

TEUNIS WILLEM VAN HEININGEN

THE CORRESPONDENCE OF
SEBALD JUSTINUS BRUGMANS
(1763-1819)

The Hague 2010

Dutch - *History of Science* - Web Centre
(www.dwc.knaw.nl)

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Digital series: *Tools and Sources for the History of Science in the Netherlands*, volume 1 (2008).
(Huib J. Zuidervaart & Ilja Nieuwland, *editors*)

Digital publication of the **Dutch - History of Science - Web Centre** (www.dwc.knaw.nl)
of the Huygens Instituut (Royal Netherlands Academy of Arts and Sciences - KNAW)
The Hague, The Netherlands

Available in 'Printing on Demand' since 2010 at Uitgeverij U2pi BV - JouvBoek.nl
Voorburg (www.jouwboek.nl), The Netherlands

ISBN 978-90-8759-158-8

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CONTENTS

Introduction

Codes of the locations of provenance of the documents

Abbreviations of the disciplines and subjects

- 1 Biography
 - 2 Correspondence with Jan Hendrik van Swinden
 - 3 Correspondence with Sir Joseph Banks
 - 4 Leyden University, Rectorships and career
 - 5 *Pharmacopoea Batava* and *Pharmacopoea Belgica*
 - 6 Military Medicine
 - 7 Correspondence with Christianus Carolus Henricus van der Aa
 - 8 Correspondence with Martinus van Marum
 - 9 Correspondence with Johan Meerman
 - 10 Correspondence with Gerardus Vrolik
 - 11 Correspondence with Jacob van Breda and Jacobus Gijsbertus Samuel van Breda
 - 12 The Cabinet of Natural History of the Stadholder
 - 13 Building up a collection
 - 14 Miscellaneous
- Biographical notes

INTRODUCTION

This publication is the result of an investigation of documents kept in several archives and libraries in the Netherlands and abroad. The research has been carried out between 1995 and 2004. The execution of this ambitious project has been made possible by the financial support of the Netherlands Organization for Scientific Research (NWO, The Hague). This institution awarded me a short time travel grant for two trips to Paris in the spring of 2001. Furthermore I have been supported by a personal donation received from Mrs. A.M. Luyendijk-Elshout, professor emeritus of history of medicine at Leyden University. I also owe much gratitude to the staff members and assistants of the National Archives of North-Holland (Haarlem, The Netherlands), who rendered me invaluable services during the past decade. The same gratitude I owe to Dr. Jean-Jacques Ferrandis, the honorary curator of the Archives and Museum of EASSA/Val the Grâce in Paris and his friendly assistant Camille Gargar, to the employees of the Centre Historique des Archives Nationales (Paris), to the personnel of the Service Historique de l'Armée de Terre (Chateau de Vincennes, Paris), to the librarian and the assistants of the library of the Institut de France (Paris) and to the librarians of the Bibliothèque Nationale de France (Paris). I still remember the many happy hours I spent in the Salle Labrouste (site Rue de Richelieu) of the French national library and later on in the new Bibliothèque Nationale de France (site Quai François Mauriac/Tolbiac). The same gratitude I owe to the curator and to the employees of the Natural History Museum in London (UK), to the librarian of the Teylers Foundation (Haarlem, The Netherlands), to the curator and employees of the Dousa Room of the library of Leyden University, to Harry Leechburch Auwers, the curator of the Library of Museum Boerhaave (National Museum of the History of Science and Medicine, Leyden), to the librarian and archivist of Naturalis (National Museum of Natural History, Leyden) and finally to the employees of all those institutions mentioned on the next page (see: Codes of the locations of origin of the documents), who have contributed to the fast grow of my personal archives on the subject of the fascinating and many-sided scientist Sebald Justinus Brugmans.

This research of almost a decade has been carried out by me as an independent scholar – a position which rendered me much freedom. The research was initiated as a reply to the official request made by Professor Harm Beukers, then professor of history of medicine of Leyden University (LUMC/departement of Metamedica, Leyden, The Netherlands) and Professor Rob Visser (then professor of history of natural sciences at the Faculty of Mathematical and Natural Sciences of Leyden University).

All documents, dug up during my countless hunts in the Netherlands, my numerous sejours in Paris, in Germany (Berlin), in Belgium (Brussels and Ghent) and in the United Kingdom (London), have found their niches in this book, a few printed documents excepted. Of each of these documents the most important details have been recorded at the end of this book: their source (location), file-code, name of the sender (+ town or village), name of the addressee (+ town or village) and date (of dispatching of the document). In most of the problematic cases, a lacking date could be reconstructed after a thorough analysis of the contents of the document, followed by a comparison with other documents, related to it by its contents, its author or its addressee. The description of the documents is preceded by an explanation of the codes of the institutions which have been visited, for as far as these efforts have produced results. In each thematic chapter, chronology has been followed consequently. By doing so, it has been possible to bring into prominence the hidden relation between various letters and also between various correspondents. Further subdivisions have been left out. It is my sincere hope that those who read this biography and its letters, will be pleased by the rich sources and – on the other hand – that they will be able to inform me about the existence of more letters and other documents, which are still unknown to me.

This book ends with a complete chronological list – divided into periods – of all the documents, which have been analysed and summarised. Finally an index of names and subjects is given.

Teunis Willem van Heiningen

Lossen (The Netherlands), April 2008

CODES OF THE LOCATIONS OF PROVENANCE OF THE DOCUMENTS

AC	Archieven van Curatoren (Archives of the governors of Leyden University), Leyden, the Netherlands.
AN-CHAN	Centre Historique des Archives Nationales (National Archives), Paris, France).
ASF	Archieven van de Senaat en de Faculteiten (Archives of the Senate and the Faculties of Leyden University), Leyden, The Netherlands.
ATS	Archieven van de Teylers Stichting (Archives of the Teylers Foundation), Haarlem, The Netherlands.
BM	British Museum (including the Natural History Museum, NHM), London, UK.
BNF	Bibliothèque Nationale de France or Bibliothèque François Mitterrand (the National Library of France, Paris, site Tolbiac, Quai François Mauriac), Paris, France.
EASSA	Archives et Bibliothèque de l'Hôpital du Val-de-Grâce (Archives and Library of the military hospital Val de Grâce), Paris, France.
GAU	Gemeente-archief Utrecht (City Archives), Utrecht, The Netherlands.
GNM	Germanisches National Museum (German National Museum), Stuttgart, Germany.
HMW	Archieven van de Hollandsche Maatschappij der Wetenschappen (Archives of the Dutch Society of Sciences), preserved in the Rijksarchief van Noord-Holland (RANH), (State Archives of North Holland), Haarlem, The Netherlands.
IDF	Institut de France (Archives and Library of the French National Institute, Academy of Sciences), Paris, France.
KB	Koninklijke Bibliotheek (Royal Library), The Hague, The Netherlands.
KHI	Koninklijk Hollandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten (Royal Dutch Institute of Sciences, literature and Fine Arts, Amsterdam), in 1810 renamed as Institut d'Amsterdam, in

	1815 continued as: Koninklijk Nederlands Instituut van Wetenschappen, Letterkunde en Schoone Kunsten (Royal Netherlands Institute of Sciences, Literature and Fine Arts, Amsterdam).
KNI	Archieven van het Koninklijk Nederlands Instituut van Wetenschappen, Letterkunde en Schoone Kunsten, preserved in the Rijksarchief van Noord-Holland (State Archives of North Holland), Haarlem, The Netherlands.
L-MET	Documents, preserved by the Department of History of Medicine, Metamedica, Leyden University Medical Centre/Faculty of Medicine, Leyden, The Netherlands (These documents are also present in Haarlem).
MMW	Museum Meermannno-Westreenianum, The Hague, The Netherlands.
MNHN	Museum National d'Histoire Naturelle (National Museum of Natural History), Paris, France.
NA	Nationaal Archief (National Archives), The Hague, The Netherlands.
NA-NHA	Nationaal Archief-Noord-Hollands Archief (State Archives of North Holland), Haarlem, The Netherlands.
NAT	Naturalis / Rijksmuseum voor Natuurlijke Historie (National Museum of Natural History), Leyden, The Netherlands.
SHAT	Service Historique de l'Armée de Terre (History Department of the French Army), Chateau de Vincennes, Paris, France.
UBA	Bibliotheek Universiteit van Amsterdam (Library of the University of Amsterdam), Amsterdam, The Netherlands.
UBL	Bibliotheek Universiteit Leiden (Library and Archives of Leyden University), Leyden, The Netherlands.
BPL	Biliotheca Publica Latina, Leyden University.
UBU	Bibliotheek van de Universiteit van Utrecht (Library of the University of Utrecht), Utrecht, The Netherlands.

In the 'Register of letters from and to Brugmans' priority will be given to the above mentioned abbreviations of the locations of these documents.

ABBREVIATIONS OF THE DISCIPLINES AND SUBJECTS

ANP	Anatomy and Anthropology, Human and Animal Physiology
AGR	Agriculture, Fertilization Science and Plantbreeding
ARC	Archeology
ART	Arts and Literature
BOT	Botany, Systematic botany and Plant physiology
CHE	Chemistry
COB	Collection building
GEO	Geology and Paleontology
HMW	Hollandsche Maatschappij der Wetenschappen
KNI	Koninklijk Nederlandsch Instituut
MED	Medicine
MIN	Mineralogy
MME	Military medicine
PAA	Pathological Anatomy
PHA	Pharmacy
PHY	Physics
TEC	Technology
ZOC	Zoology and Comparative anatomy.



Sebald Justinus Brugmans (1763-1819)

(Collection: Academisch Historisch Museum Leiden)

CHAPTER 1 - BIOGRAPHY

Introduction

The life of Sebald Justinus Brugmans (1763-1819) has already been described by several authors, for instance by his former students Hendrik Cornelis van der Boon Mesch (1795-1831), until 1823 professor of chemistry at Leyden University and after that professor of natural history, chemistry and pharmacy at the 'Athenaeum Illustre' of Amsterdam, Abraham Capadose (1795-1874), physician in Amsterdam and Cornelis Pruys van der Hoeven (1792-1871) professor of practical medicine at Leyden University. Without exception everybody trumpeted forth Brugmans's praise. However, with respect to the objectivity of these feelings, some doubt is justified. Van der Boon Mesch and Capadose, former students of Brugmans, were also his contemporaries. They both entered their biography on Brugmans at the occasion of a contest, held by the 'Hollandsche Maatschappij van Fraaije Kunsten en Wetenschappen' ('Dutch Society of Fine Arts and Sciences'). Van der Boon Mesch won the gold medal, while Capadose was awarded the silver medal. In 1825 their entries were published in Leyden. They have made a thorough study before producing the final version of their treatise. Capadose for instance, started a correspondence with Georges Cuvier, at the time secretary for life of the 'Classe des Sciences Physiques et Mathématiques' of the 'Institut de France' in Paris, in order to become better informed about Brugmans's role in the 'French (scientific) connection'. The 'Institut de France' still preserves several letters, sent by Capadose to Georges Cuvier in 1821-1822, as well as the answers Cuvier sent to him. Brugmans and Cuvier met each other several times, both in Holland and in Paris. Another biographer, Cornelis Pruys van der Hoeven (Leyden), only witnessed the last few years of Brugmans's life and career as a gifted and impassioned teacher.

In the second half of the nineteenth century as well as in the twentieth century several other authors produced new brief biographies of this interesting man, but they hardly added any new facts. A few examples are the biographical dictionaries written by Van der Aa (1852) and by Molhuysen and Blok (1914), which give reliable and concise information. The same goes for Bayle and Tillaye in

their 'Biographie Médicale' (1967) and of course also for the 'Biographisches Lexikon der hervorragenden Aerzte aus allen Länder und Zeiten' (Berlin, Wien, 1922).

The origin of the Brugmans family

The Brugmans family originates from the Palatinate (Germany) and was of noble birth. The ancestor Georg Brugmans served as Major General in the imperial army during the Eighty Years' War. In 1599 his wife and children fled to her relatives in Düsseldorf for fear of the Spanish troops, which were wandering around and marauding in the Rheinland. In 1600 she fled to de United Provinces. Her youngest son – who became the ancestor of the Dutch family – settled in Harlingen (Friesland). His son Pibo Brugmans was called as a minister to the villages of Hantum and Hantumhuizen (in Friesland). Pibo married Petronella Wiersema, the daughter of the captain commander of the bodyguard of the hereditary Prince of Orange Nassau. Their son – Antonius Brugmans (1732-1789), the father of Sebald Justinus Brugmans - married Johanna Frederika Manger, the daughter of Sebald Gottfried Manger, reverend and professor of theology in Delft, and Eva Justina Barones von Schweidnitz. Their son Sebald Justinus, who was a few years older than his brother Pibo Antonius, married Catharina Maria van Dam, the daughter of IJsbrand van Dam (secretary of the town of Leyden) and Marie Françoise Drolenveau, who gave birth to two daughters, Johanna Maria (1800-1857) and Louise Françoise (1804-1858).

Brugmans's youth

Sebald Justinus Brugmans was born on 24 March 1763 in Franeker, where his father Anthonius held a full professorship of philosophy (in the eighteenth century's sense), teaching physics, astronomy, mathematics and metaphysics. Antonius Brugmans was a well known physicist in the United Provinces and abroad. In the spring of 1767 the family moved to Groningen, where Antonius had assumed a professorship of philosophy at the university. Already at a very early age, Sebald Justinus was educated at home by his father. He taught him mathematics and philosophy. His mother stimulated his interest in botany. Young Sebald preferred the instructions in mathematics, physics, chemistry and botany above those in the 'dead' languages.

Soon he was working daily in the ‘Hortus Botanicus’ of Groningen University. At the age of 15, he was enrolled as a student of the Faculty of Philosophy and Liberal Arts and attended the lessons in botany, taught by Professor Munniks, the lessons in chemistry, taught by Professor Driessen and the lessons in medicine, taught by Professor Verschuier. More and more Sebald Justinus changed course to the fields of botany, chemistry, natural history and medicine. The names of the above mentioned teachers also turn up in the correspondence between Brugmans junior and Jan Hendrik van Swinden (1746–1823), a close friend of the family, who succeeded Antonius Brugmans as a professor in Franeker. Later on, in 1785, Van Swinden was assigned to the professorship of philosophy at the Amsterdam ‘Athenaeum Illustre’.

One of the biographers mentions a short treatise on megalithic stones, which are found as monuments (‘hunebedden’) in the province of Drenthe, as the first text written by Sebald Justinus Brugmans. In this treatise he describes and analyses the shape and the type of these rocks. The fact that at that time his father read a lecture on the same subject, illustrates the common interest of father and son in the same natural phenomena. It also proves that they did exchange ideas and experiences on various subjects. In this case, the father definitely influenced his inquisitive and studious son.

On 3 July 1781, Sebald Justinus Brugmans acquired the degrees of ‘Artium Liberalium Magister’ and of Doctor of philosophy at the University of Groningen. His geological and mineralogical dissertation was entitled: *Lithologia Groningana juxta ordinem Walleri digesta cum synonymis aliorum, imprimis Linnaei et Cronstedtii, cum figuris aeneis*. He was admitted to this degree by his father. He had spent several years of study on this aspect of nature and on its theoretical backgrounds. It resulted in the development of a taxonomy of rocks, which was partially new. In this way he tried to explain the presence and origin of the enormous boulders, which are found in the Northern provinces of the republic. In his opinion, these rocks had been dragged along from Scandinavia by a gigantic flood, a long time ago. He was convinced that in days long gone, Friesland and Groningen had been washed over by the sea. The same phenomenon must have caused the presence of the vegetable and animal petrifications, which are found in the soil of these provinces.

Undoubtedly, Sebald Justinus Brugmans was inspired by several famous Dutch scientists, such as Petrus Camper (1722–1789), who lived on the country estate of ‘Klein Lankum’ in the neighbourhood of Franeker, by his father’s successor Jan Hendrik van Swinden and by the famous German zoologist and anthropologist Johann Friedrich Blumenbach (1752–1840). Petrus Camper and Antonius Brugmans knew each other well. The discoveries, made by Blumenbach and the ideas of this scientist with respect to comparative zoology made an indelible impression on Brugmans junior. From 1781 until 1783 he studied medicine at the University of Groningen. In 1783 he left for Leyden, in order to complete his studies. In 1785 he left Leyden University.

In the meantime several of his treatises were published, some of which were written as an entry to foreign prize contests. Among these are essays on the depraving influence of toadstools, on pernicious and poisonous meadow plants, on the growth and decay of oak trees, on the observation of a sulfurous mist in the province of Groningen and on the usefulness of certain wild oat species and the damages, caused by other oat species. The treatise on the pernicious and poisonous meadow plants (1779) not only yielded him – an eighteen year old doctor – a gold medal of the ‘Académie des Sciences, Arts et Belles Lettres de Dijon’ (France), but also induced his election to the position of corresponding member of that academy (see: ‘Académie des Sciences, Arts et Belles Lettres’, ‘Liste Académique’, 27 mars 1783). In 1783 and 1785 two more gold medals were harvested. In 1783 he was awarded a gold medal by the ‘Académie des Sciences de Bordeaux’ and in 1785 by the ‘Academy of Sciences of Berlin’.

Brugmans’s second doctoral dissertation

In 1785 Sebald Justinus Brugmans took his doctoral degree of medicine in Groningen by defending a thesis on the production of pus, entitled: *Dissertatio Medica De Puogenia, sive mediis, quibus natura utitur in creando pure*, a subject which occupied him regularly in his later life. He had chosen this subject, because at the time several conflicting opinions became adopted, in which the formation of pus as a phenomenon was attributed to putrefaction, to mechanical deposition (discharge), or to transudation (or perspiration). According to his biographers, Sebald Justinus Brugmans succeeded in

unravelling the secrets of pus formation, thanks to his thorough investigations. He identified the chemical properties of pus by carrying out the various chemical procedures which were in use at the time. Unlike Albrecht Haller had asserted, the taste of pus was not at all sour, but rather sweet and milky. It was definitely the product of a pathological secretion. Pus was also different from the other humours. Moreover, it was absolutely not a residue of the serum, nor a fatty substance that had undergone a process of decay, and neither was it a constituent of the blood, which – after having passed through the vascular walls by transudation – still possessed the property of coagulation. In Brugmans's opinion, the blood vessels were able to change the nature of the humours they contain. He also believed that the pus was produced by a change in function of the solid particles of the vessels. The primary cause of these changes should be sought in the fact that the principle of life (the 'vital force') had changed. Brugmans's opinion found considerable support.

Professorships

On 1 November 1785 – at the age of 22 and shortly after having taken his doctoral degree and being on the verge of settling as physician in the town of Groningen – Sebald Justinus Brugmans was called as a professor of natural philosophy at the University of Franeker, in order to teach physics, astronomy, metaphysics and logics. In other words, he was invited to hold the chair, previously held by his father Antonius Brugmans and by Jan Hendrik van Swinden. Shortly before, Van Swinden had accepted a professorship at the 'Athenaeum Illustre' in Amsterdam. Already early November 1785, Sebald Justinus Brugmans started giving his lectures in Franeker.

In the spring of 1786 he was called to Leyden University, to take over the chair of botany from David van Royen (1727-1799). Through a coincidence he delivered his inaugural speech at Franeker University not until 2 October 1786. This unexpected and quick change of appointments forced him to let his inaugural speech, which he still owed to the governors of Franeker University, coincide with his farewell oration. His farewell speech was entitled: *De natura soli Frisici exploranda*. In this valediction he developed his ideas about the origin of the surface of the earth

in the earliest times. Not only did he discuss the remnants of former forms of life, he also gave his ideas about the possible profits of a meticulous geological survey. On 28 October 1786, just three weeks later, he delivered his inaugural speech at Leyden University, of course dealing with a botanical subject, which was near to him and which was closely related to the subjects of the treatises awarded in the past. It was entitled *De accuratori plantarum indigenarum notitia maxima commendada*. In it Brugmans observed among others that in meadows the useful plants are gradually pushed out by harmful plants, once these have been introduced. He also developed a theory about the way in which specimens of different plant species may have a negative effect on each other by means of the excretion of certain chemical substances through their roots. Furthermore he explained the settled connection between the chemical and physical properties of the soil and the vegetation growing on it. In his discussion of the useful indigenous plants, which may serve to feed man and cattle, or which can produce botanical drugs, he gave many new examples of such plants. He was convinced that knowing these facts might make the cultivation of medicinal plants, or the import of certain medicines from abroad, redundant. He underlined the importance of this knowledge and observed that the usability of many wild plant species was far from commonly known. Furthermore he focussed attention on the desirability of a better knowledge of indigenous plants. In his view it must be possible to further this knowledge and to focus more on the applicability of botanical knowledge and less on studying pure botany, such as designing new classifications, arguing the validity of Linnaeus's *Systema Naturae* or analysing and describing recently discovered plant species. He devoted himself to the development of applied botany, such as trying to solve the problems caused by plant diseases, trying to analyse the origin of different minerals in plants and, for example, making attempts to improve the acclimatization of exotic plants. In spite of his great admiration for Carl von Linné (1707-1778), he was scrupulous and hesitant towards his natural system and he also took the views of other botanists into account, such as those of Bernard de Jussieu (1699-1777) and of his nephew Antoine Laurent de Jussieu (1748-1836). In his opinion, not only the anatomical characteristics used by Linné, should – if possible – be applied in the development of a modern botanical taxonomy, but also the parts of the plant, which served in the nutrition and maintenance of its body. In this respect, he emphasized that the organism should be

regarded as a functional entity. So there were many good reasons for a further development of the knowledge of the processes, which are taking place in the body of the plant, such as the circulation of water and its function, the absorption of the 'raw saps' ('rauwe vogten'), their transformation into nutritional substances, the flow of saps, the absorption and excretion (emission) of gasses and the relationships between anatomical features and physiological processes. This relationship was also emphasized by him in several proposals for prize contests, to be held by the 'Hollandsche Maatschappij der Wetenschappen' (Haarlem). In this respect, Van der Boon Mesch (1825), one of his main biographers, mentions the fact that Brugmans received international recognition for several of his views regarding plant physiology.

On 10 January 1787 Leyden University offered him a second professorship. Professor Jean-Nicolas Sébastien Allamand (1713-1787) had died. Christiaan Hendrik Damen (1760-1799) was appointed professor of mathematics and physics as well as director of the physical cabinet, while Brugmans was offered the chair of natural history. His inaugural speech was entitled: *De Natura justam animalia proportionem, conservanti* ('On Nature as the conservator of the correct proportion within the animal kingdom'). Brugmans particularly focussed on the development of comparative anatomy. He enlarged the zoological collections set up by Allamand and by Joan Le Francq van Berkhey. Despite his caution with respect to Linné's *Systema Naturae*, Brugmans regarded this classification for the time being as the paragon of ingenuity, simplicity and clarity. At the time this field of study was one of the important topics, as is also clear from the fact that in those days the 'Dutch Society of Sciences' was involved in the discussion about the possibility or impossibility of the existence of a 'scala naturae' ('gradation of natural beings'). The contest with respect to that subject had been proposed by the Swiss scientist Charles Bonnet (1720-1793), of Genthod (near Geneva), a corresponding member of the 'Society' and also a member of the 'Académie Royale des Sciences' (Paris). Another zoological subject, which Brugmans was interested in, was the locomotion of fishes. In the treatise written by him and sent to the 'Eerste Klasse' of the 'Koninklijk Hollandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten' ('First Class' of the 'Royal Dutch Institute of Sciences, Literature and Fine Arts'), he

succeeded in explaining completely the phenomenon of the locomotion of fishes, by starting from physical principles and by pointing at a fourth cause, which in his view had to be added to the already well-known causes of locomotion, namely: the discharge of respiration water from behind the gill covers (see: *Verhandelingen der Eerste Klasse*, Part I, 1812, 185–217). In this way, he combined morphology, physiology, physics and mechanics. The traditional systematics ('purely for the sake of systematics') faded more and more into the background. In his considerations of living beings, animals as well as man, Brugmans tried to consider these beings as a 'whole' – as living beings in which all phenomena and processes are aimed towards the same end: 'Man is – just like the animal – a perfectly functioning entity'. Investigation, analysis, meticulous description, experimentation, comparison and explanation were regarded as essential steps in the procedures to be followed by the true scientists. Learned discussions, only based on argumentations, were no longer considered satisfactory. Nevertheless Cornelis Pruys van der Hoeven underlined that Brugmans should not be considered a 'modern' scientist (in our concept of 'modern science', or even of that of the second half of the nineteenth century). He preferred to advance that Brugmans acted on the border between two epochs – the 'older period' of description, metaphysical contemplation and explanation and the 'new period', during which scientists more and more tried to explain natural phenomena by investigation, by carrying out experiments and by evaluating and explaining the results of the analyses, which they had carried out. As a consequence of his efforts to explain what could not be completely explained yet, Brugmans ran into difficulties at various occasions. This can be illustrated by the fate of the contest held in 1814 by the 'Hollandsche Maatschappij der Wetenschappen' on the beauty of Greek statues, a subject which will be discussed elsewhere in this chapter (see: 'Concern with the fine arts'). All things considered, Brugmans already changed from the old fashioned science to its more modern version at the start of his professorial career, between 1788 and 1791, shortly after he had been sworn in as a member of the 'Hollandsche Maatschappij der Wetenschappen'. Within this society, the above mentioned change of trend was set by Brugmans.

In his biography Abraham Capadose also stated that Brugmans did not want to commit himself to one specific system (or theory) in particular and that he was not afraid of adopting a critical attitude, not even towards the theories, which had

been developed by famous scientists. Therefore Capadose wants to place him on the same rank with Petrus Camper (1722-1789) and Georges Cuvier (1769-1832), both great, independent and original minds and true natural scientists. To this characterization Pruys van der Hoeven has added the expression 'averse to one-sidedness'.

On 13 May 1791, after several months of deliberations between the board of governors of Leyden University and its senate, and after having received the title of 'Professor Ordinarius Medicinae' almost a year before, Brugmans was accepted as a member of the faculty of medicine, at first without a teaching commitment and as a consequence, without salary. On 17 October 1791, he was exempted from addressing an inaugural speech. On 1 November this decision was adopted by the senate. Finally, on 19 May 1795, his appointment was changed into a paid position. Most probably this event was connected with his increasing commitment with the development of the Military Health Service, as is evident from the fact that he played first fiddle in the 'Geneeskundig Bureau van de armée en de hospitalen der Bataafsche Republiek' ('Medical Bureau of the army and the hospitals of the Batavian Republic'), an institution which had been established shortly before. It is also evident from his involvement in the 'ins' and 'outs' of the 'Koninklijk Hannoversch Hospitaal' ('Royal Hanoverian Hospital') in Leyden, since May 1795 bearing the name of 'Groot Militair Hospitaal' ('Great Military Hospital').

After the death of Floris Jacob Voltelen (1753-1795) on 10 October 1795 - Brugmans was confidentially approached for the chair of full professor of chemistry, a discipline which, because of the many discoveries in this field, seemed to have great possibilities. The way in which the procedure of this appointment passed off was rather unusual. On Van Swinden's advise the governors initially invited Lichtenberger (Göttingen) to occupy the vacant chair, offering him an appointment as Professor ordinarius Philosophiae Naturalis et Chemiae. Lichtenberger did not accept the invitation, so shortly afterwards the governors of Leyden University invited Nicolaas de Bondt (1765-1796), professor of botany at the 'Athenaeum Illustre' (Amsterdam), offering him a full professorship of chemistry and experimental physics. Again they could not enter into a definitive agreement. Thereupon, on 20 March 1796, Brugmans was begged to accept the appointment in

chemistry and *materies medica* (Note the slight adjustment of the contents of the domains to be taught!). Just in case Brugmans should not be willing to accept this invitation, the governors of the university had kept Nicolaas Cornelis de Fremery (town physician in Haarlem) in reserve. Only on 25 October 1799 the senate officially changed Brugmans's fourth teaching appointment into a full professorship. More and more the authorities were impressed by his increasing repute and excellent capacities. On 1 November 1800 Brugmans gave his inaugural address, entitled 'On Boerhaave's meritoriousness in chemistry'. At that occasion he emphasized the importance of the achievements of bygone times and he sketched the singular importance of Herman Boerhaave, the man who provided the philosophical foundations of chemistry as a science. In his address Brugmans went even further back in history and also stressed the importance of Arabic writings, preserved from the past. To him it was an established fact that to those, who wish to support the new chemistry of Lavoisier (an experimental science), the books of the old chemists should not remain sealed.

Many stories have been told about the high quality of Brugmans's teaching activities. All these accounts have in common that his lectures were supported by many demonstrations and experiments, as had never before been the case.

In his opinion a major problem in the field of chemistry was the origin of the 'principia remota' (or 'remote constituents') and the 'principia proxima' (the 'nearest constituents') of the bodies of plants and animals. This interest is, for example, illustrated by the fact that he suggested a prize contest about this subject to the 'Hollandsche Maatschappij' (see also the chapters 8 and 9). In his view, the animal chemistry also covered the topic of the function of the excretory vessels in the healthy and in the diseased human body, the investigation of the sound and diseased bile ('gall'), the examination of the sound and diseased pus, the problem of the pollution of the air by pernicious 'miasmatic vapours', a question which in the years to come would lead to the writing of a treatise on the struggle against gangrene, a dissertation that was bound to attract attention both in the Netherlands and abroad.

All things considered, during the last decade of his life Brugmans taught theoretical and practical chemistry, theoretical botany (especially plant physiology),

introduction to systematic botany (during which he encouraged the study of living plants in the summer time and of herbarium plants during the rest of the year), natural history (general zoology as well as systematic zoology), comparative anatomy (including anthropology), geology and mineralogy. Of course, over time the names of these domains have changed. Every two years Brugmans taught chemistry, based on mineralogy ('inorganic chemistry', as we call it now), alternating it with vegetable and animal chemistry; so a full course of chemistry took two years. Presenting a full cycle of the main items in the domain of natural history took him about five years. It was that combination of themes in a distinct order, which gave him the opportunity to contemplate and to demonstrate God's 'Creation' in a broader perspective. It also enabled him to serve his country and in a broader sense, to serve humanity, for example by trying to improve agricultural procedures and cattle breeding, as well as the living conditions of his fellow countrymen, by the further development of the various sciences and by the application of their results. A single example will do: his concern with the fight against cattle plague (1796-1797). As a result of his findings the government decided to take measures to protect the country against the introduction of the disease by closing its borders and by prohibiting the import of foreign livestock.

As a professor of geology and mineralogy Brugmans based himself on the ideas of various scientists. Teaching the taxonomy of rocks and minerals, he considered their mathematical aspects (such as the crystalline form), their physical aspects (such as their hardness, specific gravity, refractive aspects and range of colouring) and their chemical properties (through the analysis of composite minerals and of rocks enclosing petrified bodies). One of his favourite subjects in the field of geology was the transformation of rocks as a result of the actions of erosion, fire and water. The same goes for the question of the origin of the enormous boulders, found in the Northern provinces. Brugmans tried to imagine the changes the earth had undergone in the course of time, considerations in which he turned down every absurd statement with regard to the genesis and the disappearance of mountains. This aspect of geology made him very interested in the journals of the great explorers like Peter Simon Pallas (1741-1811), Joseph Banks (1743-1820) and Déodat de Gratet de Dolomieu (1750-1801). By using the knowledge brought

together by these scientists, he was able to explain in a contemporary way the genesis of land out of the sea and the genesis of islands.

Another field of interest were the fringes between the various domains of science, such as the question of life and death (the processes of decay, putrefaction). In his view the knowledge of the forces acting in the dead world was indispensable for understanding the phenomena and processes occurring in the living world.

Brugmans also attributed to comparative anatomy. Here he especially studied the development of the sense organs of the various classes of vertebrates, an activity, which was largely facilitated by using his continually increasing collection of specimens of the various classes of animals, a collection, which – in his later years – drew attention in Holland and abroad. It not only contained pure anatomical specimens, but also pathological preparations and a growing collection of human skulls. In order to extend this collection, he made use – if possible – of his relations with foreign collectors. Sometimes these objects were offered to him in exchange for other objects or as a reward for services rendered. Later on his former student Gerard Sandifort (1779–1848), professor of anatomy at Leyden University from 1802 until his death, described and depicted part of Brugmans's collection in the famous *Museum Anatomicum Academiae Lugduno-Batavae* (Part III, Leyden, 1827). Cornelis Pruys Van der Hoeven qualified Brugmans's collection as a 'monument of his mind'.

Like his colleagues Gerardus Vrolik (Amsterdam) and Janus Bleuland (Utrecht) Brugmans could not run away from the discussion about the theories with respect to the obvious differences between the skulls of the various peoples on earth, a 'science' which would later on be given the name of 'phrenology'. In Brugmans's days there was a growing interest in this theory, which more and more evolved into a doctrine, which tried to prove a relationship between the shape and other external aspects of the human brain and – by doing so – of the external features of the human skull on the one hand and the various human capacities on the other hand. Although Brugmans obviously did not adhere unconditionally to these ideas developed by Franz Joseph Gall from Vienna, he was really interested in this field of study. Cornelis Pruys Van der Hoeven wrongly stated that Gall's theory was still modern and that it still attracted a great deal of attention when Brugmans wrote

about it. This is not true, since Brugmans did not give his first lectures on anthropology and phrenology until the last year of his life (1818–1819). The heated arguments had already ended many years ago. In the early spring of 1806, when Gall visited Holland and delivered lectures about this subject in Amsterdam and Utrecht, his theory was already declining and it was already rejected by the majority of Dutch scientists. Moreover, in 1808, the ‘Institut National’ (Paris) had put its veto on the ideas of Gall and his assistant Spürzheim, after having examined the contents of a report on the subject, written by Georges Cuvier. During the preceding years Brugmans will undoubtedly have taken notice of the ideas of Johann Caspar Lavater, included in his *Essai sur la physiognomie destiné à faire connoître l’homme et à le faire aimer* (The Hague, 1781–1783).

Ideas with regard to the origin and the disappearance of species

Already early in his career, Brugmans investigated the concept of the ‘scala naturae’ (the endless chain of living creatures in a uninterrupted sequence of continually more complex and higher developed life forms, or ‘a gradual ascent of living beings’) and the remarkable transitions between the various classes of vertebrates, as well as their development and growth. He proved to be an adversary of that theory. With respect to comparative anatomy, he did not only have a clear vision of analogies, but he was also aware of those peculiar resemblances which are now designated as ‘homologies’. Brugmans started from one ‘prototype’ (which he called ‘hoofdtypus’) of the subphylum of the vertebrates. He decided that from that ‘type’ each class of vertebrates must have developed, according to its own peculiar nature; they all owe their characteristic shape only to their changed relations, to their changed way of life and to their characteristic physiology (‘huishouding’). In other words: The external shape and the internal anatomy and physiology are the responses to the living conditions and to the way of life. However, in this assumption Brugmans did not mean to outline a kind of ontogeny from the class of fishes up to the class of mammalians, although he did not deny the fact that nature is always changing, always moving. In every creature we should worship and admire God’s ‘Wisdom’ and ‘Goodness’ and discover our own weakness and short-sightedness. Every creature has its own fixed place and function; it is a part of the entity of the world (‘nature’). Already at an early age Brugmans adhered to that

conviction. In his view there was no room for the disappearance of species and for the appearance of new ones, because these changes would disturb the needed coherence. Already in 1791 and 1792 he made this view clear in the reports sent in by him on the treatises received as entries to the prize contest held in 1783 by the 'Hollandsche Maatschappij der Wetenschappen', in which the possible existence of a 'scala naturae' had been brought up for discussion. At that occasion he expressed his ideas in the following way:

He, who has the rigidity to suppose that our earth could do without a single little plant, creates indignity! No, we – absolutely convinced as we are of the 'Divine Wisdom', which is noticeable in the whole Creation – flatter ourselves that the day will come on which the suitability of the smallest and most humble creatures, and even of those which appear to us as the scantiest of all, shall be revealed to us!

In Brugmans's view it is the ultimate goal of the true philosopher and of the true physicist – by using his 'internal sense' (which is beyond his 'physical sense'), that is to say: with his 'spiritual eye', or 'emotional eye' – to discover God's 'Creation' in all its 'Wisdom', 'Greatness' and 'Majesty'. Knowing these signs is the destination of every true philosopher and physicist!

The botanical garden

Another aspect of his professorial activities, which is inseparably connected with the contents of his first teaching commitment – was botany. The extension and accomplishment of the 'Hortus Botanicus' took much time and energy, particularly after 1813, not only because of the frequent changes of plans and objectives, but also because of the difficult financial position of the Kingdom of the Netherlands. Until 1814, Brugmans was assisted by Nicolaas Meerburgh (1734-1814), a gifted gardener. Early autumn 1817 the young German botanist Theodor Friedrich Ludwig Nees von Esenbeck (1787-1837) came to the Netherlands and Brugmans appointed him inspector of the Leyden hortus. To Brugmans's great disappointment Friedrich von Esenbeck, as he was called, left Leyden again early 1819 for Bonn in Germany, where his elder brother Christian (formerly professor in Erlangen) had been

appointed professor of botany. Friedrich was appointed director of the 'Hortus Botanicus' in Bonn. In spite of this sudden departure, the ties of friendship between him and Brugmans remained.

Medical views

In his medical views Brugmans showed a certain disposition towards the mental legacy of Georg Ernst Stahl (1659-1734), who explained every physiological change by assuming a change of the vital forces or 'anima'. This predilection is clearly shown by his doctoral thesis on the changes of pus as well as by his reports on several medical treatises evaluated by him at the request of the 'Hollandsche Maatschappij der Wetenschappen' and of the 'Eerste Klasse' of the 'Koninklijk Hollandsch Instituut' (later on: 'Koninklijk Nederlandsch Instituut'). Likewise he accepted the ideas of John Brown (1735-1788) – the so-called 'doctrine of irritability'. He also tried to apply these ideas to the life of plants. Cornelis Pruijs Van der Hoeven emphasized that the theory of irritability directed Brugmans's investigations and that it made him consider the whole of nature as an entity, like Marcello Malpighi had done before. Brugmans was well informed about the writings of this Italian scientist.

Concern with the fine arts

Finally Brugmans's interest in the fine arts has to be mentioned. In December 1798 he was one of the founders of the 'Leydsche Teeken- en Schilderacademie' under the motto 'Ars Aemula Naturae' (the 'Leyden Academy of Arts'). During his lifetime he occupied one of its director's positions. On 12 May 1801, on the occasion of the annual general assembly of 'Ars Aemula Naturae', Brugmans gave an impassioned speech, in which he reviewed the bygone years and looked into the future. He intended to have as many students as possible – and if possible from the various faculties of 'his' university – particularly from those of medicine, physics ('natuurkunde van den mensch', natural sciences) and archaeology to be instructed in the art of drawing from nature. In his opinion, this was an indispensable training of their faculty of perception, an essential exercise for the purpose of a prosperous career in the various sciences: 'Only the observation and knowledge of Nature have led to the perfectness of the fine arts!' An example is found in the already

mentioned interest in the foundations of the beauty of Greek statues. The idea behind it was that man – the subject of these masterpieces – being the crowning glory of God's 'Creation', holds a very special position. He defined this position of man by pointing at a small number of unique anatomical and physiological features. In 1814 this both scientific and philosophical topic drove him to propose a contest to the 'Hollandsche Maatschappij der Wetenschappen', in which the physical and mathematical foundations of this beauty had to be investigated and explained. In his view the time had come to reconsider the laws of proportion, formulated by Albrecht Dürer a long time ago. After having criticized the two entries, which had been received early 1818, Brugmans concluded that it was impossible to award a prize. This contest came to a disappointing end because it proved to be impossible to award one of the entries the gold medal, as a consequence of the fact that the jury's opinion was divided. The treatise written by Johann Caspar Leuchs, a rather insignificant scientist from Nuremberg (Germany), was awarded the silver medal, while the other submission – as it turned out later – entered by the famous Dresden professor of medicine and natural history Carl Gustav Carus – drew a blank.

Journeys abroad

In 1791, Sebald Justinus Brugmans made his first trip abroad, travelling to Germany. He was accompanied by his younger brother Pibo Antonius. At that occasion he visited Münster, Paderborn and Kassel. Of the contacts made by him not one letter has been preserved, neither in the Netherlands nor in Germany. In 1799, at the occasion of his honeymoon trip, Brugmans travelled to Paris. There he studied among others the organization and policy of the French military health service. In 1801 he made a second trip to Germany. In 1806, 1811 and 1815 he travelled to Paris again. In 1818, he made a last trip to Germany. Further planned journeys were blocked by the political situation and later on by his sudden death in the summer of 1819.

During his first journey to Germany (1791) Brugmans made several geological observations. Among other things he examined the composition of different rocks (such as limestone and sandstone) and tried to explain the origin of the fossils included in these rocks. At that occasion he also carried out his first physiognomical observations. During a second journey to Germany (made in 1801)

he visited the Rhineland, Brunswick, Hanover, Berlin, Dresden, Leipzig and the Harz. In the view of his biographer Van der Boon Mesch the journeys to Germany were especially intended to acquire important collections, because he had plans to found his own 'Museum of Mineralogy'. He also intended to classify the various ores, crystals and gems, which were to be displayed in this museum, according to the guidelines developed by René Just Häuy (1743-1822), the leading mineralogist and professor of the 'Muséum National d'Histoire Naturelle' (Paris). It was Brugmans's dream to complete his collection with those samples of rocks, which could elucidate the processes of orogenesis (the formation of mountains).

Brugmans's journeys to France were first of all intended to serve political aims, although he certainly had time to renew his scientific contacts, the most important of which was his relation with André Thouïn, chief gardener of the 'Jardin du Roi' (Paris) and later on professor of botany and one of the 'professeurs-administrateurs' of the 'Muséum National d'Histoire Naturelle' in Paris. Brugmans entered into correspondence with him in 1792. Secondly there was Georges Cuvier, whom he met for the first time in 1799. Since then Brugmans and Cuvier remained good friends. Because of his valuable collections Cuvier rated Brugmans among the most famous natural scientists and bracketed him together with Blumenbach, Camper, Autenrieth and Wiedemann, while he mentioned his own colleagues Bernard de Lacépède, Barthélemy Faujas de Saint-Fond, Louis Daubenton, Alexandre Brongniart and Déodat de Dolomieu in the second place.

In 1818, Brugmans set out on a last journey to Germany with his wife and two daughters. In Hanover he visited the 'School of Veterinary Medicine'. In Brunswick he was in the position to purchase the mineralogical cabinet of the late Princess of Brunswick-Lüneburg. He also visited the selenite mountains (gypsum) in the neighbourhood of the village of Tiede. He was well informed about the fact that in the past these mountains had already yielded the fossil remains of a rhinoceros, a mammoth and a mastodont. A visit to the iron mines, the marble- and granite-quarries and the stalactite caves were also included in the schedule, as well as a visit to the county of Stolberg and the towns of Goslar and Göttingen, where he admired the mineralogical cabinet and met the illustrious Blumenbach. He was also introduced to Osiander (a close friend to Joseph Banks, who had been his

companion during the journey around the world, made in 1770-1772) and to J.F.L. Hausmann (a geologist). In Heidelberg he paid a visit to the physiologist Friedrich Tiedemann (1781-1861). In Stuttgart he was received in audience by the Queen-Widow Catharina of Württemberg.

The last years of his life

Until the very end of his life Sebald Justinus Brugmans occupied himself with the various fields of the natural sciences. The statements in his letters prove that he was almost continually working under great pressure. He paid particular attention to the activities of the 'Hollandsche Maatschappij der Wetenschappen'. He showed himself as one of its most active members. All in all he was much more involved with the 'Maatschappij' than with the 'Eerste Klasse' of the 'Koninklijk Nederlandsch Instituut'. During the last years of his life the enlargement, changes and reorganization of the botanical gardens occupied him almost continually. During one of his last lectures, held at the end of the academic year of 1818-1819 – just a few weeks before he died – he enthusiastically informed his audience that he had in mind to continue his lectures with a new series of lessons in which he planned to put the subjects discussed in the past in a broader context and to stress once again the perfection of God's 'Creation'. His sudden death in the night of 22 July 1819 put an end to his ambitious plans. Shortly after he died the university took advantage of the occasion and purchased his library and collections (his 'Museum'). Brugmans, with his extremely vigorous mind, a man, who had been very interested in social problems, a warm-hearted man, full of interest, reliable, always prepared to serve as a doctor, as a counsellor and as a friend, had made an indelible impression on the minds of those who knew him. Exactly those feelings induced an extraordinary event – the organization of a prize contest: the invitation to write a well-founded laudation. This challenge rendered two valuable entries, which were written by his former students Hendrik Cornelis van der Boon Mesch and Abraham Capadose, who were still under the impression of their unique, gifted and inspiring professor and teacher.

CHAPTER 2 - CORRESPONDENCE WITH JAN HENDRIK VAN SWINDEN

Jan Hendrik van Swinden – as already has been stressed – was a close friend of the family. The friendship between Van Swinden and Antonius Brugmans explains the friendly relation with Sebald Justinus Brugmans. In their correspondence, which started when Brugmans junior was still studying at Groningen University, they exchanged ideas and views on various subjects, which he was interested in and which inspired him to write a treatise from time to time, often in response to a contest, held by a scientific society. In all these cases he scored and with justifiable pride he notified Van Swinden about these achievements. Antonius Brugmans regularly interfered in these exchanges of ideas between his son and Van Swinden. The paternal letters reveal pride of what the son had achieved. When Van Swinden moved to Amsterdam and Sebald Justinus Brugmans was appointed professor in Franeker nothing changed. The confidential relationship between the two persisted. Several other contacts went through mutual friends, such as Jacobus van Breda (Delft) and Van Swinden's brother, who was also living in Delft, or through relatives, such as Professor Manger (Delft).

In their correspondence, Antonius Brugmans and Jan Hendrik van Swinden often paid attention to the experiences and adventures of the promising young student and – later on – of the young professor. For example, on 27 December 1782, after having spent a few words on a German translation of his *Tentamina Magnetica* and after having made some remarks with regard to Van Swinden's work on electrical and magnetic phenomena, Antonius Brugmans asks his colleague and successor if perhaps he has a couple of treatises written by other scientists on these subjects in his possession. Besides he announces full of pride that at about the end of the academic year (December) the two awarded treatises of his son will be published. Already on 30 December 1782 Van Swinden sends his answer to that letter, in which he discusses the possibility of sending the requested publications about the

experiments on electricity and magnetism (carried out by other scientists) and about measurements of magnetic inclination, carried out by himself. He also discusses the possibility of a translation of his treatise on the analogy between electricity and magnetism. Furthermore he underlines that he was looking forward to receiving a copy of the awarded treatises, written by Sebald Justinus Brugmans. Van Swinden congratulates the young student through his father and expressed his wish to send him a letter soon. He sincerely hopes that this young, dear and praiseworthy son of his friend will soon be conferred the well-deserved honour ('a successful completion of his studies'). He adds his New Year's greetings for the Brugmans family. On 28 February 1783 Van Swinden sends another letter to Antonius Brugmans, in which he once more brings up the magnetic experiments carried out by himself and by several other scientists. In it he also pays attention to electromagnetic phenomena ('the induction of the magnetic force by electricity'). At the end he once more compliments his friend with the 'réussite' of his elder son and even adds the last verse of a suitable poem: 'What can one expect from such a young man?' Finally he thanks him for the treatises sent by Sebald Justinus, after having observed that his own son is at the time really excelling in mathematics.

In his letter of 30 September 1784 to Antonius Brugmans, Van Swinden sends his friend a copy of his book on the analogy between electricity and magnetism, a phenomenon, which is still occupying him strongly, a subject on which he is of a different opinion with the addressee. He asks to send him various objects and to do him a favour. He ends his letter by expressing his greetings, also to Sebald Justinus, words in which he emphasizes his deep respect. He shows his disappointment about the fact that Antonius has not been able to visit him before the beginning of the summer holidays. A second copy of his book is intended for Sebald Justinus, while a third one is intended for a colleague, they are both acquainted with.

In his letter dated 27 October 1784 – Sebald Justinus had already moved to Leyden to complete his medical studies – Van Swinden once more discusses the old subjects and adds a new one: 'animal magnetism' ('at the moment really a topic of research in Paris') and mentions several reports on that subject, written by Dutch government officials, by De Jussieu ('a prudent adherent') and by Thouret ('the most remarkable documents'). He confesses that he is already regretting his decision

to leave Friesland and Franeker and to move to Amsterdam. He spends the rest of his letter to his thoughts about the future of Sebald Justinus and underlines that he has recommended Damen as his successor for the chair of philosophy at Franeker University. If a professorate of botany and natural history would have been vacant, he would absolutely have recommended his friend's son. Nonetheless he also had to take into account other arguments, which forced him to give his vote to Damen, who had lost in the competition for the professorship in Amsterdam, now held by him. Moreover, during the last few years Sebald Justinus has particularly engaged himself on botany and medicine instead of mathematics and astronomy. Therefore he draws his attention to a forthcoming vacancy at Groningen University.

In his letter sent on 11 October 1786 to Sebald Justinus Brugmans, Van Swinden particularly discusses the possible suitability of Antoine Chaudoir – also well-known to his young friend – for a professorship of mathematics, physics and philosophy in Franeker, in order to succeed the addressee. In Van Swinden's view Chaudoir is really a good physicist, although personally he would prefer Pieter Nieuwland, who is also a very suitable candidate, certainly more than Lafaille is.

In the meantime Sebald Justinus Brugmans has been appointed professor of botany at Leyden University. Of course the fact that this most promising young scientist will give his inaugural address within a few weeks, deserves his well-meant congratulations and Van Swinden sends Antonius Brugmans his best wishes.

1. S.J. Brugmans (Groningen) to J.H. van Swinden (Franeker); 24 November 1780

Brugmans informs his father's colleague and friend about various ores, rocks and petrifications found in the Frisian soil. The bearer of this letter will also deliver a copy of Van Marum's dissertation. He adds a small collection of petrifications found in the province of Groningen, various crystals, limestone rocks, a few specimens of Tubipora, Madrepora, Millipora and a few small and large shells. Most of the *Corallina baltica* found in Groningen, have already been described in Trought's dissertation on these corals, published as an appendix to Linnaeus's *Amoenitates Academiae*. He also adds a remark on Wallerius's taxonomy of rocks and minerals. He is highly surprised about the fact that Scandinavian as well as African corals have been found in the soil of

the province of Groningen. He ends his letter with a remark on the planetarium of Eisinga, one of the members of the city council of Franeker.
[UBL BPL 755; GEO, MIN, PHY]

2. S.J. Brugmans (Groningen) to J.H. van Swinden (Franeker); 5 April 1781

Brugmans informs Van Swinden of the availability of a thermometer of Fahrenheit and continues by giving several remarks on ores, rocks and petrifications from the Frisian soil. He also adds a few words about his own dissertation entitled *De ferris lapidibus et Saxis agri Groningani* and about the observation of the ‘aurora borealis’ (which have been made on 27 and 28 March 1781). He asks Van Swinden to convey his father’s compliments to his parents.

[UBL BPL 755; GEO, MIN, PHY]

3. S.J. Brugmans (Groningen) to J.H. van Swinden (Franeker); 21 February 1783

Brugmans passes some remarks on a physiological question about the absorption of fluids by plants: ‘For that purpose, the plant must at least possess certain organs’. He expresses a few ideas on the assimilation of the absorbed saps by the plant, on the growth of plants and on chlorophyll. He outlines the design of a new plant physiology and ends his letter with the expression of his feelings of disappointment about the fact that – because of the unfavourable season – it is impossible to carry out experiments. [It is very possible that Brugmans based himself on the recent discoveries made by Joseph Priestley and Jan Ingenhousz, both living and working in London. Both demonstrated the production of oxygen by green plants].

[UBL BPL 755; BOT]

4. S.J. Brugmans (Leyden) to J.H. van Swinden (Franeker); 13 September 1783

Brugmans informs his father’s friend that he has competed in a contest held by the ‘Académie de Dijon’. He has added the copy of his treatise on the

sulphurous mist, which has observed in the province of Groningen, to this letter. It is meant to be sent on to Professor Verschuier. He has decided to send Van Swinden a Fahrenheit Thermometer. He discusses the experiments, in which Jan Ingenhousz investigated the electric sparks at iron wire points in dephlogistated air, as well as the results of an experiment carried out by Priestley and Magellan – ‘on the changes of vapour into ‘true, permanent air’ and continues by a discussion of the results which have been reported to the ‘Académie Royale des Sciences’ of Paris. These important experiments must absolutely be repeated in Holland. Again he expresses his feelings of warm friendship and veneration towards Van Swinden. He is very happy about the fact that Van Swinden enjoys good health.

[UBL BPL 755; BOT, PHY]

5. J.H. van Swinden (Franeker) to S.J. Brugmans (Leyden); 16 October 1783

Van Swinden thanks his young friend for the copy of the dissertation awarded by the Dijon Academy. Meanwhile he has conveyed the treatise on the sulphurous vapours to LeRoy (Paris), who has been ordered to hold a lecture on this phenomenon in the assembly of the ‘Académie Royale des Sciences’ (Paris) in November. He knows that the Leyden Cabinet of Physics is in the possession of a Fahrenheit thermometer and asks his young friend to carry out a couple of experiments with that instrument next winter, in order to determine the exact temperature of melting ice. He discusses an interesting experiment carried out by Ingenhousz and asks his friend to inform him about the results of the measurements to be carried out in Leyden. His work on the analogy of electricity and magnetism is in press. He really respects Brugmans junior and wants to intensify their connections. Van Swinden’s brother, who is living in Delft directly opposite the Manger residence, wants to see him too.

[UBL BPL 755a; BOT, PHY]

6. S.J. Brugmans (Leyden) to J.H. van Swinden (Franeker); shortly before 4 November 1783

In this letter – to be sent on to Van der Perre (Flushing) – Brugmans puts into words some ideas about the examination of the sulphurous mist. He considers the chemical and physical aspects of its possible constituents, stating that ‘the principles of water and fire have been intermingled and gave rise to vapour or fog’. He has investigated this phenomenon to the last detail and demonstrates that he is well informed of what has been published in the major literature on this subject. He mentions the experiments carried out by Kirwan, Crawford, Lessie and Sennebier. He fully explains the dying off of the vegetation as a consequence of the sulphurous fog and finally spends a few words on the experiments carried out by Troostwijk and Deiman.

[UBL BPL 755; PHY, CHE, BOT]

7. S.J. Brugmans (Leyden) to J.H. van Swinden (Franeker); 4 November 1783

Brugmans discusses the contents of a letter dated 22 October 1783, and mentions the treatise on the sulphurous fog and the letter, which he has asked Van Swinden to send on to Van der Perre. He again discusses this phenomenon and refers to the work of Lineman on sulphurous vapours (1654). He is eager to meet Van Swinden’s brother. At Van Breda’s (in Delft) he attended a demonstration of the improved condenser designed by Volta and lists its advantages. He also mentions the chemical demonstrations given by Van Breda (in which this scientist made use of dephlogistated air). He conveys the compliments of Hahn (Leyden), whose lectures on chemistry he has attended with pleasure. Next year this subject will be taught by Voltelen. Hahn does not hold with the new experiments carried out by Joseph Priestley, by Bergman, Scheele and Lavoisier, especially not with those regarding the various constituents of air. Soon he will send him a copy of his treatise, which has been awarded by the ‘Académie de Bordeaux’. He has also planned to carry out experiments with the Fahrenheit thermometer, as soon as the weather will allow him to do so. He promises to communicate the results. He expresses his sincere condolences to Van Swinden, whose youngest son died recently.

[UBP BPL 755; PHY, CHE]

8. J.H. van Swinden (Franeker) to S.J. Brugmans (Leyden); 24 November 1783

Van Swinden informs his young friend that he has sent some information on the sulphurous fog to Leroy (Paris). He waves aside Brugmans's gratitude. According to his ability he simply wants to support young men excelling in science. He discusses the heavy earthquake in Switzerland (1654) and the strange hazy skies in France, Hungary, Italy and Persia (1721). He refers to Richard's 'Histoire Naturelle de l'Air'. In his opinion Van Breda senior (Delft) is at the time one of the most excellent Dutch physicists. Is it possible for Brugmans to help him with the construction of the machine designed by Van Breda? He discusses the results of Van Breda's chemical experiments with dephlogistated air. He mentions Hahn's sad situation and endorses the aversion of this old professor towards the new chemistry, especially regarding the results of the experiments carried out by Priestley. One cannot deny the new facts. He qualifies Voltelen as a good successor to Hahn.

[UBL BPL 755a; PHY, CHE]

9. S.J. Brugmans (Leyden) to J.H. van Swinden (Franeker); 10 January 1784

Meanwhile, Brugmans has carried out his experiments with the Fahrenheit Thermometer, assisted by Chaudoir, and he reports about the results: The freezing point of water turned out to be 30° Fahrenheit, instead of 32°, while two other thermometers indicated a temperature of 32° Fahrenheit. He mentions the unfortunate breakage of one of the instruments during drying-up. Its reparation will be carried out in Amsterdam. The winter is peculiar. He advises Van Swinden to collect as many meteorological data as possible. He stresses Van Swinden's important contribution to meteorological science. Of course this activity will oblige his fellow physicists. He feels very honoured by Van Swinden's sincere friendship.

[UBL BPL 755; PHY]

10. J.H. van Swinden (Franeker) to S.J. Brugmans (Leyden); 5 March 1784

Van Swinden – extremely exhausted by several attacks of colica spasmodica – has made a complete recovery. He comments on the breaking of the thermometer, an accident which once happened to him too. These experiments are always dangerous! He thanks his friend for sending him the results of the temperature measurements, among others those regarding the determination of the freezing point of water. He explains the cause of Brugmans's erroneous readings. He thanks him for sending him the readings of the barometric pressure carried out in Groningen. Because of his busy occupation he will not be able for the time being to publish a treatise about these facts. He has already been informed that Mohr (Amsterdam) is carrying out similar measurements and that Van der Weyde (The Hague) also intends to do so. Perhaps he will be able to have a table published, giving the most striking results. He has already noticed the striking differences between the various observations, although they have been carried out at the same place. If possible he would have investigated the cause of this phenomenon.

[UBL BPL 755a; PHY, MED]

11. S.J. Brugmans (Groningen) to J.H. van Swinden (Franeker); 14 December 1784)

Brugmans apologizes for the delayed dispatching of the promised document. He thanks for the present, sent by Van Swinden. Reading it has given him great pleasure. The abstracts of two reports written by Van Swinden will be published in the *Natuurkundig Kabinet* ('Physical Cabinet'). At the moment he is very busy. Meanwhile, he has received Van Swinden's letter through De Luc junior; making his acquaintance has been very pleasing. He has been able to be of service to De Luc and he also showed him the town of Groningen and its surroundings. He is sincerely happy about Van Swinden's appointment in Amsterdam. He will surely be a credit to literature [to be interpreted as: 'the republic of letters' or 'the scientific world']. He wishes him a prosperous and happy future. He will undoubtedly further science and he will set a good

example. Brugmans commends himself to his benevolent and powerful attention and he assures him of his helpfulness, diligence and gratitude.

[UBL BPL 755; PHY]

12. J.H. van Swinden (Franeker) to S.J. Brugmans (Groningen); 21 December 1784

Van Swinden thanks his young friend for his honouring positive judgement and appreciates his suggestion to publish two abstracts in the *Natuurkundig Kabinet*. He also thanks him for his remarks and for his dedication with regard to De Luc's visit. It was right that De Luc wanted to meet the young Doctor Brugmans, a pleasure, which De Luc's father has not had, probably because Brugmans's 'Lithologia Groningana' still had to be published at the time. He thanks his friend for the interest, which he has shown in his recent appointment. Surely Sebald Justinus Brugmans is eager to take his place in Franeker. He has already explained the problem to Antonius Brugmans. It's beyond his power to influence the decision. He sincerely hopes that Brugmans junior will approve his argument. First of all it's Damen's turn now. Van Swinden will recommend him decently. Nevertheless, his friendship with Brugmans junior must continue; after all, his scientific qualities are really excellent. If his young friend has the opportunity to come to Amsterdam on 25 December 1784, Van Swinden expects to see him among his audience. If not, he is also welcome on another day although his house has not been arranged yet.

[UBL BPL 755a; PHY, GEO, MIN]

13. J.H. van Swinden (Franeker) to S.J. Brugmans (Groningen); 7 May 1785

After having spent a few words on Professor Manger, Sebald Justinus's grandfather, Van Swinden thanks his friend for his kind letter. The acquisition of a new Fahrenheit thermometer will be a problem. Last winter he has tested the specimen in the possession of the Franeker Academy. There are no other specimens at his disposal. He wonders if Brugmans junior has the opportunity to determine the average height of Groningen above the mean

sea level. Van Swinden explains why the petrifications, which Brugmans junior has sent him, are not identical with a species already depicted. He asks to send him a new specimen. He is convinced that the world of science will learn much from Brugmans junior with regard to this field of study. He is eager receive his dissertation. In his opinion Sebald Justinus has already made his name as a scientist; the award of the gold medal of honour by a distinguished academy must be a joyful event for his parents. Did he already send the results of his meteorological observations to the 'Haagsche Correspondentie [Societeit]'? Did he already carry out hygrometric measurements? Van Swinden continues by giving some details of the hygrometer designed by him (see: *Genees- en Natuurkundig Kabinet*). He adds the translation of the observation of the 'aurora borealis' (carried out in the night of 27 to 28 March 1781) and mentions his letter to LeRoy (Paris).
[UBL BPL 755a; PHY, GEO, MED]

14. S.J. Brugmans (Groningen) to J.H. van Swinden (Amsterdam); 6 July 1785

Through Goldsmith, Brugmans offers his friend two copies of his 'Dissertatio', one of which has to be handed over to Van Swinden's son. He commends this dissertation to Van Swinden's attention. Meanwhile he has been informed that Van Swinden has made a good start in the scientific community of Amsterdam. There is every reason to send his congratulations. He hopes that his friend will enjoy his new position. He conveys his father's congratulations and adds his own greetings to Van Swinden's wife and son.
[UBL BPL 755; PHY, MED]

15. S.J. Brugmans (Groningen) to J.H. van Swinden (Amsterdam); 8 November 1785

Last Saturday, Brugmans received the letter by which the governors of the Franeker 'Hogeschool' ('University') called him. He sincerely thanks Van Swinden for his important role in this affair, as a result of which 'Franeker' must certainly have taken a good view of him. Now it is up to him to show himself worthy of this honour, not only towards the 'Hoogeschool' but also

towards Van Swinden. He sincerely hopes that their friendship will continue. He ends his letter by observing that meanwhile Chaudoir is using Engelhard's *Compendium*.

[UBL BPL 755; PHY, ZOC]

16. S.J. Brugmans (Leyden) to J.H. van Swinden (Amsterdam); 11 October 1786

Brugmans sincerely regrets that he has not been able to see Van Swinden until now. He asks to send him a certificate of competence regarding Chaudoir, who is already fairly well-known to him. He has also been informed about Van Swinden's slight preference for Nieuwland. However, the latter has less chance of getting the job, because LaFaille is also competing for it. Brugmans is still busy with his removal to Leyden.

[UBL BPL 755; PHY]

17. S.J. Brugmans (Leyden) to J.H. van Swinden (Amsterdam); 3 March 1787

Sebald Justinus offers his friend a copy of his two inaugural lectures and adds three more copies, intended for Michel, Deiman (Amsterdam) and Paets van Troostwijk (Amsterdam). From a letter received through Chaudoir he has been informed about the offer of the herbarium of a Swiss collector. He has decided not to take up the offer, because he will be able to acquire the missing plants by means of correspondence. Did the Swiss botanist already visit the Leyden hortus? If not, he definitely should come round. He is eager to receive the guests recommended by Van Swinden. Furthermore, he has carried out several experiments on the body heat of plants, of which he adds his conclusions. He is convinced of a certain analogy with the animal (body) heat. He wants to know if Van Swinden is acquainted with similar experiments and ends his letter by underlining his warm feelings of friendship and respectful esteem.

[UBL BPL 755, PHY, BOT]

18. S.J. Brugmans (Leyden) to J.H. van Swinden (Amsterdam); 28 February 1790

Brugmans answers Van Swinden's request for further information about Jan van Heekeren's suitability for the office of 'Professor Anatomes et Chirurgiae' in Amsterdam. In his view Van Heekeren is absolutely fit for the job. Not only has he been one of his students, he has also been a pupil of Andreas Bonn (Amsterdam). Possibly Eduard Sandifort (Leyden) is also able to give very positive information.

[UBL BPL 755; MED, ANP]

19. S.J. Brugmans (Leyden) to J.H. van Swinden (Amsterdam); 10 December 1802

Brugmans sends Van Swinden several manuscripts written by Huygens and asks him to return these later. After having done so, Van Swinden will be allowed to borrow more issues. He expresses his willingness to repeat a couple of experiments with the French filters received from Paris a few months ago, which he has already carried out with those present in Leyden. As it seems, Smith has already improved his instruments. These experiments will surely help to prevent the putrefaction of drinking-water for the seamen. He has also received a few letters from the East Indian fleet, among others about the conservation of the quality of drinking-water and regarding the positive experiences with certain drugs. He asks him to convey his compliments to Mrs. Van Swinden, to Garcin and to the Misses Van Swinden.

[UBL BPL 755; CHE, MED, PHY]

20. J.H. van Swinden (Amsterdam) to S.J. Brugmans (Leyden); 17 December 1812

If possible, Van Swinden is going to attend the meeting of the 'Conseil Académique' ('Academic Council') of Leyden University. He wants to exchange ideas with regard to the year to come (1813) and he asks Brugmans to inform him about the exact assembly room, where the meeting will take

place. He also wants to see Professor Ekama. He assures him of his very high esteem and calls himself Brugmans's very obedient servant.

[UBL AC 651; UNI]

21. J.H. van Swinden (Amsterdam) to S.J. Brugmans (Leyden); 18 December 1812

The unfavourable season and his defective health – he is very susceptible to rheumatism and swellings – will keep him from attending the meeting of the 'Conseil Académique' of Leyden University, next Monday. He has decided to notify Brugmans and asks to inform him about the day, time and place of the next meeting. He calls himself Brugmans's very obedient servant.

[UBL AC 651; UNI]

CHAPTER 3 - CORRESPONDENCE WITH SIR JOSEPH BANKS

Between 1790 and 1793 Sebald Justinus Brugmans corresponded with Sir Joseph Banks, at the time president of the 'Royal Society' of London. In 1766 Banks had made a journey to New Foundland and Labrador, after which he had been elected member of the 'Royal Society'. Subsequently he made a trip around the world - between 1770 and 1772) - in the company of James Cook. This journey brought him to fame. In February and March 1773 Banks visited Holland. At that occasion he did several collectors and owners of collections of natural history the honour of a visit. In the diary kept on this trip he gave his view on the persons he met and on the quality of their collections. Brugmans knew Banks by name and was well aware of his important position in the English world of science. Afterwards it is possible to reconstruct to a certain extent how Banks's request for help found its way to Brugmans. In 1790 Banks asked Brugmans to help him to acquire the 'Twelfth collection', consisting of the 'Twelfth Herbarium' and the *Hortus Cliffortianus*. There is no correspondence left on this matter, except for the small number of letters, which are analysed in this chapter. Brugmans's first letter to the president of the 'Royal Society' proves that it has been Banks, who entered into correspondence and not Brugmans. In this letter Brugmans discusses the contents of a very honouring letter received from Banks, in which he makes an urgent request to render him a service. In the following letters this request is made more clear. A certain Vibourg - venerated by Brugmans - has drawn Banks's attention to the possible acquisition in the near future of a very important collection. This is an excellent opportunity to make a good deal. The following letters deal with the importance of both parts of the 'Twelfth collection': the 'Herbarium' (the collection of dried plants) and the *Hortus Cliffortianus* - owned by the late Clifford. This impressive book has been written by Linnaeus on Clifford's botanical collection. These letters also discuss the problems Brugmans has been faced with during his attempts to acquire the collection. They also mention his research for its authenticity, the final transaction and the compensation he wants to receive, as he smells the opportunity of obtaining a few special objects from Banks's world-famous

collections. Brugmans clearly shows his interest in certain objects, although he assures Banks that of course his greatest reward will be the fact that he has been given the opportunity to serve Banks and that he has earned his friendship. Of course nothing is more honouring to him than an immaterial indemnification!

22. S.J. Brugmans (Leyden) to J. Banks (London); 29 August 1790

In this prompt answer to a previous letter received from Banks, Brugmans offers his good offices with regard to the realization of his plan to obtain the *Hortus Cliffortianus*. He has got already in touch with Vibourg and Luchtman. The latter had sent the auction-catalogues to several British booksellers. Brugmans has understood that the complete collection will be put up for auction. Besides a series of species described in the *Hortus Cliffortianus*, the 'Herbarium' also contains several other specimens donated by Linnaeus to Clifford at the occasion of his return to Sweden. Brugmans is not acquainted with the present quality of the collection, as it has been more than two years since he last saw it. He is willing to provide dried specimens of the species, which have been described in the 'Hortus' and underlines the value of comparing various specimens of the same species. He mentions the problems of synonymy. Furthermore he promises Banks to acquire the collection through a private purchase if possible and to prevent its public auction. He assures Banks of his strong feelings of esteem.

[BM-Additional and Egerton Manuscripts-MS 8097-NHM 92 Ban; BOT]

23. S.J. Brugmans (Leyden) to J. Banks (London); 25 February 1791

Until now Brugmans has not had the opportunity to send the dried plants, which Banks has ordered. He wants to avoid a possible impression of negligence. The guardian of Twenth's children has informed him about the decision to put the 'Twenth Herbarium' and the objects of natural history up for auction together. He has been told that the 'Herbarium' also includes the plants, which have been collected by Gaubius. He thinks that this collection has not been pillaged yet. He has decided to spoil the guardian's illusions on that point. This man is convinced that Gaubius himself did collect the plants, so he is not aware of its true value! Brugmans is well informed about their

history and meanwhile he knows that they have been preserved carefully. He thanks Banks for the presents sent to him and notifies him that he wants to enlarge his collection of comparative anatomy (especially through the acquisition of skulls of rare quadrupeds, whales and humans), which he has started recently. He is eagerly looking forward to the reception of human skulls of various nationalities. He assures Banks of his high esteem.

[BM-Additional and Egerton Manuscripts-MS 8097-NHM 92 Ban; BOT, ZOC, ANA]

24. S.J. Brugmans (Leyden) to J. Banks (London); 15 March 1791

Brugmans is very grateful to Banks for the fact that he has sent him an interesting object, collected by him in New Holland. The existence of a regular connection by boat between Rotterdam and London has made it possible for Banks to send this object through Dr. G.G. Ten Haaff (Rotterdam) to Leyden. Brugmans promises to inform Banks soon about the latest developments with respect to the 'Twenth Herbarium'.

[BM-Additional and Egerton Manuscripts-MS 8097-NHM 92 Ban; BOT, ZOC]

25. S.J. Brugmans (Leyden) to J. Banks (London); early October 1791

Brugmans shows his gratitude for the kangaroo skull he received at the end of May. The Twenth 'Herbarium' has been transported to Leyden last June, while he (Brugmans) was in Germany. On 22 September he returned to Holland. He has copied the pages of the auction catalogue referring to the Twenth 'Herbarium' and discusses its authenticity. He concludes that its descriptions have not been written by Linnaeus himself. They have been extracted from the *Hortus Cliffortianus*. So the 'Herbarium' is older than the 'Hortus'. Its quality is good and it contains almost every species described in the 'Hortus'. If necessary he is willing to inform Banks more precisely. He is looking forward to receiving his orders with respect to the maximum price of the purchase. Probably the auction will take place about mid-October. Meanwhile he has compared the kangaroo skull with the skull of *Didelphus asiaticus* described by Camper in the *Acta Petropolitana* and he shows his

enthusiasm about the perfect resemblance between these two skulls. He wonders if Didelphus is a marsupial too.

[BM-Additional and Egerton Manuscripts-MS 8097-NHM 92 Ban; BOT, ZOC]

26. J. Banks (London, Soho Square) to S.J. Brugmans (Leyden); October 1791

Banks thanks his colleague Brugmans for his efforts with regard to the acquisition of the 'Twelfth Herbarium' at the occasion of the forthcoming auction. If by chance this 'Herbarium' did not belong to Clifford himself, it must at least have been built up when the *Hortus Cliffortianus* still existed. If this collection contains all the species described for the first time in the 'Hortus' the cost price may not exceed a 1,000 guilders. If it does not Brugmans is allowed to pay 200 guilders at the most. Banks leaves this transaction completely to him and he is fully aware of the fact that he has to offer him a tangible compensation. Therefore he is willing to offer him a couple of objects from his own collection, objects of which he knows that Brugmans is interested in. Banks also gives instructions for the financial settlement and calls himself Brugmans's obedient servant.

[BM-Dawson Turner Correspondence 7-NHM 92 Ban-Botany Library; BOT, ZOC]

27. S.J. Brugmans (Leyden) to J. Banks (London); 16 April 1792

On the one hand Brugmans is very flattered by the fact that he enjoys Banks's confidence, on the other hand he is afraid that he will fail in his attempts to acquire the collection. In the 'Twelfth Herbarium' he has only found a small number of the species, which have been described as new ones in the *Hortus Cliffortianus*. He also had to change his opinion about the question of the identity of its author. Most likely Linnaeus himself has started the 'Herbarium'. Brugmans has succeeded in concluding the deal at the price of 240 guilders, put up by the city tax. Now he awaits further orders with respect to the shipping through Rotterdam. As the freight charges are still unknown, he is still ignorant of the total amount of money to be advanced in

behalf of Banks. The 'Herbarium' case can be resold. Perhaps the Clifford family is still holding back some of Linnaeus's manuscripts. Meanwhile he has started his investigations in that direction. He wonders if Banks will be interested. Banks's friendship will be his greatest reward. He underlines that he is more and more focussing on comparative anatomy and on natural history and once again he asks Banks to procure him a few specimens for the Leyden collection.

[BM-Additional and Egerton Manuscripts-MS 8098-NHM 92 Ban; BOT, ZOC]

28. S.J. Brugmans (Leyden) to J. Banks (London); 22 September 1793

Brugmans informs Banks that Mr. Van Maanen, a very talented and diligent student of Leyden University, who has studied medicine zealously for several years, intends to travel to England. Van Maanen has agreed to deliver a letter to Banks. Brugmans assures Banks of his deep esteem. He hopes that Banks allows him to recommend Van Maanen and that he will be so kind not to withhold his benevolence towards him. He asks his opinion with respect to the 'Twelfth Herbarium', which he has purchased for him about a year ago. He reminds him of his former promise to give him a few objects of comparative anatomy, or rather a couple of human skulls as a present. Van Maanen is willing to accept these objects on his behalf. Once more he expresses his feelings of highest respect.

[BM-Additional and Egerton Manuscripts-MS 8098-NHM 92 Ban; BOT, ZOC]

CHAPTER 4 - UNIVERSITY, RECTORSHIPS AND CAREER

Between his first professorate at Leyden University (1786) and the end of his life (1819) Brugmans, who was eager to play his role as a key figure within social and political webs, occupied himself with various fields of science and social life. In 1797 he accepted the rectorship of the University (the 'Hoogeschool') for the first time. He assumed his office by delivering a rectoral address entitled: 'Over eene verstandige en gematigde begeerte naar nieuwigheden, vooral de geneeskunst betreffende' ('On a sensible and moderate desire for novelties, especially with respect to medicine'). From 1811 until 1813 he held the rectorship again, in which period the 'Hoogeschool' was a branch of the 'Université Impériale de France'. As a consequence of the rapid political changes this appointment 'for life' only lasted until December 1813. His biographer Van der Boon Mesch observes that Brugmans only reluctantly accepted this appointment, a remark through which he has tried to varnish over Brugmans's heavy ponderous attitude towards his French superiors. In fact, Brugmans only wanted to carry off the best results for Holland. However his unquestioning obedience and loyalty to the French authorities is clearly shown by various letters, which have been preserved. In one of these documents the address, delivered by professor J.H. van der Palm on the occasion of the beginning of the academic year 1811-1812, is discussed. In the view of the supreme authority – the Duc De Plaisance (the 'Prince-Archtreasurer') – Van der Palm had spoken inflammatory words. On the other hand, it is also unjust to portray Brugmans as a precautious orangist, as has also been done in the past. In all his actions during the period of 1795 to 1813 he has shown himself to be a faithful adherent of the French authorities, who more and more got a grip on every aspect of the Dutch society.

In every well constructed biography the year 1811 plays a major role. In that year the institutions of higher education in the Dutch provinces were subjected to a thorough inspection by the French government. It soon became clear that a lot would change in Holland. As a result of Brugmans's efforts, Noël and Cuvier, the two envoys of the French emperor, who visited Holland in June 1811, advised in favour of the Leyden 'Hoogeschool' (Leyden University). All the same Brugmans

was worried about the outcome. Therefore he travelled to Paris, where he advocated the preservation of 'his' university. His attempt proved to be successful. Leyden became a branch of the 'Imperial University', while Groningen and Amsterdam were made secondary to Leyden. Besides the imperial government intended to close the 'hoogescholen' of Utrecht, Franeker and Harderwijk. These institutions were in the meantime classified as 'provincial institutions'. Several of its professors were transferred to Leyden, several others were dismissed. The governors of Leyden University were replaced by a 'Conseil Académique', composed of a small number of Leyden professors and a couple of superintendents. The administrative reorganization yielded five faculties: the faculty of theology, the faculty of medicine, the faculty of law, the faculty of arts and the faculty of mathematical and natural sciences. Adriaan van den Ende was appointed general inspector and was charged with the supervision of the 'hoogeschool'. He was assisted by the inspectors Jan Hendrik van Swinden and Carolus Sulpicius Flament. The Leyden 'Conseil Académique' made no problem about that reorganization and was eagerly willing to cooperate and to present itself as an unconditionally law-abiding institution.

On 3 November 1812, in the presence of the Duc de Plaisance, the festive opening of the academic year and of the renewed university took place in the 'Pieterskerk' in Leyden. At that occasion Brugmans delivered a solemn address, which – according to the majority of the audience – sounded far too pro-French.

After the members of the House of Orange had returned to Holland Brugmans fell into lenient disgrace. He was forced to resign and to abandon his rectorship. This was the necessary concession to an unconditional royal demand. Brugmans's colleagues expressed their regret about these events. On 16 December 1813 Johannes Mario Kemper succeeded Brugmans as Rector Magnificus of the university. He addressed himself to his friend in a kind way and with dignity. Only reluctantly and with a heavy heart Kemper had accepted his honourable appointment. He had been forced to follow His Majesty's orders. The documents prove that on 16 December 1813 Kemper had been informed about the fact that, according to the royal decree, his appointment had been implemented on 14 December. Kemper had an urgent need to relieve his feelings towards Brugmans.

Shortly before Brugmans had already written a letter to his friend, in which he notified him that he had already heard the news about Kemper's assignment, without having been informed previously about his own dismissal. Nevertheless he was truly happy about Kemper's appointment and he knew that he had to persuade him to accept it. Although Kemper, Van der Palm, Brugmans and many others had been patriots, there was a marked difference: More than the others Brugmans had taken an active part in the administration of the state, not only during the 'Batavian Republic', but also in more recent years. Naber (1909) emphasizes that Brugmans was absolutely convinced of the necessity of the annexation of Holland by the French empire ('Through this annexation the interests of Holland would be served in the best way!'). She adds that Brugmans was a most obedient servant of His Imperial Majesty the Emperor Napoleon Bonaparte.

Until 16 October 1815 Brugmans remained in disgrace. On that day he was rehabilitated and he was appointed professor in the faculty of mathematics and natural sciences. He was assigned to lecture botany, chemistry and natural history. This rehabilitation was inextricably bound up with the good services he had rendered to His Majesty King Willem I in the late summer and autumn of 1815, by fetching back to the Netherlands the Stadholder's 'Cabinet van natuurlijke historie' ('Cabinet of Natural History'), which had been stolen from the 'United Provinces' between 1795 and 1798, or actually by bringing home a replacing collection (see also chapter 12).

In January 1814 the 'Commissie tot het Ontwerpen eener Nieuwe Wet op het Hooger Onderwijs' ('Commission for the Design of a New Higher Education Law') made proposals to reorganize education once more. On 2 August 1815 this law was passed and it received royal assent. In the northern provinces of the Kingdom of the Netherlands, Leyden University became the prime institution among the three academies. The device became: 'Freedom of science and of its scholarly work as the sole guarantee for the revival of the national sciences!' In these plans the natural sciences were treated preferentially, because the government was convinced that they would contribute to the public interest. The realization of this desire and the outcome of the efforts resulting from it are clearly found in the activities of the 'Hollandsche Maatschappij der Wetenschappen' and in those of the

‘Eerste Klasse’ of the ‘Koninklijk Nederlandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten’, as is evident from the fact that His Majesty the King commissioned these societies – and especially the ‘Instituut’ – to advise him with respect to various research questions in the fields of technology, agriculture, civil engineering, chemistry and mining engineering.

29. S.J. Brugmans (Leyden) to J. Valckenaer (Madrid); 22 February 1798.

Brugmans apologizes for his delayed answer to Valckenaer, who has passed on his name to the Academy of Barcelona. He hopes that the addressee is able to give him more detailed information on the parcel, which he has sent with a certain Mr. Du Vilé. A couple of months ago he has seen Miss van Dam, the daughter of the recently deceased former secretary of the university. Meanwhile he has married her. He congratulates Valckenaer with his diplomatic successes. Fortunately the internal quarrels are finished meanwhile. He is also very happy about the fact that the faculty of medicine of Leyden University is attracting more and more students, although he realizes that the government has caused this increasing inflow by repressing Leuven. Furthermore he informs Valckenaer that in his course of chemistry he is paying special attention to the fact that England is causing much damage to the other nations as a consequence of the development of factories. He hopes that his friendship with Valckenaer will last.

[UBA Ba 110d; UNI, TEC]

30. S.J. Brugmans (Leyden) to J. Valckenaer (Madrid); 8 May 1798

From Valckenaer’s letter Brugmans has understood that his servant has arrived in Madrid and that he has informed him of his well-being. He congratulates Valckenaer on the fact that he has been called back to Holland. He is disappointed that the principles of social well-being are winning ground so slowly in Holland, although he is sure that they will prevail in the end. He expresses his sympathy towards Valckenaer about the unpleasantnesses caused to his brother by the editor of the ‘Fransche Courant’.

[UBL BPL 1037; UNI]

31. S.J. Brugmans (Leyden) to J.D. Pasteur (Dordrecht); 28 June 1799

Brugmans informs Pasteur that he will leave for Paris next Wednesday together with his wife, her maid and a servant. He wonders if Pasteur happens to know a suitable guesthouse, if possible with a view of the 'Tuileries' and offering at least three rooms. Of course Pasteur will understand why he wants to prepare this journey so well! Is it possible to see him next Saturday? He also passes a remark on the whale, which has been washed ashore in December 1791 near the village of Wijk aan Zee and which was slaughtered immediately by the villagers. Finally he expresses his best wishes to Mrs. Pasteur.

[UBA Ba 110e; UNI, ZOC]

32. S.J. Brugmans (Leyden) to M.S. du Pui (Leyden), G. Sandifort (Leyden), J.N.G. Oosterdijk (Leyden) and N. Paradijs (Leyden); 30 March 1805

Acknowledgement of receipt of a letter from the aldermen of Utrecht, concerning the case of a certain B. van Hoorn.

[UBL ASF 429; UNI]

33. S.J. Brugmans (Leyden) to H.M. King Louis Bonaparte (The Hague); 17 January 1807

In response to His request Brugmans informs His Majesty about the situation of the citizens of Leyden, who have been wounded as a consequence of the explosion of a vessel, loaded with gunpowder on 7 January 1807. Meanwhile they have found shelter in the military hospital. For the moment they are all doing fairly well, although one of the children died yesterday. Several buildings still have to be pulled down. If not, they will come down spontaneously and make new victims. The wounded are immediately transported to the hospital. The same goes for a couple of sick persons, which have been found in the uninhabitable houses. Brugmans begs His Majesty to accept his assurance that it is his most ardent desire to comply with the wishes and intentions of his beloved King. [originally written in French].

[AN CHAN AF IV 1727; MED]

34. S.J. Brugmans (Leyden) to C.G.C. Reinwardt (Amsterdam); 30 November 1809

By barge, Brugmans sends his colleague several drawings of bones, found by him in 1805 near Weurth (in the vicinity of Nymegen), after the breach in the dike of the river Waal. The drawings made by the late Andreas Conradus Bonn, the son of professor Andreas Bonn, show the head of an aurochs and the femur and tibia of an extinct elephant species. These drawings will help to keep the memory of the young and promising anatomist and friend alive. Brugmans himself is in the possession of several other elephant bones. In his view the depicted ones do belong to the Asiatic race. Last summer, he has only found a few molars of a horse. He asks Reinwardt to provide these drawings with the appropriate descriptions and to let him know if he possesses similar pieces. Of course his colleague knows already that Cuvier has meanwhile discussed the Aurochs bones in the 'Annales du Muséum' (part 12). He allows his colleague to use his drawings for a lecture next Saturday, which – regrettably – he is not able to attend himself. He hopes to see him again soon.

[UBL BPL 609 II; ZOC, GEO]

35. S.J. Brugmans (Leyden) to E.J. Thomassen à Thuessink (Groningen) 4 December 1810

Brugmans expresses his concern about the fate of the universities. He has not been informed of the future dispositions with regard to the promotions at the universities of Leyden and Groningen and he is afraid that this will influence the behaviour of the students in a negative way, among others because of the conscription and drawing ('loting') for the army. However the introduction of the new organization (of the universities) will most likely not cause too great changes, certainly not before the commissioners from Paris have examined every Dutch institution. As soon as he has been informed more closely he will report on it. Furthermore he is struck by the sudden death of professor J. Mulder and worries about the future of his cabinet: some objects will surely find buyers. He himself would like to borrow the crocodile

skeleton, which has been given on loan by Dr. Versteegh. He wishes Thuessink's father a quick recovery and hopes that Thuessink himself will recover too. Brugmans and his family are doing well, although his brother in law Boers is ailing for some time now.

[IDF Ms 2457; UNI]

36. S.J. Brugmans (Leyden); Imperial decree; 22 October 1811

Brugmans – rector of Leyden University – signs an imperial decree, formulated by the Minister of the Interior on behalf of the Emperor Napoleon Bonaparte. It is about the public education in Holland. [originally written in French].

[UBL ASF 278; UNI].

37. S.J. Brugmans (Leyden) to Georges Cuvier (Paris); 8 November 1811

Brugmans reminds Cuvier that he has received many letters recently and drops hints regarding his trip to Holland, in connection with the reorganization of the public education system in Holland. He recommends Van Bemmelen and Milies for a professorship: Van Bemmelen for mathematics and Milies for the classical languages. [originally written in French].

[IDF Ms 3233-1; UNI].

38. S.J. Brugmans (Leyden) to Rosman (The Hague); 14 January 1812

Brugmans thanks Rosman, chief of the 'Comptabilité générale' ('Treasury') of the Ministry of the Interior, for the honouring and amiable reception in 1811 and reminds him that some time ago he has already explained the very unfavourable financial situation of the university. He also recalls the possible positive influence of his remarks on the decisions yet to be made by His Imperial Majesty. He stresses that to a certain extent they have the power to fix the attention of His Majesty and of the Minister of the Interior on the financing of the Leyden institutions.

[UBL BPL 2776; UNI].

39. N. Paradijs (Leyden) to S.J. Brugmans (Leyden), G. Sandifort (Leyden), J.N.G. Oosterdijk (Leyden) and M.S. duPui (Leyden); 9 February 1812

As a consequence of rumours about the break off of the peace treaty between France and Russia, N. Paradijs suggests Brugmans to sell the Russian bond, which is in the possession of the Faculty of Medicine. In a note on this letter Brugmans reveals that he is not sufficiently aware of the 'pros' and 'cons'. Therefore he leaves the decision to the dean of the faculty – Sandifort while Oosterdijk and DuPui have made the marginal note that they want to sell.
[UBL ASF 429; UNI]

40. S.J. Brugmans (Leyden) to A. Thouïn (Paris) and A.G. Bosc (Paris); 17 February 1812

Today two young Dutch physicians – Van Breda junior and Van Heynsbergen – are leaving for Paris, in order to study there and to complete their knowledge. They have promised to deliver this letter. Brugmans hopes that they will receive a warm welcome and that they will be served well. He reminds his colleagues of his agreeable stay in Paris, last year and also of Thouïn's agreeable company, a sojourn, which meant the renewal of a friendship of many years. Once again, he complains about the unsecure destiny of the university. He expects that the new obligations to be laid down on it by Cuvier and Noel will be considerable, although they have dedicated themselves to Leyden. Holland has expected much of these gentlemen! He emphasizes that he will go on striving for the enlargement of the financial means for the purpose of teaching of natural history. He asks his colleagues to send him the species marked on the list of seeds, which Thouïn has sent him. Perhaps it is possible to annex this parcel to the parcels which are sent almost daily from Paris to the plenipotentiary minister or to the Arch-Treasurer. He asks Thouïn to show his friendly feelings towards Reinwardt, who really has a high esteem of him. [originally written in French].
[MNHN Ms 1985; UNI, MED, COB]

41. S.J. Brugmans (Leyden) to A. Thouïn (Paris); 18 February 1812

After a delay, Brugmans hurries to pass his favourable judgement on Thouïn's young protégé. Thouïn has recommended him for an appointment in the Leyden military hospital. In Brugmans's view this recommendation will be too risky, because he does not know yet if the hospital will be maintained in Leyden. Therefore he suggests applying for a job at the Amsterdam hospital. After having tested the young man he has urged him to devote himself to the study of chemistry. Once more he reminds Thouïn of his agreeable stay in Paris and underlines the still unknown future of Leyden University. He warmly recommends the bearers of this letter – Van Breda junior and Van Heynsbergen – and he adds a copy of the catalogue of the library written by Jeronimo de Bosch (1740–1811). He assures Thouïn of his deepest feelings of esteem and devotion and finally asks him to convey his greetings to several friends. [originally written in French].

[GNM Nbg Arch. Autogr. K 37; MME, UNI, ART]

42. C. Flament (The Hague) to S.J. Brugmans (Leyden); 22 July 1812

Flament – member of the 'Conseil Académique' of Leyden University – is very pleased that Brugmans has sent him three academic yearbooks. Besides, he has received a letter from their mutual friend Bachalter (Brussels), who has asked him to remind Brugmans of the former ties of friendship for which he is still very grateful. He ends his letter by expressing his feelings of respect and devotion and calls himself Brugmans's very humble and very obedient servant. [originally written in French].

[UBL AC 651; UNI]

43. S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 17 August 1812

Brugmans (rector of the University) notifies the Dean, that the 'Grand-Mâitre de l'Université Impériale' has requested him to execute the decrees of 11 December 1808 and 15 November 1811. The governors have been ordered

to send in summaries of all the goods they administer. Brugmans has been ordered to give account for it. [originally written in French].

[UBL ASF 482; UNI]

44. S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 5 October 1812

The opening of the academic year is near. Brugmans reminds the Dean of the fact that the scheme of classes has to be published. This order only concerns the public lessons, which – according to a statutory requirement – have to be taught free of charge by the professors, lecturers and assistants. [originally written in French].

[UBL ASF 482; UNI]

45. Deans of the Faculties (Leyden) to S.J. Brugmans (Leyden); 7 October 1812

On behalf of all their colleagues, the Deans ask Brugmans to inform the ‘Grand-Maître de l’Université Impériale’ about their wishes and needs. This demand especially concerns the decision of the ‘Conseil Académique’ with respect to the budget for the next academic year. Unfortunately they are obliged to accept the fact that their former annual salary will be lowered by 25 percent. This information has led to a crisis of confidence. Besides, the salaries have not been paid in time. The professors are counting on Brugmans’s support. [originally written in French].

[UBL ASF 431; UNI]

46. G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 13 October 1812

Sandifort, the dean of the Faculty of Medicine notifies Brugmans that his Faculty owns neither properties nor capital in the sense meant by him (see his demand, dated 12 August 1812), a conclusion which – in Sandifort’s view – relieves the faculty of the obligation of entering a specified statement. [originally written in French].

[UBL ASF 431; UNI]

47. C. Flament (The Hague) to S.J. Brugmans (Leyden); 2 November 1812

Flament sends his written oath, in accordance with the formula approved by Brugmans. He asks him to add it to the oath written by Brugmans himself and to the one written by Van Swinden and to convey these documents to Van den Ende. He assures him of his feelings of esteem and solidarity. [originally written in French].

[UBL AC 651; UNI]

48. S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 6 November 1812

Brugmans draws attention to the problem that the students have not been instructed sufficiently with regard to the rules of enrolment. This registration has to take place before 15 November 1812. The students have to be urged to do so during the first lecture. If not, they cannot be admitted. [originally written in French].

[UBL ASF 482; UNI]

49. S.J. Brugmans (Leyden) to A. van Stipriaan Luïscius (Delft); 7 November 1812

Brugmans, in his function as professor of botany, chemistry and natural history at Leyden University, affirms that from 1810 to 1812, J.Fr. Mens (born in Breda) has diligently attended his lessons in chemistry, botany and natural history. [originally written in French].

[UBA 4 Bz 1; UNI, CHE, BOT, ZOC]

50. G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 11 November 1812

On behalf of the deans of the faculties, Sandifort complies with the request of the Rector to inform him about the contents of the private lessons. He assures that these lessons have been organized according to the regulations in force. Until now, they have been delivered by the leading professors. They

will continue their lessons, of course except for him as a rector and except for the professors Boers, Te Water and Sandifort. Every professor is willing to dedicate himself to the improvement of the teaching and to the advancement of the sciences. By doing so, their names will be linked forever to the famous 'Imperial University'. [originally written in French].
[UBL ASF 431; UNI]

51. S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 15 November 1812

Brugmans refers to the decree of 18 March 1808 regarding the obligation of students to enrol for a minimal number of lessons at the price of three francs each (per trimester). These sums have to be paid at the beginning of each trimester. [originally written in French].
[UBL ASF 428; UNI]

52. S.J. Brugmans (Leyden) to A. van Stipriaan Luïscius (Delft); 17 November 1812

Brugmans informs his friend Van Stipriaan Luïscius that he really cares for his well-being, although there are limits to his possibilities to serve him. He lacks the influence to recommend him successfully for the vacant professorate. Driessen (already teaching chemistry at Groningen University for about 16 years) is the first to be recommended. He counts on Van Stipriaan's understanding and observes that the governors are probably going to choose the most suitable person. Soon he will pay him a visit. He asks to send him various objects of natural history. [originally written in French].
[UBA 4 Bz 2; UNI, CHE, BOT, ZOC]

53. G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 18 November 1812

The dean of the faculty of Medicine informs Brugmans that the students will be obliged to attend all public lessons. He is convinced that the first-year students should attend lessons of mathematics, experimental physics, Latin and

logic; this instruction is needed as a foundation for further studies. [originally written in French].

[UBL ASF 431; UNI, PHY]

54. S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 24 November 1812

Brugmans emphasizes how important it is for the students to attend their lessons diligently. It's his duty to have their presence controlled. He supposes that the dean is paying special attention to this point. He wants to be informed quarterly about the diligence shown by each student. He also demands the regular sending of rolls of attendance before a new trimester starts. [originally written in French].

[UBL ASF 482; UNI]

55. S.J. Brugmans (Leyden) to M. Tydeman (Leyden); 25 November 1812

Brugmans asks Tydeman to contribute weekly to the 'fire night watch' of the 'Hof van Zessen', which is going to be set up soon. He would like to receive Tydeman's answer before the evening falls, because within a few hours he has to report on this subject. He assures him of his feelings of esteem and calls himself his obedient servant. He observes that the highest rate of contribution has been determined on three pennies a week. He has decided to enrol Tydeman for that sum. [originally written in French].

[UBL BPL 945; UNI]

56. G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 28 November 1812

The dean of the Faculty of Medicine answers the rectorial letter sent on 4 November 1812, regarding the decision made by the 'Grand-Maître de l'Université Impériale' with regard to the candidates of the faculty. He asks the addressee to argue strongly in favour of a certain student, who has run into problems by the recent changes of the regulations. To be entitled to bear

the title of Medicinae Doctor, this student only has to do one more exam.[model letter, originally written in French].

[UBL ASF 431; UNI, MED]

57. S.J. Brugmans (Leyden); Proceedings of the ‘Conseil Académique’: 3 December 1812

In the protocol of the first session of the ‘Conseil Académique’, Brugmans reports on the appointments of its members. He himself has been nominated president, while Van Swinden and Flament will be functioning as inspectors. The deans Boers, Van der Keessel, Van der Palm and Kemper are its members. All of them, except for Van der Keessel (who was not present) have accepted their nomination. The ‘Conseil’ has been divided into several sections, each with its own president. Furthermore, during the session of 30 October 1812, decisions have been made about the duties of Van Swinden and about the function of the inspector general for the ‘Imperial University’, whose name has not been mentioned yet. [originally written in French].

[UBL ASF 278; UNI]

58. S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 9 December 1812

Brugmans informs the addressee about the next deliberations on the budget and on its necessary approval by the ‘Conseil Académique’. He asks to send him the detailed budget for 1813 as soon as possible. [originally written in French].

[UBL ASF 482; UNI]

59. S.J. Brugmans (Leyden) tot the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 12 December 1812

Brugmans – acting as chancellor rector of the university – reports that he has been ordered to send him the complete list of names of all the professors and refers to article 99, title 12 of the decree of 17 March 1808. [originally written in French]

[UBL ASF 482; UNI]

60. G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 16 December 1812

The Faculty of Medicine has taken notice of the report on the village surgeons, who have passed their exam for pharmacist. It has been considered very advisable that the medical officers of the army should be enabled to practise both professions, as has been the case until now (under the condition that they take their exam in pharmacy). Brugmans underlines that the 'Jury Médical' has been given the task to examine the village surgeons, who are allowed to supply drugs, annually. It has also been determined that in the cities the functions of *medicinae* doctor, surgeon and pharmacist will remain separated. [originally written in French].

[UBL ASF 482; UNI, MED, PHA]

61. G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 16 December 1812

Sandifort discusses the distribution of the yields of the enrolments, lessons, exams and receptions, which have to find their way back to the purse of the university. The professors of the faculty will have to propose the distribution and spending of these revenues. He also discusses the problems related to the students, who are coming from the *athenaea* of Amsterdam and Utrecht and who want to acquire their degree. He underlines the problematic combination of the large intake of students and the modest budget. He expresses his gratefulness for the gifts, which His Imperial Majesty has already assigned to the various institutions of the Academy. He urgently suggests Brugmans to recommend the Faculty of Medicine to the attention of the 'Grand-Maître', among others because of the increasing problem of the salaries and the difficulty caused by the obligation to change private lessons (which are paid for by the students) into public lessons, which have to be delivered free of charge. [originally written in French].

[UBL ASF 431; UNI]

62. G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 16 December 1812

Sandifort underlines that the Faculty of Medicine is very pleased by the fact that Brugmans (chancellor of the university) is also one of the professors of his faculty and that he (Sandifort) has been appointed secretary. He asks him to convey this message to the 'Grand-Maître'. [originally written in French].

[UBL ASF 431; UNI, MED]

63. G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 18 December 1812

Sandifort presents the budget of the Faculty of Medicine for 1813, which is a part of the budget of the university. Again he discusses the problem of the intake of students coming from the other faculties of medicine in the country (Amsterdam and Utrecht), who are only intending to obtain an enrolment and to become Doctor of Medicine or surgeon. The budget is really insufficient for maintaining the collections and the buildings. Therefore the Emperor has made a donation to the university. Of course the Faculty of Medicine wants to receive its share of that gift. [originally written in French].

[UBL ASF 431; UNI, MED]

64. S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique'; 20 December 1812

In the protocol of the second session of the 'Conseil Académique' Brugmans reports on a scholarship allowed to a student and on the request made for a sum of 90 guilders for the benefit of the poor inhabitants of the village of Warmond. He advises how to deal with it. [originally written in French].

[UBL ASF 278; UNI]

65. S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 28 December 1812

Brugmans reports on the discussions with regard to the budget for 1813 and on the underlying objectives. The 'Conseil Académique' understands the

necessity and the possibility of utmost thrift, without damaging the needs of the university. Being its rector, he is responsible for the correct design and lay-out of the budget document, which has to be sent to the 'Grand-Maître de l'Université Impériale'. [originally written in French].

[UBL ASF 278; UNI]

66. S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 5 January 1813

Through his letter, dated 19 December 1812, the 'Grand-Maître' has sent his instructions with regard to the private lessons. Thereupon Brugmans has informed him that Leyden University does not have the means to suppress such lessons. Now he has been ordered to communicate that such lessons are not allowed to interfere with the public lessons. It is his duty to check if the obligatory subjects are taught, yes or no, and to verify if the subjects, which do not fit in the public lessons, are taught in the private lessons. [originally written in French].

[UBL ASF 482; UNI]

67. S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 9 January 1813

Ypey's inauguration at Leyden University, originally planned for 11 January 1813, has been postponed to 18 January. Brugmans asks the dean to inform all the professors about this change of plan. They all have to appear in 'grand tenue'. [originally in French].

[UBL ASF 482; UNI, MED]

68. S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 12 January 1813

The 'Grand-Maître de l'Université Impériale' has appointed A. Ypey, former full professor of pathology and theoretical medicine in Franeker, in the same function at Leyden University, to replace the recently deceased Paradijs. Ypey's inauguration will take place in the large room of the 'Conseil

Académique'. The 'Grand-Maître' invites all the professors to attend this event. [originally written in French].

[UBL ASF 482; UNI, MED]

69. S.J. Brugmans (Leyden) to the Deans of the Faculties (Leyden); 21 January 1813

On 12 January 1813 the 'Grand-Maître' has appointed Mr. Le Pileur (Leyden) new secretary of the university. Today he has taken up his duties. [originally written in French].

[UBL ASF 482; UNI]

70. S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique'; 1 February 1813

In the protocol of the fifth session of the 'Conseil' Brugmans reports that Le Pileur has been appointed its new secretary. Meanwhile, A. van den Ende has been appointed inspector-general of the 'Imperial University' (of Holland). Brugmans is going to make a proposal to the 'Grand-Maître' with regard to the holidays. [originally written in French].

[UBL ASF 278; UNI]

71. S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique'; 15 February 1813

In the protocol of the sixth session of the 'Conseil Académique' the president reports that the 'Grand-Maître' has complied with the demand of Van der Keessel to be discharged as a member of the 'Conseil'. On its behalf Brugmans makes a proposition for his replacement. Furthermore he makes remarks with regard to the police and to the arrangements of the holidays. [originally written in French].

[UBL ASF 278; UNI]

72. S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique'; 1 March 1813

In the protocol of the extraordinary meeting of the first and second section of the 'Conseil'Académique' Brugmans proposes to give a one-off grant to His Imperial Majesty as a token of their love for the empire, because it is extremely short of money. Each of the professors has agreed with a contribution in proportion to their annual salary. [originally written in French].

[UBL ASF 278; UNI]

73. S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique'; 1 March 1813

In the protocol of the seventh session of the 'Conseil Académique', Brugmans discusses the plan of a gift to be made to His Imperial Majesty, which has been made in the session of the first and second section of the 'Conseil'. Now he reports on the outcome of the poll amongst the professors. He has read the first draft of a letter, which in his view the professors should send to His Imperial Majesty as 'His very humble and obedient servants'. [originally written in French].

[UBL ASF 278; UNI]

74. S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique'; 29 March 1813

In the protocol of the ninth session of the 'Conseil' Brugmans reports that he has received a letter from the 'Grand-Maître de l'Université Impériale', in which he proposes to assign to Van der Keessel the title of honorary councillor. He reports on the approval of the holiday-arrangements. [originally written in French].

[UBL ASF 278; UNI]

75. S.J. Brugmans (Leyden) to the Deans of the Faculties (Leyden); 24 April 1813

On 15 April 1813 the 'Grand-Maître' has sent a letter to Brugmans with regard to the beginning and the end of the academic courses. This decree has to be carried out. [originally written in French].

[UBL ASF 482; UNI]

76. S.J. Brugmans (Leyden): Proceedings of the ‘Conseil Académique’: 26 April 1813

In the protocol of the eleventh session of the ‘Conseil’ Brugmans discusses the holidays and the assignment of the ‘Ordre de la Réunion’ in the presence of all the professors. [originally written in French].

[UBL ASF 431; UNI]

77. S.J. Brugmans (Leyden) to the Deans of the Faculties (Leyden); 30 April 1813

Brugmans discusses the decree of the ‘Grand-Maître’ regarding the holiday arrangements and the obligation of the professors to teach the required subjects of their courses completely. He suggests two solutions to the problem of lack of time and points at the consequences of contraventions to these obligations. [originally written in French].

[UBL ASF 482; UNI]

78. J.N.G. Oosterdijk (Leyden), M.S. DuPui (Leyden) and A. Ypey (Leyden) to S.J. Brugmans (Leyden); 5 May 1813

The financial administrator of the ‘Nosocomium Academicum’ has reported that the food supply in this hospital is running the risk of being cut off because of the arrears of payment. The suppliers, still delivering food, may possibly stop these deliveries. Brugmans has to intervene, in order that the instruction to be given in this hospital will be guaranteed. Perhaps Brugmans is able to convince the suppliers that they will be paid soon. The interest of the Faculty of Medicine is at stake! The authors of the letter are convinced that Brugmans will try to prevent the interruption of the courses. [originally written in French].

[UBL AC 654; UNI, MED].

79. Dean of the Faculty of Medicine (Leyden) to S.J. Brugmans (Leyden); 5 May 1813

Sandifort, Dean of the Faculty of Medicine, thanks Brugmans for the rectorial letter of 30 April 1813 to the faculty members. They have asked him to inform Brugmans about their ambition to keep to the rules with regard to the conclusion of their lessons in time. As a consequence they have decided to raise the number of lessons a week. [originally written in French].
[UBL ASF 431; UNI, MED]

80. S.J. Brugmans (Leyden) to the Deans of the Faculties (Leyden) 28 May 1813

The 'Grand-Maître' has given his consent to all planned and proposed lessons for the academic year of 1813. Now the deans have to come to an agreement with the professors of their faculties. Brugmans wishes to receive the detailed faculty schedules without delay. The same demand goes for the private lessons. These have to be clearly separated from the public ones. He underlines the right of the students to attend the lessons. The 'Grand-Maître' has also made clear what he wants to be arranged with respect to the classes of French literature. [originally written in French].
[UBL ASF 431; UNI]

81. S.J. Brugmans (Leyden) to the Deans of the Faculties (Leyden); 30 May 1813

As chancellor of the university, Brugmans wishes to be informed about the full family names, christian names, titles and functions of all those, who are employed by the university. This list also has to bear the name of Fas, lecturer of the Faculty of Mathematics and Natural Sciences. The arrears of salaries will soon be paid. [originally written in French].
[UBL ASF 482; UNI]

82. J.H. van Swinden (Amsterdam) to S.J. Brugmans (Leyden); 5 June 1813

Van Swinden has distributed the tables, recently received from Brugmans, among his colleagues. He hopes to return them next week, fully filled in. To his pleasure he has learned that Brugmans has been able to balance several

expenses already made in 1812 and that his colleagues will receive at least their wages due for the third trimester of 1812. He hopes that Brugmans's efforts on behalf of the professors, who have been appointed recently, will end successfully. They are much to be pitied. He asks his friend to convey his respectful greetings to his wife and assures him of his sincere feelings of respect.

[UBL AC 651; UNI]

83. G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 6 June 1813

Sandifort sends the text of the agreement made in consultation with the faculty professors, regarding the intended numbers of public and private lessons for the next academic year. The days of the week and the hours of the days are settled, aside from possible rearrangements, to enable students to follow the lessons of Latin and French language and of literature as well. [originally written in French].

[UBL ASF 431; UNI]

84. S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique'; 8 June 1813

In the protocol of the fourteenth session Brugmans discusses the budget of the university, put aside for architectural (structural) maintenance and repairs during this academic year. Several repairs are urgently needed, because otherwise the damage will become too severe and even injuries may occur. He particularly mentions the deplorable condition of the orangery. These repairs at the expense of the university budget require the approval of the 'Grand-Maître'. He is supposed to be of the same opinion as the members of the 'Conseil'. So the 'Grand-Maître' has to reconsider the budget. [originally written in French].

[UBL ASF 278; UNI, BOT]

85. S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique'; 24 June 1813

Brugmans reports on the fifteenth session. Because the holidays of the 'Conseil' and the academic holidays do not coincide, he has asked if its meetings are also necessary during the holidays. It has been decided that these sessions will only be held if urgent questions have to be discussed. [originally written in French].

[UBL ASF 278; UNI]

86. S.J. Brugmans (Leyden) to the Deans of the Faculties (Leyden); 5 July 1813

Brugmans is busy preparing a general report for the 'Grand-Maître' on the results of the students. He asks the deans to send him a review of their faculties. He hopes that they will provide concise information with respect to the dedication and diligence of the students. He wants to know to what extent the faculties have been able to realize the intended policy. [originally written in French].

[UBL ASF 482; UNI]

87. S.J. Brugmans (Leyden) to M. Tydeman (Leyden); 8 July 1813

Brugmans, knight of the 'Legion d'Honneur', knight of the 'Ordre de la Réunion' and chancellor of the 'Académie Impériale' of Leyden, sends Professor Tydeman – in charge with the publication of the catalogue of the university library – a copy of the library catalogue of the 'Hoogeschool' of Harderwijk, inviting him to make his choice from it in behalf of the Leyden library. He asks him to answer his letter by return and assures him of his strongest feelings of esteem.

[UBL BPL 2107; UNI]

88. A. van den Ende (Haarlem) to S.J. Brugmans (Leyden); 14 July 1813

The inspector-general of the 'Université Impériale' informs Brugmans about the execution of the decrees of the 'Conseil Académique'. [originally written in French]

[UBL ASF 278; UNI]

UNIVERSITÉ IMPÉRIALE.

ACADÉMIE DE LEIDE.

Leide, le 8^e Juillet 1813

Le Chevalier de la Légion d'Honneur et de l'Ordre
Impérial de la Réunion; Recteur de l'Académie de Leide,

à Monsieur le Professeur M. Tydeman

Chargé de la rédaction du Catalogue de la
Bibliothèque.



Monsieur.

J'ai l'honneur de vous faire parvenir le Catalogue de la Bibliothèque de l'Académie Supprimée de Harderwijk, et de vous inviter à en extraire les articles qui paraissent manquer à la Bibliothèque de Leide.

Veuillez me communiquer ce travail le plus tôt possible, et recevoir l'assurance de ma considération parfaite.

Le Recteur Suppléant.

Brugmans.

B.P.L. 2707

89. M. Tydeman (Leyden) to S.J. Brugmans (Leyden); 16 July 1813

Tydeman returns the catalogue of the library of the 'Hoogeschool' of Harderwijk, in which he has marked the titles of the books he wants to receive for the university library. He hopes that Brugmans is satisfied and assures him of his feelings of esteem.

[UBL BPL 2107; UNI]

90. Dean of the Faculty of Medicine (Leyden) to S.J. Brugmans (Leyden); 6 September 1813

Sandifort informs the chancellor of the university that Krauss (professor of pathology and therapy) has lost much time because a modern Latin textbook of therapy is not available. Therefore Krauss asks permission for a weekly printing of a couple of pages, presenting statements, to be explained during the lessons. He fears to be obliged to subject these texts to a previous censorship, which could possibly slow down the printing process. [originally written in French].

[UBL ASF 431; UNI, MED]

91. Dean of the Faculty of Medicine (Leyden) to S.J. Brugmans (Leyden); 6 September 1813

Sandifort asks Brugmans to allow the student Mommeijer (from Zolder, Belgium) a year's leave. He argues the approval of this demand – giving details of Mommeyer's results and draws the attention to positive decisions, previously made by the 'Grand-Maître'. [originally written in French].

[UBL ASF 431; UNI]

92. C. Flament (The Hague) to S.J. Brugmans (Leyden); 30 September 1813:

Flament thanks his colleague for being so kind to inform him about the next session of the 'Conseil Académique'. Although he is always coming to Leyden with pleasure and his rheumatism will probably be over, he will have to stay at home. Le Pileur has told him that he has been appointed secretary

of the university. He kindly asks Brugmans to accept the assurance of his feelings of regard and alliance. [originally written in French]
[UBL AC 651; UNI]

93. S.J. Brugmans (Leyden): Proceedings of the ‘Conseil Académique’: 5 October 1813

In the protocol of the first session of the second year of the existence of the ‘Conseil’ Brugmans reports that the new academic courses have got off to a good start. At that occasion Van der Palm has delivered a speech. He gives some information regarding the budget and makes a few remarks on the letter sent on 12 April to the ‘Grand-Maître’, relative to the expenses of the university and to the reception of a letter sent by Van den Ende, dealing with the execution of the decisions, made by the ‘Conseil’. Furthermore he makes a proposal concerning the maintenance of discipline, he discusses the question of punishable acts committed by students outside the university buildings and points at the decrees, which apply to these acts, by reminding his colleagues of the task of the ‘Imperial Procurator’. [originally written in French].
[UBL ASF 278; UNI]

94. S.J. Brugmans (Leyden) to the Deans of the Faculties (Leyden); 7 October 1813

Brugmans proudly communicates a summary of the letter sent to him by the ‘Grand-Maître’ on 27 September 1813, with regard to the yield of the enrolment and to the way it has to be spent. The deans of the faculties have to turn the revenues of the enrolments over to the university. They also have to register these sums on duplicate lists. Brugmans adds a copy of these forms to his letter. [originally written in French].
[UBL ASF 482; UNI]

95. Dean of the Faculty of Medicine (Leyden) to S.J. Brugmans (Leyden); 19 October 1813

On behalf of the students, who have presented themselves after the beginning of the academic year, Sandifort asks Brugmans to explain article 29 of the

decree of 20 Prairial an 11 (9 June 1803). Each of the students already possesses a certificate, proving that he has been training in a hospital as has been mentioned in the certificate. They have made a request to be exempted from the enrolment. Only the 'Grand-Maître' is authorized to grant this release. The dean explains the provisional arrangement made by him. He asks the rector to convey this request to the 'Grand-Maître'[originally written in French].

[UBL ASF 431; UNI, MED]

96. G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 19 October 1813

The faculty professors have taken notice of the request addressed to the 'Grand-Maître' in 1812, by J.Fr. Reiche, 'aide-major'. Since a certain article does not apply to him, his request to be enrolled has to be rejected. However another article allows him to make a request to be exempted from being enrolled, although he has to submit himself to the exams. [originally written in French].

[UBL ASF 431; UNI, MED]

97. C. Flament (The Hague) to S.J. Brugmans (Leyden; 20 October 1813

Flament announces that a student of law is going to make a request to Brugmans, in which he asks permission for a fortnight's leave. Flament has already rejected this request. Actually it has been made by Baron van Heekeren, who wants to give this student a job in his forestry office. After having spent a few words on each other's well-being, he wishes him all the best and God's blessings as well and assures him of his permanent feelings of attachment. [originally written in French].

[UBL AC 651; UNI]

98. S.J. Brugmans (Leyden) to the 'Grand-Maître de l'Université Impériale' (Paris); shortly after 23 October 1813

Brugmans objects against the disapproval, which De Fontanes ('Grand-Maître de l'Université Impériale') has expressed of the speech delivered by Van der

Palm at the occasion of the start of the new academic year. Brugmans asserts him that this professor has never before caused any complaints. For once, his behaviour has to be considered awkward; it wasn't meant badly! He promises to make further inquiries about the contents of the speech and about the political ideas of the professors. He emphasizes that at the time the 'Prince-Architrésorier' has given his consent at the maintenance of the constitution of the corps of professors. He promises not to be afraid of taking the measures needed to stimulate the love for the Emperor, especially not insofar as they have been required by the 'Imperial Université Impériale'. [originally written in French].

[CHAN AJ 16-1; UNI]

**99. S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique':
15 November 1813**

In his protocol of the fourth session of the 'Conseil' Brugmans reports that Sandifort is not able to fulfil his duties in its accountancy section. Kemper will replace him. Thereupon, the revenues and expenses have been discussed. The accountancy section will report on it. [originally written in French].

[UBL ASF 278; UNI]

**100. S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique':
22 November 1813**

In this ordinary session the report of the accountancy section, dated 17 November 1813, has been discussed and has been found in order. The 'Conseil' decides that Brugmans has to be thanked for his wise administration, an administration which absolutely has to be continued. It is especially his merit that all the buildings of the university are in a better condition now and that the budget has been managed efficiently and economically. The protocol has been signed by Van Swinden, Boers, Van der Palm and Kemper. [originally written in French].

[UBL ASF 278; UNI]

101. S.J. Brugmans (Leyden) to the Rector of the University (Leyden); 28 April 1814

Brugmans sends his report, made up by the architect of the university – with regard to the necessary repairs of the orangery – to the new rector and pleads its execution. Any postponement will lead to further damage and will also endanger many plant species. He underlines that during the last three years the number of cultivated species has increased by 30%.

[UBL AC 651; UNI, BOT]

102. S.J. Brugmans (Leyden) to the governors of the university (Leyden); 15 November 1815

Brugmans wants to be informed about the building, where the Stadholder's cabinet of natural history will be stored, which – after some delay – will arrive soon. [Within a few days the governors will decide to store the collection on its arrival in the 'Hof van Zessen' and that the books, being a part of the collection, will be taken to a good shelter. Therefore they allow Professor Wytttenbach to occupy another room in that building, suited for giving lectures].

[UBL AC II-1; UNI, ZOC, GEO, COB]

103. S.J. Brugmans (Leyden) to the governors of the university (Leyden); 16 November 1815

Once again Brugmans sends a reminder to the governors. An amount of 14.000 guilders is needed for the construction of cupboards [This sum is accepted and is added to the annual budget of the university]. He also informs them about the fact that meanwhile the Stadholder's collection of natural history has left Rouen by ship. Provisions have to be made to accommodate the treasure properly after its arrival in the Netherlands.

[UBL AC II-1; UNI, ZOC, GEO, COB]

104. S.J. Brugmans (Leyden) to the governors of the university (Leyden); shortly before 29 December 1815

Brugmans has informed the governors D'Escury van Heinenoord and Helderwier that he wishes Breitenbach to be appointed custos. This man had been discharged from that post in 1795. He even wants to give him a temporary job at the 'Groot Militair Hospitaal', until a final decision will have been made.

[UBL AC II-1; UNI, MME, ZOC]

**105. S.J. Brugmans (Leyden) to the governors of the university (Leyden);
16 February 1816**

Just like J.W. te Water has done, Brugmans requests to be allowed a bonus because of his thirty years' jubilee as a professor.

[UBL AC II-2; UNI]

**106. S.J. Brugmans (Leyden) to the governors of the university (Leyden);
about 6 June 1816**

Brugmans offers the drafts of the extension of the botanical garden to the governors of the university and suggests to allow him 7.000 guilders (initially by granting a monthly sum of 500 guilders). He knows that the governors have decided to reserve this sum from the amount of 13.000 guilders, which His Majesty has granted for the equipment of the natural history cabinet. Besides, he asks them to allow him 750 guilders to be spent for the cabinet and 730 guilders to be spent for the 'Hortus Botanicus'.

[UBL AC II-2; UNI, BOT, ZOC, COB]

**107. S.J. Brugmans (Leyden) to the governors of the university (Leyden);
17 July 1816**

Lately, Brugmans has spent much time and has paid much attention to the cabinet of natural history. He has succeeded in combining this collection with those objects, which might be subservient to the knowledge of the natural history of our country. He asks the governors of the university to support his efforts to obtain objects (plants, animals and minerals) from Java, aimed at the enrichment of the academic collections.

[UBL AC II-2; UNI, ZOC, COB, MIN]

108. S.J. Brugmans (Leyden) to the governors of the university (Leyden), 31 August 1816

After he has been given a mandate to spend 7.000 guilders on the manufacturing of cabinets for the purpose of the collection of natural history, Brugmans wants to receive the remaining sum of money, earmarked for the collections, the botanical garden and the lessons of chemistry.

[UBL AC II-2; UNI, ZOC, COB, BOT, CHE]

109. S.J. Brugmans (Leyden) to the governors of the university (Leyden); early October 1816

Brugmans underlines the importance of adding the grounds of the City rampart to the present 'Hortus Botanicus'. He knows that the municipality of Leyden has the possibility to convey the full ownership of these grounds – currently a cemetery – to the university. The same goes for the grounds situated to the south-east of the rampart.

[UBL AC II-2; UNI, BOT]

110. Governors of the University (Leyden) to S.J. Brugmans (Leyden); 14 October 1816:

The governors ask Brugmans and DuPui to inform them about the bad state of repair and the unfavourable location of the present 'Nosocomium Academicum'. They want his advise with regard to the necessary repairs. They are considering a removal to the 'Waals Diaconessenhuis voor arme mannen, vrouwen en kinderen'.

[UBL AC II-2; UNI, MED]

111. S.J. Brugmans (Leyden) to the governors of the university (Leyden); about 22 November 1816:

Brugmans requests permission to use the 'Collegie-kamer' ('lecture room'), belonging to the house facing the Gate of the University. Brugmans knows that the governors recently have bought this house from Van der Keessel. Pulling down this room will considerably improve the access to the 'Hortus Medicus'. He regrets being forced to spend money – earmarked for the

cabinet of natural history – on the rent of a house (which will be used as a library) and on the payment of its housekeeper. He wants to receive a compensation for these expenses.

[UBL AC II-2; UNI, BOT]

112. Governors of the University (Leyden) to S.J. Brugmans (Leyden); 12 February 1817:

The governors allow Brugmans the compensation for his chemical laboratory, for the collection of natural history and for the 'Hortus Botanicus' (on which most of the money will be spent). They allow him to give 100 guilders to the first garden hand, meant for an extraordinary salary.

[UBL AC II-3; UNI, BOT, CHE]

113. Governors of the University (Leyden) to S.J. Brugmans (Leyden) and M.S. DuPui (Leyden); 4 March 1817:

Brugmans and DuPui are ordered to sound the opinion of the council of the 'Waalse Kerk' ('Walloon Church') with regard to the purchase price they want to receive for the old men's and women's home. The governors of the university want to establish the new 'Nosocomium Academicum' in that building. Brugmans and DuPui are also ordered to ask when this building can be vacated and when the property can be conveyed. The transfer has to take place not later than 1 October 1817.

[UBL AC II-3; UNI, MED]

114. S.J. Brugmans (Leyden) to the governors of the university (Leyden); 31 March 1817:

Brugmans reports on the progress with regard to the accommodation of the cabinet of natural history and to the arrangement of its objects. He also makes proposals for further equipment, conform to modern standards. He is aware that the governors are going to propose to the Commissioner-General of Education, Arts and Sciences ('Commissaris-Generaal van Onderwijs, Kunsten en Wetenschappen') to put Brugmans in charge of the permanent

supreme control of the cabinet and to assign Dr. P.G. van Hoorn to the post of assistant manager.

[UBL AC II-3; UNI, ZOC]

115. Governors of the university (Leyden) to S.J. Brugmans (Leyden); 17 April 1817:

Brugmans is allowed the sum of 450 guilders to practise chemistry. Besides he will receive 3.075 guilders and 4 pence for the benefit of the cabinet of natural history and 3.962 guilders to be spent on the 'Hortus Botanicus'.

[UBL AC II-3; UNI, CHE, ZOC, BOT]

116. S.J. Brugmans (Leyden) to the governors of the university (Leyden); 22 May 1817:

Brugmans reminds the governors that meanwhile he has been employed by the university for more than thirty years. Comparative anatomy has always been his only foundation and guiding principle, not only for the systematic and philosophical consideration of the animal kingdom, but also for the study of nature. To his regret, the financial assistance given by the Public Treasury has always been insufficient. He wants to stress that his collection already attracts the attention of prominent scientists from the Netherlands and from abroad. The two most eminent scientists among them – Cuvier and Rudolphi – have paid the highest tribute to his collection. He knows that His Majesty has expressed the wish that the educational provisions are extended. He offers his collection to the governors of the university, of course at a reasonable reimbursement.

[UBL AC II-3; UNI, ZOC, COB]

117. S.J. Brugmans (Leyden) to H. Collot d'Escury (Rotterdam); 28 August 1818:

Brugmans informs H. Collot d'Escury, one of the governors of the university, that Sandifort has examined the drawings for the extension(s) of the buildings located in the 'Hortus'. He will return them soon. On 6 September 1818,

Her Royal Highness the Princess of Orange has decided to give the Leyden Garden a male kangaroo as a present.

[KB 72 D 18; UNI, ZOC, BOT, COB]

118. S.J. Brugmans (Leyden) to the governors of the university (Leyden); 27 November 1818:

Brugmans underlines the necessity of the construction of a large hothouse to enable him to cultivate tall plants from the hot regions. He adds a drawing (floor plan) and an estimate. The architect of the university buildings, J. Dobbe, has co-signed the proposition.

[UBL AC II-4; UNI, BOT]

119. S.J. Brugmans (Leyden) to the governors of the university (Leyden); 27 November 1817:

Brugmans asks the governors not to nominate him for the chancellorship for the next period.

[UBL AC II-4; UNI]

120. Governors of the university (Leyden) to S.J. Brugmans (Leyden); 10 December 1818:

The governors thank Brugmans for sending his very interesting and ambitious plans regarding the 'Leyden Academy', especially with respect to the garden. At the same time they apologize for the bad financial situation, so well-known to Brugmans. Because the budget for 1819 has already been fixed some of his projects have to be dropped. Besides there is no sense in sending new requests to His Majesty the King, as He has decided to reduce the budget. In the opinion of the governors some of the items of Brugmans's budget are far too high, especially the one regarding the hothouse, an expense which is not necessary. This point of view will not be changed in 1820. Anyhow, the plans have to be postponed.

[UBL AC II-4; UNI, BOT]

**121. S.J. Brugmans (Leyden) to the governors of the university (Leyden);
8 February 1819:**

Brugmans offers several sheets of the 'Elenchus Seminarum', which has recently been published, together with the first two sheets of the 'Elenchus Plantarum' to the governors of the university. He complains about the inadequate budget for 1818.

[UBL AC II-4; UNI, BOT]

CHAPTER 5

- *PHARMACOPEA BATAVA* AND *PHARMACOPAEA BELGICA*

The documents, dealing with the composition, the edition and the introduction of the *Pharmacopaea Batava* (1799–1806) and the *Pharmacopaea Belgica* (1816–1819) are part of the archives of the ‘Koninklijk Nederlandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten’ (Amsterdam). These documents are preserved in the ‘Rijksarchief van Noord-Holland’ (NHA, Haarlem).

For almost forty years Gerardus Vrolik (1775–1859), professor of botany (since 1798) and medicine (since 1813) at the ‘Athenaeum Illustre’ (Amsterdam) has been the secretary of the ‘Eerste Klasse’ of the ‘Koninklijk Nederlandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten’. For many years the Vrolik family has kept these documents in its possession. Early 1845 Vrolik’s son Willem (1801–1863) – initially professor of medicine at Groningen University (1828) and later on professor of natural history and medicine at the ‘Athenaeum Illustre’ (Amsterdam) – succeeded his father as secretary of the ‘Eerste Klasse’.

The first signs which showed the growing need for clear, unambiguous and consistent regulations and prescriptions for every pharmacist and doctor – as they should be set down in a pharmacopoeia – date from 29 January 1799. On that day Van Kooten – at the time Agent of National Education (‘Agent van Nationaale Opvoeding’) – sent a letter to the ‘Uitvoerend Bewind der Bataafsche Republiek’ (‘Executory government of the Batavian Republic’), in which he underlined the importance of the publication of a pharmacopoeia – a project of major importance. Only in this way it would be possible for the government to prevent imminent abuses and to bring undesirable situations to an end. As a consequence the pharmacist shops would only be allowed to prepare and sell the remedies, which have been described in this standard work. Regrettably the unfavourable situation of the treasury caused a pressing problem. Financially the ‘Bataafsche Republiek’ was down and out. Not only had it been forced to pay an enormous fortune to its ‘liberators’, it had also been forced to accept high taxes and to resign in the obligation to maintain the French troops, quartered in its territories. Even the most

modest remuneration for the members of the committee, who were expected to compose the pharmacopoeia, was out of the question and so was the suggestion to attach two paid experts in this field to the ‘Agentschap van Nationaale Opvoeding’ (‘Agency of National Education’) and to put them in charge of the execution of this project. It might be possible to repay expenses if they were kept very low and if they were not requested immediately. Van Kooten proposed a step-by-step plan: five successive moves to be made by himself: proposing five experts to the government – announcing their names in national and foreign newspapers (after having received the approval from the government) – authorizing these experts to consult or to buy the books and sources they needed – instructing them thoroughly about the way to submit their statement of expenses – and assuring them that the government had decided to approve the proposition of a remuneration afterwards (giving money or a gold medal). Van Kooten imagined that this remuneration could be paid from the profit yielded by the selling of the pharmacopoeia. To assure a sufficient yield, Van Kooten intended to force every *Medicinae Doctor* and every pharmacist (‘Apothecar’) to buy a copy of the pharmacopoeia.

Three days later, on 2 February 1799 the ‘Uitvoerend Bewind’ of the ‘Bataafsche Republiek’ took up Van Kooten’s proposal. It decided in accordance with its contents and informed him about their decision. On 28 March 1799 Jan van Heekeren junior, Van Kooten’s secretary, completed the list of candidates, after which Van Kooten offered it to the government. Being afraid of making the slightest move without having received permission in advance, Van Kooten took the view that this commission should consist of the following scientists: S.J. Brugmans (Leyden), P. Driessen (professor of chemistry, Groningen), G. Vrolik (professor of botany and chemistry, Amsterdam) and J.R. Deiman (medical doctor, Amsterdam). If necessary, they were allowed to recruit other colleagues, without offering them any payment. On 1 April 1799 F. Ermerins cited the latest decisions of the ‘Uitvoerend Bewind’ and reported that a fifth member had been engaged to the commission – the already aged doctor G.G. ten Haaff (Rotterdam). On 6 April 1799, Van Heekeren, speaking for Van Kooten, informed the commission that the streamlining of the composition and production of medicines had the highest priority. In his letter to Brugmans he assumed that the commission was already occupied with the execution of its commendable task. Indeed, the candidate

members had accepted their honourable appointments and confirmed Van Heekeren's presumption. It took Brugmans more time than his colleagues to answer Van Heekeren's inviting letter. Not until 29 April 1799 he sent his letter to the government. Thereupon the governors of the universities of Groningen, Leyden, Franeker and Harderwijk were informed about the news and a message was sent to the publishers of the *Algemeene Konst en Letterbode* (Haarlem). A letter sent on 6 May 1799 by the government to the commission, shows that meanwhile Van Kooten had been replaced by J.H. van der Palm and that Van Heekeren's position had been taken temporarily by Wenckebach. In this letter the secretary also discussed the first convocation of the members of the commission, during which they had to divide their allocations, determine the permanent seat of the commission and elect a president and secretary. Brugmans was elected president, while Gerardus Vrolik was appointed secretary and custodian of the commission's archives. The proceedings went as planned and the president regularly reported to Van der Palm. However, from time to time difficulties arose, partially evoked by Driessen (Groningen), who always complained about the long distance between his home town and Amsterdam. From the beginning the contributions made by the aged Ten Haaff were considered rather meaningless.

Soon the commission was confronted with the disadvantage of the lack of a chemical laboratory. Requests made to the municipality of Amsterdam to be authorized to use the city 'Laboratorium Chemicum' – of which professor van Rhijn (Amsterdam) had claimed the exclusive rights of use – were rejected, although the commission promised to restrain itself to the most essential experiments and preparations and to procure all the needed chemicals and tools. Although the 'Committé van Algemeen Welzijn' ('Committee of Public Welfare') supported this request, it was not granted. More recent letters do not discuss this subject, so it is likely that this problem was solved after a while.

From time to time the commission had to be urged to complete its activities as soon as possible. The Agent of National Education became more and more impatient because the 'Raad van Binnenlandsche Zaken' ('Council of the Interior') pushed him too and the activities had already taken several years. As a consequence of the fact that the communication between the various parties was done by letter and most of these letters have been preserved, it is possible to witness

the frictions between the committee members afterwards, especially between Brugmans and Driessen. Besides, the 'Staatsbewind', which is the successor of the 'Uitvoerend Bewind' and also the 'Departementale Commissie van Geneeskundig Bestuur' ('Departmental commission of medical administration') of the province of Groningen, of which Driessen was one of the members, was getting impatient. This commission had great interest in a quick completion of the job, because otherwise the pharmacists, serving the inhabitants of the northern provinces, might easily run into difficulties. The 'Raad van Binnlandsche Zaken' began to wonder if the Agent sufficiently urged the committee to complete the *Pharmacopaea Batava*. However a letter dated 3 June 1802 shows a clear progress of the proceedings. On that day Gerardus Vrolik reported that the committee only needed one more meeting to complete the job. This meeting was to be held in Amsterdam on 9 August 1802. The old Ten Haaff was put off more and more. Brugmans started to look for an assistant, an experienced pharmacist ('apothecar'), 'druggist' or 'chemist' ('chimist'). The many copies which had to be made also impeded the progress of the activities and so did the constant last minute additions, among others suggested by Deiman. Besides these textual changes and additions caused too many errors.

As a next step the commission had to submit the whole manuscript to the government for approval. Together with Van Heekeren's report it had to be presented to the 'Raad van Binnenlandsche Zaken'. After having been approved, these documents had to be offered to the 'Staatsbewind' for further approval. On 18 May 1803 the president of the 'Staatsbewind' informed Brugmans that the *Pharmacopaea Batava* had been approved the day before and that finally it had to be approved by the 'Wetgevende Vergadering' ('Legislative Assembly') of the 'Bataafsche Republiek'. Discussions between its members about the question which publisher should be authorized to publish the book hampered this last step. Finally on 29 July 1803 the 'Wetgevende Vergadering' approved the *Pharmacopaea Batava* together with its appendices (containing instructions and regulations). Not until then the book could be published. Meanwhile the members of the commission continued their correspondence about the remaining textual and pharmaceutical problems with respect to their brainchild. In February 1804 the 'Raad van Binnenlandsche Zaken', after having been authorized to do so by the 'Staatsbewind' and Johannes Allart, an Amsterdam bookseller, signed the publication contract,

which event led to a new series of discussions and adaptations of the contract made between the parties, until at last on 25 February 1805 a watertight contract was signed. J.B. Bicker initialled and C.G. Hultman signed the text of the ordinance printed on the first page of the first edition of the *Pharmacopaea Batava*. It contains the regulations, which the producers and sellers of medicines (drugs) had to observe, among others with regard to the quality control of the preparations.

On 5 September 1805 the 'Commissie voor de samenstelling van de *Pharmacopaea Batava* concluded that its job had been completed, because meanwhile the Latin version had been published. A revised edition was planned to appear around 1820. Late April 1806 the commission and the government officials began to feel very uncomfortable, as they were informed about the bad news that in the 'Annales de Chimie' (January and February 1806) a destructive review had been given of the 'Preface' of their pharmacopoeia, although the bringer of that news declared that most of the objections were groundless. Parmentier, a leading French pharmacist, was considered to be the principal offender. In Brugmans's view the commission should answer the critique publicly. Therefore Deiman and Vrolik were ordered to try to get hold of a copy of the review, while it was decided that one of the commission members had to write an appropriate reply as soon as possible. Brugmans emphasized that he too was going to take action against the critique and he asked his colleagues to foil the critique passed on their own contributions. In June 1806 C.G. Ontijd expressed his willingness to write a new review. He took great pains over his commission and asked Brugmans to have his contribution assessed. In Ontijd's opinion a reviewer should confine himself to the contents of the book, which he has been asked to review and he should never run down its authors, like it had been done in the French review with its well-chosen and only seemingly approving words. The French reviewer had made the authors of the *Pharmacopaea Batava* look a fool.

Nevertheless the commission remained cheerful and started to write a Dutch version of the pharmacopoeia, during the production of which numerous terminological and orthographical problems arose. In October 1806 a new volunteer for writing a combative reply, D. Craanen (Rotterdam), presented himself. Craanen offered the commission to comment the texts written by its members and to return the evaluated parts of the manuscript bit by bit. His offer

was accepted with pleasure. At the same time several other experts offered their assistance, particularly convinced of their own expertise. Early June 1807 the Dutch edition was off the press and the commission was already preparing a Latin reprint. Unfortunately, the Dutch edition again proved not to be impeccable.

Almost ten years later the commission was reconvened. In January 1816 Brugmans was informed that His Majesty King Willem I had decided that the day had arrived to arrange a pharmacopoeia for the southern provinces of the young kingdom. There was no doubt that this job could take several years again. Actually, it was completed only a few months before Brugmans died (in July 1819). Meanwhile several of the members of the commission had already grown very old. Because of the nature of the assignment, it was again completed by the appointment of N.C. de Fremery (professor of chemistry and botany in Utrecht), Van der Sande (Antwerp), J.B. van Mons (professor of chemistry in Leuven), Sauveur (Liège) and P.E. Wauters (Ghent). Only P. Driessen, G. Vrolik (secretary) and S.J. Brugmans (president) were left. The new members all accepted the invitation, as the letter dealing with the allowance for the expenses proves. This time the financial prospects were somewhat better than in 1799. In the summer of 1817 the process came to a standstill and in vain Brugmans urged his colleagues to enter their contributions and to enable him to convene them for a meeting. This time it was Van Mons, who hampered the progress of the activities. Anyhow, in spring 1819 the job was not yet completed. Brugmans proposed a meeting on 4 June 1819 in The Hague in order to put the final touch on the project. Unfortunately he died in the night of 22 July 1819.

122. J. van Heekeren junior (The Hague) to S.J. Brugmans (Leyden), P. Driessen (Groningen), G. Vrolik (Amsterdam), J.R. Deiman (Amsterdam) and G.G. ten Haaff (Rotterdam); 6 April 1799:

On behalf of Van Kooten, 'Agent of National Education', Van Heekeren, his secretary, has made a proposition to the 'Uitvoerend bewind', in which he stresses the importance of streamlining the composition and preparation of medicines. Van Heekeren proposes a step-by-step plan (5 steps), explicitly formulated by Van Kooten. On 6 February 1799 Van Heekeren had been informed that the government had decided positively. Now he conveys this

message to the intended members of the 'Commissie voor de samenstelling van de *Pharmacopaea Batava*', which is to be set up soon.

[NA-NHA KNI 175-7; PHA]

123. S.J. Brugmans (Leyden) to the Agent of National Education (The Hague); 29 April 1799:

Brugmans is very pleased and honoured by his nomination as a member of the 'Commissie voor de samenstelling van de *Pharmacopoea Batava*'. He is eager to cooperate in the project of creating a pharmacopoeia, which will be used in the 'Bataafsche Republiek'.

[NA-NHA KNI 175-7; PHA]

124. S.J. Brugmans (Leyden) to the Agent of National Education (The Hague); 14 May 1799:

On behalf of the new commission Brugmans reports on its proceedings. He has been appointed president and he has been put in charge of maintaining relations with the outside world. Vrolik, appointed secretary, will be the custodian of the archives. He discusses several pharmaceutical details. For the time being the commission will not discuss the question of weights and measures. It has been decided that the commission will use the term 'evenredigheden' ('proportions'), whenever it is describing chemical preparations. Furthermore attention will be paid to these chemical preparations as well as to the 'Galenica'. The French preparations will also be discussed. The next meeting will be held on 15 May 1799.

[NA-NHA KNI 175-7; PHA]

125. S.J. Brugmans (Leyden) to the Agent of National Education (The Hague); 15 May 1799:

The commission has decided that it will have its seat in Amsterdam. For the time being it does not want to spread any rumours about its proceedings, although the Agent of National Education has expressed a different wish. Brugmans presents the draft budget and he wants to know ('if possible') if the

commission will be allowed to use the Amsterdam 'Laboratorium Chemicum'. Once more the assignment of tasks has been discussed.
[NA-NHA KNI 175-7; PHA]

126. S.J. Brugmans (Leyden) to the Agent of National Education (The Hague); 17 May 1799:

Once again Brugmans informs the Agent about the definitive seat of the commission and about the fact that it wants to perform its task under tight cover. Driessen has made remarks on several chemical preparations, which have to be described. The order of the activities has been determined.
[NA-NHA KNI 175-7; PHA]

127. S.J. Brugmans (Leyden) to the 'Commissie voor de samenstelling van de Pharmacopaea Batava' (Amsterdam); 24 May 1799:

Brugmans informs the other members of the commission that the proceedings of the first meeting have been delivered at the Agent's address. He has been informed about the reimbursement of expenses: The commission has been ordered to keep within the budget of 3.500 guilders for the expenses. Meanwhile, a draft budget has been made. The commission has been allowed a free spending. After the *Pharmacopaea Batava* will have been completed and after it has been decreed by the 'Uitvoerend Bewind', it will be introduced mandatory.
[NA-NHA KNI 175-7; PHA]

128. P. Driessen (Groningen) to S.J. Brugmans (Leyden); 1 June 1799:

Driessen informs the president of the 'Commissie voor de samenstelling van de Pharmacopaea Batava' that in his view a budget of 3.500 guilders will be enough for the expenses, although experiments may turn out to be very expensive.
[NA-NHA KNI 175-7; CHE, PHA]

129. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 6 June 1799:

Vrolik is very satisfied about the outcome of Brugmans's interview with the Agent Van der Palm. Like Brugmans, he takes the view that the amount of 3.500 guilders will do and he informs him that the other members are sharing his opinion. He expresses his approval of the results of Brugmans's discussion with the Agent.

[NA-NHA KNI 175-7; PHA]

130. S.J. Brugmans (Leyden) to the Agent of National Education (The Hague); early August 1799:

Brugmans regrets the fact that the 'Laboratorium Chemicum' of Amsterdam has not been placed at the disposal of the commission yet, in spite of its very modest demands. Moreover the commission is willing to bring all its ingredients and other necessities. He discusses the opinion of the 'Commissie van Algemeen Welzijn' on this affair and expresses his feelings and those of the commission with regard to the limited professionalism of the 'Commissie'. Finally he urgently requests the Agent's attention for several other important issues.

[NA-NHA 175-7; PHA]

131. P. Driessen (Groningen) to S.J. Brugmans (Leyden); 28 June 1800:

Driessen regrets his illness and hopes that it will not last too long. He intends to come to Amsterdam on 21 July, although this will not be easy. He trembles at the thought of the interminable meetings of the commission. He asks for an answer to several important questions and to inform him about the definitive date of the next meeting.

[NA-NHA 175-7; PHA]

132. S.J. Brugmans (Leyden) to J.R. Deiman (Amsterdam) and G. Vrolik (Amsterdam); 5 October 1800:

Brugmans confirms that soon a part of the expenses already made by the members of the commission will be reimbursed. He reminds his fellow members of the fact that they did already receive a first indemnification, some

time ago. He demands the submission of signed receipts, bills and other pieces of evidence. Furthermore he did already propose a date to Driessen for the next meeting (in November).

[NA-NHA 175-7; PHA]

133. S.J. Brugmans (Leyden) to the Agent of National Education (The Hague); 8 December 1800:

Brugmans has received a letter from the 'Raad van Binnenlandsche Zaken', in which it has demanded the quick completion of the task of the commission. In accordance with his promise to Van der Palm, Brugmans has immediately sent a copy of this request to each member of the commission, asking them to answer this letter by return. Unfortunately he did not receive any answers until now. So Van der Palm has to be patient too and to apologize him to the 'Raad'. Maybe he can fulfil his promise next week.

[UBL LTK 1567; PHA]

134. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 18 March 1801:

Brugmans discusses Driessen's proposition, implying that the members of the commission should send their contributions to each other. This approach would save one meeting. After all, the Agent of National Education demands quick results. On the other hand they also have to pay attention to the records of the experiments, observations and notes of their colleagues. Brugmans is afraid that another meeting will be inevitable.

[NA-NHA KNI 175-7; PHA]

135. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 22 April 1801:

Brugmans announces his visit to his brother Pibo Antonius (Amsterdam) on Friday 24 April 1801 and hopes to see Vrolik and Deiman too, in order to exchange ideas on the *Pharmacopaea Batava*. He wants to arrange a rendezvous and indicates his preference with regard to the time of the day. Because his wife and little daughter will accompany him, he has to return early to Leyden.

[NA-NHA KNI 175-7; PHA]

136. S.J. Brugmans (Leyden) to the ‘Commissie voor de samenstelling van de *Pharmacopaea Batava*’ (Amsterdam); 16 May 1802:

Brugmans informs his colleagues about the fact that the ‘Raad van Binnenlandsche Zaken’ again has demanded the quick completion of the activities of the commission. He makes two propositions, first of all to convene a meeting on 9 August 1802 and secondly to inform the ‘Raad’ about this proposition. Both decisions will have to be carried out by Vrolik.

[NA-NHA KNI 175-7; PHA]

137. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 16 May 1802:

Brugmans is in a way disgruntled about Driessen’s behaviour and comments. Therefore has decided to visit him in Groningen, although he cannot stand the slightest contact with that man.

[NA-NHA KNI 175-7; PHA]

138. P. Driessen (Groningen) to S.J. Brugmans (Leyden), J.R. Deiman (Amsterdam) and G. Vrolik (Amsterdam); 27 May 1802:

Driessen expresses his satisfaction about the positive reception of the proposition made by the ‘Departementale Commissie van Geneeskundig Bestuur’ (Groningen), an event which has secured the progress of the project. He would have preferred an earlier date for the meeting. He promises to analyse Brugmans’s contribution to the pharmacopoeia meticulously and spends some words on the diplomatic talents of the president. He decidedly keeps on backing the letter from Groningen, although he tries to imagine Brugmans’s line of thought.

[NA-NHA KNI 175-7; PHA]

139. S.J. Brugmans (Leyden) to the ‘Raad van Binnenlandsche Zaken’ (The Hague); 3 June 1802:

Brugmans informs the ‘Raad’ that the complete proof of the ‘*Pharmacopaea Batava*’ would already have been presented, if a confluence of events would not have prevented to do so. One of the most hampering circumstances is the fact that several members of the commission are living too far from

Amsterdam. Besides two of its members have been abroad for a considerable time. Nevertheless the commission will try to complete its task before the end of this year. Therefore it has been decided meanwhile that a new meeting will be held on 9 August in Amsterdam.

[NA-NHA KNI 175-7; PHA]

140. S.J. Brugmans (Leyden) to the ‘Commissie voor de samenstelling van de *Pharmacopaea Batava*’ (Amsterdam); 1 July 1802:

Brugmans sends his contribution to the pharmacopoeia to the other members of the commission. Meanwhile he has had a look at the notes of his colleagues. He has concluded that Ten Haaff's future contributions will be meaningless.

[NA-NHA KNI 175-7; PHA]

141. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam) and J.R. Deiman (Amsterdam); 24 July 1802:

A chemical laboratory is not yet available. There is also a growing need for a skilled pharmacist (‘apothecar’, druggist or ‘chymist’). He has to be a capable and efficient prospector of the ‘simplicia’, a man who is able to execute all the preparations wanted by the commission. Former failures abroad have been due to the fact that the authors did not make use of such an assistant. The next meeting will take place as planned.

[NA-NHA KNI 175-7; PHA]

142. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 25 September 1802:

Brugmans informs his secretary that the transcription of the *Pharmacopaea Batava* is proceeding according to schedule. Soon the part of the manuscript discussing the ‘Simplicia’ can be sent to his colleagues. He urgently needs a hygrometer. Is it possible for Vrolik to borrow that instrument from Van Swinden? The transcription of the texts with regard to the ‘Chemicalia’ is going as planned. The complete manuscript will surely pass inspection now that everything has been arranged according to the ‘conspections’. Brugmans

hopes that the commission will be able to complete its task in October. He asks Vrolik to convey his compliments to his wife, to Deiman and to Van Swinden.

[NA-NHA KNI 175-7; PHA]

143. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 27 September 1802:

Independently from Deiman, Vrolik has examined the manuscript of the *Pharmacopaea Batava*. He is convinced that the final result is really excellent. Perhaps there are a few confusing vaguenesses, as has been observed by Deiman. Vrolik proposes a solution to this problem. Furthermore only a few words have to be changed or added, for example a description of the hygrometer (according to Van Swinden's design).

[NA-NHA KNI 175-7; PHA]

144. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); September 1802:

Brugmans sends the 'Conspectus' of the *Pharmacopaea Batava* to Vrolik and asks him to convey these documents with his compliments to Deiman. He asks Vrolik and Deiman to reconsider the arrangement, the nomenclature and the selection of the 'Simplicia' and the 'Galenica' and to send the complete manuscript to Driessen. Perhaps a few articles have to be added. He himself will send another copy of the manuscript to Driessen and ask him to report directly to Vrolik. The transcriptions will be continued energetically, although the work on the 'Catalogus Simplicium' will give trouble. He commends himself to Vrolik's friendship, suggests a few minor additions to the manuscript and asks his opinion about it.

[NA-NHA KNI 175-7; PHA]

145. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 29 March 1803:

Brugmans is really worried about Vrolik's disease. Fortunately it has taken a favourable turn now. Until now he has not received further news about the *Pharmacopaea Batava* project. The documents and the report are still held by

Van Heekeren. Once more he emphasizes his feelings of friendship towards Vrolik.

[NA-NHA KNI 175-7; PHA]

146. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 17 April 1803:

Since he has left Amsterdam he has had a toothache. Besides he has been suffering from the effects of the cold weather. He has also experienced the application of a 'Spanish fly' plaster. He regrets Vrolik's relapses and hopes that he will recover soon. The *Pharmacopaea Batava* has not been finished yet. Last Friday, when he was in The Hague, Van Heekeren promised him that he would have completed his report on 17 April and that he wanted to see him the day after. Now Brugmans fears a new delay. Van Heekeren has assured him that it is still possible to introduce all the documents concerning the pharmacopoeia during this session of the 'Raadgevende Vergadering'. As soon as he has received more news for Brugmans he will inform him.

[NA-NHA KNI 175-7; PHA]

147. S.J. Brugmans (Leyden) to the 'Commissie voor de samenstelling van de *Pharmacopaea Batava*' (Amsterdam); 19 May 1803:

Annexed to this letter, Brugmans sends the letter, which he has just received from the 'Raad van Binnenlandsche Zaken'. He is convinced that the other members of the commission will be pleasantly surprised by its contents. He will inform them as soon as he will have received further details. There is also good news about the reimbursement of the bills, which have already been paid by the members of the commission. He assures his colleagues of his strong feelings of respect and asks the first addressee to observe a distinct order with regard to the circulation of this letter and its annex: first of all it has to be sent to Deiman and afterwards to Driessen.

[NA-NHA KNI 175-7; PHA]

148. S.J. Brugmans (Leyden) to the ‘Commissie voor de samenstelling van de *Pharmacopaea Batava*’ (Amsterdam); 9 June 1803:

The *Pharmacopaea Batava* has not been fully accepted yet. Van Heekeren’s death has hindered the consultations and has caused a certain chaos. Nevertheless Brugmans hopes that the job will soon be finished successfully. He asks his colleagues several questions, among others about various chemical and physical problems. He supposes that they have already read the address of the president of the ‘Raad van Binnenlandsche Zaken’ in the *Algemeene Konst en Letterbode*. He ends his letter by expressing some objections to the way the preparations and the purity of medicines have to be controlled.

[NA-NHA KNI 175-7; PHA]

149. S.J. Brugmans (Leyden) to P. Driessen (Groningen), J.R. Deiman (Amsterdam) and G. Vrolik (Amsterdam); 22 October 1803:

Because the ‘Staatskas’ is extremely short of money, the reimbursements will be postponed for the time being. First of all the ‘Raad van Binnenlandsche Zaken’, the ‘Raad van Finantie’ (‘Council of Finance’), the ‘Rekenkamer’ (‘Audit Office’) and the ‘Comptoir’ (‘Treasurer’) are working very slowly. Secondly the ‘Comptoir’ has to scrape up the money, about 1.600 guilders, before the members of the commission can be repaid. The expedition of the report written by the commission has to be postponed. Besides Brugmans has his own priorities. Many ill Batavian and French soldiers are waiting for his help. He appreciates Driessen’s constructive proposals with regard to the ‘Catalogus Simplicium’ and to the ‘Commentarius’. He finally adds a technical (zoological) remark with respect to the origin of the spermaceti from the body of Physeter. The members of the commission are expected to continue the production of the ‘Commentarius’.

[NA-NHA KNI 175-7; PHA, ZOC, CHE]

150. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 15 November 1803:

Brugmans informs his colleagues that he is very busy and yields up some details of Driessen's valuable suggestions with regard to the 'Commentarius'. He informs Vrolik about the failure of the attempt made by the Amsterdam bookseller and publisher Allart to acquire the copyright of the *Pharmacopaea Batava*.

[NA-NHA KNI 175-7; PHA]

151. S.J. Brugmans (Leyden) to P. Driessen (Groningen), J.R. Deiman (Amsterdam) and G. Vrolik (Amsterdam); 6 December 1803:

Brugmans reports that the 'Raad van Binnenlandsche Zaken' wants to receive additional information about the edition of the *Pharmacopaea Batava*, which he has promised to give. He is happy to inform his fellow members that meanwhile a suitable reimbursement has been agreed. The commission still has to complete certain activities.

[NA-NHA KNI 175-7; PHA]

152. S.J. Brugmans (Leyden) to J.H. van der Palm (Leyden); 8 December 1803:

Brugmans acknowledges the receipt of the letter in which the commission is urged to complete its job. Immediately he has ordered to copy the wanted information and has sent it to his colleagues, asking for their answer by return. Since then he has not heard anything. Therefore he asks the Agent Van der Palm to convey his apologies to the 'Raad van Binnenlandsche Zaken'. He promises him to deliver the documents personally next week.

[UBL LTK 1567; PHA]

153. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 11 February 1804:

Brugmans adds some remarks to various contributions to the *Pharmacopaea Batava*, among others with regard to those entered by Driessen. Vrolik has to revise them thoroughly. A personal talk with Driessen is urgently needed.

Did Vrolik already finish his contributions to the 'Principia'? He suggests to send them to Driessen after they have been completed.

[NA-NHA KNI 175-7; PHA]

154. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 25 April 1804:

Brugmans sends some supplements to his contributions to the *Pharmacopaea Batava* as well as an improved version of the text concerning the hygrometers. Tomorrow, on 26 April 1804, he will submit a table. He also reminds Vrolik of the proofs, which he still has to receive and to control. He ends his letter by making a remark on the seeds, which Vrolik probably did not receive until yesterday.

[NA-NHA KNI 175-7; PHA]

155. S.J. Brugmans (Leyden) to J.R. Deiman (Amsterdam); 1 May 1806:

Brugmans is very concerned about the possibility that the delivery of a (first) part of the *Pharmacopaea Batava* will be overdue. Dilius has to be urged. The first review – in the 'Annales de Chimie' (January/February 1807), which has been written by Parmentier – has been negative. Although most of the negative comments turned out to be ill-founded, this review has made a bad impression on the chemical readers. A second review, in another journal, is needed to remove this bad impression. Brugmans has already an idea about how to act, but first of all he wants to read Parmentier's review of the 'Preface' of the pharmacopoeia. Driessen has already conveyed several comments with regard to his own contributions. Deiman and Vrolik have to do the same. Besides they have to get together observations regarding the formulae of several specified (chemical) substances, which have been inserted in the pharmacopoeia at the personal suggestion of Deiman. He asks Deiman to inform Vrolik.

[NA-NHA KNI 175-7; PHA]

156. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 23 August 1806:

Most regrettably Brugmans had to learn that the new Latin edition of the *Pharmacopaea Batava* contains many printing errors. So Deiman's offer to

proofread the texts has been ineffective after all. At the moment Brugmans and Vrolik are having a quarrel with Driessen about the textual additions to the names of certain preparations. Brugmans proposes a partial solution to the problem. He wants to see Vrolik about it.

[NA-NHA KNI 175-7; PHA]

157. D. Craanen (Rotterdam) to S.J. Brugmans (Leyden), P. Driessen (Groningen), G. Vrolik (Amsterdam) and J.R. Deiman (Amsterdam); 19 October 1806:

In his own view Craanen has made an important proposition to the improvement of the *Pharmacopaea Batava*. In his opinion the most reliable experts on the various subjects have to be consulted. He has elaborated some of its articles and asks for a thorough examination of his suggestions. He offers his good services and asks to return his contribution after it has been commented. If it agrees with the objectives of the commission, he is willing to cooperate and to send the results of his further efforts. He suggests to add a chemical and botanical introduction in behalf of starting physicians and pharmacists. These supplements will further the workability of the pharmacopoeia. He hopes to receive a positive answer from the learned members of the respected commission.

[NA-NHA KNI 175-7; PHA]

158. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 17 April 1807:

Brugmans brings to mind that Vrolik has recently expressed his satisfaction about the hygrometer, designed by Donato Butti. Now he asks Vrolik's opinion about a concept note. He hopes that Vrolik is willing to see has Butti about it and – if possible – to come to an agreement about the price of the hygrometer. He asks to return the various documents on this subject as soon as possible, after which it will be sent the other members of the commission, because he wants them to answer as soon as possible. He also discusses the various measures to be taken in order to prevent fraud by unqualified instrument builders. In his view broken or faulty hygrometers have to be sent to the commission and not to the suppliers.

[NA-NHA KNI 175-7; PHA]

159. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 30 April 1807:

Brugmans reminds the secretary of the draft of a proposition for the construction of hygrometers, which he has sent him some time ago. First of all Vrolik has to contact Butti before he (Brugmans) will be able to send this document, together with a covering letter, to the Minister of the Interior. Because Vrolik did not answer he is afraid that his letter has been lost. If his request remains unanswered, the commission has to discuss the affair and to finalize it. The Minister of the Interior, who is eagerly looking forward to the reception of the proposal regarding the introduction of the Dutch edition of the *Pharmacopaea Batava*, is losing his patience. Therefore Brugmans has decided to make a proposition regarding this subject. The time has come to present the bill (to the government).

[NA-NHA KNI 175-7; PHA]

160. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 22 September 1807:

Brugmans informs his colleague about the financial settlement of the activities of the commission and reminds him of the measures, which he has taken already. He is going to send the total expense account to his superiors, together with Vrolik's statement of secretarial expenses. He mentions his involvement in the medical treatment of the many diseased Dutch and French soldiers. The Minister of the Interior has asked to be informed by the departmental medical commission, seated in Amsterdam and he has informed His Majesty King Louis Bonaparte. His Majesty has been reassured, because the disease proved to be only a simple, innocent febris biliosa, which is frequently afflicting the swampy regions of Holland. He spends a few words on the symptoms. He thinks he knows which medical treatment the departmental commissions are going to recommend. Nevertheless he is curious about the contents of the reports to be entered by these commissions.

[NA-NHA KNI 175-7; PHA, MME]

161. S.J. Brugmans (Leyden) to Baron D'Alphonse (Amsterdam); 1 August 1812:

As the laws of the French Empire with regard to the practice of medicine and especially the law of 20 Germinal An 11, regarding the practice of pharmacy, meanwhile have been put into force in the various departments of the kingdom, the recently appointed members of the 'jurys médicaux' ('medical juries') had to start their activities immediately (controlling the laboratories, store rooms and shops of the pharmacists and druggists), in order to convince themselves of the good quality of the preparations. According to article 32 of that same law the pharmacists have to prepare their medicines according to the recipes and regulations operative at the time. In 1799 the government had appointed a commission for the drawing up of a pharmacopoeia, which had to be in accordance with the actual state of the chemical and pharmaceutical knowledge. This edition fully met with the requirements and needs. This job was finished in 1805. Thereupon it was decided by law that every pharmacist had to keep to it. Since then the law has not been changed. In Brugmans's proposal to D'Alphonse the new government should adopt these regulations. He adds a copy of the pharmacopoeia and underlines his high esteem and unconditional obedience. [originally written in French]
[NA 2.01.12.1042; PHA, MED]

162. S.J. Brugmans (Leyden) to Baron D'Alphonse (Amsterdam); 2 August 1812:

Assuming that Baron D'Alphonse, 'Intendant-Général des départements de Hollande', is willing to consider his proposal regarding the *Pharmacopaea Batava*, he adds two copies of this book to his letter. So D'Alphonse will have the opportunity to add a copy to the letter which has to be sent to the Minister of the Interior (Paris). The second copy is added as a personal gift and as a sign of his high esteem and sincere obedience. [originally written in French]
[NA 2.01.12.1042; PHA]

163. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 6 February 1816:

Brugmans reminds the secretary of the 'Commissie voor de samenstelling van de *Pharmacopaea Batava*' of the Royal Decree of 16 January 1816, N° 24, in which the constitution of a 'Commissie voor de herziening van de *Pharmacopaea Batava*' ('Commission for the revision of the *Pharmacopea Batava*') has been announced. He also describes the contents of an earlier letter on this subject received from the Minister of the Interior (dated 22 January 1816) and invites Vrolik to attend the first meeting, which will take place on Friday 19 April 1816 at eleven o'clock. The Minister still has to indicate the place. Brugmans hopes to see his colleague at the meeting. He expresses his regard.

[NA-NHA KNI 175-7; PHA]

164. S.J. Brugmans (Leyden) to P. Driessen (Groningen), G. Vrolik (Amsterdam) and N.C. de Fremery (Utrecht); 6 August 1816:

In His Royal Decree of 28 July 1816 His Majesty King Willem I has agreed with the expected expenses of the 'Commissie voor de samenstelling van de *Pharmacopaea Belgica*'). Brugmans informs the members of the former commission about the acceptable indemnation for a day's work. He also discusses the reimbursements for buying books, as far as they are needed for experiments. He describes the procedures to be followed and mentions the acceptable total amount of money for the costs of copying. Because the second meeting is near, he asks his colleagues to send him their contributions, or at least to inform him about the probable date of mailing their documents, after which he will decide about the date of the second meeting.

[NA-NHA KNI 175-7; PHA]

165. S.J. Brugmans (Leyden) to J.B.A. van der Sande (Antwerp), J.B. van Mons (Louvain), Sauveur (Liège) and P.E. Wauters (Ghent); 6 August 1816

In his Royal Decree of 28 July 1816 His Majesty King Willem I has agreed with the expected expenses of the 'Commissie voor de samenstelling van de

Pharmacopaea Belgica'. Brugmans informs the members of the former commission about the acceptable indemnation for a day's work. He also discusses the reimbursements for buying books, as far as they are needed for experiments. He describes the procedures to be followed and mentions the acceptable total amount of money for the costs of copying. Because the second meeting is near, he asks his colleagues to send him their contributions, or at least, to inform him about the probable date of mailing their documents, after which he will decide about the date of the second meeting.

[NA-NHA KNI 175-7; PHA]

166. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 6 August 1816:

Brugmans gives more details with regard to the settlement of the reimbursement of travelling and accommodation expenses made by the members of the 'Commissie voor de samenstelling van de Pharmacopaea Belgica'. Because he has to convene them soon, he asks to send their contributions, which have been completed meanwhile.

[NA-NHA KNI 175-7; PHA]

167. S.J. Brugmans (Leyden) to the 'Commissie voor de samenstelling van de Pharmacopaea Belgica'; 11 July 1817:

Brugmans is convinced that the members of the commission did already expect an invitation for the second meeting, during which the finishing touch should be put on the manuscript of the *Pharmacopaea Belgica*. After all, the tasks have been shared out already. He reminds the commission that each of its members has promised to enter their drafts in time and to examine each other's documents. It has also been agreed to discuss the combined contributions and the various comments during the second meeting. Now he wants to know if they have already sent their contributions to their colleagues. Until now he did not receive anything! Because the sequence of the various contributions is very important he asks his colleagues to finish their jobs as soon as possible and to send him their suggestions for a valuable exchange of ideas. If necessary, a third meeting will be convened. He asks

them to answer all his questions as soon as possible. He expresses his highest esteem and calls himself their obedient servant and friend.

[NA-NHA KNI 175-7; PHA]

168. S.J. Brugmans (Leyden) to the Minister of the Interior (The Hague); 16 December 1818:

On behalf of the commission, Brugmans answers the letter sent to him by the Minister of the Interior on 14 December 1818. He underlines the need for a third meeting, during which the various contributions have to be discussed. But first of all they must send him all their documents, especially one of his colleagues, who had taken the responsibility for a considerable part of the job. Until now, repeated warnings have been in vain. Therefore he has decided to send him a copy of the Ministerial letter. He hopes for a rapid answer. Not until then he will be able to gratify the Ministerial demand.

[NA-NHA KNI 175-7; PHA]

169. S.J. Brugmans (Leyden) to J.B. van Mons (Brussels); 16 December 1818:

Brugmans expects a quick completion of the *Pharmacopaea Belgica*, because Van Mons has promised to finish his contribution soon. He has promised to do so in the presence of Harbauer. Brugmans adds a copy of the letter from the Minister of the Interior, which he has received this morning. He wants to answer that letter quickly and in an appropriate way. The meeting cannot be convened until then. He expresses his feelings of high esteem and calls himself his obedient servant.

[NA-NHA KNI 175-7; PHA, MED]

170. S.J. Brugmans (Leyden) to the Minister of the Interior (The Hague); 1 March 1819:

Brugmans refers to a letter, recently sent to the Minister of the Interior, in which he has discussed the problems regarding the completion of the *Pharmacopaea Belgica*. Meanwhile he has received the missing parts. Now the commission can assemble and combine the various contributions to a well

integrated document. He thinks that for most of the commission's members the Easter period is the most convenient for travelling, because they have an academic job. Therefore he has decided to convene them to The Hague in the week after Easter. In his view the Minister will approve this proposal.

[NA-NHA KNI 175-7; PHA]

171. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 3 March 1819:

Brugmans brings to mind his efforts with respect to the collection of the various contributions entered by the members of the commission. Once again he reminds Vrolik of the problems Van Mons is causing problems. Not until now he has received his contribution. So now he has to arrange these documents. He also reveals some of his own ideas regarding the composition of the *Pharmacopaea Belgica*. He hopes that the proposed date of the meeting will be accepted. He wants to know Vrolik's view on it. He asks him to return a document and to send him the statements of expenses of the other members of the commission. Most regrettably he suffers from a podagra-attack again, although the inflammations have already disappeared. He assures Vrolik of his feelings of esteem and friendship.

[NA-NHA KNI 175-7; PHA, MED]

172. Minister of the Interior (The Hague) to S.J. Brugmans (Leyden); 1 May 1819:

The Minister of the Interior acknowledges the receipt of Brugmans's letter dated 9 April 1819 in which he – being president of the 'Commissie voor de samenstelling van de Pharmacopaea Belgica' – has asked to adjourn the meeting of the commission in The Hague to the first week after Whitsun. He approves this change. Meanwhile the commission has needed more than three years. His Majesty the King demands a quick completion of the job and once again the Minister points at the importance of the *Pharmacopaea Belgica*. He supposes that the work of the commission has been simplified considerably by the fact that similar books have been published previously. He expects the commission to finish the job during its next meeting and he supposes that the final result will be sent to him as soon as possible.

[NA-NHA KNI 175-7; PHA]

173. S.J. Brugmans (Leyden) to P. Driessen (Groningen), G. Vrolik (Amsterdam) and N.C. de Fremery (Utrecht); early May 1819:

Not until last spring Brugmans has received the contributions to the *Pharmacopaea Belgica*. Now it is possible for him to suggest the date of the second meeting: it will be held on 4 June 1819 at the residence of the Minister of the Interior. His Excellency has fully agreed with this plan and demands the quick completion of the project, although this will depend on the course of the exchange of ideas. Every member is obliged to attend this meeting. He expresses his feelings of the highest esteem.

[NA-NHA KNI 175-7; PHA]

174. S.J. Brugmans (Leyden) to J.B.A. Van der Sande (Antwerp), J.B. van Mons (Leuven), ?? Sauveur (Liège) and P.E. Wauters (Ghent); early May 1819:

Not until last spring Brugmans has received the contributions to the *Pharmacopaea Belgica*. Now it is possible for him to suggest the date of the second meeting: it will be held on 4 June 1819 at the residence of the Minister of the Interior. His Excellency has fully agreed with this plan and demands the quick completion of the project, although this will depend on the course of the exchange of ideas. Every member is obliged to attend this meeting. He expresses his feelings of the highest esteem.

[NA-NHA KNI 175-7; PHA]

CHAPTER 6 - MILITARY MEDICINE

On various occasions Brugmans dedicated himself to the hosting and medical treatment of wounded and diseased soldiers. During the winter months of 1793–1794, the ‘Republiek der Vereenigde Nederlanden’ (‘Republic of the United Provinces’) was overcrowded with retiring English and Hanoverian troops. At Brugmans’s suggestion a temporary ‘Koninklijk Hannoveriaansch Militair Hospitaal’ (‘Royal Hanoverian Military Hospital’) was established in the ‘Pesthuis’ (‘Plague House’), outside the walls of Leyden. Invited by the ‘Gecommitteerde Raden’ (‘Delegated Councils’) of Holland, he devoted himself to the care of these sick and wounded, assisted by several doctors and by a number of medical students. Through the confrontation with the numerous dead and wounded, he could dispose of many corpses, which gave him more than enough material to serve medical and surgical instruction and to practice pathological anatomy; more than enough opportunities for experiments and analyses.

Until 1795 a well organized army medical service did not exist, or, at least it was not regularly and sufficiently supervised by the government, for example with regard to the quality of the medical care and with respect to the devotion of the medical officers. In January 1795, when the French troops occupied the territory of the ‘Vereenigde Provinciën’ the Prince of Orange and his family fled to England. Shortly after – at the occasion of the Treaty of The Hague (made in May 1795) – the ‘Republiek der Verenigde Nederlanden’ changed its name into ‘Bataafsche Republiek’ (‘Batavian Republic’).

In May 1795 Brugmans became a member of the ‘Bureau van Gezondheid over de armee en de hospitalen’ (‘Bureau of Healthcare of the Army and the Hospitals of the Batavian Republic’), or briefly: ‘Geneeskundig Bureau’ (‘Medical Bureau’), or ‘Conseil de Santé’ (‘Medical Council’). He was elected president of this bureau and on 18 July he proposed a new organization of the medical service of the army. Shortly after, these suggestions were approved by the ‘Wetgevende Vergadering’ and these regulations were implemented. The new ‘Geneeskundig Bureau’ not only governed and surveyed the army hospitals, it was also made

responsible for the logistics and distribution of all the necessities (such as medicines, dressings/bandages, food, beds, beverage and so on). The ‘Geneeskundig Bureau’ also surveyed the hygiene and had been made responsible for the personnel management of the military hospitals.

Brugmans surrounded himself with a circle of experts in the fields of medicine, surgery, pharmacy and organization: W. Leurs (surgeon, former surgeon major of the life guard of Prince Willem V), H. Janssen (physician) and L.A. van Meerten (pharmacist). After Leurs and Janssen had died, their vacancies were filled by three new members: C. Scheidler (doctor of medicine), J.G. Starck (doctor of medicine and surgery) and P. de Riemer (doctor of medicine). The next step to be made was to find locations fit for the establishment of military hospitals. Brugmans established unambiguous standards, for example with regard to the atmospheric condition, the situation of the planned hospitals, the dimensions of the various rooms and dormitories, the qualities of the beds, the quality of nourishment and beverage, the quality of the medicines and the availability of physicians and surgeons.

Each military hospital in the republic was directed by a surgeon-major, helped by several ‘assistants’ (‘aides’) and ‘pupils’ (‘élèves’). This staff was responsible for the medical care of the garrisons and of the troops on the scene of the battle. Each assistant was personally examined by Brugmans and his colleagues, in order to assure their medical and surgical expertise, both theoretically and practically. Because the payment offered to new candidates was increased, enough candidates applied for the vacant jobs of medical officers. The documents dealing with this subject – which have been preserved in several archival collections – give many details of Brugmans’s orders. Again, these orders come to light in the more definitive later versions of the regulations drawn by him for the purpose of the ‘Medical Health Service’, such as those, which were formulated almost immediately after the union of the northern and southern provinces and the foundation of the kingdom of the Netherlands.

The military hospital of Leyden became the training institute for the medical officers of the northern provinces. Brugmans and his colleagues personally instructed them. He also founded a ‘Centraal Magazijn van Genees- en verbandmiddelen’ (‘Central Depository of medicines and dressing material’) in The

Hague. That depository also served as a laboratory, where medicines were prepared. Medical statistics were also developed; every day the distributions of medicines, food and drinks were recorded and so were their effects. Brugmans also organized the accumulation of a stock for the purpose of the 'vliegende hospitalen' ('flying hospitals'), which enabled the 'Geneeskundig Bureau' to offer quicker medical assistance than had been possible before. Experiments carried out in 1796 in an encampment near Nymegen and Arnhem proved their practicability. A second opportunity (after the first events of 1794) presented itself in 1799, after the English and Russian troops had landed on the coast of North Holland. Thanks to the well developed logistics Brugmans could save many lives. The seriously ill and wounded were hospitalized in Leyden or were transported to other hospitals situated further southward. A next occasion presented itself in 1809, after the English had bombarded Flushing and had landed on the coast of the isle of Walcheren. Brugmans's service performed splendidly, even though it had to practice economy to the limit. Brugmans had to account for every penny.

In the course of 1796, Brugmans reported for the first time about what had been achieved with regard to medical health-care. His detailed report discussed the functioning of the military hospitals of the 'Bataafsche Republiek', as far as they were not governed by the French military authorities. He also discussed the situation in the Dutch civil hospitals, as far as these had been called in to assist in the lodging and nursing of wounded and ill soldiers.

During the following years the death rate was continually lowered and the average costs per soldier were also brought down (an absolute necessity, because of the miserable financial situation of the 'Bataafsche Republiek'). These costs were distinctly lower than the cost per person of the French soldiers, lodged in one of the five French military hospitals in Holland (that's to say in Middelburg, Delft, Breda, Utrecht and Nymegen).

The military and civil authorities were so very much impressed by Brugmans's achievements that they designated the Dutch service as 'unrivalled'. Already some years before – around 1797 – the administration of the French military hospitals had been confined to the Dutch 'Geneeskundig Bureau', a challenge which has undoubtedly been accepted with eager.

After Louis Bonaparte had mounted the throne as King of Holland (in June 1806), Brugmans was invited to remain in office. His 'Militair-geneeskundige Dienst' ('Military Health Service') was well organized and did not need any change (e.g. a reorganization according to the French system of medical care, distribution of nourishment and nursing). This was due to the fact that Brugmans had succeeded in putting his finger infallibly on the weak aspects of the French service ('The French service is a headless corps, in spite of its many chiefs!'). Besides, the French service lacked a regular correspondence and it was also crippled by the fact that the medical care was completely separated from the administrative organization. The Dutch statistics, already much more favourable than the French results, did the rest. These facts gained Brugmans the function of Director-general of the 'Militair-geneeskundige Dienst' of the kingdom of Holland in November 1806. Meanwhile, the Dutch army had been placed under French command. In December 1810 Brugmans was appointed 'Médecin en Chef' ('Chief Physician') of the 17th and 31st division of the French Imperial army, which were encamped in Holland. On 23 February 1811 the Emperor Napoléon appointed him inspector-general of the army medical service. It was his task to control the army hospitals in Holland. Through this appointment (he was one of the seven in that rank) he became a colleague of Desgenettes, Percy, Heurteloup, Parmentier, Coste and Larrey. At the occasion of the Emperor's visit to Holland, in December 1810, His Imperial Highness showed himself very much impressed by Brugmans's scientific expertise and organizational talents. At that occasion Brugmans, who was constantly sympathetic towards the welfare of his colleagues of the 'Geneeskundig Bureau', commended them to the attention of the emperor. This action resulted in a suitable pension for Van Meerten, its former secretary.

After having been appointed, Brugmans appeared to be the only inspector-general who was allowed to reside permanently in the town where he fulfilled his other duties. So he could continue his function as rector for life of Leyden University. Because of his qualities and through his efforts, the financial position of 'his' university remained more fortunate than that of the other institutes for higher education. Actually, the situation even improved by the remission of its debts and

by the commitment of an annual grant. Through all these circumstances the main military hospital also remained in Leyden.

In December 1813, after the Kingdom of the Netherlands had been installed and the son of Prince Willem V had been proclaimed King of the Netherlands, Brugmans fell into royal disfavour, due to his previous unconditional loyalty to the French Emperor and due to his service as a high ranked officer in the French imperial army. Perhaps this humiliating interruption of his career was also due to the fact that he had been made knight of the 'Légion d'Honneur' on 25 October 1811, at which occasion he swore the following oath of allegiance to his beloved Emperor Napoleon Bonaparte:

Je jure d'être fidèle à l'Empereur et à sa Dynastie; je promets, sur mon honneur, de me dévouer à son service, à la défense de sa personne et à la conservation du territoire de l'Empire dans son intégrité; de n'assister à aucun conseil ou réunion contraire à la tranquillité de l'Etat; de prévenir Sa Majesté de tout ce qui le tramerait, à ma connoissance, contre son honneur, sa sûreté ou le bien de l'Empire.

Almost nine months later, Brugmans was pardoned. Through the royal decree of 14 October 1814 he regained the function of inspector-general of the 'Militair-geneeskundige Dienst' of the land forces of the Netherlands and the rank of major general was conferred on him. Besides, he was appointed president of the newly founded 'Geneeskundig Bureau', seated in The Hague.

On 27 February 1815, almost exactly four years after having been appointed inspector-general by Napoléon Bonaparte, King Willem I appointed him inspector-general of the 'Militair-geneeskundige Dienst' of the army and the naval forces of the Netherlands. Besides, the supreme control of the 'Bureau van Gezondheid over de armee en de hospitalen' the governance of the 'Kweekschool voor militair geneeskundigen' ('Training College for medical officers of the army'), established in the military hospital of Leyden, was conferred to him. The 'Centraal Magazijn van Geneesmiddelen' continually rose in importance and the regulations with respect to the rules of life and nourishment for the sick and wounded soldiers were developed and improved more and more.

Late Spring 1815 the battle of Waterloo definitely ended Napoleon's power. Immediately after the decisive combats, Brugmans turned in a tremendous performance, by preventing the disaster of the outbreak of epidemic diseases, when tens of thousands of wounded French and allied soldiers were lodged in the various parts of Brussels and its surroundings. This success brought him almost eternal fame.

In the course of 1817 a branch establishment of the 'Centraal Magazijn' was founded in Brussels, while a second military hospital was established in Leuven. The names of the two main military hospitals were changed in 'Groot Militair Hospitaal' ('Great Military Hospital').

The financial situation of the country constantly worsened, which forced the 'Militair-geneeskundige Dienst' to economize. This decline made unpleasant discussions between Brugmans and the 'General intendant' ('Intendant-Generaal') inevitable. In spite of the cogency of Brugmans's arguments, arguments which proved that he was in the right, the 'Geneeskundig Bureau' was disbanded. Its administrative tasks were placed under the direct authority of the Ministry of War and so was the majority of its personnel. Inevitably these changes, which were so very frustrating for Brugmans, would lead to an unacceptable worsening of the quality of the service, rendered to those who needed it. The situation was perhaps as worse as it had been in 1793-1794.

Another aspect not yet discussed in this respect is the great interest Brugmans took in the prevention of contagious diseases, and the fight against them, especially if they were related to the living conditions of the military. Besides, his contribution to the founding of a veterinary service of the army has to be mentioned, and for example, the formulation of regulations for the examination of army horses. His fight against the contagious diseases not only concerned the fight against gangrene, but also against diseases in besieged cities. Furthermore there were his contributions to the improvement of hygiene in hospitals, garrisons and prisons. With regard to these fields of study he carried on a correspondence with other scientists, such as J.F. Kluyskens (Ghent) and D.G. Kieser (Jena).

A last aspect worth stating is his dedication to the improvement of the living conditions of seamen, an important issue since the peace treaty of 1802 had been concluded, through which event the journeys to the East Indies seemed to become feasible again. The government even thought of establishing a 'Centraal

Magazijn van Geneesmiddelen') on the island of Java (Dutch East Indies). The foundation of such an establishment would undoubtedly prevent high transportation costs. As a matter of fact such a facility was established in Batavia, shortly after the re-establishment of the Dutch government in the East Indies (in the spring of 1816). With regard to the aspect of contagion it is also necessary to point at the contests which were held between 1801 and 1819 by the 'Hollandsche Maatschappij der Wetenschappen'), founded in Haarlem in 1752 (see also chapter 7).

During the last years of his life he put his mind more and more to his other fields of interest, especially to botany, to gardening and to the cultivation of exotic plants. After Brugmans had died, Harbaur succeeded him as inspector general of the 'Militair-geneeskundige Dienst'.

175. J. Janssen (St-Gerlach) to S.J. Brugmans (Leyden); around 10 April 1795:

Janssen describes the surgical complications, caused by a badly healing fracture of the lower leg of the servant of a Swiss officer. Janssen has found a shift of parts of the bones and a violent suppuration of the soft tissues, followed by a slow healing process. Several evacuations on open wagons and in open ships to Rotterdam had done the patient much harm. Thereupon, a febris biliosa, a febris continua, a new suppuration and a prolapse ('verzakking') of the leg followed. Nevertheless, in February 1795, the patient seemed to have recovered completely. He only complained of stiffened joints in the left leg. About the end of March, a severe malignant fever suddenly occurred and ten days later the patient died.

[L-Met; MME, PAA]

176. S.J. Brugmans (Leyden) to J. van Breda senior (Delft); 11 June 1795:

Brugmans draws Van Breda's attention to L. Bicker's plan to found a 'Comité du Salut Public' ('Public Health Committee') in conformity with the French example. Bicker has been ordered to advise Brugmans. Now he asks Van Breda to become one of the members of the advisory committee.

[ATS 2273; MME]

177. B. Hussem (Feyenoort) to S.J. Brugmans (Leyden); 22 June 1795:

Hussem (a navy surgeon residing in Amsterdam) explains the provenance of a leg, sent to Brugmans. He describes the progress of the illness, during which a temporary recovery occurred, followed by a relapse. Because the leg wound became more and more infected, the pain became unbearable and the wound began to give off a foul stench, Hussem had been forced to amputate the thigh. Only this operation has made it possible to prevent the infective agents from being absorbed by the humours. He asks Brugmans not to give his judgement yet about his pathological observations and about the procedures followed by him, because it is still possible to improve his technique and skills. After having undergone the operation, the patient has started to recover. This process will take at least 5 to 6 weeks. Meanwhile he has stopped taking medicines. In Hussem's view, this success deserves Brugmans's particular attention. He promises to inform him in the future about new interesting cases.

[L-Met; MME, PAA]

178. S.J. Brugmans (Leyden) to J. van Breda senior (Delft); 10 July 1795:

Brugmans has understood that his old friend Jacob van Breda is willing to join the 'Comité du Salut Public', already consisting of six members. [This institution has to be considered the first version of the state health authority]. Brugmans promises to propose him to the 'Representanten van het Volk' ('Representatives of the People').

[ATS 2273; MME]

179. S.J. Brugmans (Leyden) to J. van Breda senior (Delft); 18 August 1795:

Brugmans informs Van Breda senior that the inauguration of the 'Comité du Salut Public' has to be postponed, because Bicker is still abroad. Van Breda's name has been placed definitively on the list of applicants. Brugmans's proposal will certainly be adopted.

[ATS 2273; MME]

Waarde Vriend!

Het benoemen van de Leden tot het Comité van gezondheid is door de afwezigheid van den Heer Bikker buiten de Republiek vertraagd geworden, dan daar Zyn W. nu weder te rug is gekeert, twyfel ik niet, of wy zullen ten spoedigsten ons rapport uitbrengen. — Daar ik vast stelle, dat er onder de Leden van dat Comité zulke schikkingen zullen kunnen gemaakt worden, waardoor Wd. van zyne praktijk volkomen meester zal blijven, kan ik niet zien, dat dit enige zwaarigheid maakt, daar Wd. tyd immer wel zal permitteren, om op de vergaderingen in 't Hage volgens het gedrukt plan te houden, tegenwoordig te zyn. Ik zal Wd. dus op de Lyt, die aan de Represantanten zal overgegeven worden, helpen plaatsen, en twyfel niet of deze zullen onzen voordracht goedkeuren. — Met de volmaakte aching betuige intusschen te zyn

Groningen
D. 18 Aug.
1795.

J. J.
Brugmans.

180. S.J. Brugmans (Leyden) to J.D. Pasteur (Dordrecht); 28 April 1796:

Brugmans wants to see Pasteur soon in order to discuss the unexpected activities of L. Bicker, with regard to the foundation of the 'Comité du Salut Public'. Bicker's activities and plans are clearly contravening his own opinions and neither do they match with the already existing mutual agreements. Initially, Brugmans enthusiastically offered his cooperation, but now he has to observe that machinations and unfavourable circumstances have caused a delay. Bicker also seems to have lost his enthusiasm; at least he has proposed to establish a committee at a provincial level. Meanwhile Brugmans has learned that yesterday Bicker has presented a plan to the 'Nationaale Conventie' ('National Convention'). He does not understand why Bicker has blundered in that way. Bicker, he himself and the others should serve it to the best of their ability. He asks Pasteur to inform him in detail about this event. He also asks to send him a note to the 'Centraal Magazijn van Geneesmiddelen' ('Central Depository of Drugs') in the 'Voorhout' (The Hague).

[UBA Ba 110d; MME, PHA]

181. F.S. Pfenniger (Zuidlaren?) to S.J. Brugmans (Leyden); around 1 July 1796:

Pfenniger enters the description of a case of caries of the tibia of a five year old boy and informs him about the favourable effect of the administration of red peruvian bark. After several months the boy has recovered completely.

[L-Met; MME, PAA]

182. B. Hussem (Feyenoort) to S.J. Brugmans (Leyden); 22 July 1796:

Hussem has been informed by a friend that he could really do Brugmans a favour by sending him the skull of a negro of the West Indies, who died in the naval hospital lately. He hopes to win Brugmans's friendship and esteem.

[L-Met; MME, ANP, COB]

183. B. Hussem (Feyenoort) to S.J. Brugmans (Leyden); 13 December 1796:

Hussem reports on a prisoner of war, exchanged with England, who has suffered from tertian fever and who, after having been treated, seemed to have recovered. However, he again started to complain about abdominal pains and pains in his arm. He also began to suffer from dropsy and continuing fevers. Finally he died. Hussem describes an interesting preparation, which he promises to send as soon as it has been cleaned completely.

[L-Met; MME, PAA]

184. C. Scheidler (??) to S.J. Brugmans (Leyden); 31 March 1797:

Scheidler informs Brugmans about the examination of the body of a soldier, who died of a febris quartana and of scabies of the hip joint. He promises to send him the upper parts of both femurs.

[L-Met; MME, PAA]

185. B. Hussem (Feyenoort) to S.J. Brugmans (Leyden); 21 February 1798:

Hussem sends Brugmans a sacrum to which several vertebrae are attached, the remains of a patient, who deceased of a fever, lumbar pains and 'zinkingen'. The metastasis had caused the deposition of pathogenic substance in the fascia lata. There is no doubt that he died of an emaciating fever.

[L-Met; MME, PAA]

186. J.C. Reich (Leyden?) to S.J. Brugmans (Leyden); end of February 1798:

Reich describes the fatal issue of a pathological process undergone by a soldier who had been suffering for several months of a thigh wound. During the autopsy the cellulosa and the ligaments of both knee joints proved to be extremely rotten.

[L-Met; MME, PAA]

187. S.J. Brugmans (Leyden): short note; 28 May 1798:

Brugmans has examined the corps of a soldier, who died after a disease, examined by himself. The patient mainly complained about rheumatoid pains – rheumatism caused by a ‘scherpe stoffe’ (acerbic substance) – in the left shoulder, the neck and the left upper arm. From an examination carried out when the patient was still alive it appeared that numerous canals had developed in the scapula and humerus. The patient worsened very quickly after the application of ‘Spanish flies’ (meant to drain) had been stopped. The exarticulation of the shoulder joint seemed appropriate, but was useless all the same. The canals proved to contain various kinds of pus.

[L-Met; MME, PAA]

188. B. Hussem (Feyenoort) to S.J. Brugmans (Leyden); end of 1798:

Hussem sends Brugmans the skull of a seaman – born in Ethiopia/Senegal – who died in the hospital of Rotterdam [Later on, Brugmans marked this object as ‘Br 584’].

[L-Met; MME, ANP, COB]

189. Unknown person (??) to S.J. Brugmans (Leyden); around 31 January 1800:

An unknown army doctor sends the case histories of three soldiers, completely recovered after having suffered from head wounds. The officer describes the treatments, the operations, the medicines which have been administered and the effects of the various treatments. He has also added a physiological explanation.

[L-Met; MME]

190. S.J. Brugmans (Leyden): short note; around 31 October 1800:

Brugmans reports on the case history of a soldier, who died in the ‘Bataafsch Hospitaal’ in Leyden. This patient has been treated by one of his colleagues. An injury of the lower lip had spread itself dramatically fast into the mouth floor and into the cervical glands. He describes the medical treatment.

[L-Met; MME, PAA]

191. J.C. Reich (Leyden) to S.J. Brugmans (Leyden); around 31 December 1800:

Reich describes the illness and fatal end of a Swiss soldier. He gives details about the degeneration of the stomach, the medicines which have been given and their effects. Most probably the degeneration has been caused by the abuse of acerbic land wine.

[L-Met; MME, PAA]

192. J.C. Reich (Bergen-op-Zoom) to S.J. Brugmans (Leyden); around 15 January 1801:

Reich reports on the development of a fatal disease, which has been characterized by multiple and voluminous ulcerations, especially in the larger joints, while the marrow of the larger bones was putrefied. Several glands, the gall bladder and the liver proved to be swollen and rigid. Unfortunately Reich did not add any preparations.

[L-Met; MME, PAA]

193. J.C. Reich (Leyden) to S.J. Brugmans (Leyden); around 31 March 1801:

Reich reports on a mortal disease. At the autopsy the signs of phthisis laryngea, venereal disease and severely inflamed lungs had become apparent. He adds several preparations.

[L-Met; MME, PAA]

194. J.C. Reich (Honselersdijk) to S.J. Brugmans (Leyden); around 30 April 1801:

Reich has examined the remains of a patient, who has been suffering from 'Vomitii chronico'. He concludes that the patient's body has been dehydrated and that he has been suffering from a bad and insufficient stool and from a bad urination. Evidently the omentum majus had changed while the exit of the stomach was strongly contracted and had become rigid.

[L-Met; MME, PAA]

195. H. Gelpke ('s-Gravenmoer) to S.J. Brugmans (Leyden); 24 June 1801:

Gelpke opens his report with a remark on his own health and asks Brugmans's advice with respect to the disorder of his nasal cavity and pharynx. Next he asks a question about the included preparation – a part of a lower jaw, which has been severely damaged by 'beenvraat' (dissolution of the bone tissue), after which it has been rejected completely. Nevertheless the patient stayed alive. Gelpke also adds a remark on a nine year old boy suffering from a gastric-rheumatical fever and from putrefaction of the bones of the left ankle. He describes the treatment and its favourable result.

[L-Met; MME, PAA]

196. J.C. Reich (Leyden) to S.J. Brugmans (Leyden); 30 July 1802:

Reich informs his superior about the fortunate outcome of a disease. A patient, suffering from scabies, catarrhal disorders and tumour of the nerves of the upper arm, has recovered almost completely. Only a minor loss of irritability is left. Finally he briefly considers the functions of the tunica and the pulpa of the nerves.

[L-Met; MME, PAA]

197. ?? De Mees (Haarlem) to S.J. Brugmans (Leyden); 1 October 1802:

De Mees describes the history of the illness and the results of the anatomical examination of the remains of a new born child, showing defects of the intestines and bladder. He briefly informs Brugmans about the effects of the given medicines.

[L-Met; MME, PAA]

198. A. Broussonet (Isle of Tenerife) to S.J. Brugmans (Leyden); 1 Brumaire An 11 (23 October 1802):

Broussonet informs Brugmans about the fact that he has seen Jansen (governor general of the Cape Colony) on Tenerife. On that occasion he has been told that Brugmans was eager to receive exotic and extraordinary plant species. Unfortunately there are only shrubs to be found, belonging to the

genera Euphorbia, Sedum and Sempervivum. Of course it will be possible to send him dried plants after his return to Montpellier. He has sent Jansen already two skulls of the former inhabitants of the islands, which are apparently of Arabic origin. He hopes that he will have the opportunity to work in Montpellier again, after his return and he asks Brugmans to assist him with the extension of the botanical collection. He wants to restore the old 'grandeur' of the collections of Montpellier. For that purpose he asks Brugmans to send him seeds. He offers him seeds of French Mediterranean plant species in return. He invites him to mark all the wanted species in a copy of the 'Flora Monspeliensis' and to send it through the Minister Chaptal to his brother, who is a professor at the University of Montpellier.

[L-Met; MME, ANP, COB, BOT]

199. F. Beneker (Kampen) to S.J. Brugmans (Leyden); 10 November 1802:

Beneker has examined the remains of a soldier who's upper arm had to be amputated. After the operation several slivers of bone had been rejected. After having been infected by a febris putridis nervosae and after having passed through all stages of the disease within five days, the patient died. He also suffered from a venereal disorder. He adds several other preparations.

[L-Met; MME, PAA]

200. H. Lichtenstein (Capetown) to S.J. Brugmans (Leyden); 31 January 1803:

Lichtenstein sends Brugmans two skulls received from Broussonet through the governor of the Cape Colony. He recommends advises him to compare these objects with the specimens, which are already in his possession. He adds some information about the sites and also about the 'Guanche' skulls, which are easily found on Tenerife. He asks him to send his regards to his friends.

[L-Met; MME, ANP, COB]

201. J.C. Reich (Leyden) to S.J. Brugmans (Leyden); 31 March 1803:

Reich describes the outcome of an autopsy. The death has been caused by an abscess on the sacral bone and in the gluteus muscles, followed by the development of fistulae and severe disorders of the periosteum.

[L-Met; MME, PAA]

202. J.C. Reich (Leyden) to S.J. Brugmans (Leyden); around 30 April 1803:

A soldier has been hit by a knife in his groin region. Later on his sacral bone and right hip bone were affected too. He also began to suffer from a catarrhalic asthmatic cough. Reich describes the surgical operations, the medicines administered by him and their effects. The patient has completely recovered.

[L-Met; MME, PAA]

203. S.J. Brugmans (Leyden): short note; 7 September 1803:

At the request of the judicial authorities a commission directed by him, has examined the body of a man, who has been found dead in an inn. The commission has examined the skull wound caused by a stabbing.

[L-Met; MME, PAA]

204. H.H. de Wildt (??) to S.J. Brugmans (Leyden); end of 1803:

De Wildt sends a skull, accompanied by a description. It has belonged to a murderer, who has been hung in Lisse. The man called himself 'Homme Dieu'. De Wildt also gives a physiognomic description to explain his criminal character and also adds a drawing.

[L-MET; MME, ANP, COB]

205. J.C. Reich (Leyden?) to S.J. Brugmans (Leyden); 15 January 1804:

A tumour at the inner side of the right thigh has caused the unfortunate end of a diseased soldier. It turned out to be connected to a similar swelling in the abdominal cavity. The patient has complained about arthritic and rheumatic pains. The treatment and medication have led to the release of lots of pus.

However the wound became more and more gangrenous. At the autopsy the right leg appeared to contain lots of fetid substance, while the lumbar vertebrae and the right pubic bone had also been affected.

[L-Met; MME, PAA]

206. J.C. Reich (Leyden) to S.J. Brugmans (Leyden); 1 May 1804:

In 1802 a malformed fetus – a one armed lump of tissue, mainly consisting of bones and skin – has been brought into the world by a woman who experienced a second problematic pregnancy in 1804. Reich describes his fruitless efforts to induce birth. He has not been informed of the outcome yet.

[L-Met; MME, PAA]

207. ?? Van Horn junior (Alkmaar) to S.J. Brugmans (Leyden); 12 May 1804:

Van Horn junior, knowing that Brugmans already owns a considerable collection of skulls, sends him a bleached one, which has been found in the dunes near Schoorl, together with several other bones. The brain cavity still contains a bullet. He gives further details of this object.

[L-Met; MME, ANP, COB]

208. J.C. Reich (Leyden?) to S.J. Brugmans (Leyden); 15 June 1804:

Reich describes the last days of the life of a soldier, wounded by a sabre cut at the temporal region of his head. After he died, it turned out that his right lung had been affected too. Perhaps this has also been caused by the skull wound. He bases his explanation on the fact that the affection of a certain organ frequently induces the affection of another organ.

[L-Met; MME, ANP, COB]

209. S.J. Brugmans (Leyden): short note; end of 1805:

Brugmans briefly describes the skull of a Hottentot, sent to him by R. de Klerck Dibbetz. This object has been handed over to him by De Mist after his return from South Africa.

[L-Met; MME, ANP, COB]

210. S.J. Brugmans (The Hague) to B. Giraud (Paris); 5 January 1806:

Brugmans adds a list bearing the names of the most skilled Dutch physicians and surgeons, to his letter, addressed to Bruno Giraud. These men have to be recommended to Louis Bonaparte, the future king of Holland. The list contains the names of five 'Médecins consultants' ('consulting physicians'), five 'Chirurgiens consultants' (consulting surgeons'), three 'Médecins ordinaires' and one 'Chirurgien ordinaire'. [Later on the names of three other persons, a professor of medicine and two surgeons, have been added]. [originally written in French]

[AN-CHAN AF IV 1831; MME, MED]

211. ?? Mornac (Delft) to S.J. Brugmans (Leyden); 27 May 1806:

Mornac has seen Brugmans in Nymegen. On that occasion he has been informed that Brugmans eagerly wanted to receive the skull of an Egyptian. He will soon have the opportunity to send him the skull of a 26 year old man, who has died today in hospital of a nervous fever. He underlines his feelings of esteem and obedience towards Brugmans.[This skull has been marked 'Br 553'].

[L-Met; MME, ANP, COB]

212. S.J. Brugmans (Leyden) to the 'Koninglijke Courant' (??); early June 1806:

Brugmans enters the summary of a report on the 'Guanches' of Tenerife. In Spanish books hardly anything is found on this subject. In the meantime more than a thousand mummies have been found. For as far as he knows this tribe has probably been exterminated by the Spanish. Finally he gives a few details of funeral rituals, the gift of funeral presents, their art of embalming and their monuments.

[L-Met; MME, ANP, COB]

213. S.J. Brugmans (Leyden) to H.M. King Louis Bonaparte (Amsterdam); 23 July 1806:

Brugmans, who is extremely impressed by the benevolence of His Majesty King Louis Bonaparte and aware of His endless love for His subjects, dares to address himself to his sovereign. He explains how the 'Militair-geneeskundige Dienst' is governed and how it functions. He is very pleased that His Majesty has been willing to listen to him more than once. Now he wants to prove that the administration of the whole 'Militair-geneeskundige Dienst' will regain life through a reorganization. Meanwhile the Dutch service has been under his command for more than eleven years. He runs the service together with Scheidler (Doctor of Medicine), Starck (Doctor of Surgery) and the secretary Van Meerten. He praises their skills. They are very pleased by the distinct approval and very flattering commendation of all the army commanders as well as by the commendation of those who have been in command of the troops at the time when the Batavian Republic still existed. There has never been any complaint about the Dutch service, a situation quite different from that of the French military health service in Holland. The data collected by him prove that the Dutch service is nine times as cheap as the French service, taken into account the daily costs of a soldier, although the five French hospitals are much more convenient, more modern and even more luxurious than the old and crumbling Dutch military hospitals.

Brugmans, very attached to his service, is even willing to resign from his job, if it is placed under French administration. It would be better if the whole army medical service would be placed under Dutch administration, as far as it concerns the armies encamped in Holland. He asks to consider his proposal carefully. He is sure that His Majesty is of the same opinion. If not, it will be easy for him to resign from his duties and to sacrifice this part of his career. He ends his letter by underlining his very humble obedience. [originally written in French]

[AN-CHAN: AF IV 1792; MME]

214. S.J. Brugmans (Middelburg) and B. Giraud (Middelburg) to H.M. King Louis Bonaparte (Amsterdam); 1 August 1806:

After having inspected the way in which the French military hospital of Middelburg is functioning Brugmans and his colleague Giraud (first surgeon to King Louis Bonaparte) – in accordance with the orders given by His Majesty personally – invite Darquier, (first) medical officer, to accept the charge of the hospital. He will be assisted by Libert (pharmacist, 2nd Class), Hebert (pharmacist, 3rd Class), Brécourt (surgeon, 3rd Class) and Demeyer (surgeon, 3rd Class). Darquier has to get in touch with general Monnet, in order to have one of the French army medical officers encamped on the isle of Walcheren transferred to Middelburg, in order to serve in its hospital. [originally written in French].

[AN-CHAN: AF IV 1792, MME]

215. S.J. Brugmans (Breda) and B. Giraud (Breda) to H.M. King Louis Bonaparte (Amsterdam); around 3 August 1806:

After having inspected the French military hospital of Breda, Brugmans and Giraud invite Leonard, (first) medical officer and surgeon 1st Class, to take the lead of the hospital. He will be assisted by Mornac (surgeon, 1st Class). Netrasse (pharmacist, 2nd Class), La Coste (pharmacist, 3rd Class), Parmentier (pharmacist, 3rd Class), Charbonnier (surgeon, 3rd Class, Breda), Bard (surgeon, 3rd Class, Utrecht) and Prevost (surgeon, 3rd Class, Utrecht). [originally written in French]

[AN-CHAN: AF IV 1792, MME]

216. S.J. Brugmans (Nymegen) and B. Giraud (Nymegen) to H.M. King Louis Bonaparte (Amsterdam); 5 August 1806:

After having inspected the French military hospital of Nymegen, Brugmans and Giraud invite Sellière (surgeon major) to take the lead of this hospital and to accept the function of surgeon 1st Class. Because that day Boujardièrre, at the time director of the hospital, will leave, Sellière will have to take over his function. He will be assisted by Dartigaux (surgeon, 3rd Class), Marlet (surgeon, 3rd Class), Bellot (surgeon, 3rd Class), Joron (pharmacist, 2nd

Class) and La Vigne (pharmacist, 3rd Class). At the time these officers are already serving in the French hospital of Nymegen. [originally written in French]

[AN-CHAN: AF IV 1792, MME]

217. S.J. Brugmans (Leyden) and B. Giraud (Amsterdam) to H.M. King Louis Bonaparte (Amsterdam); 19 August 1806:

In his extensive report Brugmans describes the causes of the predilection of the French soldiers for the French hospitals, instead of for the Dutch hospitals. On the other hand there are two reasons to prefer the hospitalization in a Dutch hospital. The reasons are to be found in the answers to the following questions: 1°: Why do the French soldiers prefer the French hospitals? 2°: Why is the preference for the Dutch hospitals the right choice? In 1795 Holland handed over its best hospital accommodations to the French army. The Dutch government even had to pay for further improvement of the French hospitals. Since then the Dutch hospitals have not been repaired. Differences of food quality, medical care, death rate and the costs (per soldier per day) play an important role in the decisions which have to be made. This document also proposes a final decision to be made by His Majesty. Brugmans emphasizes that his proposition is based on patriotism and on the love for the patients. He underlines that the 'Militair-geneeskundige Dienst' has tried to resist the many attempts by the French to introduce their system of health care and administration in Holland. [originally written in French]

[CHAN AF IV 1792; MME]

218. B. Giraud (Amsterdam) and S.J. Brugmans (Leyden) to H.M. King Louis Bonaparte (Amsterdam); end of September 1806:

Brugmans and Giraud have completed their inspection tour to the French hospitals in Holland. Geographically the island of Walcheren is very remote and its sanitary situation could not be worse (especially in this time of the year: the autumn is to begin soon). Probably the hospital of Middelburg has to be kept very modest. It has to hold the position of a temporary facility.

The direction could be entrusted to Darquier. The hospital of Breda should develop into a central facility for the larger region. Wounded and ill soldiers coming from Middelburg, Utrecht, Nymegen, etc. could be hospitalized there. Of the five French military hospitals, the one in Breda is the best located and the best equipped. Therefore additional claims with regard to the number of persons employed should be granted. [originally written in French]

[AN-CHAN: AF IV 1792, MME]

219. S.J. Brugmans (Leyden) and B. Giraud (Amsterdam) to H.M. King Louis Bonaparte (Amsterdam); 14 October 1806:

After having returned from their inspection tour, Brugmans and Giraud have written their final report about the situation of the French military hospitals. They have formulated their advice. They underline the fact that the French hospital of Middelburg (on the island of Walcheren) is very isolated and that its sanitary situation is very bad, especially in the beginning of autumn. It seems sensible to confine its capacity to a minimum and to give it the status of a temporary facility, while the French hospital of Breda should be upgraded to the position of a main French hospital for the larger region. It should even be equipped for the admission of sick and wounded soldiers from the other provinces, even from the French military hospitals of Utrecht and Nymegen. The document ends with an enumeration of the personnel needed for the five French military hospitals (Delft, Middelburg, Breda, Nymegen and Utrecht). [originally written in French]

[CHAN AF IV 1792; MME]

220. ?? Bonhomme (The Hague) to S.J. Brugmans (Leyden); 14 November 1806:

Bonhomme informs Brugmans – first member of the ‘Conseil de Santé Militaire’ (‘Military Health Council’) – that according to the Royal Decree of 5 November 1806, N° 1, and in accordance with the previous decree of 17 September 1806, N° 19, he has been appointed Director of the ‘Service de Santé militaire’ (‘Military Health Service’) and that the title and rank of State

Councillor has been given to him. The government expects him to cooperate with the Minister of War. [originally written in French]
[SHAT 3Y^G 128; MME]

221. S.J. Brugmans (Leyden) to H.M. King Louis Bonaparte (Amsterdam); 17 January 1807:

Brugmans reports to His Majesty on the personal situation and health of the citizens, who have been hospitalized in the military hospital of Leyden after the explosion of a gun powder ship on 13 January 1806. He underlines his love for his king as well as his most humble devotion. [originally written in French]
[AN CHAN AF IV 1727; MME]

222. H.M. King Louis Bonaparte (Aix-la-Chapelle) to S.J. Brugmans (Leyden); 27 August 1807:

His Majesty emphasizes that he is well aware of the services Brugmans renders to the health of the Dutch and French troops camped in Holland and that these facts are known to those who command the troops. He asks Brugmans to inform the commanding officers about his feelings with respect to the 'Militair-geneeskundige Dienst' and he wishes that the Holy God will guard him.
[AN CHAN AF IV 1827; MME]

223. J.C. Reich (Leyden) to S.J. Brugmans (Leyden); 20 December 1807:

After having been buried under rubble, a wounded man has been brought into the military hospital. The collum femoris of one of his legs proved to be broken, so his leg was bandaged up, according to the prescriptions given by Desault. Further complaints and symptoms ('mixtus cruenta' and 'pedes cruenta') have indicated a lesion of the pelvic organs. Therefore the pelvis has been stabilized. The disease had a fatal end: after a gangrene had developed the patient died on 25 February 1807. Autopsy has proved that the pelvic viscera had become gangrenous and that the bones of the pelvic girdle were fractured.

[L-Met; MME, PAA, COB]

224. S.J. Brugmans (Leyden) to L. van Toulon (The Hague); 26 June 1808:

Brugmans has postponed the editing of several documents, which are already known to Van Toulon, until after he has been informed about the way the royal decree relative to these documents has to be explained. He has been occupied by his activities in behalf of the 'Kweekschool voor militaire geneeskunde' ('Training College of military medicine') in The Hague. Yesterday he has sent the draft of certain regulations to the Minister of War. He promises to send a cost estimate tonight and to see Van Toulon soon again, after having paid a visit to the Minister of War.

[KB-121 E 4; MME]

225. S.J. Brugmans (Leyden); short note: probably end of 1808:

A certain Dr. Jassoy (from Batavia) has given J.A. Bennet a skull as a present and Bennet has handed it over to him. It is the skull of a man, who was a member of the 'Manslaar' tribe, which is living in the region of Mangasay on the island of Biema. On 16 November 1804 the man died of a head injury. Brugmans ends his note by giving a brief description of the skull wound; using the term 'aposeparismus'. [He has added this skull to his collection as 'Br 597'.]

[L-Met; MME, ANP, COB]

226. ?? Plato (??) to S.J. Brugmans (Leyden); 13 August 1809:

The author describes the history of a fusilier, who has been wounded at the head after a bridge had come down. This accident has caused various fissures in the skull, followed by apoplectic seizures. Initially a trepanation distinctly alleviated the complaints and the patient regained conscience. After having made some remarks with respect to the treatment and the way of bandaging, the issue is described. The patient died 25 days after the accident. A description of the autopsy has been added.

[L-Met; MME, PAA]

227. S.J. Brugmans (Leyden): short note; probably end of July 1810:

Brugmans has received the skull of a deceased inhabitant of Murcia (Spain). The object has been sent to him by Mergell, surgeon major, who has served in the Dutch cavalry of the French imperial army. Mergell has made his choice carefully. It is quite a remarkable specimen – in Brugmans's view the transition between a European and an African skull.[see Brugmans's collection under 'Br 538'.]

[L-Met: MME, ANP, COB]

228. S.J. Brugmans (Leyden): short note; end of September 1810:

The skull described in this note once belonged to an inhabitant of Northern California. Colonel Rottiers – serving His Imperial Majesty – received this specimen from Van Lamsdorf, the companion of the famous explorer Krusenstern. During his journey Van Lamsdorf has excavated two skulls in a cemetery. After his arrival in Amsterdam he has gave one of these skulls to Brugmans.

[L-Met; MME, ANP, COB]

229. S.J. Brugmans (Leyden) to the 'Ministre-Directeur de l'Administration de la Guerre' (Paris); 12 January 1811:

Brugmans informs the Comte De Cessac is very honoured by the news of the appointment, which has made him chief physician of the 'Militair-geneeskundige Dienst'. Through this appointment he has been put in charge of the direction and inspection of the military hospitals of the 17th and the 31st army divisions. He is very obliged by this sign of confidence. It has been sixteen years now since he devoted himself to the various aspects of military medicine. He is eager to assume this new challenge under the command of the Minister. He reminds his superior of the hospitable welcome in 1799, when he visited Paris to study the organization and policy of the French 'Service de Santé Militaire'. Meanwhile, he has studied the regulations sent to him through the 'Commissaire Ordonnateur' Regnault. Of course, his new function has to be compatible with his rectorate and with his other functions.

Fortunately Regnault's successor, Lyanty, has put his heart at rest. Brugmans realizes that he has earned this sign of imperial benevolence and ministerial protection only because of his great and unconditional dedication. [originally written in French]
[SHAT 3 Y^G 128; MME]

230. S.J. Brugmans (Leyden) to the 'Commissaire-Ordonnateur' (Amsterdam); 31 January 1811:

Brugmans reports on the situation in the military hospital of Amsterdam during the last week of January 1811. He gives details about the number of patients (officers and soldiers), who entered the hospital, the number of deaths and the number of those who have left hospital. He also informs the 'Commissaire-Ordonnateur' about the categories of illnesses (venereal diseases, 'bilious fevers', etc). The table has been signed by the financial administrator of the hospital. [originally in French]
[EASSA Car 9 Doss 43; MME]

231. S.J. Brugmans (Leyden) to the leading officers of the 'Service de Santé Militaire'; 4 February 1811:

Brugmans informs his subordinates about his recent appointment and emphasizes the importance of this function. Although cannot wait to show his gratitude to his superiors and although he is looking forward to contribute to the glory of military medicine, it is impossible for him to leave for Paris now. He explains the new regulations and demands his subordinates to inform him frequently about every important issue, through bimestrial medical reports. He discusses the most important aspects of a good medical service, for example with regard to the statistics of the various diseases, to their changes and to the correct anamneses and treatment of the patients. For his part he promises to do justice to the zeal and talents of his subordinates. [originally written in French]
[EASSA Car 9 Doss 43; MME]

232. S.J. Brugmans (Leyden) to the 'Commissaire-Ordonnateur' (Amsterdam); 7 February 1811:

Brugmans presents an overall picture of the patients of the military hospital of Amsterdam, made up at the end of the first week of February 1811: the number of soldiers hospitalized, number of deaths, the number of those who have left hospital, the number of those who have suffered from the various types of fevers, venereal diseases, etc. The table has been signed by Roudiac, the financial administrator of the hospital. [originally written in French].

[EASSA Car 9 Doss 43; MME]

233. 'Ministre-Directeur de l'Administration de la Guerre' (Paris) to S.J. Brugmans (Leyden); 13 March 1811:

The Comte De Cessac informs Brugmans that on 23 February 1811 His Majesty the Emperor has appointed him Inspector General of the 'Service de Santé Militaire'. Now he invites him to arrange his departure for Paris in the near future. [originally written in French].

[SHAT 3 Y^G 128; MME]

234. S.J. Brugmans (Leyden) to the 'Ministre-Directeur de l'Adminstration de la Guerre' (Paris); 28 March 1811:

Brugmans thanks the Comte De Cessac for this honourable and unexpected appointment. He expresses his feelings of extreme gratitude and expresses his wish to thank him personally. However, because of the arrival of the two new French divisions in Holland, his presence is absolutely needed at the moment, so it is impossible for him to leave for France now. Besides, the 'Service de Santé Militaire' is organized in the French way (synchronized with the French service). He also wants to inform the French medical officers, arriving in Holland, about the Dutch approach. He has high expectations of it and expects the Minister to agree with his decision. He is also preparing an extended note about the nature, causes and treatment of the diseases in Holland, especially about those which often break out in autumn. He wants to present this document as soon as possible. He considers himself very privileged by the benevolence and attention of the Minister and signs

this letter by expressing his feelings of highest esteem and obedience.
[originally written in French]
[SHAT 3 Y^G 128; MME]

235. ‘Ministre-Directeur de l’Administration de la Guerre’ (Paris) to S.J. Brugmans (Leyden); 15 April 1811:

De Cessac has received Brugmans’s letter dated 28 March 1811 about his request to postpone his departure for Paris. He has already informed the Duc De Plaisance. Meanwhile Brugmans has been allowed to stay in Holland for the time being, until the ‘Service de Santé Militaire’ is functioning well and his presence is no longer required. The ‘Commissaire Ordonnateur’ of the 17th military division has also been informed. He is expected to agree with this plan as long as the troops in Holland will be assured of the best possible medical care. [originally written in French]
[SHAT 3 Y^G 128; MME]

236. S.J. Brugmans (Leyden) to the ‘Ministre-Directeur de l’Administration de la Guerre’ (Paris); 29 May 1811:

Brugmans presents two reports to the Comte De Cessac. They both deal with the causes, the treatment and prevention of the contagious and epidemic autumn diseases which afflict the inhabitants of the coastal regions of Holland. He underlines that this is his first report of this kind and extensiveness. [originally written in French]
[EASSA Car 9 Doss 43; MME]

237. S.J. Brugmans (Leyden) to the ‘Ministre-Directeur de l’Administration de la Guerre’ (Paris); 16 June 1811:

Once again Brugmans explains why it has been impossible for him to come to Paris last autumn. This postponement was especially due to the autumn fevers. Even the accession of his new job has been delayed. Now he asks permission to leave for Paris immediately, in order to extend his thanks and to offer his marks of honour. He also wants to exchange ideas about several important subjects regarding the ‘Service de Santé Militaire’. He is eager to

meet his French colleagues and wants to discuss the best and cheapest means and measures to fight the diseases, which are raging in Holland. [originally in French]

[SHAT 3 Y^G 128; MME]

238. ‘Ministre-Directeur de l’Administration de la Guerre’ (Paris) to S.J. Brugmans (Leyden); 3 July 1811:

De Cessac allows Brugmans to leave for Paris. As soon as he is no longer needed there and as soon as the military hospitals in Holland will need his presence, he has to return. De Cessac has decided to inform De Plaisance, who has had the kindness to inform him about Brugmans’s desire to leave for Paris immediately. [originally written in French].

[SHAT 3 Y^G 128; MME]

239. C. van der Meer (Utrecht) to S.J. Brugmans (Leyden); early July 1811:

Van der Meer reports on the autopsy of a patient, who arrived in hospital on 14 June 1811 and who died of a ‘hectic fever’ about a week later. He describes the anomalies, which have been observed at the occasion of the section, especially those of the viscera of the thoracic and abdominal cavities. Van der Meer refers to a description of the changes of the pulmonary tissues given by Boerhaave and emphasizes that the skull did not show any alterations.

[L-MET; MME, PAA]

240. S.J. Brugmans (Leyden) to Baron D’Alphonse (Amsterdam); 2 August 1812:

Brugmans, knight of the ‘Légion d’Honneur’, asks D’Alphonse’s attention for the problems with regard to the candidate medical officers, who have not yet been trained in midwifery. Because of the constitution of the law of 20. Prairial An 11 (article 38, § VI), they will run into difficulties. These young candidates, who eagerly want to become medical officers, have already been trained in gynaecology and obstetrics, although this skill has not been marked

on their certificates. Nevertheless, they are not admitted to the profession of accoucheur. They are not even admitted to the exam! Brugmans pleads the assignment of the title of medical officer with the clause that they are not allowed to practise accouchements, unless they have passed an exam. Of course D'Alphonse will be convinced of his sincere wish to obey the laws of the Empire and to support young, well educated and motivated surgeons as well. [originally written in French]

[NA 2.01.12.1042; MME]

241. S.J. Brugmans (Leyden): short note; 15 October 1814:

Brugmans describes the case of a soldier of a melancholic temperament, who had been quartered in Alkmaar about ten years ago and who has suffered from a severe mania. After the entry of the French army he was offered a humble job in the navy hospital of Enkhuizen. There he has been afflicted by scabies. A meticulous description of the administered medicines, the treatment and its results is added. After the scabies had disappeared the patient complained about speech defects and pulmonary troubles. Next he was transported to the Leyden hospital, where his melancholy became more severe. The scabies returned. After a suicide attempt a febris remittens continua followed. Shortly after the patient died. The autopsy showed anomalies of the pulmonary tissues, a changed brain substance and lots of fluid in the cerebral cavities.

[L-Met; MME, PAA]

242. ?? Van der Buys (Breda) to S.J. Brugmans (Leyden); 15 August 1815:

Van der Buys enters a death certificate made out in the military hospital of Breda. Dominique Félicité – a 21 years old soldier – has died of a ‘marasm’ on 16 August 1815. Van der Buys states that this declaration has been made up in accordance with the death register of the hospital. Finally he gives an enumeration of the personal belongings of the soldier.

[L-Met; MME, PAA]

243. S.J. Brugmans (Leyden) to L. van Toulon (Gouda); 20 February 1816:

Brugmans informs Van Toulon about the results of the 'Militair-geneeskundige Dienst', shortly after the glorious battles of June 1815. In spite of his good will he has not been able to send this message earlier. Furthermore he has planned a trip to The Hague, because of a meeting of the 'Geneeskundig Bureau'. He wants to see him. Perhaps this visit will be favourable to both of them.

[KB-121 E 4; MME]

244. ?? Daalderop (on board of H.M.S. 'Dageraad') to S.J. Brugmans (Leyden); 16 September 1816:

Daalderop describes the illness of a patient suffering from a presumed catharral angina. His diagnosis has partially been based on the life story told by this redeemed slave. The living creatures, which were discharged from the mouth after severe pains, have been collected in a jar. Daalderop succeeded in keeping them alive in fresh drinking-water.

[L-Met; MME]

245. C. Fruyt (Middelburg) to S.J. Brugmans (Leyden); 24 March 1817:

Fruyt describes the last months of the life of a 26 year old seaman, who has served on 'H.M. Tromp'. He has suffered from 'rheumatismus chronicus' and cataract of the right eye. He was hospitalized on 25 October 1816. Initially he seemed to recover, but finally he was afflicted by gangrene on the sacral bone and had an ulceration on the right elbow. After his death it became clear that all his bones had been mouldered, especially the skull bones. Of course the inspector general himself is able to ascertain these facts: the skull bones have partially been replaced by a gelatinous mass, completely fused with the brain tissue and the galea aponeurotica. Perhaps this seaman has suffered from the 'disease of the bones', which is common under West Indian sailors. Fruyt is not quite sure about it.

[L-Met; MME, PAA, COB]

246. Staatsraad/Intendant-generaal van de Administratie van Oorlog (The Hague) to the Inspector General of the 'Militair-geneeskundige Dienst'; (Royal Decree, 20 March 1817, Litt. N5, N° 74); 23 April 1817:

In this royal decree taken at the suggestion of the Intendant General of the Administration of War and signed by A.R. Falck (see also the royal decrees of 22 December 1813, n° 3, 14 October 1814, n°10 and 27 February 1815, n° 201 and 202), several measures are issued, which will be in force from 1 May 1817 on. This announcement is followed by numerous details about the functions, salaries, consultations, inspection tours, supply of the stores of medicines and dressing material, admission to the function of medical officer of the various grades, etc. More details will be given after further deliberations between the 'Commissaris-Generaal van Onderwijs, Kunsten en Wetenschappen' ('Commissioner General for the Education, Arts and Sciences') and the 'Intendant-Generaal van de Administratie van Oorlog' ('Intendant General of the Administration of War').

[NA 2.13.01.5506, Recueil Militair 1817-I (580); MME]

247. Staatsraad/Intendant-Generaal van de Administratie van Oorlog (The Hague) to the Inspector General of the Militair-geneeskundige Dienst (Royal Decree, 20 March 1817, Litt. N5, N° 74); 23 April 1817:

Piepers sends Brugmans a more detailed description of the function of the inspector general of the 'Militair-geneeskundige Dienst' and of the two inspectors, in accordance with the royal decree of 20 March 1817. These regulations guarantee a precise and regular supervision of every aspect of the 'Militair-geneeskundige Dienst' (financially and with regard to the materials, personal management and statistics). The inspectors will have to report regularly to their superior, while the inspector general has to report regularly to the 'Staatsraad/Intendant-Generaal'.

[NA 2.13.01.5506, Recueil Militair 1817-I (580); MME]

248. C. Fruyt (Middelburg) to S.J. Brugmans (Leyden); 4 May 1817

Fruyt sends the skeleton he wrote about lately. He hopes that Brugmans will forgive his defective autopsy report and also the incomplete preparation. The structural changes and the fragility of the bones and the defective equipment have kept him from composing a complete skeleton. Soon he will send another more interesting preparation of the remains of a man who has suffered from a bone disease. He hopes that his appointment in Middelburg will be continued. He is willing to show his zeal and obligingness.

[L-Met; MME, PAA, COB]

249. S.J. Brugmans (Leyden) to C.Fruyt (Middelburg); 28 June 1817:

Brugmans is very grateful for the skull, which has been sent to him. This object will be placed in his collection. He has read Fruyt's description with satisfaction. He gives high praise to him because of the accurate and effective operating procedures. Furthermore, he described a scrofulous disorder and discussed the problem of the infectious emanations of the scrofulous glands. Brugmans suggests a further examination of these evaporations and asks him to analyse the progress of the disease, its medical treatment and the surgery, which has been carried out. These facts deserve the attention of his colleagues. He also expresses his appreciation with respect to Fruyt's report on the fumigations according to Guyton-Morveau's prescription, which have been carried out by Milius and Fruyt.

[L-Met; MME, PAA, COB, CHE]

250. ?? Winkel (Leyden) to S.J. Brugmans (Leyden); 3 October 1817:

Winkel, military surgeon, describes the disease of a 47 year old soldier, which ended well. On 17 April 1817 severe headaches and high fevers were followed by the development of an abces on top of the skull. This abces discharged a lot of purulent substance together with large parts of the parietal bones, first on the right side and later on the left side of the crown of the skull. After these fragments had been excreted and separated, new bone tissue was formed and the patient recovered completely.

[L-Met; MME, PAA]

251. C. Fruyt (Boskoop) to S.J. Brugmans (Leyden); 18 February 1818:

On behalf of the governors of the poor relief of Boskoop, Fruyt expresses his thanks to Brugmans because one of the inhabitants of this village has been hospitalized and treated in the 'Nosocomium Academicum'. The poor relief is going to try to support this man and to provide him with a means of existence. Fruyt asks to inform him about the costs. If possible, the poor relief will reimburse the costs of the treatment. He recommends Mr. de Vreede to Brugmans's attention. It is an honest man of irreproachable behaviour and very inquisitive. He demonstrates an uncommon diligence, which makes him worthy of Brugmans's favours.

[L-Met; MME]

252. A. Asmus (Batavia) to S.J. Brugmans (Leyden); 30 March 1818:

With pleasure Asmus sends Brugmans the skull of a 37 year old Chinese, which means 'not bastardized'. He is convinced that Brugmans will appreciate this gift and that he will add it to his collection. He promises to look for other specimens and recommends himself in Brugmans's influential protection, signing his letter as his most obedient servant.

[L-Met; MME, ANP, COB]

253. S.J. Brugmans (Leyden) to the officers of the 'Militair-geneeskundige Dienst'; 17 August 1818:

Brugmans discusses the large-scale experimental application of a solution of Sulphas zinci in the treatment of scabies, clap, inflammations of the eyes, asthma, ulcerations and several other diseases. While Harles (Erlangen) showed himself very contented, Kluyskens (Ghent) seems to be less satisfied. Statistical data with regard to the results are given, among others of the frequency of the daily washings with this solution. In order to make a final decision possible every medical officer is ordered to use this medicine. In cases in which the washings prove to be ineffective the medical officers are allowed to order ointments. Finally he mentions the days on which the

trimestrial reports have to be received by him. His subordinates have to follow his orders scrupulously.

[NA 2-13.62.06.163; MME]

254. J.R. Vos (Middelburg) to S.J. Brugmans (Leyden); 26 September 1818:

Vos sends his superior the damaged Bengali skull, together with several other objects of natural history. He has asked for more skulls of the type, which Brugmans has seen in London. He also sends him several flowering plants and insects and makes a remark on the 'Cantharids' ('Spanish Flies'), which are transported to England in ever growing numbers. He asks him if it is necessary to settle in Leyden, in order to complete his promotion at the university and ends his letter by making several botanical and zoological remarks.

[L-Met; MME, BOT, ZOC]

255. C. Fruyt (Middelburg) to S.J. Brugmans (Leyden); 16 April 1819:

In this pathological-anatomical report Fruyt depicts the case history and fatal end of a patient, nursed in the military hospital of Middelburg, who has suffered from a 'febris gastrica'. He extensively describes the medication, the further treatment and the results. The blood, which has been collected during a bloodletting, proved to be purulent and of an anomalous colour. The vascular system and the liver turned out to be degenerated. He is surprised at the apparent health of someone, who is in fact seriously ill.

[L-Met; MME, PAA]

256. S.J. Brugmans (Leyden) to the officers of the 'Militair-geneeskundige Dienst'; 19 April 1819:

Brugmans informs his subordinates about the results of the large-scale experiments with a solution of Sulphas zinci against scabies. The applications proved to be very successful. He gives more details with regard to the strength of the solution, the frequency of the washings and their results. In certain cases the application of ointments seems to be preferable to the use of

the solution. He allows the medical officers to make their own choice, but demands to be regularly informed (at least biannually).

[NA 2.13.62.06.163; MME]

257. ?? Munck ('s-Hertogenbosch) to S.J. Brugmans (Leyden); 12 May 1819:

Munck sends a thigh bone of a patient, who died of cardialgy, after having broken his leg just like that, during a walk. He describes the way he fixed the splint and the replacing bandage (after Druninghausen). He also describes the changes of the femur observed at the autopsy. The recuperative power ('power of bone repair') was absolutely insufficient, which led to the fracture of the apparently healthy bone, just like that. He expects Brugmans to place the object in his collection. He wishes him the best and recommends himself in his powerful protection.

[L-Met; MME, PAA, COB]

258. F.C.A. Schulte (Zierikzee) to S.J. Brugmans (Leyden); 23 May 1819:

Also on behalf of De Pelsinaire, Schulte sends Brugmans a fragment of the skull of a horse, which is probably unique because of its peculiar outgrowths. He wants to know if Brugmans already possesses such a preparation. He adds a few words about the history of the disease ('dries') and ends his letter with his respectful greetings.

[L-Met; MME, ZOC, PAA, COB]

259. Ch.G. Reynhout (St. George d'Elmina, Guinea, West Africa) to S.J. Brugmans (Leyden); 10 June 1819:

Reynhout sends a few curiosities collected in St. George d'Elmina, Brugmans will undoubtedly be interested in. He wishes him and his family all the best. After his return to Holland he hopes to be endowed with a rank in the military health service, equal to the civil function he holds now. He calls to mind some agreeable common recollections and assures Brugmans of his feelings of esteem.

[L-Met; MME, ZOC, COB]

CHAPTER 7 - CORRESPONDENCE WITH C.C.H. VAN DER AA

At the occasion of the annual general meeting of May 1788, the ‘Hollandsche Maatschappij der Wetenschappen’ (‘Dutch Society of Sciences’) Brugmans was elected member. C.H.H. van der Aa (1718-1793), its secretary for life C.H.H. van der Aa, a theologian by education, personally informed him about his appointment. Already on 25 May 1788 Brugmans entered his letter of acknowledgement. He was very honoured by his election. At the time the ‘Maatschappij’ was by far the most illustrious scientific society of the United Provinces. It counted already a number of the most famous foreign scientists among its (corresponding) members. Since well over a year the 25 year old Brugmans has been teaching botany at Leyden University and since half a year he is also teaching natural history. Brugmans has essentially contributed to the prosperity of the ‘Maatschappij’. He has really served it as much as he could.

Van der Aa died in 1793. His office as a secretary was taken over by Martinus van Marum, already a prominent member of the Society for many years and – besides, a member of the ‘Royal Society’ (London), a gifted chemist, physicist and botanist. The friendly relation, or better the deep friendship between him and Brugmans, lasted until the latter died in July 1819. The extensive correspondence between the two friends will be discussed in chapter 8.

The few letters exchanged between Brugmans and Van der Aa, which have been preserved in the archives – forming perhaps the complete correspondence – have a pure formal content: no signs of friendship or intimacy. Of course the disparity in age played a role. At the day of Brugmans’s election, Van der Aa was already 70 years old. The difference in age between Brugmans and Van Marum was only ten years. Furthermore it is obvious that Brugmans and Van Marum shared their fields of study and interest. During the term of his service Van der Aa left his marks on the activities of the Society, on its fields of interest and also on the choice of the contests which were organized. The majority of these contests had little to do with the real natural sciences in the concept of the present days, and not even in the way they were seen by Brugmans and Van Marum. In Van der Aa’s time a number of literary, historical, pedagogical and theological subjects were proposed.

The last years of Van der Aa's term of service were marked by the already mentioned reversal of the natural sciences. In the early 1780's the Society still accepted entries in the field of the natural sciences and medicine based on reasoning and metaphysical contemplation. From 1783-1784 on only treatises were accepted, which had been based on observation, description, analysis and scientific explanation of natural phenomena, insofar as they belonged to the domain of nature. The most important contest Brugmans was confronted with in the early years of his membership was the one about the 'scala naturae', or the 'gradation of beings' (a gradation, step by step). In the discussions of the treatises, which were entered between 1783 and 1792 in reply to the above mentioned contest by Dutch and foreign scientists and which were evaluated by several famous naturalists, among others Jean DeLuc (London) and Charles Bonnet (Geneva). Brugmans (an adversary to the concept of the 'scala naturae') presented himself as a keen analyst, who defended his personal ideas with a great deal of animation and as a man who was not inclined to make concessions to the taste of the time, not even if this should end in a confrontation with a renowned scientist like Bonnet. In 1792, the young and promising professor Steven Jan van Geuns (Utrecht) missed the gold and even the silver medal because of the reports entered by Brugmans and Van Marum! The only awarded author was Jean DeLuc, who entered his treatise in January 1783. He was awarded the silver medal under the condition that the Society would be allowed to publish his treatise.

260. S.J. Brugmans (Leyden) to C.C.H. van der Aa (Haarlem); 25 May 1788:

Brugmans really appreciates the honourable appointment as a member of the 'Hollandsche Maatschappij der Wetenschappen'. He asks Van der Aa to convey his feelings of gratitude to the directors of the 'Maatschappij' and to its members. He sincerely wants to contribute to the realization of its beneficial objectives and to show his lasting gratefulness. Finally he gives his full name and titles: 'Sebald Justinus Brugmans, A.L.M., Phil. Et Med. Doct., Botanices et Historia Naturalis Professor ordinarius te Leyden, etc.'. [NA-NHA HMW 444-63; BOT, ZOC]

444.38
Jus 1788

Wel Erwaarde Zeer Geleerde Heer!

Gelyk altoos de meeste agting voor de Ed. Hollandsche Maatschappye der Wetenschappen hebbe gehad, zo kan niet anders dan zeer gemelig zyn, wegens desselvs vriendelyke en honorerende dispositie, om my tot Medlid te benoemen, waar van WWeerw. my by Missive de eer doet kennis te geven.

WWeerw. zal my verplichten, van deze myne gewoely aan Heeren Directeuren en Medeliden wel te willen mededelen, met verzekering, dat my niets aangenameer zal zyn, dan het Beweiking der heilzame oogmerken des Genootschaps medetewere

medetewerken, en altoos te tonen, hoe veel prijs ik op de agting en goedkeuring van hetzelfde stelle.

Ik hebbe de eer met de byzonderste Hoogagting te zyn

Wel Erwaarde Zeer Geleerde Heer!

WWeerw. Onderv. en Geh. Dienaar

J. J. Brugmans.

Leiden
d. 25 Mei
1788.

P.S. Ter aanvulling van het Diploma voege hier nevens naam en bytely Sebald Justinus Brugmans, A.L.M. Phil. et Med. Doct. Botanices et Historia Naturalis Professor Ordinarius te Leiden, enz.

261. S.J. Brugmans (Leyden) to C.C.H. van der Aa (Haarlem); 10 March 1791:

For the first time as a member of the 'Hollandsche Maatschappij der Wetenschappen', Brugmans reports on a treatise which deals with the nutrition of plants. In his view it is a superficially written document, not worth to be evaluated. It offers nothing interesting, no new facts or ideas. Besides the author did not at all understand the meaning of the question on which the contest had been based.

[NA-NHA HMW 444-394.57 R; BOT, CHE]

262. S.J. Brugmans (Leyden) to C.C.H. van der Aa (Haarlem); 17 April 1791:

The treatise on the 'gradation of natural beings' presents several incomprehensible and doubtful ideas. Anyhow, the 'true idea' (as the 'Maatschappij' wished to receive) has been developed very poorly. And the 'pros' and 'cons' have been considered and discussed insufficiently as well. The author has not considered the ideas of other scientists, nor has he given new arguments for his own ideas. Finally, he did not describe a natural system. Furthermore Brugmans promises Van der Aa to send him a copy of Driessen's 'Physical and Chemical Observations', containing several useful and important experiments. Besides he proposes Driessen for membership.

[NA-NHA HMW 444-390.42(2) R; ZOC, GEO, PHY, CHE]

263. S.J. Brugmans (Leyden) to C.C.H. van der Aa (Haarlem); 5 October 1791:

For the second time Brugmans has tried to send Van der Aa a copy of Driessen's 'Physical and Chemical Observations'. He does not understand what went wrong.

[NA-NHA HMW 444-66; PHY, CHE]

264. S.J. Brugmans (Leyden) to C.C.H. van der Aa (Haarlem); 28 February 1792:

In Brugmans's opinion the author's idea of a 'gradation of natural beings' according to an already existing plan is unthinkable. There are too many and too large gaps between the elements of the chain. Too many genera and species are missing. Brugmans has meticulously examined the proofs given by the author and rejects them all. Discussing the disappearance of certain species and the appearance of others, Brugmans concludes that may be these events have occurred, but only under very special conditions. In his personal view nature is always acting and its powers are endless. Therefore nature has the power to replace what has been lost and to guarantee its 'coherence'. He apologizes for the late entry of his report. This has been due to his many activities lately. In his view the treatise cannot be awarded any medal and neither does it deserve the 'accessit' (=an honourable mention in an academic contest).

[NA-NHA HMW 444-390.42(3); R; ZOC, BOT, GEO]

CHAPTER 8 - CORRESPONDENCE WITH MARTINUS VAN MARUM

Most probably Sebald Justinus Brugmans and Martinus van Marum met each other for the first time when Brugmans was elected member of the 'Hollandsche Maatschappij der Wetenschappen' ('Dutch Society of Sciences') in May 1788. Brugmans has always been well disposed towards the 'Maatschappij' and its members. He proposed a large number of contests, of which most (32) have actually been held. All things considered he participated in the jury of 70 contests, being 41% out of a total of 169 contests, which were held between the annual general meeting of May 1788 and July 1819, when he died. Of these 70 contests the dossiers of 10 have been lost. Of the remaining 60 contests 19 remained unanswered. The other 41 contests rendered several interesting memoirs (all in all more than 150 entries). Of the 32 contests (being a part of the 70 mentioned above), proposed by Brugmans, 24 rendered one or more entries, while 8 contests remained unanswered. Of the awarded treatises (entered on 8 different contests out of 24) 8 treatises were awarded (33%), 7 of which won a gold medal and one was awarded a silver medal. This made Brugmans one of the most industrious and most productive members of the 'Maatschappij' of his era (next to Van Marum). As a rule, the member who proposed a contest always had to play the leading role in its adjudication. This was not always a pleasure to him. Several entries covered well over 400 pages, sometimes in an almost illegible handwriting, often in a boring and mediocre style and of little importance. Several contests generated a number of treatises and the process of judging often took several years. In this respect contest n° 99 (in which the purification of bad drinking water had to be discussed), for the first time held in May 1802, holds the record: in 1822 the French scientist T.A. Garros was awarded the gold medal. In fact Brugmans was too much occupied by his other duties, to give so much of his time to the reading of these texts. Many of the contests, which have been held by the 'Maatschappij' were aimed at the desired progress of the natural sciences at its profitable use in the various aspects of social life and at the furtherance of public interest. In 1812 Brugmans and his fellow member

Jacob Logger, a town surgeon in Leyden, proposed a contest on the relation between the atmosphere in hospitals and the occurrence of gangrene. Having decided to compete, he withdrew as a member of the jury. His treatise was awarded a gold medal (included in the total of 8 medals, awarded to 8 out of 24 contests, mentioned above). His biographer Capadose defined Brugmans's position as a prominent member of the 'Maatschappij' as follows:

'His fellow members of the various societies, to which he has always been a credit, are able to testify to this fact, as Brugmans's evaluations of the treatises entered in response to the annual contests, have to be regarded as memoirs themselves, in which he often demonstrated that he had collected the most appropriate and most important elements, needed for the construction of a valuable treatise, in which he tried to fuse the various fields of the natural sciences. In his writings he always tried to act in a thoughtful and intelligent way, knowing that the more observations and experiments in the unendless field of God's Creation have been carried out, the more one feels the necessity to enlarge its number'.

Thereupon, Capadose adds an observation made by Barthélemy Faujas de St. Fond, one of the professeurs-administrateurs of the 'Museum National d'Histoire Naturelle' (Paris), which puts Brugmans's character as aptly as Capadose himself already did:

'Brugmans joint au plus rare mérite la plus grande modestie, signe caractéristique du vrai talent. Il travaille avec le même zèle, avec la même application que Camper et d'après ses principes. Comme lui, il ne se presse peut-être assez de publier le fruit de ses travaux et de ses méditations, mais il est assuré par là de ne point obtenir une de ses réputations usurpées, qui ne dure que peu de temps; il a d'ailleurs des titres, qui lui placent parmi les savants les plus distingués'.

Brugmans did not propose a single contest during the period of service of Van der Aa as president of the 'Maatschappij'. His first proposal dates from May 1805. The contests, which have been evaluated by Brugmans, involve the following subjects:

- Possibility or impossibility of the 'scala naturae' (deviser: Ch. Bonnet; 1791-1792); awarded (silver) in 1784 (before Brugmans was elected as a member)
- Nutrition of plants (deviser unknown; 1788-1791)
- Lavoisier's new chemistry and medicine (deviser unknown; 1791-1799)
- Food from native plants (deviser unknown; 1801-1806)
- Ventilators on board of ships (deviser: Van Marum; 1798-1800); awarded (gold)
- Natural history of whales (deviser unknown: 1799-1804); awarded (gold)
- Sap stream in plants (deviser: Van Marum; 1802-1811)
- Exhaust of smoke in chimneys (deviser: Van Marum; 1802-1804)
- Natural pigments from wild plants (deviser: Van Marum; 1808-1813)
- New chemistry and the knowledge of the human body (deviser: Van Marum; 1803-1808)
- Physics of fire (deviser: Van Marum; 1803)
- Building the best furnaces (deviser: Van Marum; 1803-1805); awarded (gold)
- Putrefaction of stagnant water (deviser: Van Marum; 1803-1808); awarded (gold)
- Changing colours by oxygen (deviser: Van Marum; 1804-1808)
- Water purification by means of charcoal (deviser: Van Marum; 1811-1819); awarded (gold)
- Column of Volta (deviser: Van Marum; 1805)
- Lead poisoning of rain water (deviser unknown; 1806-1813); awarded (gold)
- 'Principia proxima' and 'principia remota' of plants; relation to medicine (deviser unknown; 1805)
- Origin of the 'principia remota' and 'principia proxima' (deviser: Brugmans; 1811-1813)
- Damage to fruit trees, caused by harmful insects (deviser unknown; 1810); awarded (gold)
- Phosphorescence of the sea (deviser unknown; 1801)
- Diseases of fruit trees (deviser: Van Marum; 1808); awarded (gold)

- Extraction of salt from seawater (deviser: Brugmans; 1810–1812)
- Role of plants in the oxygen equilibrium of the atmosphere (deviser: Reinwardt; 1812–1814)
- Actual usefulness of the systema of Linnaeus (deviser: Bakker; 1812); awarded (gold)
- Special effect of rain water on plants (deviser: Brugmans; 1811–1813); awarded (gold)
- Chemical basis of Linnaeus's systema (deviser: Reinwardt; 1812)
- Mortar, made of lump lime and of shell lime (deviser: Brugmans; 1812–1818); awarded (gold)
- Generatio aequivoca (deviser: Van Marum; 1812); awarded (gold)
- Noxiousness of burying corpses in a residential area (deviser: Brugmans; 1813)
- Bleeding of trees (deviser: Van Marum; 1817–1820)
- Origin and exploitability of bog ore layers (deviser: Brugmans; 1816–1818)
- Origin of potash, found in the ashes of plants (deviser: Reinwardt; 1814–1816); awarded (gold)
- Effects of lighting coals on living beings (deviser: Van Marum; 181–1816); awarded (gold)
- Contagious diseases in besieged cities (deviser: Brugmans; 1816–1818); awarded (gold)
- Beauty of Greek statues (deviser: Brugmans; 1818), awarded (silver)
- Transformation of native diseases (deviser: Brugmans; 1819)
- Why is well water often undrinkable? (deviser: Brugmans; 1817–1819)
- Causes of the failure of acclimatization experiments on exotic plants (deviser: Van Marum; 1817–1819); awarded (gold)
- The best way to nourish Dutch seamen on board of warships (deviser: Brugmans; 1818)
- Signs of the true rinderpest (deviser: Brugmans; 1819); awarded (gold, in 1824)

The years, mentioned between brackets, indicate the years during which Brugmans was reading the entries and writing his evaluations as a member of the jury. Each member of the jury had to procure an independent judgements. Usually Brugmans had rather modern ideas about scientific research and about the interpretation of its

results. However, from time to time he was still old fashioned, for example with respect to the possibilities of the ‘spontaneous generation’ or ‘*generatio aequivoca*’.

Between 1806 and 1808, His Majesty King Louis Bonaparte had decided that the ‘Hollandsche Maatschappij der Wetenschappen’ had to be transformed into a duplicate of the ‘Institut National de France’ (Paris). It also had to be divided in different ‘Classes’, according to its French example. These plans have not been executed, the ‘Maatschappij’ remained an undivided ‘Hollandsche Maatschappij der Wetenschappen’. As a result of the foundation in 1808 of the ‘Koninklijk Hollandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten’ (‘Royal Dutch Institute of Sciences, Literature and Fine Arts’) , in Amsterdam, a new scientific society was born, under the personal protection of King Louis Bonaparte. In the second half of the nineteenth century the ‘Maatschappij’ was to be slowly surpassed by the ‘Eerste Klasse’ of the ‘Instituut’. However, during the first half of the nineteenth century the scientific status of the ‘Maatschappij’ was significantly higher than the position of the ‘Eerste Klasse’ of the ‘Koninklijk Instituut’, although the latter was – by birth – the official advisory panel to the King and to the Dutch government (see also chapter 10). First of all, the ‘Maatschappij’ counted many famous foreign scientists among its (corresponding) members, which offered the possibility of a fruitful exchange of ideas and printed information. A few examples will do:

Sir Joseph Banks (London, elected member in 1790), C. Blagden (London, 1791), J. Redman Coxe (medicine, Philadelphia, 1805), G. Cuvier (zoology, geology Paris, 1811), J.Fr. Blumenbach (zoology, Göttingen, 1791), J.A. DeLuc (philosophy, London, 1784), J. Euler (mathematics, St. Petersburg, 1787), B. Faujas St-Fond (natural history, Paris, 1786), A.F. Fourcroy (chemistry, medicine Paris, 1801), E. Geoffroy Saint Hilaire (zoology, Paris, 1803), R.J. Haüy (mineralogy, Paris, 1803), W. Herschel (astronomy, Slough, near Windsor, 1791), Ch. Hutton (London, 1786), J.Fr. von Jacquin (medicine, botany, Vienna, 1802), Thomas Jefferson (medicine, Philadelphia, 1803), A. Thouin (botany, Paris, 1795), Ch. Bonnet (philosophy, Genthod, near Geneva, 1765), C.P. Thunberg (botany, Upsala, 1781), A. Volta (medicine, Pavia, 1785), A.G. Werner (geology, Zurich, 1803) and J.P.E. Vaucher (botany, Geneva, 1817).

Several of these scientists were also elected corresponding members of the 'Eerste Klasse' of the 'Instituut' often several years after they had been elected member of the 'Maatschappij'. Furthermore the 'Instituut' needed several years to develop itself to an internationally renowned scientific academy. So, putting two and two together, with respect to the tracing of renowned scientists and inviting them for corresponding membership, the 'Eerste Klasse' of the 'Instituut' eagerly followed the successful example of the 'Maatschappij'.

265. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1796:

In Brugmans's view the entry on the significance of the 'System of Lavoisier' has been elaborated insufficiently. This treatise shows a complete lack of knowledge and even ignorance. In his view several animal physiological processes, such as respiration, animal warmth, 'animalization' ('transformation') and assimilation of food, have been described insufficiently and have hardly been based on the new chemistry. Neither did the author link his ideas regarding chemistry to medicine and pharmacology. Besides he did not present any results of experiments, nor did he prove the major importance of chemistry to the medical sciences. Brugmans does not believe that the author will be able to improve the quality of his contribution.

[NA-NHA HMW 444-397.69(1) R; CHE, MED, PHA]

266. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 27 February 1799:

Most regrettably he has not been able to send Van Marum a letter. This situation is due to Van Marum's recent trip to Germany. Therefore he could not thank him for the pleasant gift – a booklet dealing with important physical experiments. From the fact that he again received a treatise to evaluate, he has understood that Van Marum has returned meanwhile. In spite of his many occupations he promises to return this treatise as soon as possible, together with his report. He hopes to see him soon again (perhaps during the Easter holidays?). By then he will spend a few days in Amsterdam. This letter, also meant as a letter of recommendation for its deliverer, the

citizen Fouquet, a former minister of the navy of the French republic and at the time ambassador in Madrid. Fouquet is eager to visit Van Marum and to see his excellent collection of natural history, a collection which deserves national pride. More meritorious foreigners should be enabled to see such an important Dutch scientist.

[NA-NHA 529-14; PHY, ZOC, GEO]

267. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 5 April 1799:

Brugmans returns the treatise, entered to the contest on the question about the influence which Lavoisier's new chemistry has had on physiology until now. He apologizes for being late. He has no high esteem of the author and his contribution to science. Everyone who knows about both fields of science, is able to say in a few words more than the author has done in his whole treatise. Brugmans emphasizes that he discusses these subjects thoroughly in his lessons: until the winter holidays he teaches botany and from January on he lectures zoology. He wants to know if Fourcroy's book on the 'chimie animale' has already been published and hopes to see Van Marum soon.

[NA-NHA 529-14; CHE, BOT, ZOC]

268. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 February 1800:

Brugmans sends his report on the treatise about ventilators aboard ships. In part his report is positive. He is really impressed by the calculations, which have been carried out by the author. The author really tried to quantify the problem, although still many precise experiments have to be carried out. Nevertheless, the treatise is already sufficiently perspicuous and deserves to be awarded the gold medal.

[NA-NHA HMW 444.399.78(2) R; PHY, MED]

269. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 February 1800:

Again the pressure of work has prevented him from fulfilling his duties towards the 'Maatschappij'. He promises Van Marum to return the assessed treatise the day after tomorrow, together with his report. Today he sends him the drawing and description of a whale's head. He is aware that Van Marum wants to use these documents soon. He promises to send him some more information on this subject. He also explains why he did not send the sample of 'urias baryte' until now. He is still waiting for the crystal models Haiÿ is going to send to him. He is eagerly looking forward to the moment on which he will be able to send Van Marum a more extensive letter.

[NA-NHA 529-14; ZOC, CHE, GEO, COB]

270. M. van Marum (Haarlem) to S.J. Brugmans (Leyden) 28 December 1800:

Once again Van Marum asks his colleague to evaluate a treatise on the contribution of Lavoisier's new chemistry to our knowledge of the human body. If he is willing to do so, he has to sign the receipt and return it. Van Marum wants to receive his report within three or four weeks. He is also eagerly looking forward to the reception of the description of the head of the whale calf, in addition to the description of its skull, which he has already received. He wants to be informed about the health of Brugmans and his family.

[NA-NHA HMW 444-78; MED, CHE, ZOC]

271. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 30 December 1800:

The day before yesterday Brugmans received the treatise sent to him by Van Marum. Now he returns the receipt and observes that it will not be easy to evaluate this entry. He asks to send him a copy of the programme of the 'Maatschappij'. He has not been able to describe the head of the whale calf yet. He promises to do so as soon as possible. He is also going to send Van Marum a small barrel filled with unslaked lime and promises to return to him

soon the beautiful treatise of Werner entitled 'Ueber die Gänge ... etc.'. He would already have sent him a certain quantity of 'muriate de baryte' if this chemical had not to be treated once more (by carrying out a recrystallization). [NA-NHA HMW 444-78; CHE, ZOC]

272. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 6 February 1801:

As has been agreed, Brugmans returns the treatise assessed by him. It would have been easy for him to add many more arguments for his negative judgement than he has given already. The 'aerometer' has already been described extensively in Baumé's *Elémens de Pharmacie*. He is willing to lend it to Van Marum. Soon he shall send him a letter again. Because of his many occupations he ends his letter.

[NA-NHA 529-14; CHE, PHA]

273. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 27 June 1801:

Until now Brugmans had to postpone his letter to Van Marum. Until the last day before his leave for Germany he had hoped to find the time for seeing Van Marum. Yesterday his lectures have come to an end. This letter is a good bye to his friend. Can he perhaps be of some help to him during his stay in Germany? If so, Van Marum has to arrange that his letters to him will be delivered at the address in Berlin, where he will be staying. If all goes well, with the child too, they will return to Holland after having visited Dresden, Leipzig and Frankenland. He assures Van Marum of his warmest feelings of friendship and hopes to see him in good health soon after his return.

[NA-NHA 529-14]

274. M. van Marum (Haarlem) to S.J. Brugmans (Leyden); 28 June 1801:

Van Marum is very sorry that he will not have the opportunity to see his friend before his departure. Just now he is eager to see him and to ask him some favours. Could he bring home some fossils, which might contribute to the further development of the geognosis, or which could support the theory of catastrophes to which the earth has been subjected, objects which are still

missing in the collections of 'Teylers Foundation'? He is willing to refund the money spent by Brugmans for packaging and transport. If Brugmans will discover, by chance, some interesting outcroppings ('dagzomen') and other geological phenomena, which might illustrate the condition, composition and evolution of mountains, he would like to receive a couple of rock specimens from these regions. He also lacks models, which might illustrate these processes. Once more he asks to send him catalogues and petrifications of vegetable and animal origin.

[NA-NHA 529-14; ZOC, GEO, BOT]

275. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 5 November 1801:

Because of the fact that a recent rheumatic attack is still impeding him he will not be able to see Van Marum next Sunday. Besides, the limited possibilities of travelling also hamper his plan to visit his friend. The same goes for the obligation to attend an important meeting, which cannot be postponed. Instead, he wants to visit his friend in a few weeks. He also returns Werner's treatise and encloses a few (scientific) journals. The last journal, which he has received from Van Marum, was n° 116 of the 'Annales de Chimie'. He thanks his friend for sending him the apparatus for the combustion of wine-spirit. He also discusses the best way to collect a number of bottles, ordered for him by Van Marum, the reception of a case of minerals from Freiberg (= Freiburg) and of a case, containing a couple of books and skeletons, which have been sent from Berlin. On behalf of the 'Maatschappij'. Finally he thanks Van Marum for sending him a present on its behalf.

[NA-NHA 529-14; CHE, GEO, COB, MIN]

276. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 February 1802:

Brugmans returns the treatise on the manuring of fields together with his report. He regrets the fact that he returned the documents so late and expresses his dislike of the poor quality of the treatise. Further well designed experiments are needed in order to bring the results and ideas more into line

with the latest developments of scientific botany and chemistry. Until now the collection of minerals ordered in Germany did not arrive. He thanks his friend voor sending him the last volume of the *Natuurkundige Verhandelingen* ('Physical Transactions'). With great interest he has read about Van Marum's galvanic experiments. Finally he wishes him good luck with regard to the continuation of this research and asks him to convey his compliments to Mrs. Van Marum.

[NA-NHA 529-14; BOT, PHY, CHE, GEO, COB, MIN]

277. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 18 April 1802:

Brugmans returns the treatise on the sap stream in plants together with his report and apologizes again for the late remittance. With pleasure he accepts Van Marum's offer to be of service to him during his trip (announcing, that he has to leave Leyden for eight to ten days). He hopes to see Van Marum before he leaves. He did not receive the collection of minerals yet. As usual, he ends his letter by expressing his feelings of friendship and high esteem.

[NA-NHA 529-14; BOT, GEO, COB, MIN]

278. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1802:

In order to enable a modern ('physical or physiological') explanation this treatise had to be based on plant anatomy and plant physiology. The author has chosen the easiest way by adhering to predisposed points of view and by his predilection for hypotheses, without having carried out any experiments or observations.

[NA-NHA HMW 444-400.83(1) R; BOT]

279. M. van Marum (Haarlem) to S.J. Brugmans (Leyden); spring of 1802:

Van Marum asks Brugmans to return the five treatises on the physical causes of the smoking of chimneys, which are still in his possession, together with his report(s).

[NA-NHA HMW 444-400.84(1) R; PHY]

280. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 21 February 1803:

Evaluating a treatise of 15 pages on combustion and heat did not take up too much of Brugmans's time. The author only touched upon a few well-known aspects of this subject. His knowledge is very defective; he does not even know what he is writing about. The theoretical foundation of the second part of his treatise is completely missing. The meaningless depiction of various furnaces and chimneys does not increase its value. New facts are totally false. Awarding a prize is absolutely out of the question.

[NA-NHA HMW 444-403.95(1) R; PHY]

281. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 23 February 1803:

Brugmans returns the treatise on the theory of heat together with his report. The document is of no value at all. He promises to return Böckmann's treatise on the reduction of gold and silver as soon as the shipping routes will be open again. Böckmann also wrote about the combustion of phosphorus in various gasses. Brugmans knows that the author is eager to become a member of the 'Maatschappij'. He hopes that Van Marum is going to support the nomination and election of this scientist.

[NA-NHA HMW 444-81; PHY, CHE]

282. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 20 April 1803:

Brugmans returns Böckmann's treatise on the reduction of gold and silver, together with a covering letter (his report). He is sure that the other members of the 'Maatschappij' are going to appreciate this contribution to science. He recommends this renown scientist for membership. A single word spoken by Van Marum will do! He would really be obliged.

[NA-NHA 529-14; CHE]

283. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 October 1803:

Brugmans is very pleased that Van Marum has promised to see him during his trip to Rotterdam and back. On his journey out (to Rotterdam) Van Marum is expected to take the soup at his place.

[NA-NHA 529-14]

284. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 13 March 1804:

Brugmans returns the treatise on whaling, together with his report and apologizes for being late.

[NA-NHA HMW 444-399.82(1) R; ZOC]

285. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 6 April 1804:

The author of the treatise on whaling did not sufficiently discuss the natural history (anatomy and physiology). This knowledge is really indispensable to whale fishers! The illustrations are also partially incorrect. Of course, the author had to compare whales with dolphins. He should also have paid more attention to the information given by experienced whalers. For example, the relation between anatomy, the way of life and the environment has not been discussed sufficiently. Brugmans agrees with the author's preference for the English harpoon gun, although, for mechanical and mathematical reasons, he keeps his doubts with respect to the improvements, proposed by the author. Mathematical calculations are absolutely indispensable!

[NA-NHA HMW 444-399.82(1) R; ZOC]

286. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 8 April 1804:

In his covering letter Brugmans declares that the treatise on whaling is likely worth to be awarded, after having been improved. So, this document has to be returned to the author, together with detailed and explicit requirements regarding its improvement. The other members of the jury – N.C. de Fremery (Utrecht) and H. Aenae (Amsterdam) – have different views. Only Aenae pleads the award.

[NA-NHA HMW 444-399.82(1) R; ZOC]

287. M. van Marum (Haarlem) to S.J. Brugmans (Leyden); 13 May 1804:

Van Marum asks Brugmans to give his opinion with respect to the capability of Bisdorn (related to Brugmans) for a vacant position in the board of Directors of the 'Maatschappij'. He asks him to sound Bisdorn cautiously on this position and to inform him about his rights and duties (among others with regard to the annual financial contribution).

[NA-NHA HMW 444-82]

288. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 18 May 1804:

Brugmans has sounded Bisdorn, who is eagerly willing to join the circle of directors of the 'Maatschappij'.

[NA-NHA HMW 444-82]

289. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 March 1805:

As Brugmans's evaluation of a treatise on furnaces is very positive, nothing prevents its award. The author has used his thorough knowledge of physics and chemistry. Brugmans is unanimous with Van Swinden, who has written an extensive and perspicuous analysis.

[NA-NHA HMW 444-403.95(2) R; PHY, CHE]

290. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 March 1805:

Letter, covering the report on the treatise on furnaces.

[NA-NHA HMW 444-403.95(2); PHY, CHE]

291. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 April 1805:

Brugmans reports extensively on several treatises on the putrefaction of stagnant water, which have been entered in the second round of this contest. He voices the opinion of the majority of the jury. The contest has to be held once more. One of the authors has based himself insufficiently on the new

chemistry and clearly demonstrated his prejudice by recommending a certain agent, developed by himself. Much to his regret, the author of the treatise on whaling is not willing to improve his contribution.

[NA-NHA HMW 444-403.96(2) R; CHE, ZOC]

292. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 April 1805:

Brugmans reports on the second improved version of treatise on the putrefaction of stagnant water. Wrongly the author still thinks that only his theory will bring a good result.

[NA-NHA HMW 444-403.96(2); CHE]

293. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1805:

Brugmans is very negative about the treatise on the contribution of the new chemistry to our knowledge of human physiology and medicine. The author did not make good use of the performances turned in by Fourcroy. This outstanding chemist has already written about the 'principia proxima' and the 'principia remota'. Furthermore the author is not well informed about what is already known with respect to the solid and liquid constituents of the human body. He displays a clear resistance against the new chemistry. As far as he is making use of it, he is applying it insufficiently, superficially and wrongly. He is not familiar with the writings of other authors about the subject and most of the scarce experiments described by him have been taken from other authors. Finally, most of the results of his experiments have been explained wrongly.

[NA-NHA HMW 444-401.87(2) R; CHE, MED]

294. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1805:

The author of a second treatise on the putrefaction of stagnant water did neglect the importance of the new chemistry for the explanation of the phenomena and for the effectiveness of the agent against putrefaction. His theoretical foundation of the purification method is defective. It is also

unsatisfactory with regard to its practical execution. Besides, the phenomenon has been explained wrongly. The same goes for a third treatise on the same subject. The experiments designed by this author are inadequate and so is the improved cleansing agent, a fact which the author admits himself also.

[NA-NHA HMW 444-403.96(2) R; CHE]

295. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1805:

Although a few formulations are obscure, the treatise on the column of Volta evaluated by him is completely up to date.

[NA-NHA HMW 444-404.102 R; PHY, CHE]

296. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 1 November 1805:

Brugmans returns two treatises, which have been by him (without giving further details), and promises to see Van Marum before winter closes in.

[NA-NHA HMW 444-83]

297. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 26 November 1805:

Brugmans rejects a treatise on the lead poisoning of water.

[NA-NHA HMW 444-83; CHE, MED]

298. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 24 December 1805:

The author of a treatise on the lead poisoning of water did not focus his attention equally on the various sub-questions. So, the result turned out to be unsatisfactory. The very defective introduction is far too extensive and the author did not pay any attention to the fact that the formation of carbonates is a result of various influences. The influence of various chemical liquids is hardly discussed. The author does not show his insight in modern chemistry and he barely elucidates the qualities of rainwater. His description of the poisonous influence of lead glaze has been described defectively. He also had

to examine which foodstuffs absolutely have to be conserved in glass jars. Not a single experiment has been carried out, nor has it been described.

[NA-NHA HMW 444-405.103(1); CHE]

299. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 26 December 1805:

Brugmans maintains his earlier opinion with regard to a treatise on the lead poisoning of water.

[NA-NHA 444-83; CHE]

300. S.J. Brugmans (Leyden) to M. van Marum (Haarlem) around December 1805:

Brugmans reports on a treatise, entered by an author on his own initiative. The entry deals with the regenerative power of plants. In Brugmans's view new insights and well founded theories are missing. The author restricts himself to the description of the various ways by which plants are able to regenerate vegetatively. He also gives several artificial methods. Awarding the entry is out of the question.

[NA-NHA HMW 444-83; BOT, AGR]

301. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); early January 1806:

Brugmans reports on another treatise about the origin of the body heat, which has been entered by the author on his own initiative. Although this entry is of minor value, he agrees with the author that none of the current explanations at the moment is really acceptable. Mistakenly the author has put that the heat capacity of arterial blood is higher than that of venous blood. In the author's opinion these facts are responsible for the development of 'caloricum' ('heat substance') in the left cardiac cavity. He founds his ideas on the presumption that liquid constituents contain more 'caloricum specificum latens' than solid constituents do. In vain Brugmans has tried to imagine these phenomena in a quantitative way. However, he has to conclude that it remains impossible to explain the quantities of free

‘caloricum’ from the quantities of food and drink, which are consumed on a daily basis. Of course the quantity of ‘caloricum’ absorbed during the transition of solid into liquid equals the quantity which is released by the transition from liquid into solid constituents.

[NA-NHA HMW 444-84; PHY, MED]

302. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); end of April 1806:

Again Brugmans rejects a treatise on the regenerative force of organisms, especially of plants. Although the author has tried to give some new facts and although he tried to describe the situation in which this process – so useful to agriculture – is taking place, the old and well known facts are much more important and more correct than the new ones. The author especially focussed on the process of gemmae development. The agricultural and horticultural importance of this treatise is too minor to be awarded.

[NA-NHA HMW 444-84; BOT, AGR]

303. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1806:

The treatise on the fertilization of poor soil under the device ‘Non honoris ... etc.’ is very defective. The author’s knowledge of the physiology of plants is absolutely insufficient. The introduction is too extensive and the conclusion that the fertility of the soil completely depends of the ‘principia remota’ of the plants which once grew there, is unacceptable. Of course a discussion of the best manure may be important, although the role of the ‘principia remota’ is still unproven. On the other hand many interesting items have not been discussed, such as the stimulating effects of the manure constituents.

[NA-NHA HMW 444-402.91(3) R; BOT, AGR]

304. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1806:

Brugmans rejects the treatise under the motto 'Tempus rite impensum sapiens ... etc.' on the 'Fauna Batava'. The result of his judgement is even more negative than Van Marum's is. The treatise is very defective and its style of writing is very pathetic. The division of the animals into native and foreign species is completely wrong. Evaluating this entry has been a waste of time.

[NA-NHA HMW 444-404,101(1) R; ZOC]

305. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1806:

Brugmans rejects an entry about the 'caloricum' sent to the 'Maatschappij' on the author's own initiative. Although the thesis that arterial blood has a higher heat capacity than venous blood is perhaps in a certain way tenable, his conclusion that the liquid constituents of nutrition contain more 'caloricum' than the solid particles do is unacceptable. The same goes for the other hypotheses founded on that primary assumption. From a thermodynamic equation (set up by himself), Brugmans concludes that the transition from the liquid to the solid phase, followed by the transition from the solid to the liquid phase, does not yield any profit. The author has not been able to elucidate this problem and an award is out of the question.

[NA-NHA HMW 444-84; PHY, MED]

306. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 May 1806:

Brugmans enters a treatise, written by L. van Meerten, his colleague of the 'Conseil de Santé' (Health Council). This author is definitely gifted in the field of the physico-chemical sciences. He is absolutely able to push forward the boundaries of our knowledge. Therefore Brugmans proposes him for membership of the 'Maatschappij'. He ends his letter by making a remark on several catalogues.

[NA-NHA HMW 444-84; CHE, MME]

307. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 10 May 1806:

Brugmans is not at all satisfied about the description of indigenous wild plants which could possibly serve as food for the inhabitants. It is a complete failure. Instead of giving a complete enumeration of these plants, the author restrained himself to the description of a small number of wild plants, which are common in Northern France, together with a description of their habitat and of their edible parts. This is absolutely unacceptable, although there is a certain similarity between the two countries. Furthermore, the author has had a too broad conception of the term 'usable for nourishment'. Besides he followed Linnaeus's *Systema naturae* too closely. He did not give any result of new experiments and observations, nor did he describe how to cultivate new plant species, which might serve as food. He had to prove whether these efforts were worthwhile, yes or no. There are still many possible examples of grasses, which are not in use at the time.

[NA-NHA HMW 444-399.76(2) R; BOT, AGR]

308. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 10 May 1806:

Brugmans apologizes for holding back a treatise too long. He is very happy about Van Meerten's election as a member of the 'Maatschappij'. He is sorry for not having succeeded yet in finding a person who is suited for the post of one of its directors. He proposes a new contest, this time with regard to the origin of the spermaceti (followed by a second proposal concerning the production of sugar from sugar cane, an addition to his letter, which has later on been deleted).

[NA-NHA HMW 444-84; ZOC, BOT]

309. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 19 May 1806:

Obligingly Brugmans offers to propose four more suggestions for contests.

[NA-NHA HMW 444-84]

310. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 9 August 1806:

Brugmans has been ordered by the government to undertake an inspection tour through Zealand and Batavian Brabant in the near future (see also Chapter 6). This made it impossible for him to answer Van Marum's latest letter. Now he congratulates him on the fact that the 'Maatschappij' has acquired the royal patronage. He feels very much involved in its ups and downs. He is glad that the plan to join the Dutch scientific societies has been dropped and that a new institute will be founded under royal patronage, apart from the other societies. He promises to inform Van Marum more in detail as soon as he has heard more news about it. He is also glad that they are of the same opinion with regard to this affair.

[NA, RANH 529-14; KNI]

311. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 18 March 1807:

In Brugmans's view the treatise on reproduction under the motto 'De Mensch ... etc. has no value at all. It does not explain the subject in any way. The author is unacquainted with the most important discoveries of the last few years with respect to the subject, although he briefly discusses the 'absorbing vessels' ('opslopende vaten') of the plants, the way they absorb their nutrition and a new kind of leaf organs. Perhaps this last description deserves to be published in the works of the 'Society'. In Brugmans's view a specially appointed commission has to evaluate this discovery. Only then it will be possible to determine the importance of the treatise as a whole,

[NA-NHA HMW 444-85; BOT]

312. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 21 March 1808:

Brugmans completely runs down a treatise on the influence of oxygen (from the earth's atmosphere) on the changing of colours. The author should have checked the results of his own experiments and he should have restricted himself to the true facts. Now he has decided to borrow all his data from

other scientists. Obviously his most important source has been the academic treatise of the Groningen professor Th. Van Swinderen (1805). He has even had the audacity to borrow his citations and notes and to keep silent about his major source. The author even has dared to state that there are no great chemists, although there are many valuable sources, like Fourcroy, Chaptal and Ypey, for example. If there should be someone who deserves the gold medal, it should be Van Swinderen himself, Brugmans concludes.

[NA-NHA HMW 444-403.97(2) R; PHY, CHE]

313. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 April 1808:

Brugmans comments negatively on a treatise on the phosphorescence of seawater, of which the author has tried to substantiate in a very defective way that the phosphorescence is not caused by small animals living in the water, only because he himself could not perceive them. If he had filtered the seawater and if he had carried out some microscopic research, he would have proved the presence of thousands of these tiny animals. Now the author restricts himself to two possible causes: the presence of phosphorescent salts resulting from putrefying organic remains and the presence of a 'luminescent substance', which is absorbed in daylight and emitted again during the night, an explanation in which he is pointing at the theories of Tachard, LeRoy and Bory de St. Vincent. The author's ideas are inconsistent with the current and generally accepted chemical laws. He is also ignorant of the writings of Viviani (Genoa, 1805), who keeps 14 different marine animals responsible for the phosphorescence of the sea. His final conclusion, that the luminant substance of the sunbeams is the true cause, is unacceptable. The contest has to be held again.

[NA-NHA HMW 444-406.115 R; BOT, ZOC, CHE, PHY]

314. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 21 April 1808:

Brugmans reports on several treatises, which have been entered on a combination of three closely related questions, all dealing with indigenous plants as a possible source for the production of medicines, food constituents

and dyes. None of the three authors has entered a complete and totally new treatise. So, none of these entries deserves to be awarded.

[NA-NHA HMW 444.400.86(1) R; BOT, CHE, MED]

315. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1808:

Brugmans gives a positive report on the improved treatise on whaling. Never before he has read such a complete and well written treatise. Nevertheless, the natural history of the whales is still incomplete, for example with regard to the anatomy of these animals. Only through the completion of this knowledge it is possible to inflict deadly harpoon wounds. John Hunter, who collected all the known facts with regard to the anatomy of whales and related fishes, has made several incorrect drawings. This time the author really deserves to be awarded, among others because he has proved that the harpoon gun is not more accurate than the throwing harpoon. Even the English whalers make less and less use of the harpoon gun. Brugmans wonders why the author has not had the opportunity to compare the total catch of similar English and Dutch whalers, in order to determine the best way of whaling. He should have presented a table. In Brugmans's view the author has to add these data before his treatise can be published.

[NA-NHA HMW 444-399.82(2) R; ZOC]

316. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1808:

For the first time – and all circumstances considered – the author of the treatise on whaling under the motto ‘Grant that powerful feeling ... etc.’ has complied with the requirements, despite a few hiatuses. Because mail traffic between Holland and England is still impossible the author has not been able to bring together the desired data. Nevertheless he has indicated and argued exactly where the harpoon has to hit the body of the whale. Therefore his entry has to be awarded this time.

[NA-NHA HMW 444-399.82(2) R; ZOC]

317. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1808:

Brugmans reports on two treatises on the putrefaction of stagnant water. The author of the entry under the motto ‘Vingt fois sur le métier ... etc.’ did not understand the question at all. He is completely ignorant in the field of chemistry and about the putrefaction of water and he only gives the most primitive solution to the problem. The treatise under the maxim ‘Neque vero neglignmentem ... etc.’ is of a far better quality. It proves for example that clear and pure water is unchangeable and cannot go bad. Furthermore, he explains the role of alien bodies in water in the process of putrefaction and he also gives the remedies against that process. There are two possibilities: the absorption and further purification of water, which is already as pure as possible and its storage in wooden barrels, of which the inner side has been burned. He also extensively discusses the preservation of drinking-water and meat for seamen. This entry absolutely deserves to be awarded the gold medal.

[NA-NHA HMW 444-403.96(3); CHE]

318. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 1 May 1808:

In vain Brugmans went to Haarlem to see Van Marum. Therefore, he has handed over his report on a treatise to Teissèdre L’Ange. Andreas Conradus Bonn, the young scientist, who made a fine drawing of a mammoth skeleton, was visibly disappointed, because he wanted to offer the drawing personally. Meanwhile Cuvier had taken him the wind from the sails (see: ‘Annales du Muséum’, Tome 8, gravure d’un mammouth’). In Brugmans’s view, Bonn’s drawing is superior to Cuvier’s. It is even possible to improve it by a few minor changes. Together with this covering letter, he returns all the treatises, still in his possession. He wants to see Van Marum next week. He is very curious about his commission relative to the new ‘Instituut’.

[NA-NHA HMW 444-86; ZOC, GEO, KNI]

319. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 1 May 1808:

Brugmans has evaluated four treatises on the diseases of fruit trees, marked 'A', 'B', 'C' and 'D'. The first one ('A'), under the motto 'Nisi utile est, quod facimus, stulta est gloria' (written in Dutch) and the second one ('B'), under the devise 'Principia obsta' (written in German) deserve to be evaluated. The entries 'C' and 'D' are without any value. In 'A' the various damaging diseases, the remedies for their control, the ways to improve the situation and the possibilities for their prevention are discussed. Regrettably the author sometimes confuses the diseases with their causes. Besides, he sometimes mentions the wrong causes and gives incomplete and inaccurate descriptions. This fact hampers the determination of the exact character of the disease. Nevertheless the author deserves the silver medal, if he promises to improve his treatise. Treatise 'B' extensively describes and examines the causes of the diseases and also mentions the ways to prevent them. The approach, in which the author uses the analogy between the organic life of plants and animals for his theory on the diseases of plants, is completely new to Brugmans. By doing so the author has stopped walking the beaten track of science. He has put a first step into the right direction. Therefore he definitely deserves the gold medal.

[NA-NHA HMW 444-407.120 R; AGR, ZOC]

320. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 May 1808:

Brugmans gives his judgement on the improved drawing of the mammoth, made by Andreas Conradus Bonn. He describes the experiences he had on 1 May 1808. The drawing is absolutely of the highest quality and by far better than the drawing made by Cuvier, which has already been published. Once more he repeats his advice to Bonn junior. Brugmans still has to return several treatises. He wants to learn Van Marum's feelings with regard to the 'Institute'.

[NA-NHA HMW 444-86; ZOC, GEO, KNI]

321. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 20 May 1808:

After his return from Amsterdam Brugmans has handed the treatise on whaling over to the pharmacist Sterk (Haarlem), who probably has conveyed it to Van Marum. Tomorrow, on 21 May, he will come to Haarlem to attend the annual general meeting of the 'Maatschappij'. Of course he will be able to see him and to discuss the affair of the 'Instituut'. He assumes that Bonn's drawing of a mastodon has already been handed over to Van Marum. He hopes that Bonn junior will be elected member of the 'Maatschappij'. This will surely encourage him. He is really a most promising young scientist and he will probably be able to produce important writings!

[NA-NHA HMW 444-86; ZOC, GEO, KNI]

322. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1809:

Again Brugmans judges three treatises on the lead poisoning of drinking-water. The very succinct treatise 'Ratione ... etc.', in which no experiments have been described, must be rejected immediately. It does not give any new fact nor any experiment. In a way the second treatise, under the motto 'Non fingendum ... etc.', justifies the jury's confidence in a possible improvement, although the author is obviously ignorant of the new chemistry and although he did not describe any experiments. Without any proof he states that during the summer the atmosphere of the coastal towns contains sufficient free sea hydrochloric acid to dissolve lead. This 'fact' is doubted by other chemists. All in all this treatise is very inaccurate and incomplete. The author of the treatise 'Felix qui potuit ...' ascribes the solution of lead and the poisoning of rainwater to the existence of small creatures (animals), living in the water of the roof-gutter as well as to the rotting of the wood of these gutters. According to this author the lead gives off lead particles to the water, which leads to lead poisoning. Brugmans does not understand this conclusion, because drinking-water generally has a rather good quality. This author must be encouraged to complete his treatise.

[NA-NHA HMW 444-405.103(2) R; CHE, ZOC]

323. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 7 May 1809:

Covering letter of the treatises on lead poisoning. Brugmans hopes that Van Marum will receive these documents in time. His busy activities as a commission member kept him from returning them earlier. He wants to see Van Marum and Bennet as soon as possible.

[NA-NHA HMW 444-87; CHE]

324. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 4 March 1810:

At last Brugmans has had the opportunity to return the two treatises on the possibility of building and exploiting 'gradeerhuizen' ('salt huts') at the coast. He reminds his friend of the fact that they still have to examine Camper's treatise on the giant lizard. He promises to return this treatise as soon as possible and expresses his wish to see Van Marum soon after he will have received these documents. It is urgent because it's about a ministerial demand.

[NA-NHA HMW 444-88; PHY, CHE, GEO, ZOC]

325. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 12 March 1810:

Brugmans returned the treatises on the 'salt huts' as soon as possible. Because the members of the jury were of different opinions, he has elaborated his own report as much as possible. He hopes to read it at the annual general meeting. He thanks his friend for sending him the catalogue of plants and utters his admiration about Van Marum's rich, well composed and really unique botanical collection. He himself is composing a seed collection. He eagerly accepts Van Marum's offer to make a choice of seeds for his Leyden 'Hortus' and offers a gift in return. Until now he did not receive a word from Bennet.

[NA-NHA HMW 444-88; PHY, CHE, BOT, COB]

326. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 18 April 1810:

Brugmans returns the really excellent treatise on the diseases of fruit trees, caused by harmful insects, together with his report. He expects that the

author is willing to add some information on the destruction caused by beetles. It has been a long time since he has read such a well written and complete writing, a treatise, which met so beautifully with all the requirements. Furthermore he proposes several concept questions and promises to send forward some remarks.

[NA-NHA HMW 444-88; AGR, ZOC]

327. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1810:

Again Brugmans states that he is very satisfied about the treatise on the diseases of fruit trees. The author was right to confine himself to the most important harmful insects. He has also given an outline of their natural history as far as this was necessary in order to understand those diseases. He really did an excellent job with regard to the explanation why the diseases of fruit trees are increasing and he also gave the most important and most useful remedies to fight them. Besides he has added information about the most modern techniques of cultivating trees. He also proposed an attack of the problem from two sides: preventing the trees from damage and fighting the insects. The treatise ends with an excellent summary. Of course the author deserves to be awarded the gold medal [a decision the other members of the jury agree with].

[NA-NHA HMW 444-406.109 R; AGR, ZOC, BOT]

328. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 11 May 1810:

Brugmans apologizes for not having sent proposals for new contests. He promises to comply with that request within a few days. He will also come to Haarlem to attend the annual general meeting and to discuss the final redaction of the proposed questions. Furthermore he adds Vrolik's treatise on the remarkable retarded growth (of a fetus), because his friend Martinus van Marum is the next reviewer.[see also chapter 10: S.J. Brugmans, M. van Marum and J.A. Bennet to G. Vrolik; about mid-May 1810; NA-NHA KNI 175-43].

[NA-NHA HMW 444-89; MED, ANA, PAA]

329. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 11 January 1811:

Brugmans thanks his friend for the kind letter, which he found upon his return. He promises to sign the receipt immediately and to return it as soon as possible. He also pledges to judge the treatise immediately. Next week he will return it, together with his report. After that he will examine the treatise on bread yeast ('leaven'). He is not sure if he will be able to spend enough time on his relation with the 'Maatschappij' next spring, because the journey of the commissioners of the 'Conseil Académique' has been postponed for several months. As soon as he knows more about this matter he will inform Van Marum.

[NA-NHA HMW 444-89; CHE, AGR, UNI]

330. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 23 January 1811:

Brugmans returns the receipt of the treatise on the fermentation of bread yeast. Last night, at a very late hour, he returned from The Hague. He promises to return the treatise on the constituents of the animal bodies, which he has read with pleasure, before the end of the week, together with his report. Besides he has immediately sent a letter to Mrs. Kent, a widow, about how to act with regard to the pension she is entitled to receive. He expresses his best wishes for this new year and stresses once more how very busy he is.

[NA-NHA HMW 444-89; CHE, ZOC]

331. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 30 January 1811:

Brugmans returns the treatise on the constituents of animal bodies, together with his report. He promises to report as soon as possible on the treatise on bread yeast. He presumes that Van Marum did receive his last letter about the 'Kent' affair and informs him through a postscriptum that Cuvier and Noël, the Commissioners for the affairs related to the University will not arrive before the month of May. As soon as he has more detailed information he will notify his friend.

[NA-NHA HMW 444-89; ZOC, CHE, UNI]

332. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 30 January 1811:

The treatise under the motto ‘Corporis in brutis per motus ... etc.’ on the origin of the ‘principia remota’ of the animal body, is unacceptable in its actual state. The author only partially discussed the questions and related problems. To prove that he is right, Brugman gives a masterly example of a possible answer. One of the most important questions was if certain ‘principia remota’ are simple corpuscles, yes or no. If the answer is no, than they are produced in the animal body itself. Brugmans agrees with the choice made by the author. He chose the example of carbon as ‘principium remotum’ and admires the experiment in which chickens and eggs have been burned to ashes, after which the remains have been analysed chemically. By doing this so the author proved his expertise. However if the author is willing to carry out a few more experiments and counter experiments the entry deserves to be awarded.

[NA-NHA HMW 444-406.108(1) R; CHE, ZOC]

333. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 February 1811:

Brugmans reports on the French treatise under the maxim ‘Nihil ... etc.’ on the purification of water by using charcoal. The ‘Maatschappij’ had asked for a chemical explanation of the purifying effect of charcoal and a calculation to prove the economic benefit. This question had become especially interesting because Fourcroy, Brugnatelli and Proust were of a different opinion. The ‘Maatschappij’ also hoped to receive a definitive answer about the question in which way carbon and hydrogen possibly attract each other. Brugmans also mentions the experiments, carried out by Ruppe and Lowitz (Saint Petersburg). On the other hand, the author proved to be familiar with the experiments carried out with charcoal filters. Fortunately he made the distinction between ‘clarification’ and ‘purification’ (‘depuration’) of water and he proved to be aware of the fact that the second process means more

than the simple removal of putrid gasses. Brugmans accepts his statement that purified water easily goes bad again. Most regrettably many propositions remained unproven. Apparently the author is not familiar with the new chemistry. Because of the good perspective his treatise offers, he has to be encouraged to complete his writing.

[NA-NHA HMW 444-403.99(1) R; PHY, CHE, MED]

334. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 March 1811:

Brugmans apologizes for the late return of the treatise on the bread yeast. This has been due to urgent affairs. He also returns some bread samples, belonging to treatise 'A'. He will send his report very soon.

[NA-NHA HMW 444-89; CHE]

335. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 6 March 1811:

Brugmans reports on the treatise on bread yeast. He had a good reason for writing a concise report, because perhaps many reports have to be read during the next meeting of the 'Maatschappij'. He promises to assess and to return the treatise on the improvement of water as soon as possible.

[NA-NHA HMW 444-89; CHE]

336. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 April 1811:

Brugmans returns the assessed treatise on the purification of water by means of charcoal. He is eager to see Van Marum and to discuss this entry with him. As soon as he has been informed more in detail about the affairs of the University with respect to the visit of the French commissioners who will evaluate the affairs of the University and decide about its future, he will notify him immediately. The coming trip to Paris has not been arranged definitively, perhaps it will take place in June. Within a few days he will send some remarks with respect to the draft of a certain contest. Furthermore, he wants to know if it is possible to elect Gottlieb Salomon, Medicinae Doctor in Leyden and lecturer of midwifery (obstetrics), as a member of the Society.

He is a brilliant scientist. Once again he sends Camper's treatise on the crocodiles of Maastricht, together with the objections made by the author to its report. He also adds the draft of a report and asks Van Marum's opinion on it as a member of the jury. If he has no objections he will send the documents to Gerardus Vrolik. Furthermore he also encloses a few seeds of *Heracleum speciosum*. Soon he will send Van Marum some new requests with regard to the Leyden hortus.

[NA-NHA HMW 444-89; CHE, UNI, ZOC, MED, COB, BOT]

337. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 18 May 1811:

Brugmans returns a modest entry on the watering of plants with rainwater. He proposes a question on ink and emphasizes that the drafts of the questions, sent to him by Van Marum, seem to be appropriate, except for the one on the importance of 'broei' (heating of hay) in order to make it a better nourishment for cattle. With respect to a prize contest on the production of sugar, which has been held for the first time in 1809, he proposes an improved and more chemically oriented version. He has abandoned the idea to propose his brother P.A. Brugmans as a member of the 'Maatschappij'. Meanwhile he also received the seeds and plants in good order and thanks him for that. He hopes that he will have the opportunity to visit him and to see them grow and flourish. Anyhow, he will come to Haarlem next Saturday.

[NA-NHA HMW 444-89; PHY, CHE, COB, BOT]

338. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 18 May 1811:

Brugmans reports on the treatise on the watering of plants with rainwater and exposes some of his own ideas. Rainwater is more than a simple nutrient for the plants. So he adheres to the belief which the 'Maatschappij' has in the 'vruchtbaarmakend beginsel' ('fertility stimulating principle'). He also mentions several experiments carried out with plants under bell-jars. The author did not introduce any new fact and most of the recently developed scientific ideas seem to have eluded his notice. He is even more ignorant than the most humble gardener.

[NA-NHA HMW 444-410.135(1) R; PHY, BOT, AGR]

339. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 29 May 1811:

Brugmans announces that Georges Cuvier has arrived in The Hague in the evening of 28 May. He went to see him immediately and they discussed several subjects. He also had dinner with him, the 'Prince-Architrésorier' and some others. Late that night, he went back to Leyden. Noël will presumably arrive today or on 30 May and immediately go on to Amsterdam, through Haarlem. Brugmans has already informed them on the collections, which are present in Haarlem. He is sure that Van Marum will be satisfied about the issue of the coming visit. He has not been informed yet about the exact day and hour the French guests are going to visit Leyden, but there is no doubt that this will happen during the next three or four days. Probably the visit to Holland will take about 8 or 10 more days.

[NA-NHA HMW 444-89; UNI, ZOC, GEO]

340. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 February 1812:

Brugmans returns the two treatises on the 'salt huts' together with his reports. The other treatises, which are still in his possession, will be returned as soon as possible. In the course of this week he will leave for Amsterdam and possibly see Van Marum on his way there or on his return trip. He promises to notify him in advance. He also hopes to be able to return the list of seeds.

[NA-NHA HMW 444-90; PHY, CHE, BOT]

341. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 February 1812:

Brugmans reports on two treatises on the production of salt from seawater. The first entry, which is very brief, deserves no attention. The second entry, under the maxim 'Ratione et Experientia', deserves full attention. The practiced author proves his experience of many years with regard to the building of 'salt huts' along the coast of Norway. In an extensive and meticulous analysis of this well structured and technically solidly based

treatise, Brugmans elucidates every detail of the designed seawater supply system. Most regrettably the calculations are not correct. They have been based on the Norwegian situation. Yet the technical calculations and designs of pumps, mills and wheels are very important. He also appreciates the author's attempt to make a design fit for the Dutch coast. Nevertheless several technical, chemical and economical questions remained unanswered. The Dutch situation has not been taken into account sufficiently.

[NA-NHA HMW 444-408, 125(2) R; PHY, CHE]

342. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 29 February 1812:

In chemical respect the two entries on the different qualities of lump lime and shell lime are completely inadequate, although they give some interesting chemical facts. The question why lump lime is a more reliable base material for the production of mortar and brickwork than shell lime is, remains unanswered. The remedies for the improvement of shell lime are not based on chemical facts. The author of the second entry puts that shell lime has to be mixed with river silt before it is subjected to the burning process. After this procedure has been completed the 'trasmolen' ('trassmill') gives a good mixture of ashes and lime. Mixing this substance with sand and water gives a mortar, which hardens well. Nevertheless the two treatises do not deserve to be awarded.

[NA-NHA HMW 444-411,145(1) R; CHE, PHY]

343. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 4 March 1812:

Brugmans reports on the treatise on the reproduction of living beings. After having given a summary of his own ideas, completed with a brief historical survey, he assures Van Marum that he is very content with the author's contribution. He endorses his explanation of the origin of organisms and emphasizes that the new chemistry does not cause any problem with regard to this theory. He likes the way the author has elucidated the origin of beings within the various classes of the animal kingdom, especially of the lower

developed organisms. In fact Brugmans fully agrees and he does not mind that the author borrowed his examples from other authors. His theory is not conflicting with the actually ruling laws of nature. The treatise is well organized and fully meets the contest. So it deserves to be awarded.

[NA-NHA HMW 444-411.149 R; BOT, ZOC, CHE]

344. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1812:

Initially Brugmans is very pleased by this very sizeable treatise on a new classification of the vegetable kingdom, based on the anatomy of the plants and on their chemical properties. Important results in the field of chemistry may trigger the development of a scientific botany. However soon after he started reading this manuscript, he felt more and more disappointed. On the basis of two main characteristics – the structure of the sub-epidermal tissues ('celwijs weefsel', 'parenchym') and the presence and structure of the spiral vessels of the wood – the author distinguishes between 300 plant species, divided into two groups: plants with regular tissues and plants with irregular tissues. Next, he follows the Linnaean system. Nothing new has been presented, no discoveries! The author fell into the same trap as Sprengel and Desfontaines have done before him. He borrowed a lot from the earliest works of Linnaeus and also from other authors. His chemical contribution is a hotchpotch too. There is absolutely no relation between chemistry and anatomy and a new basis for systematics is completely absent. Furthermore, the author is not capable of improving his contribution. He does not deserve to be awarded.

[NA-NHA HMW 444-410.140 R; BOT, CHE]

345. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 11 May 1812:

Brugmans apologizes for the rather long delay of the return of the treatise evaluated by him. He has been very busy lately. After a light attack of podagra he is recovering again. He thanks his friend for sending him some seeds; they are already beginning to germinate. He will surely come to Haarlem on 23 May, together with a couple of fellow members living in

Leyden, to attend the annual general meeting. Tomorrow he will send the text of the question, which has been devised and edited by his fellow member Logger. In his opinion the question on the porpoises is well defined. He also suggests a question about the ore bogs and adds some information. He will send suggestions for further contests as soon as possible.
[NA-NHA HMW 444-90; CHE, PHY, ZOC]

346. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 11 May 1812:

Brugmans reports on a treatise, which discusses the revision of the 'Systema' of Linnaeus, which is perhaps necessary as a consequence of the new scientific discoveries. In his opinion the author answers too easy in the affirmative. He then gives the criteria a new system has to comply with. The very impressive, sizeable, handsome and promising introduction gives a sketch of the anatomy of the various classes of animals. Although the author does not come out with much new information and although he rejects the ideas of excellent physicists, this part of the treatise seems to meet with the requirements. Hitherto this contribution is really the best of what has been written in this field of science until now. The draft of the fundamental principles of the new system is also acceptable. However Brugmans gets annoyed at the ease with which the author rejects the ideas and discoveries made by the most brilliant naturalists. Furthermore most of the proposed changes are only apparent improvements, or even worse – only reprehensible errors. In spite of the minor contribution of the author to a really new concept he wants to plead in the author's favour by proposing the award.

[NA-NHA HMW 444-408.128 R; ZOC]

347. M. van Marum (Haarlem) to S.J. Brugmans (Leyden); 20 February 1813:

To his regret, Van Marum did not receive the treatise on the lead poisoning of water under the motto 'Felix qui potuit ... etc.' until now. Therefore he asks Brugmans to follow the request of the author and to establish contact with him directly. Although it is against the rules of the 'Maatschappij', just once it cannot do any harm. Nevertheless, it must be kept secret, otherwise

such demands could be repeated. Van Marum counts on Brugmans. He expects him to answer that request and to inform him personally.

[NA-NHA HMW 444-91; CHE, MED]

348. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 21 February 1813:

Brugmans has evaluated several treatises on the decay of cadavers. Soon he will send Van Marum the treatise on the growth of plants. He also promises to send his report on the new version of a treatise on lead poisoning. He would like to discuss this matter and several other chemical subjects with a few colleagues. He is not very much attracted by the idea of a direct correspondence with an author; this is really inconvenient, because it might severely hurt the impartiality of the 'Maatschappij'. Of course the author knows why the first version of his treatise has been turned down and what he has to improve to have a better chance. He simply has to improve the unacceptable parts of his treatise. So Brugmans rejects the proposition of a direct correspondence between him and the author. He wants to see Van Marum soon in Haarlem or in Leyden. His work in the hortus is really progressing; the plants came well through winter. The flower boxes and the greenhouse of the botanical garden of Harderwijk have been broken up and the remaining building material has been sent to Leyden. He has ordered to store it for the time being. He asks his friend to send him new seeds, because many seedlings have been lost during this winter.

[NA-NHA HMW 444-91; MED, ZOC, BOT, COB]

349. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 24 February 1813:

With great satisfaction Brugmans has learned from Van Marum's letter that they are now of the same opinion with respect to the question about the correspondence wanted by the author of the treatise on the lead poisoning of water. The bearer of this letter is assisting him in the hortus. Brugmans asks his friend to show him his beautiful gardens before they have turned into leaf completely and are blocking the view too much. This will further their

exchange of ideas about the Leyden hortus. He also asks his friend to send him a few cuttings.

[NA-NHA HMW 444-91; CHE, AGR, BOT, COB]

350. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 24 February 1813:

In the past various authors did really exaggerate the harm caused by the burial of decaying cadavers in inhabited areas, although there is no doubt about the noxiousness of the inhalation of evaporations to health. The majority of these 'emanations' absolutely should be kept in the ground, after which they have to disappear through (chemical) decomposition. Because it is not clear if this really happens with every vaporous 'emanation' (evaporation), the 'Maatschappij' is of the opinion that experiments and observations are needed. Both authors did not understand the meaning of the question and they lost sight of the aim, which has been formulated by the 'Maatschappij'. The first treatise, under the motto 'Nos ubi decidimus ... etc.' only gives well known facts. Although the second treatise, under the device 'Tentasse suffit ... etc.', is more extensive it is still unsatisfactory. Although Brugmans agrees with the author's opinion that fumigations, especially those according to Morveau, are very effective, his instructions are very inaccurate. For example the author proposes to pour sulphuric acid on the soil, as long as the cadavers are decaying. If the contest has to be held once more the question has to be elucidated. He makes a suggestion.

[NA-NHA HMW 444-412.156 R; MED, CHE]

351. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 15 March 1813:

The three treatises on the possible effect of watering plants with rainwater and on the difference between rainwater and other types of water do not deserve to be awarded. The author of the first treatise under the device 'Ins Innere der Natur schaut kein erfahrener Geist' is not worthy of any attention. The author of 'Observando discimus' is far too much convinced of the fact that rain transmits a growth stimulating 'electrical substance' from the

atmosphere to the plants. So he is ignorant of the fact that Paets van Troostwijk and Krayenhoff have proved the opposite. In spite of the objections which can be urged against the third treatise, under the maxim 'Felix qui ... etc', it deserves attention. Its author explains the exceptional effect of rainwater by pointing at its peculiar origin and at the way it is decomposed. He did not describe any experiments. Besides, he fully rejects the ideas of his adversaries. He also introduces the term 'Assimilationsproces', by which he describes the way small vapour bubbles change their nature under the influence of the 'elektrieke vloeistof' ('electrical fluid'), after which they fall down on the ground as a fertile rain. Brugmans is very annoyed about the fact that the author bases his theory on terms like 'Parallelismus' and 'Polarity' of plants. Brugmans has already lost the scent and pronounces the sentence of death on this treatise.

[NA-NHA HMW 444-410.135(2) R; PHY, BOT]

352. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 28 March 1813:

The two treatises on the purification of bad water by using charcoal – the incomplete Dutch entry under the maxim 'Zuiver lucht en zuiver water is 't behoud van 's menschen gezondheid' and the French entry under the motto 'Nihil majus quam populi salutatem nec non sanitatem curare' do not deserve to be awarded. At the occasion of the rejection of the first version of their treatise, the authors have been told that they had to improve two aspects: the experimental aspect with regard to the purifying properties of charcoal and the chemical explanation of these processes. Neither of the two commissions has been carried out.

[NA-NHA HMW 444-403.99(2) R; BOT, CHE, PHY]

353. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 8 April 1813:

Brugmans extensively thanks his friend for the rich collection of seeds he received through Bennet. He also sends his report on the purification of water. Soon the reports on other treatises will follow. A physical indisposition has hampered his activities temporarily. If possible he would like to receive a

sample of the seeds, which Van Marum has received recently from Thouin. Does he have a spare copy of Thouin's catalogue perhaps? He would be very pleased to receive it.

[NA-NHA HMW 444-91; BOT, CHE, COB]

354. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 16 April 1813:

Brugmans returns the treatise on the lead poisoning of water. Now the author absolutely deserves the gold medal. As soon as his report has been transcribed he will send it. At the occasion of his last visit he has forgotten to tell Van Marum that he had already planted the seeds of *Atractylis cancellata*. As soon as the small plants can be planted out he will send him a few.

[NA-NHA HMW 444-91; MED, CHE, BOT]

355. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1813:

In this supplement Brugmans discusses several aspects of the treatise on the lead poisoning of water under the maxim 'Felix qui potuit ... etc.'. He reminds his friend of the decision made in May 1809. The 'Maatschappij' had decided that the author could be awarded the gold medal after having completed his treatise to the full satisfaction of the jury. Meanwhile, the author has added what was missing in the field of chemistry. Through further experiments he has proven that the compound hydrogen vapours have a destructive and decomposing influence on lead. Now the effect of hydrochloric acid (present in the sea air) and the smaller influence of sulphurous acid ('zwavelig zuur') have been explained better than before, although the jury does not completely agree. The author also elucidated the effect of the small plants and animals present in the rainwater. The same goes for the circumstances in which lead gives off small lead particles to the water. The noxiousness of lead has been proven sufficiently, although Brugmans again wants to add a few experiments. In accordance with Van Marum's letter of 6 June 1809, the author has left out the investigation of the influence of lead glaze on water. Now he absolutely deserves the gold medal.

[NA-NHA HMW 444-405.103(3) R; MED, CHE, BOT, ZOC]

356. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1813:

The treatise on the origin of the 'principia remota' of the animal body still contains several inaccuracies. The survey of the nutrients is incomplete and the chemical description of the incineration experiments is not clear. If the author would have been well informed about the works of Fourcroy and Vauquelin and if he had read those of Bracconnot, De Saussure and Gehler, he would have been better acquainted with the constituents of plants and animals. The conclusion is that his explanation of the origin of the 'principia remota' is incorrect and that it is not true that the majority of these elements is formed in the body of the living animal itself. The analyses carried out by the author have their shortcomings. Although the author does not deserve a medal, he deserves an encouragement. It's annoying that several treatises are so difficult to evaluate.

[NA-NHA HMW 444-406.108(2) R; CHE, BOT, ZOC]

357. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 11 May 1813:

Brugmans reminds his friend of the events with respect to the three treatises on the lead poisoning of water. One of them was so meritorious that the author has been advised to improve his entry under the condition that, if the special commission, who had to judge his improved treatise, would agree with the improvements and additions, he would be awarded the gold medal. The author has tried to satisfy the commission. Indeed, he completely rewrote his work. The obvious improvements of the contents, the addition of new facts, the improvement of the readability and the removal of every diffuseness absolutely justify its publication and the award of the gold medal.

[NA-HMW 444-405.103(3) R; CHE, MED]

358. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 18 May 1813:

Just before the annual general meeting Brugmans sends another report on a treatise on the origin of the 'principia remota' of the animal body. The author has given a completely incomprehensible and confused explanation. Of course, he had to present the results of experiments which have been

carried out carefully. He had to prove that the constituents of the animal body (and especially the 'principia remota') did not originate from the food. The author did not worry at all about the fact that his results were not consistent with the facts given by the doctrine of Lavoisier. He even decided that the time had come to reject the ideas of Lavoisier! In his view the theory of 'transsubstantiation' has been abandoned wrongly. In his opinion it is a very usual thing that a 'principium remotum' or 'single principium' turns into another, as this is constantly happening in living creatures, as the result of the functioning organs. Brugmans has been put of his rattle completely. This wisdom is completely beyond his comprehension. How is it possible for a scientist of this century to present such strange ideas? And that is it!

[NA-NHA HMW 444-406.108(2) ZOC, CHE]

359. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 14 January 1814:

Brugmans agrees that his friend will send him the treatise on the lump lime and shell lime as well as the one on the theory of manuring. He promises to evaluate these entries as soon as possible. For a particular reason he has to withdraw from the jury, which has been appointed to judge the treatise on the 'gangraena nosocomialis'. It is not a question of unwillingness. He asks his friend to keep silent about the reasons why. Next Sunday at the very latest, he will send two more letters, respectively to 'Schr.' (Schrader?) and to 'L' (Lichtenstein?). Does his friend possess any 'Proceedings' (treatises) of the 'Linnean Society'? How many does he have and which ones? In Paris he has had the opportunity to throw a glance at Volume 9.

[NA-NHA HMW 529-14; AGR, CHE, BOT, PHY, MME]

360. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 12 February 1814:

Already for some time the question regarding a manuring theory, based on plant physiology, has been exercising many minds. The improved entry under the motto 'Magistra e(s)t duce Natura' contains several interesting theses. They show the author's experience in the fields of chemistry and

agriculture. Nevertheless his proofs are not sufficient. The thesis that carbon – the most important nutrient element of manure – in the composition of carbonic acid, only is absorbed by the roots of the plants, causes Brugmans's resentment. Unfortunately the author is ignorant of the works of Ingenhousz, De Saussure and Bracconnot. The results of manuring experiments, related to the soil types, are also insufficient. He did not give an explanation based on plant physiology. His thesis that manure is only working well after a decaying fermentation has not been proved either. Unfortunately he did not give any new facts, so the entry cannot be awarded.

[NA-NHA HMW 444-402.91(7) R; AGR, BOT, CHE]

361. S.J. Brugmans (Leyden) to M. van Marum (Haarlem) 15 February 1814:

The author of a completely rewritten treatise on the differences between shell lime and lump lime under the motto 'La chaux est presque toujours saturée d'acide carbonique ...etc.' seems to be very experienced in the art of lime burning. He is aware of the disadvantages of shell lime as a constituent of mortar and informs his readers about how to improve its quality. This information only covers the first half of the answer. The 'Maatschappij' also wanted to know the chemical backgrounds of the changes the lime undergoes during the burning process. Furthermore it had demanded a chemical comparison between shell lime and lump lime. The author had to explain why the brickwork made with mortar prepared with lump lime becomes more solid and lasts longer than brickwork made with mortar of shell lime. The fact that he omitted this answer, proves that he is not a chemist. If he would have understood the theoretical background of this question he would have answered it.

[NA-NHA HMW 444-411, 145(2) R; CHE]

362. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 16 February 1814:

Brugmans returns the treatise and his report on the production of mortar. Until now he did not receive any letters from Schrader and Lichtenstein. He

is looking forward to the reception of Van Marum's letter. The frost keeps him from making a trip to Haarlem, in order to receive the collection of cuttings. He is eager to know which experiments of Crell have been the starting point for the third prize contest of the 'Maatschappij' for 1815 (about the presence of carbon in plants). In addition to his letter, he informs Van Marum that meanwhile he has received the invitation for a visit, next Sunday.

[NA-NHA 529-14; AGR, CHE, BOT]

363. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 30 March 1814:

With pleasure Brugmans sends the first part of the document promised to Van Marum. The rest will follow soon, especially the part regarding the medical education in the army (as it has been organized in the past). He also returns the treatise on the origin of oxygen and proposes the drafts of several new questions in the field of literature and archaeology, which have to be answered from the field of physics as a starting point. More suggestions will be sent later on. Furthermore he offers the treatise of P.G. van Hoorn, on the healing influences of music. Of course Van Marum is already acquainted with this scientist through his dissertation on the consequences of amputations. Brugmans wants to propose Van Hoorn for membership of the 'Maatschappij' and he tries to smooth the path for him. He encloses a few sachets filled with seeds, received from Berlin. Is it perhaps possible to see Van Marum soon in Haarlem? He will also send him the calculations with respect to the 'Hof van Zessen', the calculations regarding the transfer of the physical cabinet, those with respect to the 'Theatrum Anatomicum' and those concerning several reconstructions. He also asks to send him seeds of *Mesembryanthemum cristallinum*.

[NA-NHA 529-14; MME, ARC, LIT, PHY, BOT, MED]

364. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 26 April 1814:

The author of the treatise on the origin, nature, the simplicity or the compound character of the alkalis present in vegetable ashes is well informed

about the most important chemical literature. Experiments have already proved that the potash resulting from the incineration of plants was already present before the burning process was carried out. The author does not reveal the way in which this process does occur. Brugmans has his own ideas. In his answer to the third sub-question – regarding the possible augmentation of the potash concentration in plants – the author concludes that its quantity depends on the precision with which the yield of the incineration process has been collected and that it does not depend on the method used for the incineration process. Besides mouldered alder-wood yields more potash than dry alder-wood. The author also gives some advice to the potash burner. Brugmans is very satisfied about the quality of this treatise, although a few minor questions still remained unanswered. The author deserves the gold medal if he is successful in answering these last questions. This document, which is so important to the further development of chemistry, deserves a wide distribution.

[NA-NHA-HMW 444-412,163(1) R; CHE, BOT]

365. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 26 April 1814:

Brugmans apologizes for his sluggishness with respect to his contacts with Van Marum. Now he sends his report on the organization of the medical education in the army. He is eager to know if Van Marum appreciates the structure of this draft or that it has to be adapted. He is sorry for not being able to send him the notice on the ‘Veterinary School’, because it is still incomplete. He thinks that Van Marum – being a member of the commission – is able to promote its foundation. For that purpose, it is possibly best to appoint a new commission of real experts, which has to prepare its establishment, and which will be able to administrate this school. Furthermore he has evaluated the treatise on the potash and he promises to return these documents as soon as possible.

[NA-NHA 529-14; MME, CHE]

366. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1814:

Brugmans opens his report by giving a draft of the major aspects of the treatise under the maxim 'Possam multa tibi veterum ... etc.' on the question of the oxygen equilibrium in nature. The conclusion that natural oxygen is produced in a way different from its production through chemical processes, that is to say through the decomposition of water and carbonic acid, is very acceptable. The 'Maatschappij' was already familiar with that fact. The question was, if living plants are able to restore what is used by animals. In Brugmans's opinion a mere theoretical consideration is not enough. He reproaches the author that the second chapter seems to be an abstract of the work of Muncke. The new experiments carried out by the author (oat seedlings and flies under bell jars) seemed to be the right approach, but the results turned out to be disappointing, because the author did not determine the quantity of oxygen produced. Brugmans also raises objections against the experiments with mice, although the procedures have been well chosen. Furthermore it is dangerous to accept the results of eudiometric determinations without question. All in all it is impossible to award this treatise.

[NA-NHA HMW 444-408.126(2) R; PHY, BOT, CHE]

367. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); late May 1814:

Brugmans thanks his friend for informing him about the honourable decision of the 'Maatschappij' with regard to his treatise (on gangrene). Unfortunately he has not been able to attend the annual general meeting. Undoubtedly Van Marum will accept his excuse: his sorrowful family circumstances. He hopes that his treatise will be in print soon. Nevertheless he asks him to return the manuscript because he has to add a few facts. Is it possible to sent him some copies of his published treatise, of course on payment, according to the rules? In the very near future he will commit several of his botanical ideas to paper. He ends his letter by observing that Van Marum's gardener has recently sent him *Iris pseudacorus* instead of *Typha angustifolia*.

[NA-NHA 529-14; MME, BOT, COB]

368. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 7 June 1814:

Brugmans returns the manuscript of his treatise on 'gangraena nosocomialis' after having added a few remarks and names. He also gives instructions with regard to the way his name as an author has to be mentioned. He repeats his request to send him a number of copies of his treatise after it has been published, of course on payment. He assumes that the 'Maatschappij' will take care of the textual and stylistic corrections. He asks if it is possible for the publisher to send him the printer's proofs by the sheet, as soon as these have been printed. He would be very grateful if his treatise will be in print soon. He ends his letter by expressing his gratitude for the list of Erica species, which Van Marum has added to his last letter. Soon he will send him the list of plant species, as has been promised by Kent.

[NA-NHA 529-14; MME, BOT, COB]

369. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 29 June 1814:

Very impatiently Brugmans has looked forward to receiving the proof of the second sheet of his treatise on gangrene. He supposes that Van Marum is not to be blamed for the delay of the printing process. He is in a hurry because next Monday he has to leave Leyden for several weeks. Moreover S. [Sandifort?], who has offered to review the proofs, will be out of town from time to time.

[NA-NHA 529-14; MME]

370. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 21 October 1814:

Brugmans – just returned from Brabant – has received Van Marum's letter together with the gold medal and he thanks him for his kind words. All in all he has been out of town for almost three months. For that reason he could not see his friend. Neither has he had the opportunity to return the petrifications found in Groningen. After having stayed in Gelderland for some days, he travelled to Brabant (at the invitation of H.M. the King). There he

stayed for the rest of the time. Immediately after his return he has left for The Hague in order to resume his duties as inspector general of the 'Militair-geneeskundige Dienst'. Now he wants to see Van Marum and he hopes that his friend is willing to present his treatise to His Majesty and that he will pay him a visit soon. Furthermore, his journey through Brabant gained him several acquisitions for his garden, although several exotic plants have disappeared meanwhile.

[NA-NHA 529-14; MME, GEO, ZOC, BOT, COB]

371. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 20 February 1815:

Brugmans discusses two treatises on the peculiar influence of rainwater on plants. The treatise marked 'B', under the motto 'Hoe kan het water zulke groote dingen doen?', is not worthy any attention, while the treatise marked 'A', entitled 'Jupiter utilibus ... etc.' has a far greater value. In the author's view rain is unrivalled because a common shower gives more water to the plant and the atmosphere is saturated with water. Rain gives more nutrient substances to the plants than watering does. Brugmans observes that the author should have added that in England the plants themselves are not watered, but only the surrounding soil is. He should also have emphasized that rain has its influence on the temperature, on light, on electricity and on the winds. On the other hand the author correctly observes that it is in fact impossible to imitate showers by a particular way of watering. Although the author has only described a small number of experiments his treatise deserves to be awarded.

[NA-NHA HMW 444-410.135(3) R; PHY, BOT, AGR]

372. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 13 March 1815:

Brugmans is very positive in his evaluation of the treatise on the effect of 'aanglimmende kolen' ('live coals' or 'lighting coals') on living animals. The author describes several hundreds of experiments together with their results. In the physical process of lighting the coals not only produce carbon dioxide,

but also another gas. In these experiments more of this unknown gas is produced than in experiments with coals, which are dying out or which are already extinguished. In a most successful way the author has tried to produce these gasses by dry distillation of wood (destructive distillation). He carried out a large number of experiments on living animals in closed jars. In all these experiments he used the same quantity of live coals. These keen analytical experiments produced watertight results. Nevertheless the author regrets the fact that the syntheses of the constituent gasses, suspected by him, did not bring the results he had hoped for. The fact that he carried out 1.271 experiments proves his great skills and zeal. His treatise deserves to be awarded, there is no doubt about that, unless the assemblee decides otherwise.

[NA-NHA HMW 444-112.167(1) R; CHE, PHY, ZOC]

373. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 11 February 1816:

Brugmans reports on three treatises on the difference of quality between mortar made of lump lime and mortar made of shell lime. The author of the Dutch entry under the maxim 'Zoo Aandagt, Kunde en Vlijt ... etc.' did not understand the question at all. The German entry under the motto 'Jucundus est Labor ... etc.' is by far the best of the three entries. It has scientific qualities. The author understands why scientific knowledge is indispensable. He has carried out all the necessary experiments with both types of lime and produced plain results. He also examined the process of setting of the various mortars. He has tested the theories and prescriptions with regard to the best mixtures of the constituents. His answer to the first three questions is really excellent. Unfortunately he did not carry out the order to test the Dutch shell lime. He is not familiar with the large scale lime burning, nor did he examine brickwork made by using shell lime mortar. The author deserves to be awarded after her will have removed these last objections.

[NA-NHA HMW 444-411.145(3); R; CHE]

374. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 20 February 1816:

The author of the treatise on the location, origin and possible exploitation of bog ore in the Netherlands does not deserve to be awarded. Obviously he is not familiar with these layers and he is not acquainted with reliable information on this subject. Most of his 'facts' seem to have been borrowed from Le Francq van Berkhey's 'Natuurlijke Historie van Holland' ('Natural History of Holland'). He did not discuss the damaging influence of ore on plants. Without any proof or investigation the author assumes that the bog ore forms an impenetrable separation between the plants and the deeper layers of the soil. In his opinion this situation prevents the absorption of nutrient elements. Because the water cannot permeate into the deeper layers it loses its 'luchtzuur' (.....), which is so important to plant growth. In the view of the author this fact, together with the presence of the salts around the roots, makes the water 'cold', 'acute', 'bitter' or even 'biting'. The many absurd assumptions and statements, the general lack of proofs and the absence of an advice with regard to the removal of this harmful influence block the award.

[NA-NHA HMW 444-412.161(1) R; CHE, AGR]

375. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 1 March 1816:

Brugmans returns three treatises [not specified in this letter]. Because of his many obligations he could hardly find the time to read them carefully. Next week he will send the report. The French treatise is too superficial, while the Dutch entry is the most elaborated one and the German treatise is the most efficient one. The German contribution must have been written by someone who is really experienced in this field of study. However, none of the three treatises offers any new facts or astonishing results. So they cannot be awarded. He hopes that his letter will satisfy Van Marum. He expresses his remorse for the late return of the treatises.

[NA-NHA HMW 444-94].

376. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 12 March 1816:

The author of the treatise on the origin of potash in plants has successfully tried to improve his valuable treatise. Now it has been proved that the potash was already present in the plants before the incineration process started and that its proportion does not depend on the way of incineration. The author did also prove that the mouldering process raises the potash contents. Brugmans fully agrees with these conclusions, although he would have preferred experiments on a much larger scale. The final result fully deserves to be awarded.

[NA-NHA HMW 444-412.163(2) CHE, BOT]

377. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 22 March 1816:

Brugmans reports briefly on the treatise dealing with the question of the live coals. Within a few days he will send a more extensive report, giving his evaluation of the addition to the entry, which had already been awarded in 1815. He thanks Van Marum for his kindness and obligingness with respect to the auction recently held. During the last weeks he has been very occupied. Tomorrow he will leave for The Hague. He will try to find out what has happened to a request mentioned by Van Marum. He adds a list of seeds desired by him. He hopes that another list of seeds, composed by himself, will be copied tomorrow. He expresses his warm feelings of friendship and esteem towards Van Marum and asks him to convey his compliments to his wife.

[NA-NHA HMW 444-94; CHE, BOT, ZOC]

378. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 29 April 1816:

Although the three treatises on the diseases in besieged cities have been written by experienced physicians, they do not deserve to be awarded yet. There are clear similarities between the entries, which makes their judgement difficult. The German entry, marked 'A', the Dutch entry, marked 'B' and the French entry, marked 'C', are very voluminous. Brugmans describes their

contents, analyses their most important aspects and concludes that each of them has got its own strong and weak aspects. If he should have to make a choice, he would prefer 'A', because of the advices it gives, although these are not all fully elaborated.

[NA-NHA HMW 444-414.173(1); MME]

379. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1816:

Various occupations, excursions and problems with regard to several prize contests have delayed Brugmans's answer to Van Marum's letter. Now he sends him the drafts of two contests. He proposes to elucidate the contest on the diseases in besieged cities and refers to the enclosed advice. He also substantiates the necessary repetition of several contests and asks to reimburse him the money, which the 'Maatschappij' owes him. Most regrettably he is not able to see Van Marum next Saturday, because he has to leave for Breda. He has an important commission about which he will inform his friend soon. He will return next Tuesday. Finally he informs him that the governors of the university have definitively decided to enlarge the garden.

[NA-NHA HMW 444-94; MME, BOT]

380. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 1 July 1816:

Keuchenius, town physician of Schoonhoven (province of Utrecht) and very passionately practising science, has asked to be proposed for membership of the 'Maatschappij'. Brugmans has informed him that – according to its laws – it is only possible to be elected member after having entered a treatise or an observation. Thereupon Keuchenius has sent him the enclosed observation. Brugmans asks the directors to have this contribution evaluated. Undoubtedly Keuchenius is a meritorious physician. He wonders if Van Marum has the possibility to propose him. He ends his letter by adding the draft of a possible new prize contest.

[NA-NHA HMW 444-94; MED]

381. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 23 February 1817:

Brugmans reports on a brief contribution dealing with 'darry water'. In spite of his many occupations he promises to evaluate several treatises, which are still in his possession and to return them soon together with the reports. His draughtsman still has to make an illustration. He adds his greetings and expresses his feelings of friendship and esteem.

[NA-NHA HMW 444-95; CHE, PHY]

382. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 23 February 1817:

Brugmans is not entirely positive about a treatise on 'darry water' under the motto 'Nuttig te zijn voor mijne landgenoten' ('Being useful to my fellow-countrymen'). Although the author has operated very judiciously, he did not answer the question completely. Yet, he tried to examine and to explain the decay of water in dug wells and he seems to have succeeded in explaining the phenomenon. He also gave the right solution to the problem. Initially Brugmans decided to propose the publication of the treatise. In his view the decay is caused by the development of a 'peculiar jelly-like substance' and by at least one type of gaz. A new way of digging and building wells seems to be appropriate and the well diggers have to take into account the type of soil and the future use of the well. As the 'Maatschappij' demanded a more extensive consideration of the problem, this treatise cannot be awarded.

[NA-NHA HMW 444-415.186(1) R; PHY, CHE, GEO]

383. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 March 1817:

Brugmans gives his judgement on the treatise on the bleeding of trees. He explains why he is forced to shorten his reports considerably. By doing so the members assembled in the general meeting will be able to spare precious time for more important activities. Soon he will return another treatise after having evaluated it. He expresses his feelings of esteem and friendship.

[NA-NHA HMW 444-95; BOT]

384. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 9 March 1817:

Brugmans reports on a treatise on the acclimatization of exotic plants. He sketches its contents. He rejects a great deal of the fundamental principles given by the author. The part of the treatise dealing with the culture of trees has been elaborated too superficially. The practical rules given by the author have been based on suppositions. At least he had to found some of these hypotheses on the results of comparative anatomy and physiology. Several of his operation procedures are founded on meaningless and unjustifiable conclusions. Although this treatise is not completely undeserving. So the treatise cannot be awarded. The author has to be informed about the defects and he has to be encouraged to improve and to complete his entry.

[NA-NHA HMW 444-415.187(1) R; BOT]

385. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1817:

Brugmans reports negatively on a treatise entered under the motto 'Solis tum accessus ... etc.', which discusses the sap stream in plants. It's really a hotchpotch of citations borrowed from other authors, although the author had to understand that exactly with regard to this subject new observations and experiments are really indispensable. He has only provided meaningless reasonings and comparisons between the sap stream of plants and the circulation of the animal blood. Too many questions remained unanswered, for example with respect to the bleeding of trees and regarding the direction of the sap stream. The treatise does not give any new facts, while the ideas about the improvement of tree nurseries are very premature and almost without any foundation.

[NA-NHA HMW 444-412.157(1) R; BOT, AGR]

386. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 24 February 1818:

Brugmans reports on two German treatises and on a Dutch one on contagious diseases in besieged cities. The last one has the least quality. Both

German entries – one under the maxim ‘Intelligenti pauca ... etc.’ and the other under the motto ‘Nunquam aliud natura ... etc.’ have been improved. Brugmans also was a member of the jury at the occasion of the first judgement (1816). This time the author of the first German entry has given results of experiments and also practical and well founded instructions. Obviously he has acquired practical experience in besieged cities. The second German entry is even more valuable. The experienced author has completely answered the questions. He has perfectly elaborated the subject, which resulted in ten points of attention. He has proved to be well informed about the actual developments of the sciences. So there are several reasons to award his treatise the gold medal, while the other German author deserves the silver medal. From the texts of both treatises it is possible to compose the complete regulations for a successful fight against contagious diseases in besieged towns. It is to be hoped that these regulations will be followed consequently.

[NA RANH HMW 444-414.173(2) R; MME, CHE]

387. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 25 February 1818:

Brugmans returns the treatises on the contagious diseases threatening besieged towns. Pressure of work made it impossible for him to finish this commission earlier. He also promises to return the other entries, which he still keeps. He has also thrown a glance at the additions to the treatise on lump lime. This time he is satisfied. He hopes that the deliverer of the documents is also willing to deliver a glass, filled with some flowers of *Agave vivipara*, which Van Marum asked to send him when it was in flower in the Leyden Hortus, some time ago.

[NA-NHA HMW 444-96; MME, CHE, BOT]

388. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 19 March 1818:

Brugmans reports on a treatise on the differences between shell lime and lump lime in the fourth round, The ‘Maatschappij’ had already decided that the author of ‘Jucundus est labor ... etc.’ had to be encouraged to accomplish

his entry. The results of the experiments and analyses to be carried out, had to end in an improvement of this very important construction material. In his supplement, the author has solved this problem in a very smart way. New burning experiments carried out with shells received from Holland have proved that there was indeed a difference of quality between shell lime and lump lime, but in an unexpected way. The shell lime even proved to give a better mortar than the lump lime does. He has drawn his conclusions from a series of experiments at various temperatures and of various durations. So he could decide which temperature was the best and how much time was needed. The author also carried out important hygroscopic experiments. Because the entry of 1816 already had a good quality it has now become an excellent contribution to science, from the very beginning until the end. Nevertheless the author still has to combine both parts of his treatise and to carry out a few additional experiments, after which the treatise can be awarded. There is no doubt about that!

[NA-NHA HMW 444-411.145(4) R; CHE]

389. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 19 March 1818:

Letter covering the report on the treatise on the differences between shell lime and lump lime. Brugmans thanks Van Marum for the objects sent to him, among others the seeds of Abies. They have already developed into small trees. He remembers that he did not mention this fact when he saw Van Marum for the last time.

[NA RANH HMW 444-96; CHE, BOT]

390. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 27 March 1818:

With great pleasure Brugmans has read the treatise on the bog ore banks. The author's ideas largely cover his own agricultural opinions. Yet Brugmans still doubts if the author thoroughly discussed every aspect of the question. Although the treatise has its merits, some additions and changes seem to be absolutely necessary. Brugmans gives several examples. The author did

sufficiently demonstrate his theoretical knowledge and practical experience. Because he does not know the laws of the 'Maatschappij' by heart, Brugmans asks his friend if a member of the jury, while writing his report, also has to give a concrete advice with respect to its improvement. He is eager to show his satisfaction about the treatise, although he is not willing to plead the award. His judgement of the other entry, under the maxim 'Wilt gij met vrucht uw land bebouwen, ... etc.', remains negative. Besides, it has been written by the author, who entered the treatise under the motto 'Terrae altitudinem ... etc.' at an earlier occasion. Now its quality is even worse!

[NA-NHA HMW 444-412.161(2); CHE, AGR]

391. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 27 March 1818

To his regret Brugmans has not been able to complete the report on the treatises discussing the beauty of the Greek statues. He adds his apologies to this letter, observing that he will return the judged treatises as soon as possible. Both treatises do not deserve to be awarded, because they did not answer the question about the physical foundations of the beauty of these statues. In his view there is no doubt about the fact that since Dürer's time new discoveries have been made and new understandings have been gained, so it is time for a physical demonstration of these facts, which can demonstrate the excellence of these statues. If the authors of the two entries would have been of the same opinion, they would have given a few examples. They did not!

[NA-NHA 444-96; ART, ANP, PHY]

392. M. van Marum (Haarlem) to S.J. Brugmans (Leyden); 21 April 1818:

Once more the contest with regard to the beauty of Greek statues comes up. Despite his earlier promise Brugmans's report has not been received yet. Van Marum does not understand how he will be able to bring together three unanimous reports before 25 April 1818. In Bakker's view the treatise under the maxim 'Ernst ist das Leben ... etc.' deserves to be awarded. Meanwhile he has asked Sandifort to write a report, after having consulted Brugmans, the

deviser of the contest and because of that the first member of the jury and the first to receive the entries. If Sandifort is willing to cooperate, it's still possible to have a fourth report produced, as is needed according to the laws of the 'Maatschappij' in case of a possible difference of opinion. Bleuland also resigned the invitation because he does hardly understand German.

[NA-NHA HMW 444-96; ART, ANP]

393. M. van Marum (Haarlem) to S.J. Brugmans (Leyden); 29 April 1818:

During the meeting of 28 April 1818 it appeared that all the reports on the treatises entered in 1818 had been received, except those regarding the beauty of the Greek statues. The 'Maatschappij' has only received the report written by Bakker and is informed about his preference. Because Brugmans's indispensable advice is still missing, he once more urges him to send his report quickly. Brugmans has had these treatises in his possession from 16 January until 27 March 1818. Yesterday Van Marum received Sandifort's cancellation. Now he does not know anymore how to organize another advice, which is at least almost unanimous with Brugmans's report. After all Brugmans holds the 'Maatschappij' in great respect, enough respect to get it out of troubles, or does he not? Is it perhaps possible for him to encourage Sandifort to attain consensus with him? Maybe Van Hoorn is willing to write an advice after having been informed by Brugmans. Bennet will not be able to do so because of his disease and depressiveness. There is no time left to ask other colleagues.

[NA-NHA HMW 444-96; ART, ANP]

394. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); shortly after 29 April 1818:

Brugmans regrets that he has not been able to send his report on the entries on the beauty of the Greek statues earlier. Nevertheless his reports will arrive in time. He also regrets that Van Marum has not been able to find a competent critic. He himself has encouraged professor Sandifort once more, but it has been in vain. Van Hoorn is eager to participate in the jury, but he does not master the German language sufficiently to be able to fulfil his

commission in time. At the end he expresses his busy occupation and devotion.

[NA-NHA HMW 444-96; ART, ANP]

395. M. van Marum (Haarlem) to S.J. Brugmans (Leyden); spring of 1818:

The author of the treatise on the possible improvement of the nourishment of seamen only gives old and useless facts, ideas and prescriptions. The 'Maatschappij' wanted to receive a comparison based on the chemical investigation of different types of food and drinks, in order to determine which are the best and the most useful. The author did not carry out any analysis. He only gave a superficial exposition of the constituents of the various types of food. Conclusions based on observations with regard to their nutritional value are lacking completely. The statements about the theory of nourishment have been formulated carelessly and are badly founded. Besides the author does not propose any improvement of the dietary pattern and regulations for the seamen on board of ships. Giving an award is out of the question.

[NA-NHA HMW 444-415.193 R; CHE]

396. M. van Marum (Haarlem) to S.J. Brugmans (Leyden); early May 1818:

Still Van Marum does not understand why Brugmans did not answer his letter until now. Actually he had indicated the urgent necessity of a quick response to the treatises on the beauty of the Greek statues. Only a few lines would have satisfied him. The longer Brugmans postpones the expedition of his report, the more the 'Maatschappij' will be embarrassed.

[NA-NHA HMW 444-96; ART, ANP]

397. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); early May 1818:

At the occasion of a contest on the fermentation of bread yeast, previously devised by him (early May 1815), Brugmans has drawn up a new question.

Now he enters its definitive formulation. He does not know yet if he will be able to attend the next annual general meeting. The preparation of his coming trip to Germany takes too much of his time and attention.

[NA-NHA HMW 444-96; BOT, ZOC, COB, CHE]

398. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); early June 1818:

Unfortunately, Brugmans has not been able to attend the last annual general meeting. He emphasizes that the document, which has been added to this letter, has a good quality. He asks his friend to show the deliverers of his letter (several of his foremen and the architect) his beautiful greenhouses. After all he intends to have carried out the reconstruction before autumn begins. Coming Thursday or Friday he intends to leave for Germany. Through Hanover, Brunswick and the Hartz, this journey will lead him to Göttingen, Coburg, Erlangen and Stuttgart. He does not know about the further route. Anyhow he has planned to return through Frankfort. Of course he is willing to carry out certain commissions for Van Marum. Finally he wants to know from whom Van Marum has bought the 'spathen' at the time.

[NA-NHA 529-14; BOT, GEO, MIN, COB, ZOC]

399. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 5 September 1818:

Very much to his regret he is not able to accommodate the large carnivorous animals Van Marum has offered him recently, because the quarters are not ready yet. Besides he would have to pay himself for their support. Some months ago His Majesty the King already donated him several animals, for which he has expressed his gratitude. He has to cut short his journey to Germany, because for the time being he cannot be missed in Leyden. Nevertheless he is satisfied with the results: he has collected many objects and invites Van Marum to see him and to admire this collection, although not everything has arrived yet. Today 38 chests will be unpacked, the rest will soon follow. He has not yet been informed about the chests which have been

sent from the Hartz. Coming Sunday he will leave for Zealand for a couple of days. He hopes to see Van Marum soon again.

[NA-NHA 529-14; ZOC, GEO, MIN, BOT, COB]

400. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 9 February 1819:

Letter, covering the report on the treatise on the changing nature of diseases in the Netherlands. The author has really shown his good will. Brugmans underlines that he has rendered extraordinary services to the 'Maatschappij', in spite of his extremely occupied life and his chronically lack of time. Only by sparing no pains he has been able to finish this last report. The small handwriting made the job even more unpleasant. Nevertheless he promises to finish his report on another treatise as soon as possible. Tomorrow he will hand over the treatise on the rinderpest to Sandifort. If the 'Maatschappij' decides that the contest on the changing character of diseases should be held again, it has to be made more explicit. He allows his friend to make his choice from the enclosed list of seeds. He has also marked which species he wants to receive from his friend. Furthermore he has sent the wooden remains of the 'Drenthse Brug' to Bennet. He confirms Van Marum's conclusion about the species to which the wood types belong. He emphasizes his warm feelings of friendship.

[NA-NHA HMW 444-97; MED, GEO, BOT, ARC]

401. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 9 February 1819:

Brugmans has evaluated the treatise on the changing nature of diseases in the Netherlands. He agrees with the author that – while assessing old theories and therapies – one should not get lost in 'sectarianism'. A good scientist always tries to examine the diseases carefully and meticulously. He discusses the philosophical aspects of the question. In the view of the 'Maatschappij' the main object had been to determine whether the diseases ruling in the Netherlands have changed over a surveyable period, yes or no. He sketches the differences between the diseases in Hippocrates's time and the diseases

ruling nowadays. He also mentions the causes of these changes. These causes have to determine the therapies to be applied. The author has really tried to develop the draft of a classification, which can meet with his approval. Nevertheless the author did not succeed. Brugmans rejects his complaint that the historical data were not sufficiently available. Therefore the treatise is still too superficial and too general, which prevents its awarding.

[NA-NHA HMW 444-415.185(1) R; MED]

402. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 11 February 1819:

A moment of rest during an attack of 'podagra' ('gout') which makes him suffer already for several days in spite of the leeches he has placed, gives him some time to thank Van Marum for what he has sent him. In return and as a reply to his request, he shall send him a copy of his 'Elenchus Plantarum ... etc..' He asks his friend to send him the report on the 'Graaf Solmdijk' and to inform him about its geographical location. Furthermore he has started reading several treatises, which he still holds in his possession. It depends on his health when he will have finished this commission.

[NA-NHA HMW 444-97; BOT]

403. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 16 February 1819:

Brugmans returns the treatises on the 'fabriques' (factories?), to which he has added his advice. Meanwhile he has sent Van Marum's answer to a question asked by Dr. Moll, to him.

[NA-NHA HMW 444-97]

404. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 March 1819:

Brugmans returns a treatise on the situation and quality, the defects and the possible improvement of the Dutch prisons. He assumes that Van Marum is able to conclude that he has really spent all his spare time on behalf of the 'Maatschappij'. Within eight or ten days he will examine the German treatise.

This document has been written in a very unpleasant style. Besides, it is hardly legible. He still keeps his leg resting on a pillow, so he has to keep to his room for the time being, although he feels already much better and he is even able to work again.

[NA-NHA HMW 444-97; MED]

405. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 29 March 1819:

Report on a treatise, dealing with the question if the rinderpest has changed during the last 40 years, yes or no. Brugmans mentions several historical facts. The 'Maatschappij' also demanded a discussion of the measures taken or prepared to be taken in foreign countries. The German author is ignorant of the situation in the Netherlands. Without any proof he supposes that the disease did not change. Brugmans, who is well acquainted with the disease, does not agree. Although the author has given evidence that the disease has been introduced from Eastern Europe, especially from Podolia and Armenia, he did not discuss the measures taken abroad. The most successful part of the treatise is the author's consideration of the preventive measures. He has also spent a few words on the financial compensation of cattle breeders, but not at all on the 'Vee Fonds' ('Cattle Fund'). All in all this document does not offer any new views, so awarding is impossible.

[NA-NHA HMW 444-417.206(1) R; MED, AGR]

406. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 April 1819:

Brugmans reports on a treatise on the prisons, in which the causes of the defects and their possible improvements had to be discussed and explained. The results are very disappointing. Statistical data with regard to the needed dimensions of cells are missing. The author wrongly assumes that it is impossible to influence the factors, which determine the quality of health. Brugmans mentions the possible improvements. They regard the construction of prisons, the nourishment of prisoners, the heating of their cells and the quality of the beds or hammocks.

[NA-NHA HMW 444-416.202 R; MED]

407. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 4 April 1819:

Brugmans reports on a treatise discussing the acclimatization of exotic plants. Already in 1817 the author had performed well. At the time Brugmans was willing to propose the award, but the other members of the jury did not. Now the supplement – in size almost the double of the original entry – gives almost every detail. The author has really put himself out. The quality of this treatise has really been improved, for example with regard to the differences between the warm climate and the cold and also with respect to its importance to the cultivation of plants. Now it has been made clear how to deal with recently imported plants. Of course the author has the right to stand his own view! The treatise deserves to be awarded, after the two parts – the original entry and its supplement – have been integrated.

[NA-NHA HMW 444-415.187(2) R; BOT, AGR]

408. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); early May 1819:

The very busy Brugmans is happy about the fact that this time a report of a few words will do. He has no opportunity to spend more time on it. Now he understands why so many members duck out of the obligation of evaluating treatises. His colleague Bernard is also very occupied. Therefore he does not dare to propose him as a reviewer of this treatise, although he is the best suited for the job. He hopes that Van Marum will be able to find somebody else. He expresses his feelings with respect to the 'Instituut'. His enthusiasm is declining and he thinks that Van Marum feels the same about it. Referring to the information Van Marum has given him about the elections of new members of the 'Eerste Klasse' of the 'Instituut', he observes that these facts are confirming him in his opinion about the rather questionable way in which its executory committee is functioning. He might even decide to end his relationship with the 'Eerste Klasse', or at least to minimize his efforts in its behalf.

[NA-NHA HMW 444-97; MED]

409. S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 16 May 1819:

Brugmans regrets that until now he has not had the opportunity to see Van Marum. He has planned to attend the meeting next Friday. However, he cannot leave Leyden on Saturday. He has written the answers to the questions put by Van Marum on the enclosed sheet of paper. He hopes that Van Marum will be able to read these notes.

[NA-NHA HMW 444-97]

CHAPTER 9 - CORRESPONDENCE WITH JOHAN MEERMAN

Johan Meerman (The Hague), at the time of his correspondence with Brugmans in office as Director-General of Arts and Sciences, played a central role in the relation, developed between H.M. King Louis Bonaparte and the Dutch scientific societies. Meerman was also responsible for the further development of the various levels of education in the kingdom of Holland. In the few letters, which have been preserved, various subjects are discussed, for example with regard to the royal decrees, which were needed to fulfil the vacant professorships. Brugmans has often been asked for his advice.

410. S.J. Brugmans (Leyden) to J. Meerman (The Hague); 9 April 1807:

Brugmans promises to keep the academic buildings (of Leyden) open next Saturday, in order to show his collections to Meerman and to the other members of the 'Academic Commission'. He is aware of the fact that Dr. Craanen has ambitious plans; he wants to teach technical chemistry in Rotterdam, under the benevolent supervision of the government. Brugmans doubts if this project can be carried out. Anyhow, he wants to discuss this plan with Meerman. Furthermore he is not familiar yet with the new and perhaps improved edition of the work of Chaptal (most probably it is about his 'Chimie appliquée aux arts', published in four volumes, in 1807). Craanen should not undertake its translation, because probably most scientists want to read such a publication in French.

[MMW 24 S 89; CHE, ZOC, ANA]

411. S.J. Brugmans (Leyden) to J. Meerman (The Hague); 10 May 1807:

Brugmans knows professor Gunther (Duisburg) as a very honest man, a good accoucheur and an experienced surgeon, who has taught anatomy, physiology, surgery and obstetrics for many years. He mentions the positive and negative aspects of this candidate for a professorate at the University of Harderwijk. He would applaud the possible acquisition of a good medical

library by the University of Leyden, at least if the collection comprises many books, published during the last thirty years. He makes a proposition in that respect. Because of the illness of the young Prince he has not been able yet to send Meerman a letter about the occupation of the chair of physics and chemistry in Amersfoort. Among the possible candidates the young Van Maanen seems to be the right man for the job. This excellent physician, who has studied in Harderwijk – and who is well informed about chemistry, although a little bit less about physics – has the possibilities to become an excellent professor. His pleasant nature does the rest. Ekama, an excellent student of Van Swinden (Amsterdam), would be the most suitable candidate, if besides physics also mathematics and natural history had to be taught. Within a few days he will give some more names.

[MMW 24 S 89; MED, UNI, PHY, CHE]

412. S.J. Brugmans (Leyden) to J. Meerman (The Hague); 17 June 1807:

Brugmans remembers well that Meerman has seen him in order to discuss the work of Chaptal and informs him that he did not receive it until now and that he has not had the chance to read it. So there is still no reason to discharge Meerman of his commission to procure this book. [MMW 24 S 89; CHE]

413. S.J. Brugmans (Leyden) to J. Meerman (The Hague); 19 July 1807:

Professor De Fremery (Utrecht) has proved his qualities with respect to the translation of Lavoisier's works. So the same might go for the translation of Chaptal's work. The more works on chemistry will be published in the native language, the easier it will be to continue this job. The quality of the Dutch translations even exceeds the quality of the German ones. Brugmans underlines the importance of additions to the translation of Chaptal's writings and he wants to see Meerman about that, of course only if the condition of Mrs. Meerman allows this visit.

[MMW 24 S 89; CHE]

414. S.J. Brugmans (Leyden) to J. Meerman (The Hague); 22 June 1808:

Dr. Randt has been a most diligent student, who has rendered excellent service during the last epidemic, which ravaged under the soldiers lodged in the 'Groot Militair Hospitaal' in Leyden. Therefore he recommends positively with respect to his possible appointment as a town physician in Purmerend. This would certainly be preferable, because most of the medical care of the smaller rural towns of Holland is consigned to empiricists. Because of his illness, the young doctor Cornet has not been able to edit the review of his (Brugmans's) collections.

[MMW 24 S 89; MME, MED, ZOC, BOT]

415. S.J. Brugmans (Leyden) to J. Meerman (The Hague); 7 August 1808:

The experienced draughtsman and engraver Milies absolutely deserves Meerman's attention. Milies has already largely contributed to the plates in Lyonnet's work. He is really an excellent artist, who absolutely exceeds all other draughtsmen working in the field of natural history. He even equals most of the French and English artists. Besides Milies is very civilized and of an irreproachable behaviour. With Meerman's assistance he must be saved for Holland. Brugmans assumes that Meerman already received his advice regarding the collection of Quant.

[MMW 24 S 78; ART, ZOC]

416. S.J. Brugmans (Leyden) to J. Meerman (The Hague); 15 August 1808:

In Brugmans's view, nobody is fit for the position of editor of the 'Annales', except for the Haarlem pastor Teissèdre L'Ange. Furthermore he gives his opinion on the suitability of various candidates for a professorship in one of the fields of medicine. Van Doeveren's fundamental medical knowledge is too superficial. Bonn junior is by far the most excellent Dutch anatomical draughtsman and Heiligers, at the moment surgeon of the 'Maison du Roi', is less fit for this appointment. As soon as possible he will send him a draft of the composition of his collection and apologizes for the delay.

[MMW, 24 S 89; MED, MME]

417. S.J. Brugmans (Leyden) to J. Meerman (The Hague); 26 September 1808:

Of the candidates, nominated for a professorship at the University of Harderwijk, Brugmans only knows Gunther (Duisburg), an excellent anatomist and surgeon and also a high-principled man. Meanwhile, Bakker and Hoffman have declined the invitation to come to Franeker. Of the candidates for a second professorship – in Harderwijk, to replace Reinwardt – he only knows Van Stipriaan Luïscius, who is really one of the most deserving Dutch scientists of the time. His appointment would be very profitable to Harderwijk. The same goes for the appointment of Van Maanen in that town, although he is perhaps not available. Anyhow Rozeboom, who is especially interested in philosophy, is less suited for the job. He leaves it to Reinwardt to give his opinion on Vosmaer and Cramer. Furthermore he is not able to estimate the value of the botanical collection of Colizzi, in spite of what has been written about it in the ‘Synopsis Plantarum Horti Coliziani’ and in the ‘Hortus Louisen-burgensis’. Perhaps it only contains 2.000 of the most common species. Most of them will already be present in Reinwardt’s ‘Royal Botanical Garden’ in Haarlem. Possibly, Colizzi’s collection could serve botanical instruction. It’s up to Reinwardt to decide, especially because His Majesty has already bought several other collections. He awaits Meerman’s decision before he will send the catalogue to the person indicated by Meerman.

[MMW 24 S 89; BOT, MED]

418. S.J. Brugmans (Leyden) to J. Meerman (The Hague); 2 October 1808:

Brugmans has asked professor Van Maanen about Rozeboom and Vosmaer and he has heard that they did already prove their qualities while they were studying at the University of Harderwijk. However they have to go on developing their qualities, before they can be called for the chair at Harderwijk. Furthermore Van Maanen has stated that Hoffman, who did

decline the invitation from Franeker is perhaps willing to come to Harderwijk and to fill the vacancy.

[MMW 24 S 89; MED, UNI, BOT, CHE]

419. S.J. Brugmans (Leyden) to J. Meerman (The Hague); 19 December 1808:

Brugmans apologizes for not having answered Meerman's last letter until now. He promises to answer soon. He also returns the two documents borrowed from him. His own contribution will soon follow. He sincerely regrets that the publication of the 'Annales' will be delayed and he apologizes for that. He is more and more overwhelmed with work.

[MMW 24 S 89]

CHAPTER 10 - CORRESPONDENCE WITH GERARDUS VROLIK

The ‘Koninklijk Hollandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten’ (‘Royal Dutch Institute of Sciences, Literature and Fine Arts’) has been founded by the Royal Decree of 4 May 1808. This event was preceded by a turbulent period, which – at least as far as it concerns the visible changes – began shortly after 5 June 1806, when Louis Bonaparte was crowned king of Holland. On 13 July 1806 His Majesty elected himself president for life of the ‘Hollandsche Maatschappij der Wetenschappen’. At that occasion the ‘Maatschappij’ was rebaptized and was given the name of ‘Koninklijke Hollandsche Maatschappij der Wetenschappen’ (‘Royal Dutch Society of Sciences’). From the very start H.M. the King intended to merge the most important Dutch scientific societies and to found a new scientific institution after the example of the ‘Institut National de France’ (seated in Paris). The French ‘Institut’ was divided into three ‘Classes’, the ‘Classe des Sciences Physiques et Mathématiques’ (‘Class of Natural Sciences and Mathematics’), the ‘Classe des Sciences Morales et Politiques’ (‘Class of Humanities and Political Sciences’ and the ‘Classe de la Littérature et des Beaux-Arts’ (‘Class of Literature and Fine Arts’).

In his answer to a prize contest, which had been held several years before by the ‘Zeeuwsch Genootschap der Wetenschappen’, Andreas Bonn had already suggested several good ideas, which held a certain critic on the structure, the organization, the functioning and the fields of activities of the various Dutch scientific societies. In his sketch of these societies, as far as it concerns the period between 1750 and 1815, Mijnhardt (Amsterdam, 1988) quotes De Bruyn (1977), former librarian of the ‘Hollandsche Maatschappij der Wetenschappen’, as he underlines that Bonn’s critics and suggestions came too early and that he was a voice ‘crying in the wilderness’.

Shortly after having had the opportunity of an audience with His Majesty, Van Marum informed Meerman about his feelings with regard to the royal plans. Van Marum disliked these ideas. The situation in Paris was far too different from the situation in Holland. The Dutch scientists were living much more spread over

the country, while the majority of the members of the French 'Institut' were living in or around Paris. The preserved documents prove that the directors of the 'Hollandsche Maatschappij der Wetenschappen' ordered Van Marum to develop of a renewed 'Maatschappij', also divided into three Classes. These documents also prove that more than in former days the 'Maatschappij' focussed on holding prize contests and that it had not only decided to give publicity to the names of the winners, but also to those who had formulated the contests. From now on both winner and deviser would be awarded a medal. The gold medal would be given to the winner, while the deviser of the contest would be honoured by a silver medal. Furthermore it was decided that the prize money given to a winner would be doubled and that the number of contests would not be limited any longer. On 2 February 1807 this plan was proposed to the King. His Majesty hinted that he was willing to favour the 'Maatschappij' as much as possible and that he wanted to advance it to the ranks of the most eminent scientific societies of Europe. If all would go well Haarlem could possibly become the scientific centre of Holland. On the other hand there were also problematic consequences, like His Majesty's wish to abolish the board of directors, a desire which could not be accepted with open arms. As a matter of fact the annual contribution paid by the directors was almost the entire annual income of the 'Maatschappij'. The same unacceptability went for the condition that the election and appointment of the members and the prize contests to be held had to be submitted to His Majesty's approval. A couple of weeks later F.W. Boers, former advocate of the 'Dutch East India Company', fermented trouble in his letter to Van Marum. In his view there were so many differences between the French 'Institut' and the 'Hollandsche Maatschappij', as far as it concerned its foundation and its objectives that the latter could impossibly become a copy of the former.

Only a few months later Van Marum had the opportunity to arrange a new audience with His Majesty the King, at which occasion he was informed about the plans His Majesty had with the 'Maatschappij'. After having been informed by Van Marum, the only possible and acceptable outcome could be that His Majesty would show his benevolence towards to the 'Maatschappij' and that he would promise an annual grant of 6.000 guilders, given the fact that the directors would be willing to make their exit. However the 'Maatschappij' did not agree with the desires of His

Majesty and Van Marum was able to make an arrangement with him: The directors were allowed to remain in office as the official board of the 'Maatschappij'. Furthermore His Majesty also accepted the organization it had proposed. His Majesty took a step down and became its protector. On 13 March 1808 these decisions were communicated to its members, together with the news that His Majesty had decided to found a new scientific institute. These plans were developed by Van Marum, Van Swinden, De Bosch and Stuart. Their report was published on 12 August 1808, eight days after His Majesty had ordered the foundation of the 'Koninklijke Hollandsche Maatschappij der Wetenschappen'. Therefore the date of 4 August 1808 has to be regarded as the official date of the foundation of the 'Instituut', a new academy, counting four Classes, the 'Klasse der Natuurkunde' ('Class of Physics'), comprising physical sciences, including physics, mathematics, chemistry, geology, medicine, biology and agricultural sciences), the 'Klasse der Geschiedkunde en oude talen' ('Class of History and Dead Languages'), the 'Klasse der Letterkunde' ('Class of Literature') and the 'Klasse der Schoone Kunsten' ('Class of Fine Arts'). Unfortunately his patronage only lasted two years. Besides, the royal grants were not always paid in time. When in 1810 the kingdom of Holland was annexed by the emperor Napoléon Bonaparte, the 'Koninklijk Hollandsch Instituut' was temporarily renamed in 'Institut d'Amsterdam'. After the foundation of the kingdom of the Netherlands in December 1813, it was renamed 'Koninklijk Nederlandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten' ('Royal Netherlands Institute of Science, Literature and Fine Arts'). Its first president was Jan Hendrik van Swinden, while Gerardus Vrolik, professor of medicine and botany at the 'Athenaeum Illustre' (Amsterdam) became the first secretary for life of the 'Eerste Klasse' ('First Class'), which position he held almost until his death in 1859. Sebald Justinus Brugmans belonged to the first group of scientists, who were elected members of the 'Instituut'. Most of the names of these members originated from the membership's list of the 'Maatschappij'. They were appointed by His Majesty King Louis Bonaparte in August 1808. Brugmans's activities for the benefit of the 'Eerste Klasse' were almost identical with those carried out in behalf of the 'Hollandsche Maatschappij der Wetenschappen'. Again Brugmans had to fulfil a job which consumed much of his time: the evaluation of the texts of speeches and of treatises, which had been entered on the own initiative

of their authors, usually resulting from speeches previously delivered in the meetings of the 'Eerste Klasse'. The culture of holding prize contests was far less developed than it was in the 'Hollandsche Maatschappij'. A largely new activity for the members of the 'Eerste Klasse' was to advise His Majesty King Willem I and his ministers. So it not only occupied itself with the study of pure science, but also with the solution of the major problems of everyday life and with the improvement of the living conditions of the inhabitants of the Netherlands and of its economic situation. The entries, which had been considered worthy of publication, were published in the *Verhandelingen* ('Transactions'), a series, which, after the appearance of a few volumes, was continued under the title of *Nieuwe Verhandelingen* ('New Transactions'). This series ended in 1855, a few years after the reform of the 'Instituut' and its renaming into 'Koninklijke Nederlandsche Academie van Wetenschappen' ('Royal Netherlands Academy of Sciences'), an event which took place in the course of 1851. In 1855 the above mentioned publications were continued as *Verhandelingen der Eerste Sectie der Eerste Klasse* ('Transactions of the First Department of the First Class'), comprising physics, mathematics, engineering sciences, astronomy and meteorology, chemistry, geology, mineralogy and crystallography and *Verhandelingen der Tweede Sectie der Eerste Klasse* ('Transactions of the Second Department of the First Class') (*Verhandelingen der Tweede sectie*), comprising medicine, zoology, botany, hygienics, physiology, anatomy and pathology.

Already a few years after he had been elected member Brugmans dropped a hint that he was not very pleased by the relations within the 'Instituut' and that he felt much more comfortable among his friends and colleagues of the 'Hollandsche Maatschappij der Wetenschappen'.

The following brief survey shows with which advices, treatises, investigations, etc. Brugmans occupied himself for the benefit of the 'Eerste Klasse'. Between brackets the years are indicated during which he occupied himself with the mentioned subjects:

- Activities, regarding the development of the 'Hollandsch Woordenboek' ('Dutch Dictionary', 1809);

- Advice, regarding the relation between the anatomy of the speech organ and language (1809);
- Report on a treatise written by G. Vrolik on the exceptionally retarded development and partial weakening of the bones of a 14 year old boy, accompanied by an emaciation of the facial nerves, caused by blindness; accompanied by two drawings (1809-1810); published;
- Advice on the patent application for the production of filtering machines (1810);
- Activities of the 'Commission for the Common Salt' (cooking salt) (1810-1817);
- Report on the treatise, written by A.G. Camper on a giant lizard (1810); not published;
- Advice on the production of salt from sea water by S. Kros (1810);
- Report on the treatise written by C.H. à Roy on worms, discharged through the urethra (1810); published;
- Advice, regarding the report on the discovery of lumps of quartz, which had been found on the 'Lochemse Berg' and their possible exploitation (1810);
- Objections against the treatise written by A.G. Camper, dealing with a new classification of the Reptilia (1810-1811); not published;
- Report on a treatise written by G. Vrolik, dealing with an open bladder, associated with a congenital fistula of the small intestine (1813-1814); published.
- Report on the treatise written by S. Stratingh and P. Driessen on the disease of pear trees (1814); not published;
- Report on G. Vrolik's treatise on the anomalous development of the urinary bladder (1814); published;
- Report on an observation and description of the composition of a vesical calculus (1814), not published;
- Report on a treatise, written by C.H. à Roy on the use of vinegar in the fight against typhoid fever (1814-1816); not published;
- Report on the text of a speech delivered by M. van Marum on the vegetable origin of pit coal (1814-1817); published;
- Advice regarding the demand for obtaining the exclusive rights for the production of home appliances made of zinc (1814);

- Report on the treatise written by A. van Stipriaan Luiscius on the purification of decaying bad water on board of ships (1814-1815); not published;
- Advice regarding the demand for obtaining the exclusive rights for a procedure for the preservation of brewer's yeast during the summer (1815-1817);
- Report on the treatise written by A. Paets van Troostwijk on the influence of electrical discharges on the 'vital force' of plants (1815-1816); published;
- Report on the treatise written by G. Vrolik on a peculiarly malformed foetus, born after a pregnancy of eight months (1815-1816); published;
- Report on the treatise written by C.H. à Roy on asthenic inflammations (1816); published;
- Advice, regarding a report written by C. Brunings junior on domestic iron (1816-1819);
- Advice, regarding a report on the forgery of madder (1816-1819);
- Advice, regarding a report on metallic substances found in the soil of Hainaut (1816);
- Advice, regarding the production and quality of synthetic mortar, called 'Amsterdamsch Kunst-cement' ('Amsterdam artificial mortar', 1817);
- Advice, regarding the production of pigments for oil-painting (1817-1819);
- Report on a treatise written by J.F. Kluyskens on hospital gangrene and its treatment (1817-1818); published;
- Advice, regarding the patent application for the production of gelatine (1817);
- Report on the treatise written by G. Sandifort on headless monstra (1817-1819); published;
- Advice, regarding De Ferussac's 'Histoire Naturelle des Mollusques terrestres et fluviatiles' (1817);
- Advice, regarding a process for the production of beef cubes (1818);
- Report on a treatise written by A. Bonn on the Footrot of sheep (1818-1819); published;
- Report on the treatise written by N.C. de Fremery on the degeneration of the right ovary (1818-1819); published;
- Advice, regarding the long-lasting preservation of meat (1818-1819);
- Report on the treatise written by J.B. van Mons on the presence of oxygen in the 'gaz muriatique oxygéné' (chlorine gaz); not published;

- Report on the remains of a wooden bridge, which had been excavated in the high moorland of Drenthe (1819).

The two hiatuses – the first one occurring between 1811 and 1813 and the second one in 1815 and 1816 – are remarkable. The first gap is due to Brugmans's rectorate of Leyden University and to his position as inspector general of the 'Militair-geneeskundige Dienst' ('Military Health Service'). The second gap finds its cause in the fact that between August and December 1815 Brugmans had been commissioned by His Majesty King Willem I, to reclaim the former cabinet of natural history of the Stadholder Willem V, which had been dragged away from The Hague to Paris between 1795 and 1798.

420. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), J.A. Bennet (Leyden) and M. van Marum (Haarlem); 31 January 1809:

The addressees are informed that they have been appointed member of a jury, in order to judge a treatise.

[NA-NHA KNI 175.34.36]

421. G. Vrolik (Amsterdam) to M. van Geuns (Utrecht), A. Bonn (Amsterdam) and S.J. Brugmans (Leyden); 31 January 1809:

Gerardus Vrolik, secretary for life of the 'Eerste Klasse', informs the addressees that they have to report on a treatise on vesical calculi. This document describes the case of a girl, of which a calculus has been discharged in the natural way. The commission has to investigate whether these new facts should give rise to the development of a new way of treatment, yes or no.

[NA-NHA KNI 175.34.58; MED]

422. G. Vrolik (Amsterdam) to A. Bonn (Amsterdam) and S.J. Brugmans (Leyden) and several other members of the 'Eerste Klasse' of the 'KHI'; 30 April 1809:

Vrolik informs Bonn and Brugmans about their collective contributions to the 'Hollandsch Woordenboek' ('Dutch Dictionary'), especially with regard to the introduction of scientific terms.

[NA-NHA KNI 175-34.73; MED, ANP, ZOC, BOT]

423. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden) and A. Bonn (Amsterdam); 11 June 1809:

Vrolik asks an advice with regard to the relation between the organs of speech and language. The jury has to confer with the following members of the 'Instituut': W. Bilderdijk, D.J. van Lennep and a third person, who has not been appointed yet.

[NA-NHA KNI 175-34.86; ANP]

424. G. Vrolik (Amsterdam) to M. van Marum (Haarlem), A. Bonn (Amsterdam) and S.J. Brugmans (Leyden); 8 August 1809:

The advice given by the addressees regarding the question in which way the deceased members of the 'Instituut' have to be commemorated, has been accepted. A laudatio will be held during the next public assembly.

[NA-NHA KNI 175-34.99]

425. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden) and other members of the 'Eerste Klasse' of the 'KHI'; 15 September 1809:

Vrolik asks his fellow members to give him the names of renowned Dutch and foreign scientists who deserve to be appointed correspondent of the 'Eerste Klasse' of the 'Instituut'.

[NA-NHA KNI 175-34.115]

426. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), M. van Marum (Haarlem) and J.A. Bennet (Leyden); 6 January 1810:

Vrolik informs the addressees that they have been commissioned to evaluate the treatise, written by himself, on the exceptionally retarded development and partial weakening of the bones of a 14 year old boy, associated with an

emaciation of the facial nerves, caused by blindness; to which two drawings have been added.

[NA-NHA KNI 175-34.152; MED, PAA]

427. S.J. Brugmans (Leyden), J.A. Bennet (Leyden) and C.G.C. Reinwardt (Harderwijk) to G. Vrolik (Amsterdam); 21 January 1810:

On behalf of the commission Brugmans answers the question asked by the Minister of the Interior, regarding the production of sea salt by the evaporation of sea water at the coast near Katwijk. The quality of this product has to be compared with the common edible salt, available at the merchant's. The question is if the government has to promote this production, yes or no. The author has given some information regarding its chemical and physical properties are given, resulting from several analyses, as well as a list of impurities. This sea salt does not damage health, although it still has to be purified. The sea salt from Katwijk has almost the same qualities as the salts from Lisbon and Saint Ubes. A second question asked by the department of the Interior remains unanswered.

[UBL BPL 609 II; PHY, CHE, TEC]

428. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden) and M. van Marum (Haarlem); 2 March 1810:

Vrolik asks an advice on the treatise written by A.G. Camper, entitled 'Aanmerkingen over de bouw van het skelet van de reuzenhagedissen uit de steengroeven van Maestricht, teneinde eenige bijzonderheden op te helderen en te bewijzen dat in deze groeven meer dan een soort wordt gevonden' ('On the structure of the skeleton of the giant lizards from the quarries of Maestricht, meant for the elucidation of some peculiarities, to prove that more than one species is hidden in these quarries').

[NA-NHA KNI 175-34.163; ZOC, GEO]

429. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), M. van Geuns (Utrecht) and J.A. Bennet (Leyden); 2 March 1810:

Vrolik asks the addressees to report on the treatise written by C.H. à Roy, entitled 'Eenige beschouwingen omtrent de wormen, welke door de pisleider ontlast zijn geworden' ('Some considerations about the worms, which have been discharged through the urethra').

[NA-NHA KNI 175-34.164; MED, ZOC]

430. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), H. Aenae (Amsterdam), M. van Marum (Haarlem) and W. van Barneveld (Hattem); 24 March 1810:

The Minister of the Interior has demanded an advice with respect to a patent application for the production of filtering machines.

[NA-NHA KNI 175-34.170; PHY]

431. S.J. Brugmans (Leyden), M. van Marum (Haarlem) and J.A. Bennet (Leyden) to the 'Eerste Klasse' of the 'KHI' (Amsterdam); 17 April 1810:

Brugmans informs the members of the 'Eerste Klasse' that he and his colleagues have decided favourably on the treatise, written by G. Vrolik, on the exceptionally retarded development and partial weakening of the bones of a 14 year old boy, associated with a wasting of the facial nerves caused by blindness; to which two drawings have been added.

[NA-NHA KNI 175-43; MED, PAA]

432. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 17 April 1810:

Brugmans informs Vrolik about the fact that Camper's treatise on the reptile bones, which have been excavated from the 'Maastrichtsche Berg' ('Maastricht quarry') has not been improved to the complete satisfaction of the commission yet.

[NA-NHA KNI 175-43; ZOC, GEO]

433. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 25 June 1810:

Brugmans is officially invited to deliver a lecture during the meeting of the 'Eerste Klasse', which – according to the schedule of speaking engagements – has been planned on 12 July 1810.

[NA-NHA KNI 175-34.192]

434. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 14 July 1810:

Covering letter of the treatise written by Brugmans himself on the locomotion of fishes.

[NA-NHA KNI 175-43; ZOC, PHY]

435. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden) and C.G.C. Reinwardt (Amsterdam); 28 July 1810:

Vrolik asks Brugmans and Reinwardt to report on a treatise on the production of sea salt, which has been sent to the Minister of the Interior by S. Kros (Katwijk), director of the water purification plant.

[NA-NHA KNI 175-34.202; PHY, CHE, TEC]

436. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), M. van Marum (Haarlem), A.G. Camper (Klein Lankum, near Franeker) and C.G.C. Reinwardt (Amsterdam); 8 October 1810:

Vrolik sends the addressees a letter received from the Minister of the Interior, in which he communicates that he has been informed that the 'Eerste Klasse' is paying attention to the examination of the quartz lumps found on the 'Lochemse Berg' ('Mountain of Lochem', Gelderland) and that it is investigating the possible economic use of these minerals.

[NA-NHA KNI 175-34.223; MIN, CHE, PHY]

437. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden) and J.A. Bennet (Leyden); 23 October 1810:

Vrolik asks his colleagues to finish the report on Camper's classification of the Reptilia and on his treatise on the giant lizard from the 'Maestricht quarry' as

soon as possible, because Camper has been complaining about the fact that he did not receive any messages until now.

[NA-NHA KNI 175-34.226; ZOC, GEO]

438. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 3 November 1810:

Brugmans answers the letter in which Van Marum has asked for a report on the results of the examination of the procedure for the production of sea salt from sea water through evaporation [This final report will not be written by Brugmans, because he resigned as a member of the Commission late October 1817].

[NA-NHA KNI 175-43; PHY, CHE, TEC]

439. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 4 November 1810:

Vrolik asks to send him by return two reports, one dealing with the worm disease (written by C.H. à Roy) and the other one about the salt production from sea water (written by S. Kros). Finally he makes a remark on Brugmans's own treatise on the locomotion of fishes, a treatise which he hopes to receive soon.

[NA-NHA KNI 175-34.232; GEO, ZOC, PHY, CHE]

440. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 5 December 1810:

Vrolik informs Brugmans about the reception of Camper's letter, in which he articulates his objections against the report on his treatise on the giant lizard, which has been excavated in the Maestricht quarry. Vrolik proposes to answer Camper's letter as soon as possible.

[NA-NHA KNI 175-34.240; ZOC, GEO]

441. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 21 October 1811:

Brugmans has to deliver a lecture during the meeting of the 'Eerste Klasse', which will be held on 16 November 1811.

[NA-NHA KNI 175-34.291]

442. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 24 April 1813:

Vrolik informs his colleague about his coming speaking engagement on 13 May 1813.

[NA-NHA KNI 175-34.402]

443. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 1 June 1813:

Vrolik announces that much to its regret the 'Eerste Klasse' had to accept being deprived of the lecture Brugmans had promised to deliver on 13 May 1813. Now he wants to learn when Brugmans will be able to deliver his speech.

[NA-NHA KNI 175-34.408]

444. G. Vrolik (Amsterdam) to M. van Geuns (Utrecht), A. Bonn (Amsterdam) and S.J. Brugmans (Leyden); 8 September 1813:

Vrolik expresses his disappointment with the fact that until now the report on the treatise on a vesical calculus discharged in a natural way has not been entered, whereas the commission had already been given in 1809. Now the jury really has to answer by return.

[NA-NHA KNI 175-35.25; MED]

445. W. van Barneveld (Hattem), S.J. Brugmans (Leyden) and M. van Marum (Haarlem) to G. Vrolik (Amsterdam); 14 January 1814:

Report on a treatise on the disease of pear trees, observed in and around the town of Groningen. It gives a meticulous description of the nature and distribution of the disease, which is characterized by a rapidly developing general infertility of the trees. The author – a member of the 'Instituut' – is ignorant about the nature and the cause of the disease. He has asked his

colleagues to inform him if possible. After having given a brief description he complains that it is impossible to prevent the disease. Anyhow this disease is incited by a very fine red dust produced by the fungus *Lycoperdon cancellatum*. The members of the jury suggest the following measures: to burn all the leaves, to scratch off the branches and to wash them off. They point at an earlier communication about this treatment by one of them in the *Algemeene Konst en Letterbode* (1813, N° 51 and 52). The author has to examine this treatment, after which he has to inform the 'Eerste Klasse' about the results of his experiments in the most appropriate way.

[NA-NHA KNI 175-56(120).22 R; BOT, ZOC]

446. S.J. Brugmans (Leyden), M. van Geuns (Utrecht) and M. van Marum (Haarlem) to the 'Eerste Klasse' of the 'KNI' (Amsterdam); 19 March 1814:

Brugmans reports on Gerard Vrolik's treatise, entitled 'Verhandeling over het buitenliggen van den achterwand der pisblaas, gepaard met eene omgekeerd buitenhangende strook van het dun gedarmte' ('Investigations regarding the reversion of the bladder, associated with a congenital intestinal fistula'). In about one year the jury must have entered its final report – a document which has been lost since – because Vrolik's treatise has been published in the *Verhandelingen der Eerste Klasse* ('Transactions of the First Class'), part 2 (1816), pp. 88-122.

[NA-NHA KNI 175-44; MED, PAA]

447. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 28 March 1814:

Invitation, conveyed by Vrolik, to attend the general meeting of the four Classes of the 'Instituut'. The 'Eerste Klasse' will be represented by its members S.J. Brugmans, C. Ekama, C. Brunings junior, M. van Marum, M. van Geuns and A. van den Ende.

[NA-NHA KNI 175.35.60]

448. G. Vrolik (Amsterdam) to the members of the 'Eerste Klasse' of the 'KNI'; 23 June 1814:

At the time, Van Geuns, Bonn and Brugmans had been commissioned to evaluate the report on the examination of a vesical calculus, which has been discharged in the natural way. Several years ago, in March 1809, this calculus has already been sent to the secretary of the 'Eerste Klasse' by His Majesty King Louis Bonaparte.

[NA-NHA KNI 175-44; MED]

449. G. Vrolik (Amsterdam) to M. van Geuns (Utrecht), A. Bonn (Amsterdam) and S.J. Brugmans (Leyden); 25 June 1814:

Impatiently Vrolik demands to receive the report on the vesical calculus discharged in the natural way by an unmarried female patient, sent to the 'Eerste Klasse' by His Majesty King Louis Bonaparte in March 1809. Vrolik orders Van Geuns to enter the report within two months.

[NA-NHA KNI 175-35.83; MED]

450. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 7 July 1814:

Vrolik reminds his colleague of his speaking engagement during the session of the 'Eerste Klasse' on 4 August 1814.

[NA-NHA KNI 175.35.85]

451. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), J.A. Bennet (Leyden) and C.G.C. Reinwardt (Amsterdam); 19 July 1814:

Vrolik invites the addressees to give their opinion on the text of the lecture delivered by Van Marum, in which he discusses the vegetable origin of pit coal.

[NA-NHA KNI 175-35.90; CHE, BOT, GEO]

452. S.J. Brugmans (Leyden) to the members of the 'Eerste Klasse' of the 'KNI'; 4 August 1814:

During the meeting of the 'Eerste Klasse' held on 4 August 1814 Brugmans delivers a lecture on the phosphorescence of the sea [Shortly after C.G.C.

Reinwardt, J.A. Bennet and M. van Marum are commissioned to report on this treatise. According to Vrolik and the other members it is really a brand-new theory].

[NA-NHA KNI 175-44; PHY, ZOC]

453. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam), S.J. Brugmans (Leyden), P. Driessen (Groningen) and G. Vrolik (Amsterdam); 19 September 1814:

The addressees are asked to advise about a patent application for the production of household appliances to be made of zinc, filed by Dozy & Companion. This application has been received through the Minister of the Interior.

[NA-NHA KNI 175-35.115; PHY, TEC]

454. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam), S.J. Brugmans (Leyden), M. van Marum (Haarlem), J.A. Bennet (Leyden) and G. Vrolik (Amsterdam); 19 October 1814:

Vrolik wants to receive the report on the treatise written by A. van Stipriaan Luïscius, on the purification of decayed water. The request has been made by the Secretary General of State, A.R. Falck. The results will be most important to the well-being of ship's crews.

[NA-NHA KNI 175-35.119; CHE, MED, TEC]

455. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 28 December 1814:

Vrolik asks to send him the report on the treatise written by C.H. à Roy on the favourable effects of vinegar in the fight against typhoid fever.

[NA-NHA KNI 175-35.137; MED]

456. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 16 February 1815:

Vrolik demands the report on the process, invented by Ryckaseys for the preservation of brewer's yeast during the summer.

[NA-NHA KNI 175-35.145; BOT, PHY, TEC]

457. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 25 March 1815:

Vrolik asks Brugmans to evaluate the treatise written by A. Paets van Troostwijk, on the high sensibility of plants to electrical discharges and on the destructive influence of weak electric shocks on their vital force.

[NA-NHA KNI 175-35.162; PHY, BOT]

458. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 5 August 1815:

Vrolik asks Brugmans to judge his treatise on a monstrum, giving an anatomical description of the most peculiar structures of a foetus, born after a pregnancy of eight months, delivered together with a well proportioned child.

[NA-NHA KNI 175-35.192; MED, PAA]

459. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 8 August 1815:

Yesterday night Brugmans returned from Brussels. Soon he will have to leave for Brussels again. He has no opportunity at all to comply with Vrolik's request to enter a new treatise before the end of this month to be read during the next session of the 'Eerste Klasse'. Therefore, he asks to allow him to swap his speaking engagement with a fellow member and to deliver his lecture during the meeting of September. He would be very grateful for that.

[NA-NHA KNI 175-28(66).116]

460. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 17 August 1815:

Vrolik reminds Brugmans of the lecture, which has to be delivered during the meeting of the 'Eerste Klasse', which will be hold on 16 October 1815.

[NA-NHA KNI 175-35.195; PHY]

461. A. Bonn (Amsterdam), S.J. Brugmans (Leyden) and J.A. Bennet (Leyden) to G. Vrolik (Amsterdam); 6 January 1816:

The jury reports favourably on Vrolik's treatise – giving an anatomical description of a foetus, born after eight months of pregnancy, delivered

together with a well proportioned child (with additional drawings). Vrolik hopes that his contribution to teratology will be published in the *Verhandelingen der Eerste Klasse* ('Transactions of the First Class') of the 'Instituut'.

[NA-NHA KNI 175-44; MED, PAA]

462. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 24 January 1816:

Vrolik explains the problem caused by Reinwardt's leave for the East Indies. Reinwardt has refrained from reporting on several treatises. As it seems at least one treatise, written by P. Driessen, is lost. Probably the same goes for the request entered by Dozy & Comp., to be informed about the outcome of the deliberations with respect to the production of household appliances of zinc and also for the treatise, written by Van Stipriaan Luiscius, on the purification of water and perhaps even for Brugmans's contribution on the phosphorescence of the sea.

[NA-NHA KNI 175-35.239; PHY, CHE, ZOC, TEC]

463. M. van Geuns (Utrecht), S.J. Brugmans (Leyden) and J.A. Bennet (Leyden) to G. Vrolik (Amsterdam); 28 May 1816:

Unanimous positive report on the treatise, written by C.H. à Roy, on asthenic inflammations. As it seems old Van Geuns rejects the division of diseases into sthenic and asthenic ones, while à Roy wants to base the treatment on this division. Van Geuns also regrets the absence of a brief consideration of Hufeland's doctrine and its comparison with the ideas of Sprengel. Neither did the author pay attention to Paradys's keen sketch of the ideas of John Brown and of Gaubius. In spite of these objections – feelings which have been most carefully expressed, especially by Van Geuns – à Roy deserves full marks. The publication of his treatise by the 'Instituut' is absolutely justified.

[NA-NHA KNI 175-57(132).4 R; MED]

464. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden) and J.H. van Swinden (Amsterdam); 28 July 1816:

Vrolik asks for an evaluation of the report entered by C. Brunings junior, discussing the results of several experiments carried out on the inland iron, of which some deposits have been found in the southern provinces of the kingdom.

[NA-NHA KNI 175-35.296; CHE, PHY, TEC]

465. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 6 August 1816:

During the last meeting with the Minister of the Interior, Vrolik has received a letter (dated 26 July 1816, N° 17b), which discusses the continuing problem of the falsification of madder, in spite of all the measures taken against it. The 'Eerste Klasse' has been ordered to develop a clear and sufficient chemical test and to give a simple description, which is understandable to laymen. Does Brugmans perhaps have something in mind?

[NA-NHA KNI 175-35.314; BOT, CHE]

466. S.J. Brugmans (Leyden), P. Driessen (Groningen) and J.A. Bennet (Leyden) to G. Vrolik (Amsterdam); 15 August 1816:

Brugmans informs Vrolik that several objections have been made against Ryckaseys's proposal for the preservation of brewer's yeast during the summer.

[NA-NHA KNI 175-44; BOT, CHE]

467. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 27 September 1816:

Vrolik wants to be informed about the question if the information given by the governor of Hainaut about metallic substances found in that region, is correct. Do these substances contain any silver, yes or no?

[NA-NHA KNI 175-35.343; MIN, CHE]

468. S.J. Brugmans (Leyden) and G. Vrolik (Amsterdam) to G. Vrolik (Amsterdam); 20 November 1816:

Report on à Roy's treatise on the use of vinegar in the fight against typhoid fever. The jury expresses itself in the most positive way. The author has discussed the function of this remedy very clearly. He also referred to Parrot, who has underlined the properties of this remedy with respect to the prevention of putrefaction and inflammation. The author only recognizes its second property and considers it as a support to other remedies, which play their role in a much more comprehensive medical treatment. The observations, the conclusions and the theoretical foundation of this excellent treatise do really match. It is justifiable that the author acts very carefully with respect to the applicability of bloodlettings and antiphlogistic treatments. He is well aware of the fact that a wrong choice of medication or treatment might cause death.

[NA-NHA KNI 175-57(132).5 R; MED, CHE]

469. S.J. Brugmans (Leyden), M. van Marum (Haarlem) and G. Vrolik (Amsterdam) to G. Vrolik (Amsterdam); 23 November 1816:

More extensive report on the communication by the governor of Hainaut about the presence of metallic substances in the soil. A scientific analysis has proved that these substances are pyrite and kaolin. Perhaps these discoveries may lead to the extraction of sulphur and iron and to the production of sulphuric acid (vitriol).

[NA-NHA KNI 175-57(132).3 R; MIN, CHE]

470. M. van Geuns (Utrecht), S.J. Brugmans (Leyden) and G. Vrolik (Amsterdam) to the members of the 'Eerste Klasse' of the 'KNI'; 7 December 1816:

Letter, covering the report on C.H. à Roy's treatise on the role of vinegar in the fight against typhoid fever.

[NA-NHA KNI 175-44; MED]

- 471. S.J. Brugmans (Leyden), M. van Marum (Haarlem) and J.H. van Swinden (Amsterdam) to the 'Eerste Klasse' of the 'KNI'; 21 December 1816:** Letter, covering the report on the treatise, written by A. Paets van Troostwijk, discussing the high sensibility of plants to statical electrical discharges and on the destructive influences of weak electrical shocks on the 'vital principle'.
[NA-NHA KNI 175-44; PHY, BOT]
- 472. J.H. van Swinden (Amsterdam), M. van Marum (Haarlem) and S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 21 December 1816:**
The commission has been very positive on the treatise, entitled 'On the high sensibility of plants to statical electricity ... etc'. The results of the splendid experiments have been explained brilliantly. The author seems to have discovered a universal principle. At first the electrical stimulus amplifies the vital forces. This change is followed by a state of over-excitation and finally by the extinction of these forces. These phenomena are distinctly visible. The process is clearly depending of the season and of the force of the stimulus. The commission regrets that the various conclusions made by Paets van Troostwijk do not have the same importance. The commission would have appreciated if it had been informed about the results of other experiments, for example those regarding the effect of electricity on plants, which had been placed under glass bells. After the author has added this last supplement nothing withholds its publication in the works of the 'Institute'.
[NA-NHA KNI 175-57(132).6 R; BOT, PHY]
- 473. S.J. Brugmans (Leyden) and J.A. Bennet (Leyden) to the State Secretary of the Interior (The Hague); 10 April 1817:**
Provisional reply on behalf of the 'Eerste Klasse' to a question put by the 'Maatschappij van Letteren en Schoone Kunsten' ('Society of Literature and Fine Arts'), Ghent. The commission has been asked to examine various pigments, which are suited for the use in art academies. The 'Eerste Klasse' has decided to send its report to O. Repelaer van Driel Esq., Commissioner General of Education, Arts and Sciences (The Hague).

[NA-NHA KNI 175-44; BOT, CHE, ART]

474. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), P. Driessen (Groningen) and J.A. Bennet (Leyden); 10 April 1817:

Vrolik requests the advice on Ryckaseys's request for a bonus because of the fact that he has discovered a procedure for the preservation of brewer's yeast during the summer.

[NA-NHA KNI 175-44; BOT, PHY]

475. G. Vrolik (Amsterdam) to P. Driessen (Groningen), S.J. Brugmans (Leyden) and J.A. Bennet (Leyden); 16 April 1817:

Once again Vrolik repeats his demand with respect to Ryckaseys's discovery regarding the brewer's yeast.

[NA-NHA KNI 175-35.422; BOT, PHY]

476. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 16 April 1817:

Vrolik asks Brugmans to send him the results of the investigations with regard to the painting pigments for the benefit of painters (artists), as has been requested by the 'Maatschappij van Letterkunde en Schoone Kunsten' (Ghent).

[NA-NHA KNI 175-35.423; BOT, CHE, ART]

477. S.J. Brugmans (Leyden) and G. Vrolik (Amsterdam) to G. Vrolik (Amsterdam), 23 April 1817:

Brugmans reports on Van Marum's treatise on the vegetable origin of pit coal, a very important contribution written by an author who has already surprised the scientific world with most interesting reports for more than forty years. Undoubtedly this publication will be received and read with the greatest possible interest. Van Marum's observations really support the views of Schaub (Kassel) and Werner (Göttingen). Brugmans accepts Van Marum's view that the trunks found in the coal always have had a flattened shape. The author's authority guarantees the correctness of this statement, although

Brugmans has had some difficulty to accept this view. Van Marum has urged him to enter this report as soon as possible.

[NA-NHA KNI 175-57(132).10 R; GEO, BOT]

478. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 28 April 1817:

Van Marum's treatise on the vegetable origin of pit coal will soon be published. He invites Brugmans to write his own treatise on this subject, because he is well acquainted with his intentions in that direction. Furthermore he wants to receive the text of the lecture on the phosphorescence of sea water at the Dutch shores, delivered by Brugmans. At that occasion he has had a very attentive audience! Brugmans had promised to return the text to him. Now Vrolik repeats his request.

[NA-NHA KNI 175-35.426; CHE, GEO, BOT, ZOC]

479. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), C.H. à Roy (Amsterdam) and G. Vrolik (Amsterdam); 24 May 1817:

J.F. Kluyskens has entered a treatise entitled 'Dissertation on the hospital gangrene and on the effectiveness of muriatic acid in the treatment of this disease', as a compensation for not having been able to deliver a lecture.

[NA-NHA KNI 175-35.435; MME, MED]

480. G. Vrolik (Amsterdam) to M. van Marum (Haarlem), S.J. Brugmans (Leyden) and N.C. de Fremery (Utrecht); 11 September 1817

The Minister of the Interior has expressed his wish to be informed about a patent application regarding the production of improved gelatine.

[NA-NHA KNI 175-44; CHE, BOT, TEC]

481. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 20 September 1817:

More detailed request regarding the question if it is necessary to permit Stolker & D'Arcet (Liège) to produce soups and soup tablets from gelatine.

[NA-NHA KNI 175-35.489; CHE, ZOC, TEC]

482. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 3 October 1817:

Vrolik asks an advice on behalf of the Minister of the Interior about the possible prohibition of selling salt by the volume instead of selling it by weight.

[NA-NHA KNI 175-35.493; PHY, CHE]

483. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 20 October 1817:

Brugmans returns 17 treatises and other documents, together with the reports and a covering letter. Meanwhile he has been informed that Reinwardt has been appointed member of the ‘Commissie voor het gewoon Keukenzout’ (‘Commission for the Common Cooking Salt’). He wants to point at the fact that only thanks to an extreme effort he has succeeded in finishing one more report.

[NA-NHA KNI 175-28(67).26; PHY, CHE]

484. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 23 October 1817:

Once again Brugmans begs to be saved from participating in the ‘Commission for the Common Cooking Salt’.

[NA-NHA KNI 175-44; PHY, CHE]

485. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 20 November 1817:

Vrolik reminds Brugmans that – according to schedule – he has to deliver a speech on 20 December 1817.

[NA-NHA KNI 175-35.512]

486. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 21 November 1817:

On his urgent request Gerard Sandifort has sent Brugmans a treatise on two headless monstra. Now he sends it on to Vrolik. His busy occupation has kept him from following his heart and from devoting himself completely to

the 'Eerste Klasse'. He considers his introduction to this treatise as a sign of his dedication to the 'Instituut'. His fellow members will undoubtedly agree that science will benefit from Sandifort's contribution. He asks Vrolik to convey his best wishes to his colleagues. He assures him of his feelings of esteem and signs the letter as his obedient servant.

[NA-NHA KNI 175-28(67).29; MED, PAA]

487. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 6 December 1817:

Letter covering Sandifort's first contribution (the treatise on the headless monstra) to the 'Eerste Klasse' of the 'Instituut'.

[NA-NHA KNI 175-44; MED, PAA]

488. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), N.C. de Fremery (Utrecht), J.A. Bennet (Leyden) and P. Driessen (Groningen); 12 December 1817:

Vrolik reminds his colleagues that during the last meeting of the 'Eerste Klasse' (held on 10 September 1817) a letter has been read, which had been received from Baron De Ferussac (Paris). This letter covers a prospect entitled 'Histoire Naturelle des Mollusques terrestres et fluviatiles' ('Natural history of the freshwater molluscs'). De Ferussac wants to learn the opinion of the 'Eerste Klasse' about its contents. He is also eager to exchange specimens of his collection for doublets of the Leyden collection of molluscs. Vrolik demands the answer by return.

[NA-NHA KNI 175-35.525; ZOC]

489. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), J. Kops (Utrecht) and J.F. Serrurier (Zwolle); 18 March 1818:

Vrolik asks Brugmans to send him the text of a lecture delivered by Bonn, dealing with the foot rot of sheep.

[NA-NHA KNI 175-35.541; ZOC, MED, PAA]

490. G. Vrolik (Amsterdam) to M. van Marum (Haarlem), S.J. Brugmans (Leyden) and N.C. de Fremery (Utrecht); 7 May 1818:

On behalf of the Minister of the Interior, Vrolik wants to receive an advice regarding a patent application (from Liège) for the production of beef cubes and animal glue from gelatine.

[NA-NHA KNI 175-44; CHE, TEC]

491. M. van Marum (Haarlem), S.J. Brugmans (Leyden) and N.C. de Fremery (Utrecht) to G. Vrolik (Amsterdam); 12 May 1818:

The commission advises with respect to the patent application for the production of gelatine and for the production and sale of beef cubes and animal glue by three inhabitants of Liège. Perhaps D'Arcet has a prior claim, because he is already practising this production for several years. For more detailed information the commission refers to the 'Annales de Chimie' (Volume 92). The commission proposes to reject D'Arcet's application and gives its reasons. A second request by D'Arcet regards the use of the 'Papiniaansche Pot' ('Papinian Jar') for the production of soup gelatine for the benefit of the poor. The commission refers to two recent royal decrees and suggests to reject this request too (giving two reasons for its decision). Of course the government has to decide where these papinian jars have to be placed.

[NA-NHA KNI 175-57(132).33 R; AGR, CHE, TEC]

492. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 14 August 1818:

Because Bonn is eager to read the report on his treatise on the foot rot of sheep Vrolik asks Brugmans to hurry. The same goes for the demand of the Minister of the Interior with respect to the problem of the falsification of madder. Now His Excellency wants to be informed about the way the commission is planning to detect and fight these falsifications. The government is very interested.

[NA-NHA KNI 175-35.589; ZOC, BOT, CHE, MED, PAA]

493. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), G. Vrolik (Amsterdam) and E.J. Thomassen à Thuessink (Groningen); 11 September 1818:

Vrolik asks the addressees to evaluate the treatise written by N.C. de Fremery (Utrecht) and read by him during the meeting of 27 August 1818. It is entitled 'Waarneeming betreffende de degeneratie van het rechter ovarium' ('Observation of the degeneration of the right ovary').

[NA-NHA KNI 175-35.595; MED, PAA]

494. S.J. Brugmans (Leyden), C.H. à Roy (Amsterdam) and G. Vrolik (Amsterdam) to G. Vrolik (Amsterdam); 20 October 1818:

The members of the jury are very positive about Kluyskens's treatise on the hospital gangrene. They really appreciate the fact that the author has given his preference to liquid hydrochloric acid for the cleansing of wounds. He also uses this chemical in the healing of a gangrene which has not gone too far already. In spite of the advisability of further comprehensive experiments the jury already recommends its publication. Getting acquainted with this treatment will absolutely inspire other scientists. It's really an excellent treatise.

[NA-NHA KNI 175-58(133).2 R; MME]

495. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden) and J.A. Bennet (Leyden); 25 November 1818:

Through his letter of 18 November 1818, N° 1, the Minister of Public Education, National Industry and Colonies has asked for an advice with regard to the technique invented by E. Lennig (Mainz), meant for preserving meat for a long time, without using salt. The results of several experiments have been added. Brugmans and Bennet are asked to carry out large-scale experiments – using several tons of meat. The 'Eerste Klasse' also wants to receive a written instruction for the preparation of the meat and barrels. It is willing to compensate the expenses, which may arise.

[NA-NHA KNI 175.35.620; CHE, PHY, TEC]

- 496. G. Vrolik (Amsterdam) to M. van Marum (Haarlem), S.J. Brugmans (Leyden) and J.A. Bennet (Leyden); 12 January 1819:**

The 'Eerste Klasse' has received a letter about the discovery of an old wooden bridge, which has been found in the peat moor of the province of Drenthe. Several samples of the wood have been added to this letter. The commission is asked to report as soon as possible.

[NA-NHA KNI 175-35.641; ARC, BOT]

- 497. G. Vrolik (Amsterdam) to P. Driessen (Groningen), N.C. de Fremery (Utrecht) and S.J. Brugmans (Leyden); 3 February 1819:**

Vrolik wants to receive the report on the treatise written by J.B. van Mons (Leuven), entitled 'Motifs fondés sur l'expérience et le raisonnement en faveur de l'existence de l'oxygène dans le gaz muriatique oxygéné' ('Arguments founded on the experience and the reasoning in favour of the presence of oxygen in chloric acid ['oxygenated muriatic acid']').

[NA-NHA KNI 175-35.650; CHE]

- 498. M. van Marum (Haarlem), S.J. Brugmans (Leyden) and J.A. Bennet (Leyden) to G. Vrolik (Amsterdam); 5 February 1819:**

The commission briefly reports on the significance of the discovery of the remains of a wooden bridge in the peat moor of Drenthe. More specific research has proven that it was not a Roman bridge. It proved to be impossible to determine its age. It was easier to determine the kinds of wood. The bridge has been built of alder wood and walnut.

[NA-NHA KNI 175-58(133).8 R; BOT, ARC]

- 499. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), J. Kops (Utrecht), N.C. de Fremery (Utrecht), G. Moll (Utrecht), J.F.L. Schroeder (Amsterdam), J.H. Bennet (Leyden), C. Brunings junior. (Leyden), C. Ekama (Leyden), M. van Marum (Haarlem), A. van den Ende (Haarlem) and C.H. à Roy (Amsterdam); 8 March 1819:**

Vrolik briefly informs the addressees about the extraordinary meeting. Probably the Cabinet of 'farming machines' will be stored elsewhere. Because

of the great importance of this collection it has to be kept in Amsterdam. It has been decided that the members who are living in or near Amsterdam shall be informed and that they will be asked to express these feelings towards the government.

[NA-NHA KNI 175-35.675; AGR, PHY, TEC]

500. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 27 March 1819:

Vrolik informs Brugmans that he has to deliver a lecture on 27 March 1819.

[NA-NHA KNI 175-35.683]

501. S.J. Brugmans (Leyden), G. Vrolik (Amsterdam) and E.J. Thomassen à Thuessink (Groningen) to G. Vrolik (Amsterdam); 12 April 1819:

The commission reports on the treatise written by De Fremery, entitled 'Waarneeming betreffende de degeneratie van het rechter ovarium, gepaard gaande met de vorming van vetachtige stof, haren, bot en tanden' ('Observation of the degeneration of the right ovary, accompanied by the formation of fatty substance, hair, bone substance and teeth'). The author has really done a good job. He has described the origin and the causes of this phenomenon after a thorough anatomical examination and he has added accurate drawings as well. The treatise also gives important new facts. It absolutely deserves to be published.

[NA-NHA KNI 175-58(133).12 R; MED, PAA]

502. S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); spring 1819:

The jury reports positively on Bonn's treatise on the foot rot of sheep. The parts of the body which have been affected, have been well depicted just like the further stages of the disease have been illustrated. The author also compares his results with those found by Kalf and Ree. In Brugmans's opinion such a performance has never been presented before. He recommends its publication.

[NA-NHA KNI 175-58(133).11 R; MED, ZOC, PAA]

503. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 19 July 1819:

Vrolik repeats his request regarding the demand of the Minister of Public Education, National Industry and Colonies to inform him about the quality of the procedures developed by E. Lennig (Mainz), which are meant for the preservation of meat. Brugmans and Bennet had already been recommended to carry out large-scale experiments (as a repetition of Lennig's earlier experiments). The results have to generate a written instruction.

[NA-NHA KNI 175-35.718; CHE, PHY, TEC]

CHAPTER 11 - CORRESPONDENCE WITH JACOB VAN BRED AND JACOBUS GIJSBERTUS SAMUEL VAN BRED

As a friend of Jacob van Breda, the aged town physician of Delft, Sebald Justinus Brugmans has observed from a distance but attentively the promising career of Van Breda's son Jacobus Gijsbertus Samuel (1788-1867), who took his doctoral degree at Leyden University in 1811. His career as a professor started in 1816, when he was given the chair of natural history at the University of Franeker – as appears from the correspondence between Brugmans and Van Breda senior. This fact is also evident from the first two letters given in this chapter, in which the intention of two former students of Brugmans to travel to Paris, is discussed. When Brugmans died in July 1819, Van Breda was still living in Franeker. In 1822, when the political situation in the Netherlands was still stable, he was appointed professor of botany, zoology and comparative anatomy at the University of Ghent. In 1831, after the outbreak of the war between Holland and Belgium, Van Breda junior fled to the Netherlands together with his family and found himself in Leyden. In 1835 he was appointed professor of natural history at Leyden University. After Van Marum had died, it would take about a year before Jacob Gijsbert Samuel van Breda was appointed director of the cabinet of 'Teyler's Tweede Genootschap' ('Teyler's Second Society'). On 1 May 1839 he was appointed secretary of the 'Hollandsche Maatschappij der Wetenschappen' ('Dutch Society of Sciences'). Van Breda devoted himself above all to the study of geology and palaeontology, activities, through which he became acquainted with the leading German geologists and the most renowned French and Italian palaeontologists.

504. S.J. Brugmans (Groningen) to J. van Breda (Delft); 17 November 1781:

Brugmans thanks Van Breda senior for the kindness shown to him at the occasion of his visit to Delft. Of course he would have sent some gifts in return, if he had not been brought down by fever. He repeats his feelings of high esteem towards Van Breda. Initially he could not handle the

eudiometer, which he had received from Cuthberson (England). He has been more successful after having followed Van Breda's instructions. He has repeated an experiment carried out by a certain Swijghuisen. He promises to enclose a letter addressed to Ingenhousz (London) next time.
[ATS, 2248; CHE, PHY]

505. S.J. Brugmans (Leyden) to J. van Breda (Delft); 11 June 1795

Brugmans calls Van Breda's attention to the proposition made by L. Bicker to establish a 'Comité du Salut Public', which has been made public in the newspapers. Bicker and Brugmans had to advise on it and so they did. They both are aware of Van Breda's deservingness.
[ATS 2273; MED]

506. S.J. Brugmans (Leyden) to J. van Breda (Delft); 10 July 1795

J. van Breda has informed Brugmans that he is willing to accede to the 'Comité du Salut Public', consisting of six members, one of which is Brugmans. In the near future Brugmans will recommend him for membership to the 'Representanten van het volk'. After the 'Comité' will have been completed, its members will have to divide its various tasks.
[ATS 2273; MED]

507. S.J. Brugmans (Leyden) to J. van Breda (Delft); 18 August 1795

Due to Bicker's absence abroad, the installation of the 'Comité du Salut Public' had to be postponed. Brugmans promises Van Breda to have him put on the membership list definitively.
[ATS 2273; MED]

508. S.J. Brugmans (Leyden) to J. van Breda (Delft); 29 July 1816:

Brugmans emphasizes that already for some time Van Breda junior deserves his esteem and affection. Therefore he is pleased to be able to support his attempts to attain a professorate. The Franeker 'Athenaeum' will absolutely take advantage of the diligence and merits of this young and promising scientist. He shares the feelings of pride of the father with regard to the

appointment of his son and he wishes him to witness his son's glory for the years to come. He expresses his feelings of friendship towards his old friend.
[ATS 2248; UNI]

509. S.J. Brugmans (Leyden) to J.G.S. van Breda (Franeker); 18 December 1816:

With pleasure Brugmans has heard of Van Breda junior's successful start in Franeker. He hopes that he will be informed from time to time. He is also very interested in the situation of the Franeker hortus. He promises to send various seeds and he wants to know if there is also room for shrubs and other perennials. At the moment he is very much hindered by a swelling in his right foot, as a consequence of 'podagra' (gout), just now that he is spending most of his time in the hortus. Nevertheless he is going on - even if he will have to crawl on hands and knees. He hopes that from now on also Franeker students are going to compete for a prize of the contests to be held by Leyden University. That would be profitable to the Franeker academy and to Van Breda as well. He wants to see him in Amsterdam this winter. He assures him of his eternal friendship and ends his letter by announcing that he is going to send a letter to A.G. Camper today.
[ATS 2273; UNI, BOT]

510. S.J. Brugmans (Leyden) to J.G.S. van Breda (Franeker); 25 November 1817:

Brugmans apologizes for answering Van Breda's letters after such a delay. He thanks him for the trouble he has taken for him. If it had been up to him Leyden University would already have been in the possession of the collection to which his friend is referring. Now there is only a minor chance left that he will have the opportunity to lay his hands on it. He hopes that the sale to an Englishman will be prevented. He urgently has to see the governors of the university. He is also interested in the (bas-)reliefs. He promises to pay for it promptly. He also encourages Van Breda junior to write a treatise and to send it to him, after which he will send it on to Vrolik. He wants to know if his friend is coming to Leyden this winter. He also asks to convey his

compliments to Camper and to his Franeker colleagues and he assures him of his feelings of friendship and esteem.

[ATS 2273; UNI, ZOC, COB, ART]

511. S.J. Brugmans (Leyden) to J.G.S. van Breda (Franeker); 23 January 1818:

Brugmans thanks his friend for what he has sent to him. He regrets the many problems with which the directors of the 'Staatskas' ('Dutch Treasury') are constantly speeding him up. Besides they never answer his letters. He hopes that Plante is going to retire, which would enable him to try again to obtain permission for the purchase he eagerly wants to make.

[ATS 2273; UNI, ZOC]

512. S.J. Brugmans (Leyden) to J.G.S. van Breda (Franeker); 12 March 1818:

Unfortunately the governors of the university have missed the chance to buy the collection, which Van Breda has been referring to. The lack of money, the indecisiveness and the fact that the offer has been made too late, although one third above the price, which has been asked originally, demonstrate the incomprehensible behaviour of the governors. Suddenly the money is available and he has been authorized to buy a collection of microscopes for the academies of the southern provinces. He thinks that this time he will be able to make the deal. Perhaps he has to travel to Germany to buy these instruments, although his time is scarce. He asks his friend to keep silent about it. Maybe he will leave for Germany together with his family, by mid-May. Does Van Breda have any wishes with regard to the completion of his collections? What about his plans with regard to his journey to Italy? Last Saturday professor Bernard has assumed his duties in Leyden. Brugmans ends his letter by underlining his feelings of friendship and devotion.

[ATS 2273; UNI, ZOC, COB]

513. S.J. Brugmans (Leyden) to J.G.S. van Breda (Franeker); 3 April 1818:

Brugmans thanks his young friend for sending him a note on a dolphin. He has already a specimen of *Delphinium nasarnach* (Lacépède) in his possession and meanwhile Gerard Sandifort has dissected his own specimen. So it has been possible to send the third animal to somebody else. He describes the dissection carried out by himself and reminds him of Cuvier's doubt about the correctness of the determination. Nevertheless he is sure that he has determined the (new) species correctly. Meanwhile he has seen four specimens of it. He gives a few characteristics, among others regarding the development of the set of teeth. He asks emphatically to convey his sincerest compliments to Camper. Finally he assures him of his strong feelings of friendship and devotion and promises to send him seeds and plants soon.

[ATS 2273; ZOC, BOT]

514. S.J. Brugmans (Leyden) to J.G.S. van Breda (Franeker); 28 September 1818:

Brugmans expresses his regrets with respect to the fact that Van Breda junior has taken so much trouble for him. He promises to pay the bill (of exchange) sent to him immediately after they have decided about the easiest way of payment. Perhaps Van Breda should send him a receipt for the collection ordered for him in Switzerland and add the Swiss receipt to his answer to Brugmans as a proof.

[ATS 2273; COB]

515. S.J. Brugmans (Leyden) to J.G.S. van Breda (Franeker); 30 June 1819:

Brugmans informs his friend that Dr. Harbauer is coming to see him in Leyden. He invites Van Breda for a visit next Friday afternoon at 3.30 p.m. and to have dinner with them.

[NA 2.21.204(4); MME]

CHAPTER 12 - THE CABINET OF NATURAL HISTORY OF THE STADHOLDER

In January 1795 the French troops had marched into the Republic of the United provinces and the larger towns had been occupied. Around mid-February, the French scientists André Thouïn and Barthélemy Faujas de Saint-Fond arrived in Holland (together with Auguste Savinien Le Blond and ... Demailly forming the commission, especially appointed to collect all kinds of valuable objects of science and art). Thouïn and Faujas de Saint-Fond were both professors at the 'Muséum National d'Histoire Naturelle' in Paris (founded in June 1793). They were also members of the administration of this museum. Thouïn and Faujas had already successfully completed their commission in the Southern provinces (the future Belgium): drawing up an inventory, describing interesting objects of natural history, scientific instruments and books and finally wrapping up and crating of all these precious objects, which were sent to Paris.

When the Stadholder Willem V fled to England together with his family Thouïn and Faujas de Saint-Fond had already a clear notion of the composition of their possible captures, particularly of the scientific collections of the Stadholder, collections to which they had been ordered to confine themselves. This was due to the fact that France was at war with the Prince of Orange and his family and not with the 'Republiek der Vereenigde Nederlanden' ('Republic of the United Provinces').

Thouïn and Faujas were eager to fulfil their task. The most important pieces of the collection absolutely had to be transported to Paris, in order to enrich the collections of their 'Muséum National d'Histoire Naturelle'. The existing catalogues, which had been written by Aernout Vosmaer, the curator of the scientific collections of the Stadholder, the diaries of various scientific travellers who had visited Holland (and which had been published, such as the one written by Thomas Pennant in the 17sixties) and other journals (not published, such as the diary kept by Joseph Banks during his trip to Holland in February-March 1773) were most ideal manuals for a quick and well organized execution of the

plundering, as it had been ordered by the French republican government. This action was considered a justified payment by a defeated country to its conqueror. Numerous documents kept in the 'Centre Historique des Archives Nationales' in Paris ('CHAN') prove that Thouïn and Faujas de Saint-Fond were already in Holland several months before the peace treaty of The Hague was concluded (on 9 May 1795). So they had to wait until after that date before carrying out their orders and starting to send the precious collections to Paris. The correct execution of these operations was part of the peace treaty to be executed by both parties. Nevertheless Thouïn and Faujas could not wait. Besides they knew that they would be given back support by the 'Commission des Relations Extérieures' ('Commission for Foreign Relations', Paris) as well as by the 'Comité de l'Instruction Publique' ('Committee for Public Education', Paris), just like it had been the case in Belgium in the autumn of 1794. So on 13 March 1795 they started making inventories, enthusiastically and in good spirits.

Most of the objects of natural history, belonging to the collections of the former Stadholder, were sent to Paris between early May and the end of October 1795. Together with the collection of paintings, which once belonged to the Stadholder, they formed the 'most desired war booties' from Holland. In the following years (between April 1796 and early May 1798) the livestock of the Stadholder was transported to Paris. The most important animals of this collection were two living young elephants – a male and a female. These two giant beasts were the last zoological 'hunting trophies' coming from Holland. They were received in triumph in Paris in May 1798, after the necessary preparations had been made with regard to their accommodation in the 'Jardin des Plantes' on the grounds of the 'Muséum National d'Histoire Naturelle'.

During the night of 29 May 1814 the allied forces marched into Paris. The next day the peace treaty of Paris was concluded, after which the Emperor Napoleon Bonaparte was exiled to the island of Elba. Louis-Stanislas-Xavier, the brother of the executed French king Louis XVI, who had returned from banishment to England, was crowned King of France and assumed the name of Louis XVIII. On 19 August 1814 the French Minister of the Interior announced that he had received requests from various countries, concerning the possible restitution of objects of

science and art, which had been stolen. Initially the French government was very unwilling to answer these requests. So it proved to be necessary to put pressure on the defeated France.

Initially the leading allied powers took the view that it was sensible not to irritate the French government too much by depriving the two most important museums (the 'Musée du Louvre' and the 'Muséum National d'Histoire Naturelle') of their contents, or at least of their treasures. After Napoleon had returned to France in March 1815 and after he had been given a warm welcome by a growing number of faithful followers and new battles had to be fought, the allies completely put aside their lenient attitude towards their unreliable enemies. In the summer of 1815 the allied nations, which had started to execute their rights with regard to the restitution of what had been stolen from them, stopped to restrain themselves. On 4 September 1815 the united allied powers presented a log of claims to the French King, who had been helped to ascend the throne again after having fled to England for the second time, when Napoleon had become a threat once again.

The Netherlands, one of the smaller allies and besides an ally of the most recent past, had to queue up. This modest position not only regarded the reclamation of works of art, but also the reclamation of the objects of natural history and of other sciences. The restitutions to His Majesty King Willem I began about mid-September 1815. The Dutch commissioners were only able to realize their reclamations after having called in the help of the experienced negotiators of the great allied powers like England, Prussia, Austria and Russia. In his own view Brugmans, commissioned to represent His Majesty the King of the Netherlands, with regard to the reclamation and restitution of the objects of natural history, had to endure many humiliations, inflicted on him by the French government and by the administration of the 'Muséum National d'Histoire Naturelle'. All in all the overwhelming majority of the objects of natural history returned to Brugmans were replacements, given from the duplicates and second rate objects of the collections of the French 'Muséum'. This outcome was caused by the fact that the most important objects simply had been qualified as 'never to be returned'. The other reasons were that many objects had deteriorated meanwhile, that their appearance had been changed, or that they had been given to museums elsewhere in the former French empire. After the negotiations with the 'professeurs-administrateurs' of the

‘Muséum’ had been completed Brugmans had to sign away all future claims with regard to the collections of natural history once belonging to the Stadholder Willem V. Early December 1815 the collections, which had been acquired by Brugmans, arrived in the Netherlands. His Majesty King Willem I had decided that they should be given to the ‘Leyden Hoogeschool’ (Leyden University).

516. Secretary General of State (The Hague) to S.J. Brugmans (Leyden); 6 April 1814:

Anton Reinhard Falck, Secretary general of State of the Kingdom of the Netherlands, informs Brugmans that His Majesty King Willem I has ordered him to ask the addressee if there are any accurate inventories left of the objects of natural history, which have been taken away from the cabinets of the late Stadholder Willem V shortly after the occupation of the United Provinces by the French troops in 1795 had been completed. Messages received from Paris have made clear that these objects might be reclaimed in the not too distant future. Falck asks Brugmans to do some research and to inform him as soon as possible.

[NA 2.02.01.5921; ZOC, GEO, MIN]

517. ‘Muséum National d’Histoire Naturelle’ (Paris) to S.J. Brugmans (Paris); 13 September 1815:

The ‘professeurs-administrateurs’ of the ‘Muséum National d’Histoire Naturelle’, who are present in the meeting – De Jussieu, DelaMarck, Desfontaines, Thouïin and Laugier, inform Brugmans that they have received his letter, by which he reclaims the cabinet of natural history of the former Stadholder. They propose several solutions, which – in their view – undoubtedly will please His Majesty the King of the Netherlands. They emphasize the importance of their ‘Muséum’ for the benefit of science on a European scale. Besides Brugmans has to understand that it is almost impossible to identify every single object. Furthermore a part of the Stadholder’s collection is no longer present in the ‘Muséum’. Moreover it is not the task of the ‘Muséum’ to find out the whereabouts of these objects. It is even more difficult to ‘translate’ the value of the original collection into the

composition of a new collection of replacements. If all the objects once belonging to the Stadholder would really be returned to the King of the Netherlands the Paris' collection would be damaged too much. Nevertheless the 'professeurs-administrateurs' are willing to propose the composition of a replacing collection as beautiful as the original one. A copy of this letter is sent to the French Minister of the Interior, their superior. [originally written in French].

[AN-CHAN AJ 15-115; ZOC, GEO, MIN]

518. S.J. Brugmans (Paris) to the 'Muséum National d'Histoire Naturelle' (Paris); 21 September 1815:

Brugmans informs the 'professeurs-administrateurs' of the 'Muséum National d'Histoire Naturelle' about the fact that His Majesty the King of the Netherlands has ordered him to reclaim his father's cabinet of natural history, which has been taken away to Paris as a consequence of acts of war – and that it has been stored in the 'Muséum'. He has been authorized to negotiate its restitution, if possible by friendly negotiations. He hopes to be able to follow this method in his contacts with these famous scientists, who are devoted to science ('like he himself is') and who have always kept in mind the progress of science. Brugmans is convinced that the importance of the Paris' collection will hardly be damaged by the restitution of the Stadholder's collection. He offers an opening by putting that his principal is willing to abandon his rights with respect to certain objects, which cannot be returned, because they are stored elsewhere. These objects have to be replaced by other ones. Brugmans assures his strong feelings of esteem. [originally written in French].

[AN-CHAN AJ 15-611; ZOC, GEO, MIN]

519. 'Muséum National d'Histoire Naturelle' (Paris) to S.J. Brugmans (Paris); 22 September 1815:

In their answer to Brugmans the 'professeurs-administrateurs' of the 'Muséum' acknowledge the receipt of Brugmans's letter. They inform him that they are willing to propose an acceptable solution, a solution which, in their view will meet the interests of both parties. They are counting on his

fairness with respect to the final settlement of the restitution to which the 'Muséum' has been forced by the peace treaty, which has been imposed on France by the allies. [originally written in French].

[AN-CHAN AJ 15-611; ZOC, GEO, MIN]

520. S.J. Brugmans (Paris) to the 'Muséum National d'Histoire Naturelle' (Paris); 23 September 1815:

Brugmans confirms the reception of the letter sent to him by the 'professeurs-administrateurs' of the 'Muséum' on 22 September 1815. The proposition made to him seems to be acceptable. So he is going to convey this plan to his government as soon as possible. In order to attain a really definitive and satisfying conclusion of this uncomfortable operation, a solution which will do justice to the responsibilities of both parties, he wants to receive the old catalogue. This document must have been stored somewhere in the archives of the 'Muséum'. Besides he wants to receive a detailed list of objects to be offered in substitution. He formulates the points of departure for the composition of the collection, which has to be offered to him. He assures the addressees of his feelings of respect and signs this letter as their most humble and most obedient servant, the special commissioner of His Majesty the King of the Netherlands, assigned with the reclamation of the cabinet of natural history, ... etc. [originally written in French].

[AN-CHAN AJ 15-611; ZOC, GEO, MIN]

521. 'Muséum National d'Histoire Naturelle' (Paris) to S.J. Brugmans (Paris); 24 September 1815:

In reply to Brugmans's letter, dated 23 September 1815, the 'professeurs-administrateurs' of the 'Muséum' inform him that the catalogues of the collection of the Stadholder are waiting for him. They remind him of several events of the past, as a consequence of which only a part of the collection has been taken to Paris. Nevertheless in their view it is possible to offer a collection which is even more interesting than the original one. The most excellent and remarkable pieces will be returned – or at least part of them – unless Brugmans insists on receiving replacements. The 'professeurs' wish to

fix the time and date on which the operation will be started. They have promised to cooperate. [originally written in French].

[AN-CHAN AJ 15-611; ZOC, GEO, MIN]

522. S.J. Brugmans (Paris) to the ‘Muséum National d’Histoire Naturelle’ (Paris); 24 September 1815:

Today, 24 September 1815, Brugmans has received the letter sent to him by the ‘professeurs-administrateurs’ of the ‘Muséum’. In his brief reply he declares that he is willing to accept their proposition. Tomorrow morning at 10.00 o’clock they will start with the selection of the minerals, as it has been proposed by Thouin, at the time the director of the ‘Muséum’. He ends his letter by assuring them of his strong feelings of esteem and calls himself their most humble and most obedient servant, signing his letter as the ‘Commissaire spécial à Sa Majesté le Roi des Pays-Bas pour la reprise du Cabinet d’Histoire Naturelle, ... etc.’. [originally written in French].

[AN-CHAN AJ 15-611; ZOC, GEO, MIN]

523. ‘Muséum National d’Histoire Naturelle’ (Paris) to S.J. Brugmans (Paris); 24 September 1815:

On 24 September 1815 the ‘professeurs-administrateurs’ of the ‘Muséum’ – DelaMarck, Faujas, Vauquelin, Häuy, Cuvier, Desfontaines and Thouin – inform Brugmans that they are waiting for him. They repeat the reasons why the collections of the Stadholder are not complete any more. As a consequence, they make a plea to his sense of fairness. The ‘Muséum’ is also willing to prepare an extensive enumeration of all the objects which can be offered to the Dutch commissioner. After having read this document to the end, he should decide if there is a reason to be satisfied. Of course the objects of major importance to the Stadholder are at his disposal. The ‘professeurs-administrateurs’ insist on coming to a full agreement. They are willing to cooperate without any restraint. [originally written in French].

[AN-CHAN AJ 15-115; ZOC, GEO, MIN]

524. S.J. Brugmans (Paris) to A.R. Falck (The Hague); 4 October 1815:

On 4 October 1815 Brugmans reports on the state of the affairs with regard to the restitution of the cabinet of natural history of the Stadholder. He wants to know if His Majesty agrees with his proposal and if He is satisfied with the results of his efforts. If so, he will soon be able to conclude the negotiations. Meanwhile he is already busy collecting the objects. Only the certainty of being able to achieve his ultimate purpose keeps him going. If there had not been such a secret sabotage, he would already have accomplished his task. Is His Majesty by any chance willing to renounce a few remarkable pieces of His father's collection? He makes several propositions, gives a rough description of the new collection and asks to answer him by return. He hopes that His Majesty will soon determine the definitive destination of this fine collection.

[NA 2.02.01.5924; ZOC, GEO, MIN]

525. A.R. Falck (The Hague) to S.J. Brugmans (Paris); 10 October 1815:

On 10 October 1815 Minister Falck repeats his earlier answer to Brugmans. Perhaps Brugmans did not receive his letter of 4 October. The way the reclamation is set about meets with His Majesty's approval in every way. A collection of equal beauty and equal scientific importance is of course acceptable, although the Dutch government explicitly demands the restitution of the skeletons of the giraffe and the hippopotamus. Thuret, a banker and also consul general of the Netherlands in Paris, has agreed to provide the money needed for the transport to Holland.

Brugmans has to get in touch with the department of the Interior or with Repelaer van Driel, Commissioner General of Education, Arts and Sciences, who wants to receive a well founded proposal regarding the definitive destination of the collection. Leyden seems to be a good choice, among others because it has been Brugmans (professor at Leyden University), who did achieve so well in bringing home the important collection. This gift is also meant to compensate him for the many unpleasantnesses and sadnesses he had to endure.

[NA 2.02.01.5924; ZOC, GEO, MIN]

526. S.J. Brugmans (Paris) to the ‘Muséum National d’Histoire Naturelle’ (Paris); 11 October 1815:

Once more Brugmans informs the administration of the ‘Muséum’ that His Majesty the King of the Netherlands has given him the mandate to negotiate the restore of the Stadholder’s collection of natural history carried away from Holland. He adds a copy of his mandate. It shows that the Dutch claims are supported by the plenipotential representatives of the most powerful allies. [originally written in French].

[AN-CHAN AJ 15-115; ZOC, GEO, MIN]

527. ‘Muséum National d’Histoire Naturelle’ (Paris) and S.J. Brugmans (Paris) to A.R. Falck (The Hague); 24 October 1815:

Brugmans – acting as the receiver of the Stadholder’s collection – and the representatives of the professeurs-administrateurs of the ‘Muséum’ as the refunding party – both sign an agreement regarding the restitution of 9.980 objects of natural history to His Majesty the King of the Netherlands. Brugmans, having been mandated to act as the special commissioner of His Majesty, declares – by signing this document – to renounce all future claims and to consider this restitution as a fully satisfying indemnification. Thereupon this agreement is declared to be legally valid for both countries. A brief description of the collection is added to this covenant. [originally written in French].

[AN-CHAN AJ 15-840; ZOC, GEO, MIN]

528. S.J. Brugmans (Paris) to L.F. Thyssens (Paris); 24 October 1815:

Brugmans mandates his secretary – Leonardus Franciscus Thyssens – to load the ship of captain Morel with the chests containing the returned collection of natural history. Meanwhile the transport from Paris to Rotterdam through Rouen has been arranged completely. Thyssens is ordered to accompany the precious cargo and Brugmans gives further details with regard to this transport. The banker Thuret has procured the money needed for this shipment. Thyssens has been authorized to cover all the expenses. On his arrival, he will have to account for every expense.

[NAT; ZOC, GEO, MIN, BOT]

529. S.J. Brugmans (Paris) to A.R. Falck (The Hague); around 24 October 1815:

Around 24 October 1815 another document is drawn up, in which is declared that Brugmans has judged it necessary and advisable to draw an inventory of the collections of natural history, which have been returned by the French government to His Majesty the King of the Netherlands, before his return to Holland, since the affair has been arranged to everyone's satisfaction. To the list of 9.980 objects he adds 160 living plants (103 different species), 31 dried fruits, a 'Herbarium of Surinam' ('still to be sent to Holland', a 'pro memoria item'), 43 fossils and 41 molluscs, preserved in alcohol, which makes a total of 10.263 objects. [originally written in French]. [AN-CHAN AJ 15-840; ZOC, GEO, MIN, BOT]

530. S.J. Brugmans (Paris) to L.F. Thyssens (Paris); 25 October 1815:

Brugmans emphasizes once more that he has appointed his secretary supervisor of the transport by boat of the collection of natural history from Paris to Rotterdam. Thyssens has to follow all the instructions given to him. He signs as 'Inspector General of the Military Health Service of the Army and the Navy of His Majesty the King of the Netherlands'. [NAT; ZOC, GEO, MIN, BOT]

531. S.J. Brugmans (Paris) to O. Repelaer van Driel (The Hague); 8 November 1815:

In accordance with a former agreement, Brugmans sends a detailed report of his adventures to O. Repelaer van Driel Esq., the Commissioner general of Education, Arts and Sciences. He discusses the fortunate end and describes the most important events (giving dates on which they occurred). Finally his attempts resulted in the restitution of a partially renewed collection of natural history. An acceptable and honourable compromise has been reached, as is shown by the added documents and by the copy of the contract made with the 'Muséum National d'Histoire Naturelle' (Paris). Brugmans underlines the

importance of several of these acquisitions (from New Holland and New Zealand). Much to his regret some of the larger objects had to remain in Paris, in spite of the wishes of His Majesty, which have been conveyed by him to the 'professeurs-administrateurs' of the 'Muséum'.

[NA 2.02.01.6092; ZOC, GEO, MIN, BOT]

532. S.J. Brugmans (Leyden) to the governors of the university (Leyden); 15 November 1815:

Brugmans asks the governors of the university to inform him about the accommodation where the cabinet of natural history, received from Paris, has to be stored after its delayed arrival in Rotterdam.

[UBL AC II-1; UNI, ZOC, GEO, MIN, BOT]

533. S.J. Brugmans (Leyden) to the governors of the university (Leyden); around 16 November 1815:

Brugmans informs the governors of the university about the fact that a sum of approximately 14.000 guilders is needed for the construction of cupboards for storing and exposing the collection of natural history. Meanwhile this collection has arrived from Rouen. If the university does not take steps now it will be impossible to accommodate it in a proper way.

[UBL AC II-1; UNI, ZOC, GEO, MIN, BOT]

534. S.J. Brugmans (Leyden) to L.F. Thyssens (Rotterdam); 6 December 1815:

Brugmans is very pleased about Thyssens's safe and sound arrival in Rotterdam. He hopes to see him in Leyden one of these days. He admits that he has been worrying because messages failed to appear, except for one brief note from Paris (dated 8 November 1815) and a letter from Thyssens to his father. He asks his secretary how the captain has to be paid on his arrival in Leyden and how the possibly given advances have to be deducted.

[NAT; UNI, ZOC, GEO, MIN, BOT]

535. S.J. Brugmans (Leyden) to L.F. Thyssens (Rotterdam); 7 December 1815:

Brugmans promises to wait for his secretary in the 'Hof van Zessen' (in Leyden). He asks him to steer all the wagons over the 'Noordeinds-brug' and from there – along the house of professor DuPui – to the gate on the Rapenburg. He ends by giving further instructions with regard to the unloading.

[NAT; UNI, ZOC, GEO, MIN, BOT]

536. S.J. Brugmans (Leyden) to the governors of the university (Leyden); shortly before 29 December 1815:

Brugmans informs the governors of the university about the safe arrival of the shipment of objects of natural history in Leyden.

[UBL AC II-2; UNI, ZOC, GEO, MIN, BOT]

CHAPTER 13 - BUILDING UP A COLLECTION

The collection of documents regarding the subject of building up a collection is rather small. Perhaps the conclusion is justified that extending his collections was not Brugmans's first priority, or that the letters with regard to this subject have been rare from the beginning, or even that they have been lost. However, in more than one letter Brugmans complains about the fact that the supply of plants from the East Indies by Reinwardt were never (especially) meant for the Leyden Hortus, but always for the gardens of Amsterdam, Ghent and Leuven. One of the major sources of new plants was the quickly expanding garden of his best friend, Martinus van Marum, who soon after the start of his career in Haarlem, more and more turned towards botany and gardening. In 1803 Van Marum bought the estate 'Plantlust', alongside the river 'Spaarne'. Soon an orangery and a greenhouse were built. In 1814 his collection of living plants counted already more than 3.500 species. Several of the following letters illustrate the important relation between Van Marum and Brugmans with regard to the exchange of living plants and seeds. Other examples of a botanical 'connection' were those Brugmans maintained with several important botanists living in Paris. First of all there was his old friend André Thouin, one of the 'professeurs-administrateurs' of the 'Muséum National d'Histoire Naturelle', with whom he was already acquainted since 1791. Secondly there was his friendly relationship with the South African bryologist Cornelis Hendrik Persoon, who spent most of his life in Paris. Brugmans greatly admired him. Persoon had developed a remarkable knowledge of the cryptogames. André Thouin was responsible for the 'Jardin des Plantes', especially with regard to the plant species which were economically important. As we know, Brugmans had assisted Thouin in 1795-1796 with the preparation of the shipments from The Hague to Paris. Perhaps Thouin's actions for the benefit of Brugmans were a favour in return, if we consider the contents of the first letter given in this chapter.

Another scientist with whom Brugmans exchanged plants was A. Broussonnet, who after his return from the Antilles to his home town Montpellier, expressed his hope that Brugmans would be able to help him to restore the old

glory of the 'Jardin des Plantes' of Montpellier. Chapter 6 ('Military Medicine') describes the contents of a letter sent by Broussonnet to Brugmans, while he is still staying on the island of Tenerife and collecting plants there. Taking into account what is known about Brugmans's character as well as the fact that he had a strong desire for enriching his botanical collection, he will undoubtedly have lent his ear to Broussonnet's request. Another source, which rendered him a contribution to his collection, was the 'Hortus Botanicus' of the University of Harderwijk, after it had been closed down in 1813. This event provided him with the building materials for a greenhouse and an orangery, but not until he had exerted some pressure. Contributions to the zoological collection of Brugmans have among others been made by Joseph Banks (London), André Thouin (Paris) and Pierre Marie Auguste Broussonet (Montpellier).

Brugmans arranged his collection of natural history on the basis of comparative anatomy, a field of zoology, which was developing rapidly since the mid-seventies of the eighteenth century. All in all the zoological collection founded by Allamand, Brugmans's predecessor as a professor of natural history at Leyden University, was substantially extended. It has been stressed by his biographers that he frequently demonstrated objects of his collection to his numerous audience, listeners who sometimes came from far and wide, and who were not only students of his faculty, but also his colleagues and former students.

According to the information given by Van der Klaauw (1936) a great deal of the extension of Brugmans's zoological and zootomical collection has to be attributed to the efforts of his assistant, Johan Le Francq van Berkhey, lecturer of comparative anatomy at Leyden University, who had also worked under Allamand.

537. S.J. Brugmans (Leyden) to J.D. Pasteur (Dordrecht); 23 January 1792:

Brugmans thanks Pasteur – secretary of the 'Uitvoerend Bewind' of the 'Bataafsche Republiek' – for his letters of 20 November and 2 December 1791. He apologizes for not having answered his letters until now. He also thanks him for sending him a chest, containing the skeleton of a wouwouw monkey. He would like to compare this object with other similar skeletons,

because in his view this species is identical with the small gibbon, described by Buffon. He also discusses the difference of opinion between the author of the treatise published in the *Natuurkundige Verhandelingen* of the ‘Hollandsche Maatschappij der Wetenschappen’ and Petrus Camper. Furthermore he thanks him for sending him several skulls of Chinese and ‘Indians’ (inhabitants of the East India) – ‘objects, which might contribute to unriddle the secrets of human anatomy!’ He asks to supply him with a few bird skulls. He underlines Pasteur’s opinion with regard to the *Systema Naturae* of Linnaeus, but adds remarks on several weak aspects of Pasteur’s treatise and also with respect to his plan to add an introduction (giving concise information about the character of these animals) to the zoological descriptions. Furthermore he proposes several suggestions for the improvement of Pasteur’s treatise.

[UBA KNMG Ba 110a; ZOC, ANA, COB]

538. S.J. Brugmans (Leyden) to A. Thouïn (Paris) and A.G. Bosc (Paris); 8 May 1792:

Brugmans thanks for the seeds his friend has sent him. He apologizes for not having sent a collection of seeds himself until now. At the moment the botanist Marron is staying in Leyden. Furthermore he adds a list of seeds, containing many species wanted by Thouïn. As several of these species do not produce any seeds he asks him to indicate the best way of sending living plants to Paris. For the time being the political situation in France is blocking his plans to make a round trip there.

[MNHN Ms 1985; BOT, ZOC, COB]

539. S.J. Brugmans (Leyden) to J.D. Pasteur (Dordrecht); 2 February 1794:

Brugmans opens his letter to Pasteur by explaining his late answer. He has tried to send him the complete works of Pallas, but he happened to have only 13 fascicles of it in his possession. Therefore he has asked several publishers. He spends a few words on *Ursus maritimus* and refers to Cook’s *Voyage in the Northern Hemisphere*, Volume III, tab. 73, and to Blumenbach’s *Historia*

Naturalis (latest edition). Furthermore he discusses the systematic position of various animals, which have been described by Linnaeus in his *Systema Naturae*, among others those of the kangaroo and the gerboa and he gives arguments for their systematic position. Because of the similarity of their sets of teeth, these animals have to occupy adjacent positions. He prefers Linnaeus's system above the one designed by Blumenbach. Finally he thanks Pasteur for sending him a raccoon and he recommends himself for further gifts.

[UBA Died 110c; ZOC, COB]

540. S.J. Brugmans (Leyden) to C.H. Persoon (Paris); 1 July 1796:

First of all Brugmans observes that an earlier letter sent to Paris, in which he has discussed Persoon's *Observationes Mycologicae*, must have been lost. He eagerly awaits the publication and sending of Persoon's *Synopsis Fungorum* and *Flora Gottingensis*. He promises to send the reviews written by Persoon to the Dutch journals and to recommend him as a possible member to various scientific societies. His own research with respect to the useful productions of nature will probably not be carried out, because of the troublesome situation of public funds. As a matter of fact he wants to send Persoon and Blumenbach several dissertations, which have been published in the Batavian Republic, but he cannot afford the money for the shipping. He asks Persoon to send him various cryptogames to be added to his collection and informs him about the death of professor S.J. van Geuns, who taught botany and chemistry at the University of Utrecht. The lectures on chemistry will be given by N.C. de Fremery. He ends his letter by observing that he has been given the supervision of the French and Dutch military hospitals in the Batavian Republic. This fact will possibly give him many opportunities to carry out physiological experiments.

[UBL BPL 243; BOT, MME, COB]

541. S.J. Brugmans (Leyden) to the 'Muséum National d'Histoire Naturelle' (Paris); 5 Fructidor An 7 (22 August 1799):

Brugmans signs and returns the receipt for 13 objects of natural history, which have been sent to him by the ‘professeurs-administrateurs’ of the ‘Museum National d’Histoire Naturelle’ (Paris). They are meant to be added to the Leyden collection.

[AN-CHAN AJ 15-838; ZOC, COB]

542. J.H. Peyzel (Tunis) to S.J. Brugmans (Leyden); 21 June 1819:

Peyzel – surgeon major on board of H.M. corvette ‘Lynx’, anchored in the Bay of Tunis – is very pleased about the fact that he has been able to send Brugmans a human skull, found at a depth of approximately 30 feet, in an old grave in Athens. Two more skulls from the same grave will be sent by him to a German Prince. This result has been made possible by the efforts of Colonel Rottiers. He is waiting for Brugmans’s confirmation of the exceptional nature of this gift.

[UBL AC 73-II; ANA, COB]

CHAPTER 14 – MISCELLANEOUS

In this last chapter a few remaining letters are discussed, which could not be included in one of the preceding chapters.

543. S.J. Brugmans (Leyden) to J.D. Pasteur (Dordrecht); 9 October 1793:

Brugmans opens his letter with a remark regarding Pasteur's treatise on birds, written after the example of Buffon's opus. He himself would not dare to write a treatise in French. He praises Pasteur and Blussé for their ambitious attempt. He has promised to write several supplements – among others on the anatomy (a subject which is still lacking completely in Pasteur's work). He judges it wise to have a prospectus published. He promises to send more remarks later. Last summer he has spent some time in Friesland and Groningen. He wonders why Pasteur's booklet on natural history is so little known. This is perhaps due to the fact that its prospectus has been circulated so sparingly. He hopes to receive a few illustrations soon (among others drawn by A.G. Camper).

[UBA KNMG Ba 110b; ZOC]

544. Secretary of the 'Provinciaal Utrechtsch Genootschap van Kunsten en Wetenschappen' (Utrecht) to S.J. Brugmans (Leyden), A. Bonn (Amsterdam) and N. de Bondt (Amsterdam); around 7 June 1795:

The addressees are informed about the decision, made by the governors of the 'Provincial Society of Arts and Sciences' (Utrecht), that they have been appointed members of a jury to examine the treatise written by Christiaan Schacht, professor of chemistry and natural history at the university of Harderwijk, in which the author discusses the limits set by nature to the generation of hybrids.

[GAU 713-11.10; ZOC]

545. Secretary of the ‘Provinciaal Utrechtsch Genootschap van Kunsten en Wetenschappen’ (Utrecht) to S.J. Brugmans (Leyden); around 13 April 1800:

The secretary informs Brugmans that he and A. Bonn have been commissioned to evaluate the treatise entered by N.C. de Fremery (Utrecht) on the anatomy of birds (especially with regard to the question how they manage to fly at different altitudes in the atmosphere).

[GAU 713-11.10; ZOC]

546. Louis Bonaparte (Paris) to S.J. Brugmans (Paris); 16 February 1806:

Louis Bonaparte (not yet King of Holland) asks Brugmans, at the moment residing in the ‘Hôtel de l’Europe’ (in Paris), to inform him about the results of the consultation with respect to his complaints about eczema. Among the treatments with respect to his disease he has observed the one described as ‘inoculation de la gale’ and he wants to know Brugmans’s opinion on it. He is eager to submit himself to this treatment before he will undergo the other treatment, which at an earlier time has been proposed by Brugmans himself.

[UBA KNMG Ef 51; MED]

547. Chr.G. Heyne (Göttingen) to S.J. Brugmans (Leyden); 6 April 1807:

Heyne thanks his colleague for sending him a chest full of books. He has tried to send a quick answer, to which he has added two letters of credit, one at a value of 125 guilders and 1 penny and the other at a value of 61 guilders and 19 pennies. He also mentions the names of several other authors. For example, he is interested in the works of Gerardus Vrolik, Petrus Camper and Martinus Stuart. He also asks Brugmans to send him the still missing volumes of the *Tegenwoordige Staat der Nederlanden* (‘The Actual situation of the Netherlands’), and asks him to postpone the sending until a more convenient moment has arrived. He wants to be informed about new and possibly interesting publications.

[UBA Died 73 H 14, ANA, ZOC]

548. S.J. Brugmans (Leyden) to C.J. Temminck (Leyden); 24 December 1813:

Brugmans informs Temminck that he had to postpone his trip to Amsterdam for several days. He wanted to see him and thank him personally for his important accomplishment and offer him the illustration of a preparation. With pleasure he has read Temminck's letter sent to him. Ornithologists will surely feel very obliged to Temminck because of his beautiful monograph. They will also be looking forward to its continuation. He ends his letter by giving the assurance of his feelings of esteem and calls himself Temminck's obedient servant.

[NAT; ZOC]

549. S.J. Brugmans (Leyden) to ?? Ulens (??); shortly before 25 May 1818:

Once again Brugmans urgently asks Ulens not to visit Mr. Tweygang, as he has done yesterday.

[KB 129 A 27]

550. S.J. Brugmans (Leyden) to ?? von Zinkgraaff (??); 9 August 1818:

Brugmans informs Zinkgraaff about his next journey to Germany. He has also planned to see him. He assures the addressee of his willingness to evaluate a text written by him.

[UBL BPL 1886]

551. S.J. Brugmans (Leyden) to L. Suringar (Leyden); 25 April 1819:

Brugmans asks Suringar, pastor in Leyden, to remember the daughter of Mrs. Pompe in his prayers, because her illness is worsening.

[UBL BPL 2730]

552. S.J. Brugmans (Leyden) to J. Voet van Campen (Leyden); 11 May 1819:

Brugmans informs J. Voet van Campen, pastor in Leyden that the state of health of the daughter of Mrs. Pompe is still worsening. He asks him to remember her in his prayers. If she is recovering he will let him know as soon as possible.

[KB 121 A 13]

CHRONOLOGICAL INDEX OF LETTERS FROM AND TO BRUGMANS

Preliminary remark

The following chronological survey gives the complete list of letters ‘to’ and ‘from’ Brugmans, his reports on treatises, sent to the ‘Hollandsche Maatschappij der Wetenschappen’ (‘Dutch Society of Sciences’, Haarlem) and to the ‘Eerste Klasse’ (‘First Class’) of the ‘Koninklijk Hollandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten’ (‘Royal Dutch Institute of Sciences, Literature and Fine Arts’, or Royal Netherlands Institute of Sciences, Literature and Fine Arts’, Amsterdam, from December 1813 onwards known as ‘Royal Netherlands Institute of Sciences Literature and Fine Arts’). This survey has been divided into periods of five years each, in order to illustrate Brugmans’s rapidly increasing activities and the growing number of his contributions to both societies.

Editors note: the ranking numbers in the list below are not the same as the numbers, used in the ‘register of letters’, summed up in the chapters before.

Period 1780-1785

001-UBL BPL 755: S.J. Brugmans (Groningen) to J.H. van Swinden (Franeker); 24 November 1780.

002-UBL BPL 755: S.J. Brugmans (Groningen) to J.H. van Swinden (Franeker); 5 April 1781.

003-ATS 2248: S.J. Brugmans (Groningen) to J. van Breda (Delft); 17 November 1781.

004-UBL BPL 755: S.J. Brugmans (Groningen) to J.H. van Swinden (Franeker); 21 February 1783.

005-UBL BPL 755: S.J. Brugmans (Groningen) to J.H. van Swinden (Franeker); 13 September 1783.

006-UBL BPL 755a: J.H. van Swinden (Franeker) to S.J. Brugmans (Leyden); 16 October 1783.

- 007-UBL BPL 755: S.J. Brugmans (Leyden) to J.H. van Swinden (Franeker); shortly before 4 November 1783.
- 008-UBL BPL 755: S.J. Brugmans (Groningen) to J.H. van Swinden (Franeker); 4 November 1783.
- 009-UBL BPL 755a: J.H. van Swinden (Franeker) to S.J. Brugmans (Groningen); 24 November 1783.
- 010-UBL BPL 755: S.J. Brugmans (Leyden) to J.H. van Swinden (Franeker); 10 January 1784.
- 011-UBL BPL 755a: J.H. van Swinden (Franeker) to S.J. Brugmans (Groningen); 5 March 1784.
- 012-UBL BPL 755a: S.J. Brugmans (Groningen) to J.H. van Swinden (Franeker); 14 December 1784.
- 013-UBL BPL 755a: J.H. van Swinden (Franeker) to S.J. Brugmans (Groningen); 27 December 1784.
- 014-UBL BPL 755a: J.H. van Swinden (Franeker) to S.J. Brugmans (Groningen); 7 May 1785.
- 015-UBL BPL 755: S.J. Brugmans (Groningen) to J.H. van Swinden (Amsterdam); 6 July 1785.
- 016-UBL BPL 755: S.J. Brugmans (Franeker) to J.H. van Swinden (Amsterdam); 8 November 1785.

Period 1786-1790

- 017-UBL BPL 755: S.J. Brugmans (Leyden) to J.H. van Swinden (Amsterdam); 11 October 1786.
- 018-UBL BPL 755: S.J. Brugmans (Leyden) to J.H. van Swinden (Amsterdam); 3 March 1787.
- 019-NA-NHA HMW 444-63: S.J. Brugmans (Leyden) to C.C.H. van der Aa (Haarlem); 25 May 1788.
- 020-UBL BPL 755: S.J. Brugmans (Leyden) to J.H. van Swinden (Amsterdam); 28 February 1790.
- 021-BM-Additional and Egerton Manuscripts-MS 8097-NHM 92 Ban: S.J. Brugmans (Leyden) to J. Banks (London); 29 August 1790.

Period 1791-1795

- 022-BM-Additional and Egerton Manuscripts-MS 8097-NHM 92 Ban: S.J. Brugmans (Leyden) to J. Banks (London); 25 February 1791.
- 023-NA-NHA HMW 444-394.57 R: S.J. Brugmans (Leyden) to C.C.H. van der Aa (Haarlem); 10 March 1791.
- 024-BM-Additional and Egerton Manuscripts-MS 8097-NHM 92 Ban: S.J. Brugmans (Leyden) to J. Banks (London); 15 March 1791.
- 025-NA-NHA HMW 444-390.42(2) R: S.J. Brugmans (Leyden) to C.C.H. van der Aa (Haarlem); 17 April 1791.
- 026-NA-NHA HMW 444-66: S.J. Brugmans (Leyden) to C.C.H. van der Aa (Haarlem); 5 October 1791.
- 027-BM-Additional and Egerton Manuscripts-MS 8097-NHM 92 Ban: S.J. Brugmans (Leyden) to J. Banks (London); early October 1791.
- 028-BM-Dawson and Turner Correspondence 7-NHM 92 Ban-Botany Library: J. Banks (London, Soho Square) to S.J. Brugmans (Leyden); October 1791.
- 029-UBA Ba 110a: S.J. Brugmans (Leyden) to J.D. Pasteur (Dordrecht); 23 January 1792.
- 030-NA-NHA HMW 444-390.42(3) R: S.J. Brugmans (Leyden) to C.C.H. van der Aa (Haarlem); 28 February 1792.
- 031-BM-Additional and Egerton Manuscripts-MS 8098-NHM 92 Ban: S.J. Brugmans (Leyden) to J. Banks (London); 16 April 1792.
- 032-MNHN Ms 1985: S.J. Brugmans (Leyden) to A. Thouin (Paris) and A.G. Bosc (Paris); 8 May 1792.
- 033-BM-Additional and Egerton Manuscripts-MS 8098-NHM 92 Ban: S.J. Brugmans (Leyden) to J. Banks (London); 22 September 1793.
- 034-UBA Ba 110b: S.J. Brugmans (Leyden) to J.D. Pasteur (Dordrecht); 9 October 1793.
- 035-UBA Ba 110c: S.J. Brugmans (Leyden) to J.D. Pasteur (Dordrecht); 2 February 1794.
- 036-L-Met: J. Janssen (St-Gerlach) to S.J. Brugmans (Leyden) around 10 April 1795.

037-GAU 713-11.10: Secretary of the 'Provinciaal Utrechtsch Genootschap van Kunsten en Wetenschappen' (Utrecht) to S.J. Brugmans (Leyden), A. Bonn (Amsterdam) and N. Bondt (Amsterdam); around 7 June 1795.

038-ATS 2273: S.J. Brugmans (Leyden) to J. van Breda (Delft); 11 June 1795.

039-L-Met: B. Hussem (Feyenoort) to S.J. Brugmans (Leyden); 22 June 1795.

040-ATS 2273: S.J. Brugmans (Leyden) to J. van Breda (Delft); 10 July 1795.

041-ATS 2273: S.J. Brugmans (Leyden) to J. van Breda (Delft); 18 August 1795.

Period 1796-1800

042-UBA Ba 110d: S.J. Brugmans (Leyden) to J.D. Pasteur (Dordrecht); 28 April 1796.

043-NA-NHA HMW 444-397.69(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring 1796.

044-UBL BPL 243: S.J. Brugmans (Leyden) to C.H. Persoon (Paris); 1 July 1796.

045-L-Met: F.S. Pfenniger (Zuidlaren?) to S.J. Brugmans (Leyden); around 1 July 1796.

046-L-Met: B. Hussem (Feyenoort) to S.J. Brugmans (Leyden); 22 July 1796.

047-L-Met: B. Hussem (Feyenoort) to S.J. Brugmans (Leyden); 13 December 1796.

048-L-Met: C. Scheidler (??) to S.J. Brugmans (Leyden); 31 March 1797.

049-L-Met: B. Hussem (Feyenoort) to S.J. Brugmans (Leyden); 21 February 1798.

050-UBL BPL 1037: S.J. Brugmans (Leyden) to J. Valckenaer (Madrid); 22 February 1798.

051-L-Met: J.C. Reich (Leyden?) to S.J. Brugmans (Leyden); end of February 1798.

052-UBL BPL 1037: S.J. Brugmans (Leyden) to J. Valckenaer (Madrid); 8 May 1798.

053-L-Met: S.J. Brugmans (Leyden); short note; 28 May 1798.

054-L-Met: B. Hussem (Rotterdam) to S.J. Brugmans (Leyden); end of 1798.

055-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 27 February 1799.

056-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 5 April 1799.

- 057-NA-NHA KNI 175-7: J. van Heekeren junior (The Hague) to S.J. Brugmans (Leyden), P. Driessen (Groningen), G. Vrolik (Amsterdam), J.R. Deiman (Amsterdam) and G.G. ten Haaff (Rotterdam); 6 April 1799.
- 058-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to the Agent of National Education (The Hague); 29 April 1799.
- 059-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to the Agent of National Education (The Hague); 14 May 1799.
- 060-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to the Agent of National Education (The Hague); 15 May 1799.
- 061-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to the Agent of National Education (The Hague); 17 May 1799.
- 062-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to the 'Commissie voor de samenstelling van de *Pharmacopea Batava*'; 24 May 1799.
- 063-NA-NHA KNI 175-7: P. Driessen (Groningen) to S.J. Brugmans (Leyden); 1 June 1799.
- 064-NA-NHA KNI 175-7: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 6 June 1799.
- 065-UBA Ba 110e: S.J. Brugmans (Leyden) to J.D. Pasteur (Dordrecht); 28 June 1799.
- 066-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to the Agent of National Education (The Hague); early August 1799.
- 067-AN-CHAN AJ 15-838: S.J. Brugmans (Leyden) to the 'Muséum National d'Histoire Naturelle' (Paris); 5 Fructidor An 7 (22 August 1799).
- 068-L-Met: Unknown person (??) to S.J. Brugmans (Leyden): around 31 January 1800.
- 069-NA-NHA HMW 444-399.78(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 February 1800.
- 070-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 February 1800.
- 071-GAU 713-11.10: Secretary of the 'Provinciaal Utrechtsch Genootschap van Kunsten en Wetenschappen' (Utrecht) to S.J. Brugmans (Leyden); around 13 April 1800.

- 072-NA-NHA KNI 175-7: P. Driessen (Groningen) to S.J. Brugmans (Leyden); 28 June 1800.
- 073-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to J.R. Deiman (Amsterdam) and G. Vrolik (Amsterdam); 5 October 1800.
- 074-L-Met: S.J. Brugmans (Leyden): short note: around 31 October 1800.
- 075-UBL LTK 1567: S.J. Brugmans (Leyden) to the Agent of National Education (The Hague); 3 December 1800.
- 076-UBL LTK 1567: S.J. Brugmans (Leyden) to the Agent of National Education (The Hague); 8 December 1800.
- 077-NA-NHA HMW 444-78: M. van Marum (Haarlem) to S.J. Brugmans (Leyden); 28 December 1800.
- 078-NA-NHA HMW 444-78: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 30 December 1800.
- 079-L-Met: J.C. Reich (Leyden) to S.J. Brugmans (Leyden); around 31 December 1800.

Period 1801-1805

- 080-L-Met: J.C. Reich (Leyden) to S.J. Brugmans (Leyden); around 15 January 1801.
- 081-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 6 February 1801.
- 082-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 18 March 1801.
- 083-L-Met: J.C. Reich (Leyden) to S.J. Brugmans (Leyden); around 31 March 1801.
- 084-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 22 April 1801.
- 085-L-Met: J.C. Reich (Honselersdijk) to S.J. Brugmans (Leyden); around 30 April 1801.
- 086-L-Met: H. Gelpke ('s-Gravenmoer) to S.J. Brugmans (Leyden); 24 June 1801.
- 087-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 27 June 1801.

- 088-NA-NHA 529-14: M. van Marum (Haarlem) to S.J. Brugmans (Leyden); 28 June 1801.
- 089-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 5 November 1801.
- 090-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 February 1802.
- 091-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 18 April 1802.
- 092-NA-NHA HMW 444-400.83(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1802.
- 093-NA-NHA HMW 444-400,84(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1802.
- 094-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to the 'Commissie voor de samenstelling van de *Pharmacopea Batava*'; 16 May 1802.
- 095-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 16 May 1802.
- 096-NA-NHA KNI 175-7: P. Driessen (Groningen) to S.J. Brugmans (Leyden), J.R. Deiman (Amsterdam) and G. Vrolik (Amsterdam); 27 May 1802.
- 097-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to the 'Raad van Binnenlandsche Zaken' (The Hague); 3 June 1802.
- 098-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to the 'Commissie voor de samenstelling van de *Pharmacopea Batava*'; 1 July 1802.
- 099-NA-NHA KNI 175-7: S.J. Brugmans (Groningen) to G. Vrolik (Amsterdam) and J.R. Deiman (Amsterdam); 24 July 1802.
- 100-L-Met: J.C. Reich (Leyden) to S.J. Brugmans (Leyden); 30 July 1802.
- 101-NA-NHA 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 25 September 1802.
- 102-NA-NHA 175-7: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 27 September 1802.
- 103-NA-NHA 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); September 1802.
- 104-L-Met: ?? De Mees (Haarlem) to S.J. Brugmans (Leyden); 1 October 1802.

- 105-L-Met: A. Broussonet (Ste. Croix, Tenerife) to S.J. Brugmans (Leyden); 1. Brumaire An 11 (23 October 1802).
- 106-L-Met: F. Beneker (Kampen) to S.J. Brugmans (Leyden); 10 November 1802.
- 107-UBL-BPL 755: S.J. Brugmans (Leyden) to J.H. van Swinden (Amsterdam); 10 December 1802.
- 108-UBL-BPL 755a: J.H. van Swinden (Amsterdam) to S.J. Brugmans (Leyden); 17 December 1802.
- 109-UBL-BPL 755a: J.H. van Swinden (Leyden) to S.J. Brugmans (Leyden); 18 December 1802.
- 110-L-Met: H. Lichtenstein (Capetown) to S.J. Brugmans (Leyden); 31 January 1803.
- 111-NA-NHA HMW 444-403.95(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 21 February 1803.
- 112-NA-NHA 444-81: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 23 February 1803.
- 113-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 29 March 1803.
- 114-L-Met: J.C. Reich (Leyden) to S.J. Brugmans (Leyden); 31 March 1803.
- 115-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 17 April 1803.
- 116-NA-NHA HMW 444-81: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 20 April 1803.
- 117-L-Met: J.C. Reich (Leyden) to S.J. Brugmans (Leyden); around 30 April 1803.
- 118-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to the 'Commissie voor de samenstelling van de *Pharmacopea Batava*'; 19 May 1803.
- 119-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to the 'Commissie voor de samenstelling van de *Pharmacopea Batava*'; 9 June 1803.
- 120-L-Met: S.J. Brugmans (Leyden): short note; 7 September 1803.
- 121-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 October 1803.
- 122-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to P. Driessen (Groningen), J.R. Deiman (Amsterdam) and G. Vrolik (Amsterdam); 22 October 1803.

- 123-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 15 November 1803.
- 124-UBL LTK 1567: S.J. Brugmans (Leyden) to the Agent of National Education (The Hague); 3 December 1803.
- 125-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to P. Driessen (Groningen), J.R. Deiman (Amsterdam) and G. Vrolik (Amsterdam); 6 December 1803.
- 126-UBL LTK 1567: S.J. Brugmans (Leyden) to J.H. van der Palm (Leyden); 8 December 1803.
- 127-L-Met: H.H. de Wildt (??) to S.J. Brugmans (Leyden); end of 1803.
- 128-L-Met: J.C. Reich (Leyden?) to S.J. Brugmans (Leyden); 15 January 1804.
- 129-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 11 February 1804.
- 130-NA-NHA HMW 444-399.82(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 13 March 1804.
- 131-NA-NHA HMW 444-399.82(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 6 April 1804.
- 132-NA-NHA HMW 444-399.82(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 8 April 1804.
- 133-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 25 April 1804.
- 134-L-Met: J.C. Reich (Leyden) to S.J. Brugmans (Leyden); 1 May 1804.
- 135-L-Met: ?? van Horn junior (Alkmaar) to S.J. Brugmans (Leyden); 12 May 1804.
- 136-NA-NHA HMW 444-82: M. van Marum (Haarlem) to S.J. Brugmans (Leyden); 13 May 1804.
- 137-NA-NHA HMW 444-82: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 18 May 1804.
- 138-L-Met: J.C. Reich (Leyden?) to S.J. Brugmans (Leyden); 15 June 1804.
- 139-NA-NHA HMW 444-403.95(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 March 1805.
- 140-NA-NHA HMW 444-403.95(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 March 1805.

- 141-UBL ASF 429: S.J. Brugmans (Leyden) to M.S. DuPui (Leyden), G. Sandifort (Leyden), J.N.G. Oosterdijk (Leyden) and N. Paradijs (Leyden); 30 March 1805.
- 142-NA-NHA HMW 444-403.96(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 April 1805.
- 143-NA-NHA HMW 444-403.96(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 April 1805.
- 144-NA-NHA HMW 444-401.87(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1805.
- 145-NA-NHA HMW 444-403.96(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1805.
- 146-NA-NHA HMW 444-404.102 R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1805.
- 147-NA-NHA HMW 444-83: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 1 November 1805.
- 148-NA-NHA HMW 444-83: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 26 November 1805.
- 149-NA-NHA HMW 444-405.103(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 24 December 1805.
- 150-NA-NHA HMW 444-83: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 26 December 1805.
- 151-NA-NHA HMW 444-83: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); around December 1805.
- 152-L-Met: S.J. Brugmans (Leyden): short note; end of 1805.

Period 1806-1810

- 153-AN-CHAN AF IV 1831: S.J. Brugmans (The Hague) to B. Giraud (Paris); 5 January 1806.
- 154-NA-NHA HMW 444-84: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); early January 1806.
- 155-UBA KNMG Ef 51: Louis Bonaparte (Paris) to S.J. Brugmans (Paris); 16 February 1806.

- 156-NA-NHA HMW 444-84: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); end of April 1806.
- 157-NA-NHA HMW 444-402.91(3) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1806.
- 158-NA-NHA HMW 444-404.101(1) R): S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1806.
- 159-NA-NHA HMW 444-84: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1806.
- 160-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to J.R. Deiman (Amsterdam); 1 May 1806.
- 161-NA-NHA HMW 444-84: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 May 1806.
- 162-NA-NHA HMW 444-399.76(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 10 May 1806.
- 163-NA-NHA-HMW 444-84: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 10 May 1806.
- 164-NA-NHA HMW 444-84: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 19 May 1806.
- 165-L-Met: ?? Mornac (Delft) to S.J. Brugmans (Leyden); 27 May 1806.
- 166-L-Met: S.J. Brugmans (Leyden) to the 'Koninglijke Courant' (??); early June 1806.
- 167-AN-CHAN: AF IV 1792: S.J. Brugmans (Leyden) to H.M. King Louis Bonaparte (Amsterdam); 23 July 1806.
- 168-AN-CHAN AF IV 1792: S.J. Brugmans (Middelburg) and B. Giraud (Middelburg) to H.M. King Louis Bonaparte (Amsterdam); 1 August 1806.
- 169-AN-CHAN AF IV 1792: S.J. Brugmans (Breda) and B. Giraud (Breda) to H.M. King Louis Bonaparte (Amsterdam); around 3 August 1806.
- 170-AN-CHAN: AF IV 1792: S.J. Brugmans (Nijmegen) and B. Giraud (Nymegen) to H.M. King Louis Bonaparte (Amsterdam); 5 August 1806.
- 171-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 9 August 1806.
- 172-AN-CHAN AF IV 1792: S.J. Brugmans (Leyden) and B. Giraud (Amsterdam) to H.M. King Louis Bonaparte (The Hague); 19 August 1806.

- 173-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 23 August 1806.
- 174-AN-CHAN AF IV 1792: B. Giraud (Amsterdam) and S.J. Brugmans (Leyden) to H.M. King Louis Bonaparte (Amsterdam); end of September 1806.
- 175-AN-CHAN AF IV 1792: S.J. Brugmans (Leyden) and B. Giraud (Amsterdam) to H.M. King Louis Bonaparte (Amsterdam); 14 October 1806.
- 176-NA-NHA KNI 175-7: D. Craanen (Rotterdam) to S.J. Brugmans (Leyden), P. Driessen (Groningen), G. Vrolik (Amsterdam) and J.R. Deiman (Amsterdam); 19 October 1806.
- 177-SHAT 3 Y^G 128: ?? Bonhomme (The Hague) to S.J. Brugmans (Leyden); 14 November 1806.
- 178-AN-CHAN AF IV 1792: S.J. Brugmans (Leyden) to H.M. King Louis Bonaparte (Amsterdam); 17 January 1807.
- 179-NA-NHA HMW 444-85: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 18 March 1807.
- 180-UBA Died 73 H 14: Chr.G. Heyne (Göttingen) to S.J. Brugmans (Leyden); 6 April 1807.
- 181-MMW 24 S 89: S.J. Brugmans (Leyden) to J. Meerman (The Hague); 9 April 1807.
- 182-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 17 April 1807.
- 183-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 30 April 1807.
- 184-MMW 24 S 89: S.J. Brugmans (Leyden) to J. Meerman (The Hague); 10 May 1807.
- 185-MMW 24 S 89: S.J. Brugmans (Leyden) to J. Meerman (The Hague); 17 June 1807.
- 186-MMW 24 S 89: S.J. Brugmans (Leyden) to J. Meerman (The Hague); 19 July 1807.
- 187-AN-CHAN AF IV 1827: H.M. King Louis Bonaparte (Aix-la-Chapelle) to S.J. Brugmans (Leyden); 27 August 1807.
- 188-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 22 September 1807.

- 189-L-Met: J.C. Reich (Leyden) to S.J. Brugmans (Leyden); 20 December 1807.
- 190-NA-NHA HMW 444-403.97(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 21 March 1808.
- 191-NA-NHA HMW 444-406.115 R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 April 1808.
- 192-NA-NHA HMW 444-400.86(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 21 April 1808.
- 193-NA-NHA HMW 444-399.82(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1808.
- 194-NA-NHA HMW 444-399.82(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1808.
- 195-NA-NHA HMW 444-403.96(3) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1808.
- 196-NA-NHA HMW 444-86: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 1 May 1808.
- 197-NA-NHA HMW 444-407.120 R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 1 May 1808.
- 198-NA-NHA HMW 444-86: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 May 1808.
- 199-NA-NHA HMW 444-86: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 20 May 1808.
- 200-MMW 24 S 89: S.J. Brugmans (Leyden) to J. Meerman (The Hague); 22 June 1808.
- 201-KB-121 E 4: S.J. Brugmans (Leyden) to L. van Toulon (The Hague); 26 June 1808.
- 202-MMW 24 S 89: S.J. Brugmans (Leyden) to J. Meerman (The Hague); 7 August 1808.
- 203-MMW 24 S 89: S.J. Brugmans (Amsterdam) to J. Meerman (The Hague); 15 August 1808.
- 204-MMW 24 S 89: S.J. Brugmans (Leyden) to J. Meerman (The Hague); 26 September 1808.
- 205-MMW 24 S 89: S.J. Brugmans (Leyden) to J. Meerman (The Hague); 2 October 1808.

- 206-MMW 24 S 89: S.J. Brugmans (Leyden) to J. Meerman (The Hague); 19 December 1808.
- 207-L-Met: S.J. Brugmans (Leyden): short note; probably end of 1808.
- 208-G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), J.A. Bennet (Leyden) and M. van Marum (Haarlem); 31 January 1809.
- 209-NA-NHA KNI 175-34.58: G. Vrolik (Amsterdam) to M. van Geuns (Utrecht), A. Bonn (Amsterdam) and S.J. Brugmans (Leyden); 31 January 1809.
- 210-NA-NHA KNI 175-34.73: G. Vrolik (Amsterdam) to A. Bonn (Amsterdam), S.J. Brugmans (Leyden) and several other members of the 'Eerste Klasse' of the 'KHI'; 30 April 1809.
- 211-NA-NHA HMW 444-405.103(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1809.
- 212-NA-NHA HMW 444-87: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 7 May 1809.
- 213-NA-NHA KNI 175-34.86: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden) and A. Bonn (Amsterdam); 11 June 1809.
- 214-NA-NHA KNI 175-34.99: G. Vrolik (Amsterdam) to M. van Marum (Haarlem), A. Bonn (Amsterdam) and S.J. Brugmans (Leyden); 8 August 1809.
- 215-L-Met: ?? Plato (??) to S.J. Brugmans (Leyden); 13 August 1809.
- 216-NA-NHA KNI 175-34.115: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden) and other members of the 'Eerste Klasse' of the 'KHI'; 15 September 1809.
- 217-UBL BPL 609 II: S.J. Brugmans (Leyden) to C.G.C. Reinwardt (Amsterdam); 30 November 1809.
- 218-NA-NHA KNI 175.34.152: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), M. van Marum (Haarlem) and J.A. Bennet (Leyden); 6 January 1810.
- 219-UBL-BPL 609 II: S.J. Brugmans (Leyden), J.A. Bennet (Leyden) and C.G.C. Reinwardt (Amsterdam) to G. Vrolik (Amsterdam); 21 January 1810.
- 220-NA-NHA KNI 175-34.163: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden) and M. van Marum (Haarlem); 2 March 1810.

- 221-NA-NHA KNI 175-34.164: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), M. van Geuns (Utrecht) and J.A. Bennet (Leyden); 2 March 1810.
- 222-NA-NHA HMW 444-88: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 4 March 1810.
- 223-NA-NHA HMW 444-88: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 12 March 1810.
- 224-NA-NHA KNI 175-34.170: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), H. Aenae (Amsterdam), M. van Marum (Haarlem) and W. van Barneveld (Hattem); 24 March 1810.
- 225-NA-NHA KNI 175-43: S.J. Brugmans (Leyden), M. van Marum (Haarlem) and J.A. Bennet (Leyden) to the 'Eerste Klasse' of the 'KHI' (Amsterdam); 17 April 1810.
- 226-KNI 175-43: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 17 April 1810.
- 227-NA-NHA HMW 444-88: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 18 April 1810.
- 228-NA-NHA HMW 444-406.109 R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1810.
- 229-NA-NHA HMW 444-88: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 11 May 1810.
- 230-NA RANH KNI 175-34.192: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 25 June 1810.
- 231-NA RANH KNI 175-43: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 14 July 1810.
- 232-NA RANH KNI 175-34.202: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden) and C.G.C. Reinwardt (Amsterdam); 28 July 1810.
- 233-L-Met: S.J. Brugmans (Leyden): short note; probably end of July 1810.
- 234-L-Met: S.J. Brugmans (Leyden): short note; end of September 1810.
- 235-NA RANH KNI 175-34-223: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), M. van Marum (Haarlem), A.G. Camper (Klein Lankum, near Franeker) and C.G.C. Reinwardt (Amsterdam); 8 October 1810.
- 236-NA-NHA KNI 175-34.226: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden) and J.A. Bennet (Leyden); 23 October 1810.

237-NA-NHA KNI 175-43: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 3 November 1810.

238-NA-NHA KNI 175-34.232: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 4 November 1810.

239-IDF Ms 2457: S.J. Brugmans (Leyden) to E.J. Thomassen à Thuessink (Groningen); 4 December 1810.

240-NA-NHA KNI 175-34.240: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 5 December 1810.

Period 1811-1815

241-NA-NHA HMW 444-89: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 11 January 1811.

242-SHAT 3Y^G 128: S.J. Brugmans (Leyden) to the 'Ministre-Directeur de l'Administration de la Guerre' (Paris); 12 January 1811.

243-NA-NHA HMW 444-89: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 23 January 1811.

244-NA-NHA HMW 444-89: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 30 January 1811.

245-NA-NHA HMW 444-406.108(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 30 January 1811.

246-EASSA Car 9 Doss 43: S.J. Brugmans (Leyden) to the 'Commissaire-Ordonnateur' (Amsterdam); 31 January 1811.

247-NA RANH HMW 444-403.99(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 February 1811.

248-EASSA Car 9 Doss 43: S.J. Brugmans (Leyden) to the leading officers of the 'Militair-geneeskundige Dienst'; 4 February 1811.

249-EASSA Car 9 Doss 43: S.J. Brugmans (Leyden) to the 'Commissaire-Ordonnateur' (Amsterdam); 7 February 1811.

250-NA-NHA HMW 444-89: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 March 1811.

251-NA-NHA HMW 444-89: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 6 March 1811.

- 252-SHAT 3 Y^G 128: 'Ministre-Directeur de l'Administration de la Guerre' (Paris) to S.J. Brugmans (Leyden); 13 March 1811.
- 253-SHAT 3 Y^G 128: S.J. Brugmans (Leyden) to the 'Ministre-Directeur de l'Administration de la Guerre' (Paris); 28 March 1811.
- 254-NA-NHA HMW 444-89: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 April 1811.
- 255-SHAT 3 Y^G 128: 'Ministre-Directeur de l'Administration de la Guerre' (Paris) to S.J. Brugmans (Leyden); 15 April 1811.
- 256-NA-NHA HMW 444-89: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 18 May 1811.
- 257-NA-NHA HMW 444-410.135(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 18 May 1811.
- 258-NA-NHA HMW 444-89: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 29 May 1811.
- 259-EASSA Car 9 Doss 43: S.J. Brugmans (Leyden) to the 'Ministre-Directeur de l'Administration de la Guerre' (Paris); 29 May 1811.
- 260-NA-NHA HMW 444-89: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 29 May 1811.
- 261-SHAT 3 Y^G 128: S.J. Brugmans (Leyden) to the 'Ministre-Directeur de l'Administration de la Guerre' (Paris); 16 June 1811.
- 262-SHAT 3 Y^G 128: 'Ministre-Directeur de l'Administration de la Guerre' (Paris) to S.J. Brugmans (Leyden); 3 July 1811.
- 263-L-Met: C. van der Meer (Utrecht) to S.J. Brugmans (Leyden); early July 1811.
- 264-NA-NHA KNI 175-34-291: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 21 October 1811.
- 265-UBL ASF 278: S.J. Brugmans (Leyden): Imperial Decree; 22 October 1811.
- 266-IDF Ms 3233-I: S.J. Brugmans (Leyden) to G. Cuvier (Paris); 8 November 1811.
- 267-UBL BPL 2776: S.J. Brugmans (Leyden) to ?? Rosman (The Hague); 14 January 1812.
- 268-NA-NHA HMW 444-90: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 February 1812.

- 269-NA-NHA HMW 444-408.125(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 February 1812.
- 270-UBL ASF 429: N. Paradijs (Leyden) to S.J. Brugmans (Leyden), G. Sandifort (Leyden), J.N.G. Oosterdijk (Leyden) and M.S. DuPui (Leyden); 9 February 1812.
- 271-MNHN Ms 1985: S.J. Brugmans (Leyden) to A. Thouïn (Paris) and A.G. Bosc (Paris); 17 February 1812.
- 272-GNM Nbg Arch Autogr. K 37: S.J. Brugmans (Leyden) to an unknown person (Paris); 18 February 1812.
- 273-NA-NHA HMW 444-411.145(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 29 February 1812.
- 274-NA-NHA HMW 444-411.149 R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 4 March 1812.
- 275-NA-NHA HMW 444-410.140 R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1812.
- 276-NA-NHA HMW 444-90: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 11 May 1812.
- 277-NA-NHA HMW 444-408.128 R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 11 May 1812.
- 278-UBL AC 651: C. Flament (The Hague) to S.J. Brugmans (Leyden); 22 July 1812.
- 279-NA 2.01.12.1042: S.J. Brugmans (Leyden) to Baron D'Alphonse (Amsterdam); 2 August 1812.
- 280-UBL ASF 482: S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 17 August 1812.
- 281-UBL ASF 482: S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 5 October 1812.
- 282-UBL ASF 431: Deans of the Faculties to S.J. Brugmans (Leyden); 7 October 1812.
- 283-UBL ASF 431: G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 13 October 1812.
- 284-UBL AC 651: C. Flament (The Hague) to S.J. Brugmans (Leyden); 2 November 1812.

- 285-UBL ASF 482: S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 6 November 1812.
- 286-UBA 4 Bz 1: S.J. Brugmans (Leyden) to A. van Stipriaan Luïscius (Delft); 7 November 1812.
- 287-UBL ASF 482: G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 11 November 1812.
- 288-UBL ASF 482: S.J. Sandifort (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 15 November 1812.
- 289-UBA Bz 2: S.J. Brugmans (Leyden) to A. van Stipriaan Luïscius (Delft); 17 November 1812.
- 290-UBL ASF 431: G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 18 November 1812.
- 291-UBL ASF 482: S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 24 November 1812.
- 292-UBL BPL 945: S.J. Brugmans (Leyden) to M. Tydeman (Leyden); 25 November 1812.
- 293-UBL ASF 431: G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 28 November 1812.
- 294-UBL ASF 278: S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 3 December 1812.
- 295-UBL ASF 482: S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 9 December 1812.
- 296-UBL ASF 482: S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 12 December 1812.
- 297-UBL ASF 431: G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 16 December 1812.
- 298-UBL ASF 431: G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 16 December 1812.
- 299-UBL ASF 431: G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 16 December 1812.
- 300-UBL AC 651: J.H. van Swinden (Amsterdam) to S.J. Brugmans (Leyden); 17 December 1812.

- 301-UBL ASF 431: G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 18 December 1812.
- 302-UBL AC 651: J.H. van Swinden (Amsterdam) to S.J. Brugmans (Leyden); 18 December 1812.
- 303-UBL ASF 278: S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 20 December 1812.
- 304-UBL ASF 278: S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 28 December 1812.
- 305-UBL ASF 482: S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 5 January 1813.
- 306-UBL ASF 482: S.J. Brugmans (Leyden) to the Dean of the Faculty of Mathematics and Natural Sciences (Leyden); 9 January 1813.
- 307-UBL ASF 482: S.J. Brugmans (Leyden) to the Deans of the Faculties (Leyden); 12 January 1813.
- 308-UBL ASF 482: S.J. Brugmans (Leyden) to the Deans of the Faculties (Leyden); 21 January 1813.
- 309-UBL ASF 278: S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 1 February 1813.
- 310-UBL ASF 278: S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 15 February 1813.
- 311-UBL ASF 278: S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 18 February 1813.
- 312-NA-NHA HMW 444.91: M. van Marum (Haarlem) to S.J. Brugmans (Leyden); 20 February 1813.
- 313-NA-NHA HMW 444-91: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 21 February 1813.
- 314-NA-NHA HMW 444-91: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 24 February 1813.
- 315-NA-NHA HMW 444-412.156 R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 24 February 1813.
- 316-UBL ASF 278: S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 1 March 1813.

- 317-UBL ASF 278: S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 1 March 1813.
- 318-NA-NHA HMW 444-410.135(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 15 March 1813.
- 319-NA-NHA HMW 444-403.99(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 28 March 1813.
- 320-UBL ASF 278: S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 29 March 1813.
- 321-NA-NHA HMW 444-91: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 8 April 1813.
- 322-NA-NHA HMW 444-91: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 16 April 1813.
- 323-NA-NHA KNI 175-34.402: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 24 April 1813.
- 324-UBL ASF 482: S.J. Brugmans (Leyden) to the Deans of the Faculties (Leyden); 24 April 1813.
- 325-UBL ASF 278: S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 26 April 1813.
- 326-UBL ASF 482: S.J. Brugmans (Leyden) to the Deans of the Faculties (Leyden); 30 April 1813.
- 327-NA-NHA HMW 444-405.103(3) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1813.
- 328-NA-NHA HMW 444-406.108(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1813.
- 329-UBL AC 654: J.N.G. Oosterdijk (Leyden), M.S. DuPui (Leyden) and A. Ypey (Leyden) to S.J. Brugmans (Leyden); 5 May 1813.
- 330-UBL ASF 431: Dean of the Faculty of Medicine (Leyden) to S.J. Brugmans (Leyden); 5 May 1813.
- 331-NA-NHA HMW 444-405.103(3) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 11 May 1813.
- 332-NA-NHA HMW 444-406.108(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 18 May 1813.

- 333-UBL ASF 482: S.J. Brugmans (Leyden) to the Deans of the Faculties (Leyden); 28 May 1813.
- 334-UBL ASF 482: S.J. Brugmans (Leyden) to the Deans of the Faculties (Leyden); 30 May 1813.
- 335-NA-NHA KNI 175-34.408: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 1 June 1813.
- 336-UBL AC 651: J.H. van Swinden (Amsterdam) to S.J. Brugmans (Leyden); 5 June 1813.
- 337-UBL ASF 431: G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 6 June 1813.
- 338-UBL ASF 278: S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 8 June 1813.
- 339-UBL ASF 278: S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 24 June 1813.
- 340-UBL ASF 482: S.J. Brugmans (Leyden) to the Deans of the Faculties (Leyden); 5 July 1813.
- 341-UBL BPL 2107: S.J. Brugmans (Leyden) to M. Tydeman (Leyden); 8 July 1813.
- 342-UBL ASF 278: A. van den Ende (Haarlem) to S.J. Brugmans (Leyden); 14 July 1813.
- 343-UBL BPL 2107: M. Tydeman (Leyden) to S.J. Brugmans (Leyden); 16 July 1813.
- 344-UBL ASF 431: Dean of the Faculty of Medicine (Leyden) to S.J. Brugmans (Leyden); 6 September 1813.
- 345-UBL ASF 431: Dean of the Faculty of Medicine (Leyden) to S.J. Brugmans (Leyden); 6 September 1813.
- 346-NA-NHA KNI 175-35.25: G. Vrolik (Amsterdam) to M. van Geuns (Utrecht), A. Bonn (Amsterdam) and S.J. Brugmans (Leyden); 8 September 1813.
- 347-UBL AC 651: C. Flament (The Hague) to S.J. Brugmans (Leyden); 30 September 1813.
- 348-UBL ASF 278: S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 5 October 1813.

- 349-UBL ASF 278: S.J. Brugmans (Leyden) to the Deans of the Faculties (Leyden); 7 October 1813.
- 350-UBL ASF 431: Dean of the Faculty of Medicine (Leyden) to S.J. Brugmans (Leyden); 19 October 1813.
- 351-UBL ASF 431: G. Sandifort (Leyden) to S.J. Brugmans (Leyden); 19 October 1813.
- 352-UBL AC 651: C. Flament (The Hague) to S.J. Brugmans (Leyden); 20 October 1813.
- 353-CHAN AJ 16-1: S.J. Brugmans (Leyden) to the 'Grand-Maître de l'Université Impériale' (Paris); shortly after 23 October 1813.
- 354-UBL ASF 278: S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 15 November 1813.
- 355-UBL ASF 278: S.J. Brugmans (Leyden): Proceedings of the 'Conseil Académique' (Leyden); 22 November 1813.
- 356-NAT: S.J. Brugmans (Leyden) to C.J. Temminck (Leyden); 24 December 1813.
- 357-NA-NHA KNI 175-56(120).22 R: W. van Barneveld (Hattem), S.J. Brugmans (Leyden) and M. van Marum (Haarlem) to G. Vrolik (Amsterdam); 14 January 1814.
- 358-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 14 January 1814.
- 359-NA-NHA HMW 444-401.91(7) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 12 February 1814.
- 360-NA-NHA HMW 444-411.145(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 15 February 1814.
- 361-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 16 February 1814.
- 362-NA-NHA KNI 175-44: S.J. Brugmans (Leyden), M. van Geuns (Utrecht) and M. van Marum (Haarlem) to the 'Eerste Klasse' of the 'KNI'; 19 March 1814.
- 363-NA-NHA KNI 175-36.60: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 28 March 1814.

- 364-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem) 30 March 1814.
- 365-NA 2.02.01.5921: Secretary-General of State (The Hague) to S.J. Brugmans (Leyden); 6 April 1814.
- 366-NA-NHA HMW 444-412.163(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 26 April 1814.
- 367-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 26 April 1814.
- 368-UBL AC 651: S.J. Brugmans (Leyden) to the Rector of the university (Leyden); 28 April 1814.
- 369-NA-NHA HMW 444-408.126(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1814.
- 370-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); late May 1814.
- 371-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 7 June 1814.
- 372-G. Vrolik (Amsterdam) to the members of the 'Eerste Klasse' of the 'KNI'; 23 June 1814.
- 373-NA-NHA KNI 175-35.83; G. Vrolik (Amsterdam) to M. van Geuns (Utrecht), A. Bonn (Amsterdam) and S.J. Brugmans (Leyden); 25 June 1814.
- 374-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 29 June 1814.
- 375-NA-NHA KNI 175-35.85: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 7 July 1814.
- 376-NA-NHA KNI 175-35.90: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), J.A. Bennet (Leyden) and C.G.C. Reinwardt (Amsterdam); 19 July 1814.
- 377-NA-NHA KNI 175-44: S.J. Brugmans (Leyden) to the 'Eerste Klasse' of the 'KNI'; 4 August 1814.
- 378-NA-NHA KNI 175-35.115: G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam), S.J. Brugmans (Leyden), P. Driessen (Groningen) and G. Vrolik (Amsterdam); 19 September 1814.
- 379-L-Met: S.J. Brugmans (Leyden): short note; 15 October 1814.

- 380-NA-NHA KNI 175-35.119: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 19 October 1814.
- 381-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 21 October 1814.
- 382-NA-NHA KNI 175-35-137: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 28 December 1814.
- 383-NA-NHA KNI 175-35,145: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 16 February 1815.
- 384-NA-NHA HMW 444-410.135(3) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 20 February 1815.
- 385-NA-NHA HMW 444-412.167(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 13 March 1815.
- 386-NA-NHA KNI 175.35.162: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 25 March 1815.
- 387-NA-NHA KNI 175-35.192: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 5 August 1815.
- 388-NA-NHA KNI 175-28(66).116 S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 8 August 1815.
- 389-L-Met: ?? van der Buys (Breda) to S.J. Brugmans (Leyden); 15 August 1815.
- 390-NA-NHA KNI 175-35.195: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 17 August 1815.
- 391-AN-CHAN AJ 15-115: 'Muséum National d'Histoire Naturelle' (Paris) to S.J. Brugmans (Paris); 13 September 1815.
- 392-AN-CHAN AJ 15-611: S.J. Brugmans (Paris) to the 'Muséum National d'Histoire Naturelle' (Paris); 21 September 1815.
- 393-AN-CHAN AJ 15-611: 'Muséum National d'Histoire Naturelle' (Paris) to S.J. Brugmans (Paris); 22 September 1815.
- 394-AN-CHAN AJ 15-611: S.J. Brugmans (Paris) to 'the Muséum National d'Histoire Naturelle' (Paris); 23 September 1815.
- 395-AN-CHAN AJ 15-611: 'Muséum National d'Histoire Naturelle' (Paris) to S.J. Brugmans (Paris); 24 September 1815.
- 396-AN-CHAN AJ 15-611: S.J. Brugmans (Paris) to the 'Muséum National d'Histoire Naturelle' (Paris); 24 September 1815.

- 397-AN-CHAN AJ 15-115: 'Muséum National d'Histoire Naturelle' (Paris) to S.J. Brugmans (Paris); 24 September 1815.
- 398-NA 2.02.01.5924: S.J. Brugmans (Paris) to A.R. Falck (The Hague); 4 October 1815.
- 399-NA 2.02.01.5924: A.R. Falck (The Hague) to S.J. Brugmans (Paris); 10 October 1815.
- 400-AN-CHAN AJ 15-115: S.J. Brugmans (Paris) to the 'Muséum National d'Histoire Naturelle' (Paris); 11 October 1815.
- 401-NAT: S.J. Brugmans (Paris) to L.F. Thyssens (Paris); 24 October 1815.
- 402-AN-CHAN AJ 15-840: 'Muséum National d'Histoire Naturelle' (Paris) and S.J. Brugmans (Paris) to A.R. Falck (The Hague); around 24 October 1815.
- 403-AN-CHAN AJ 15-840: S.J. Brugmans (Paris) to A.R. Falck (The Hague); around 24 October 1815.
- 404-NAT: S.J. Brugmans (Paris) to L.F. Thyssens (Paris); 25 October 1815.
- 405-NA 2.02.01.6092: S.J. Brugmans (Leyden) to O. Repelaer van Driel (The Hague); 8 November 1815.
- 406-UBL AC II-1: S.J. Brugmans (Leyden) to the governors of the university (Leyden); 15 November 1815.
- 407-UBL AC II-1: S.J. Brugmans (Leyden) to the governors of the university (Leyden); around 16 November 1815.
- 408-NAT: S.J. Brugmans (Leyden) to L.F. Thyssens (Rotterdam); 6 December 1815.
- 409-NAT: S.J. Brugmans (Leyden) to L.F. Thyssens (Rotterdam); 7 December 1815.
- 410-UBL AC II-1: S.J. Brugmans (Leyden) to the governors of the university (Leyden); shortly before 29 December 1815.

Period 1816-1819

- 411-NA-NHA KNI 175-44: A. Bonn (Amsterdam), S.J. Brugmans (Leyden) and J.A. Bennet (Leyden) to the 'Eerste Klasse' of the 'KNI'; 6 January 1816.
- 412-NA-NHA KNI 175-35.239: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 24 January 1816.

- 413-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 6 February 1816.
- 414-NA-NHA HMW 444-411.145(3) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 11 February 1816.
- 415-UBL AC II-1: S.J. Brugmans (Leyden) to the governors of the university (Leyden); 16 February 1816.
- 416-KB-121 E 4: S.J. Brugmans (Leyden) to L. van Toulon (Gouda); 20 February 1816.
- 417-NA-NHA HMW 444-412.161(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 20 February 1816.
- 418-NA-NHA HMW 444-94: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 1 March 1816.
- 419-NA-NHA HMW 444-412.163(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 12 March 1816.
- 420-NA-NHA HMW 444-94: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 22 March 1816.
- 421-NA-NHA HMW 444-414.173(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 29 April 1816.
- 422-NA-NHA HMW 444-94: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1816
- 423-NA-NHA KNI 175-57(132).4 R: M. van Geuns (Utrecht), S.J. Brugmans (Leyden) and J.A. Bennet (Leyden) to G. Vrolik (Amsterdam); 28 May 1816.
- 424-UBL AC II-2: S.J. Brugmans (Leyden) to the governors of the university (Leyden); about 6 June 1816.
- 425-NA-NHA HMW 444-94: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 1 July 1816.
- 426 UBL AC II-2: S.J. Brugmans (Leyden) to the governors of the university (Leyden); 17 July 1816.
- 427-NA-NHA KNI 175-35.296: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden) and J.H. van Swinden (Amsterdam); 28 July 1816.
- 428-ATS 2248: S.J. Brugmans (Leyden) to J. van Breda (Delft); 29 July 1816.
- 429-NA-NHA KNI 175-35.314: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 6 August 1816.

- 430-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to P. Driessen (Groningen), G. Vrolik (Amsterdam) and N.C. de Fremery (Utrecht); 6 August 1816.
- 431-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to J.B.A. van der Sande (Antwerp), J.B. van Mons (Louvain), ?? Sauveur (Liège) and P.E. Wauters (Ghent); 6 August 1816.
- 432-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 6 August 1816.
- 433-NA-NHA KNI 175-44: S.J. Brugmans (Leyden), P. Driessen (Groningen) and J.A. Bennet (Leyden) to G. Vrolik (Amsterdam); 15 August 1816.
- 434-UBL AC II-2: S.J. Brugmans (Leyden) to the governors of the university ((Leyden); 31 August 1816.
- 435-L-Met: ?? Daalderop (on board of H.M.S. 'Dageraad') to S.J. Brugmans (Leyden); 16 September 1816.
- 436-NA-NHA KNI 175-35.343: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), 27 September 1816.
- 437-UBL AC II-2: S.J. Brugmans (Leyden) to the governors of the university (Leyden); early October 1816.
- 438-UBL AC II-2: Governors of the university (Leyden) to S.J. Brugmans (Leyden); 14 October 1816.
- 439-NA-NHA KNI 175-57(132).5 R: S.J. Brugmans (Leyden) and G. Vrolik (Amsterdam) to G. Vrolik (Amsterdam); 20 November 1816.
- 440-UBL AC II-2: S.J. Brugmans (Leyden) to the governors of the university (Leyden); about 22 November 1816.
- 441-NA-NHA KNI 175-57(132).3 R: S.J. Brugmans (Leyden), M. van Marum (Haarlem) and G. Vrolik (Amsterdam) to G. Vrolik (Amsterdam); 23 November 1816.
- 442-NA-NHA KNI 175-44: M. van Geuns (Utrecht), S.J. Brugmans (Leyden) and G. Vrolik (Amsterdam) to the members of the 'Eerste Klasse' of the 'KNI'; 7 December 1816.
- 443-ATS 2273: S.J. Brugmans (Leyden) to J.G.S. van Breda (Franeker); 18 December 1816.

- 444-NA-NHA KNI 175-44: S.J. Brugmans (Leyden), M. van Marum (Haarlem) and J.H. van Swinden (Amsterdam) to the 'Eerste Klasse' of the 'KNI'; 21 December 1816.
- 445-NA-NHA KNI 175-57(132).6 R: J.H. van Swinden (Amsterdam), M. van Marum (Haarlem) and S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 21 December 1816.
- 446-UBL AC II-3: Governors of the university (Leyden) to S.J. Brugmans (Leyden); 12 February 1817.
- 447-NA-NHA HMW 444-95: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 23 February 1817
- 448-NA-NHA HMW 444-415.186(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 23 February 1817.
- 449-NA-NHA HMW 444-95: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 2 March 1817.
- 450-UBL AC II-3: Governors of the university (Leyden) to S.J. Brugmans (Leyden); 4 March 1817.
- 451-NA-NHA HMW 444-415.187(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 9 March 1817.
- 452-L-Met: C. Fruyt (Middelburg) to S.J. Brugmans (Leyden); 24 March 1817.
- 453-UBL AC II-3: S.J. Brugmans (Leyden) to the governors of the university (Leyden); 31 March 1817.
- 454-NA-NHA KNI 175-44: S.J. Brugmans (Leyden) and J.A. Bennet (Leyden) to the State Secretary of the Interior (The Hague); 10 April 1817.
- 455-NA-NHA KNI 175.44: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), P. Driessen (Groningen) and J.A. Bennet (Leyden); 10 April 1817.
- 456-NA-NHA KNI 175-35.422: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 16 April 1817.
- 457-NA-NHA KNI 175-35.423: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 16 April 1817.
- 458-UBL AC II-3: Governors of the university (Leyden) to S.J. Brugmans (Leyden); 17 April 1817.
- 459-NA 2.13.01.5506: 'Recueil Militair', Volume 1817-I (580): 'Staatsraad/Intendant-Generaal van de Administratie van Oorlog' (The Hague) to the

- Inspector-General of the 'Militair-geneeskundige Dienst' (Leyden); Royal Decree, 20 March 1817, Litt. N⁵, N^o 74; 23 April 1817.
- 460-NA 2.13.01.5506: 'Recueil Militair', Volume 1817-I (580): 'Staatsraad/Intendant-Generaal van de Administratie van Oorlog' (The Hague) to the Inspector-General of the 'Militair-geneeskundige dienst' (Leyden); Royal Decree, 20 March 1817, Litt. N⁵ N^o 74; 23 April 1817.
- 461-NA-NHA KNI 175-57(132).10 R: S.J. Brugmans (Leyden) and G. Vrolik (Amsterdam) to G. Vrolik (Amsterdam); 23 April 1817.
- 462-NA-NHA KNI 175-35.426: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 28 April 1817.
- 463-NA-NHA HMW 444-412.157(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1817.
- 464-L-Met: C. Fruyt (Middelburg) to S.J. Brugmans (Leyden); 4 May 1817.
- 465-UBL AC II-3: Governors of the university (Leyden) to S.J. Brugmans (Leyden); 22 May 1817.
- 466-NA-NHA KNI 175-35.435: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), C.H. à Roy (Amsterdam) and G. Vrolik (Amsterdam); 24 May 1817.
- 467-NA 2.13.01.5506: 'Recueil Militair', Volume 1817-I (581): Commissioner General of War (Brussels) to the officers in command of the corps of the army; 23 June 1817.
- 468-L-Met: S.J. Brugmans (Leyden) to C. Fruyt (Middelburg); 28 June 1817.
- 469-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to the 'Commissie voor de samenstelling van de Pharmacopaea Belgica'; 11 July 1817.
- 470-NA-NHA KNI 175-44: G. Vrolik (Amsterdam) to M. van Marum (Haarlem), S.J. Brugmans (Leyden) and N.C. de Fremery (Utrecht); 11 September 1817.
- 471-
- 472-NA-NHA KNI 175-35.489: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 20 September 1817.
- 473-NA-NHA KNI 175-35.493: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 3 October 1817.
- 474-L-Met: ?? Winkel (Leyden) to S.J. Brugmans (Leyden); 3 October 1817.

- 475-NA-NHA KNI 175-28(67).26: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 20 October 1817.
- 476-NA-NHA KNI 175-44: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 23 October 1817.
- 477-NA-NHA KNI 175-35.512: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 20 November 1817.
- 478-NA-NHA KNI 175-28(67).29: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 21 November 1817.
- 479-ATS 2273: S.J. Brugmans (Leyden) to J.G.S. van Breda (Franeker); 25 November 1817.
- 480-NA-NHA KNI 175-44: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 6 December 1817.
- 481-NA-NHA KNI 175-35.525: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), N.C. de Fremery (Utrecht), J.A. Bennet (Leyden) and P. Driessen (Groningen); 12 December 1817.
- 482-ATS 2273: S.J. Brugmans (Leyden) to J.G.S. van Breda (Franeker); 23 January 1818.
- 483-L-Met: C. Fruyt (Boskoop) to S.J. Brugmans (Leyden); 18 February 1818.
- 484-NA-NHA HMW 444-414.173(2). R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 24 February 1818.
- 485-NA-NHA 444-96: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 25 February 1818.
- 486-ATS 2273: S.J. Brugmans (Leyden) to J.G.S. van Breda (Franeker); 12 March 1818.
- 487-NA-NHA KNI 175-35.541: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), J. Kops (Utrecht) and J.F. Serrurier (Zwolle); 18 March 1818.
- 488-NA-NHA HMW 444-411.145(4) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 19 March 1818.
- 489-NA-NHA HMW 444-96: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 19 March 1818.
- 490-NA-NHA HMW 444-412.161(2): S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 27 March 1818.

- 491-NA-NHA-444-96: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 27 March 1818.
- 492-L-Met: A. Asmus (Batavia) to S.J. Brugmans (Leyden); 30 March 1818.
- 493-NA-NHA HMW 444-96: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); March 1818.
- 494-NA-NHA HMW 444-96: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); March 1818.
- 495-ATS 2273: S.J. Brugmans (Leyden) to J.G.S. van Breda (Franeker); 3 April 1818.
- 496-NA-NHA HMW 444-96: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 21 April 1818.
- 497-NA-NHA HMW 444-96: M. van Marum (Haarlem) to S.J. Brugmans (Leyden); 29 April 1818.
- 498-NA-NHA HMW 444-96: M. van Marum (Haarlem) to S.J. Brugmans (Leyden); shortly after 29 April 1818.
- 499-NA-NHA HMW 444-412.161(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1818.
- 500-NA-NHA HMW 444-415.193 R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); spring of 1818.
- 501-NA-NHA HMW 444-96: M. van Marum (Haarlem) to S.J. Brugmans (Leyden); early May 1818.
- 502-NA-NHA HMW 444-96: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); early May 1818.
- 503-NA-NHA KNI 175-44: G. Vrolik (Amsterdam) to M. van Marum (Haarlem), S.J. Brugmans (Leyden) and N.C. de Fremery (Utrecht); 7 May 1818.
- 504-NA-NHA KNI 175-57(132).33 R: M. van Marum (Haarlem), S.J. Brugmans (Leyden) and N.C. de Fremery (Utrecht) to G. Vrolik (Amsterdam); 12 May 1818.
- 505-KB-129 A 27: S.J. Brugmans (Leyden) to ?? Ulens (?); shortly before 25 May 1818.
- 506-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); early June 1818.

- 507-UBL BPL 1886: S.J. Brugmans (Leyden) to ?? von Zinkgraaff (?); 9 August 1818.
- 508-NA-NHA KNI 175-35.589: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 14 August 1818.
- 509-NA 2.13.62.06.163: S.J. Brugmans (Leyden) to the officers of the 'Militair-geneeskundige Dienst'; 17 August 1818.
- 510-KB 72 D 18: S.J. Brugmans (Leyden) to H. Collot d'Escury (Rotterdam); 28 August 1818.
- 511-NA-NHA 529-14: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 5 September 1818.
- 512-NA-NHA KNI 175-35.595: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), G. Vrolik (Amsterdam) and E.J. Thomassen à Thuessink (Groningen); 11 September 1818.
- 513-L-Met: J.R. Vos (Middelburg) to S.J. Brugmans (Leyden); 26 September 1818.
- 514-ATS 2273: S.J. Brugmans (Leyden) to J.G.S. van Breda (Franeker); 28 September 1818.
- 515-NA-NHA KNI 175-58(133).2 R: S.J. Brugmans (Leyden), C.H. à Roy (Amsterdam) and G. Vrolik (Amsterdam); 20 October 1818.
- 516-NA-NHA KNI 175-35.620: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden) and J.A. Bennet (Leyden); 25 November 1818.
- 517-UBL AC II-4: S.J. Brugmans (Leyden) to the governors of the university (Leyden); 27 November 1818.
- 518-UBL AC II-4: Governors of the university (Leyden) to S.J. Brugmans (Leyden); 10 December 1818.
- 519-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to the Minister of the Interior (The Hague); 16 December 1818.
- 520-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to J.B. van Mons (Brussels); 16 December 1818.
- 521-NA-NHA KNI 175-35.641: G. Vrolik (Amsterdam) to M. van Marum (Haarlem), S.J. Brugmans (Leyden) and J.A. Bennet (Leyden); 12 January 1819.

- 522-NA-NHA KNI 175-35.650: G. Vrolik (Amsterdam) to P. Driessen (Groningen), N.C. de Fremery (Utrecht) and S.J. Brugmans (Leyden); 3 February 1819.
- 523-NA-NHA KNI 175-58(133).8 R: M. van Marum (Haarlem), S.J. Brugmans (Leyden) and J.A. Bennet (Leyden) to G. Vrolik (Amsterdam); 5 February 1819.
- 524-UBL AC II-4: S.J. Brugmans (Leyden) to the governors of the university (Leyden); 8 February 1819.
- 525-NA-NHA HMW 444-97: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 9 February 1819.
- 526-NA-NHA HMW 444-415.185(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 9 February 1819.
- 527-NA-NHA HMW 444-97; S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 11 February 1819.
- 528-NA-NHA HMW 444-97: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 16 February 1819.
- 529-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to the Minister of the Interior (The Hague); 1 March 1819.
- 530-NA-NHA HMW 444-97: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 March 1819.
- 531-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 3 March 1819.
- 532-NA-NHA KNI 175-35.675: G. Vrolik (Amsterdam) to J. Kops (Utrecht), N.C. de Fremery (Utrecht), G. Moll (Utrecht), J.F.L. Schroeder (Amsterdam), S.J. Brugmans (Leyden), J.A. Bennet (Leyden), C. Brunings junior (Leyden), C. Ekama (Leyden), M. van Marum (Haarlem), A. van den Ende (Haarlem) and C.H. à Roy (Amsterdam); 8 March 1819.
- 533-NA-NHA KNI 175-35.683: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 27 March 1819.
- 534-NA-NHA HMW 444-417.206(1) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 29 March 1819.
- 535-NA-NHA HMW 444-416.202 R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 3 April 1819.

- 536-NA-NHA HMW 444-415.187(2) R: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 4 April 1819.
- 537-NA-NHA KNI 175-58(133).12 R: S.J. Brugmans (Leyden), G. Vrolik (Amsterdam) and E.J. Thomassen à Thuessink (Groningen) to G. Vrolik (Amsterdam); 12 April 1819.
- 538-L-Met: C. Fruyt (Middelburg) to S.J. Brugmans (Leyden); 16 April 1819.
- 539-NA 2.13.62.06.163: S.J. Brugmans (Leyden) to the officers of the 'Militair-geneeskundige Dienst'; 19 April 1819.
- 540-UBL BPL 2730: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); 25 April 1819.
- 541-NA-NHA KNI 175-58(133).11 R: S.J. Brugmans (Leyden) to G. Vrolik (Amsterdam); spring of 1819.
- 542-NA-NHA KNI 175-7: Minister of the Interior (The Hague) to S.J. Brugmans (Leyden); 1 May 1819.
- 543-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to P. Driessen (Groningen), G. Vrolik (Amsterdam) and N.C. de Fremery (Utrecht); early May 1819.
- 544-NA-NHA KNI 175-7: S.J. Brugmans (Leyden) to J.B.A. van der Sande (Antwerp), J.B. van Mons (Louvain), ?? Sauveur (Liège) and P.E. Wauters (Ghent); early May 1819.
- 545-NA-NHA HMW 444-97: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); early May 1819.
- 546-KB-121 A 13: S.J. Brugmans (Leyden) to J. Voet van Campen (Leyden); 11 May 1819.
- 547-L-Met: ?? Munck ('s-Hertogenbosch) to S.J. Brugmans (Leyden); 12 May 1819.
- 548-NA-NHA HMW 444-97: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); 16 May 1819.
- 549-L-Met: F.C.A. Schulte (Zierikzee) to S.J. Brugmans (Leyden); 23 May 1819.
- 550-NA-NHA HMW 444-97: S.J. Brugmans (Leyden) to M. van Marum (Haarlem); May 1819.
- 551-L-Met: Ch.G. Reynhout (St. George d'Elmina, Guinea, West Africa) to S.J. Brugmans (Leyden); 10 June 1819.
- 552-UBL AC 73-II: J.H. Peyzel (Tunis) to S.J. Brugmans (Leyden); 21 June 1819.

553-NA 2.21.204(4): S.J. Brugmans (Leyden) to J.G.S. van Breda (Franeker); 30 June 1819.

554-NA-NHA KNI 175-35.718: G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden); 19 July 1819.

BIOGRAPHICAL NOTES

Aenae, Henricus (1743–1810)

For some time Aenae studied mathematics and physics at Franeker University, after which he left for Amsterdam in 1767. In 1769 he left for Leyden, where he was qualified Master of Liberal Arts and Doctor of Philosophy. Later on Aenae exercised his duties as adviser of the navy of the Batavian Republic. Besides he was appointed inspector of weights and measures.

Allamand, Jean Nicolas Sébastien (1713–1787)

In 1747 the theologician Allamand was appointed professor of physics, mathematics and chemistry at Franeker University. In 1749 he was appointed professor at Leyden University, where he taught the same subjects. He translated Herman Boerhaave's *Elementa chemiae* into French. He carried out experiments with the 'Leyden jar'.

D'Alphonse, Baron, François-Jean Baptiste (1756–1821)

After having been in office as prefect of the Département du Gard (France), D'Alphonse was in 1810 appointed 'Intendant de l'Intérieur' of Holland, which position he held until late 1813. He wrote a very extensive and detailed description of Holland, entitled *Aperçu de la Hollande*, largely based on the inspection tours and on the reports sent to him by various government officials.

Autenrieth, Johann Heinrich Ferdinand von (1772–1835)

From 1797 onwards, Autenrieth was professor of anatomy, physiology, surgery, obstetrics and the art of bandaging at the University of Tübingen (Germany). From 1805 on he especially taught comparative anatomy.

Bakker, Gerbrand (1771–1828)

Bakker (who was born in the town of Enkhuizen) was a pupil of DuPui, who lectured obstetrics in the town of Alkmaar, after having been teaching the same subjects in the town of Kampen. Bakker moved to Groningen, where he studied

mathematics, physics and botany. When DuPui was appointed professor of medicine at Leyden University, Bakker again followed his teacher. In 1794 he took his doctor's degree in medicine. In 1806 he was appointed lecturer of anatomy, obstetrics and surgery at Teyler's Foundation (established in Haarlem). In 1811 he was appointed full professor of anatomy, physiology and surgery at Groningen University.

Banks, Joseph (1743-1820)

The natural scientist and explorer Joseph Banks was elected president of the 'Royal Society' (London) in 1778.

Bemmelen, Jacob Albertus van (1792-1853?)

After having completed his studies of medicine at Leyden University, Van Bemmelen was appointed lecturer of anatomy and obstetrics at 'Teyler's Foundation' (Haarlem).

Bennet, Jan Aarnout (1758-1828)

Bennet studied philosophy at Harderwijk University in 1770 and from 1779 to 1782 he studied philosophy and medicine. In 1782 he took his doctoral degree in philosophy. From 1782 to 1785 he studied medicine at Leyden University, where he obtained his doctorate in medicine. From 1815 to 1817 he lectured agricultural economy at Leyden University. In 1817 he resigned his position for health reasons. He was the author of major contributions to the *Fauna Belgica* (1805) and wrote a natural history of the whales (1808).

Bergman, Tobern Olaf (1734-1784)

Bergman studied law and theology, after which he was active in the field of physics, mathematics and chemistry. From 1767 to 1789 he was professor of chemistry and pharmacy at the University of Uppsala. Berman devised a new chemical nomenclature of minerals. He was a member of the Swedish Academy of Sciences, of the 'Royal Society' (London) and of the scientific societies Paris, Berlin, Göttingen and Turin.

Bicker, Lambertus (1732-1801)

Lambertus Bicker was a student of the Leyden chemist Gaubius. After having taken his doctorate, he was appointed town physician in Rotterdam. Bicker was one of the founders of the 'Bataafsch Genootschap der Proefondervindelijke Wijsbegeerte' (Rotterdam) and became its first secretary. He was well acquainted with Samuel de Monchy, who was professor of medicine and physics at the Rotterdam clinical school. Bicker was an ardent advocate of the inoculation against the smallpox. He was a member of various scientific societies, for example of the 'Academia Caesarea Leopoldino-Carolina naturae curiosorum'.

Blagden, Charles (1748-1820)

Charles Blagden was a physicist and plant physiologist. He kept a lively correspondence with the physicists William Cavendish and Antoine Laurent Lavoisier. After having been in office as an army surgeon, he was appointed assistant of Cavendish in 1782. He occupied that post until 1789. He spent many years of his life in France, working together with Berthollet. At the age of 24 already, he was elected member of the 'Royal Society' (London). He was appointed secretary of this famous society in 1784.

Blumenbach, Johann Friedrich (1752-1840)

Blumenbach studied medicine at the universities of Jena and Göttingen. From 1776 to 1836 he held the position of professor of anatomy at the University of Göttingen. He wrote several important books, such as *De generis humani varietate nativa* (1775), *Ueber den Bildungstrieb* (1780) and *Handbuch der Naturgeschichte* (1830).

Böckmann, Carl Wilhelm (1773-1821)

Carl Böckmann was professor of physics at the grammar school of Karlsruhe (Germany). He was especially interested in the physical aspects of warmth.

Bonn, Andreas (1737-1817/1818)

Andreas Bonn – descendant of a leading Amsterdam family – studied medicine from 1752 on at the 'Athenaeum Illustre', established in his native town. Thereupon he left for Leyden, in order to complete his studies. In 1763 he took his doctoral

degree on a thesis, entitled *De continuationibus membranorum*. After having studied in Paris for about a year, where he attended the lectures and demonstrations of various famous surgeons and anatomists, he returned to Holland. In 1771 he was appointed professor of anatomy, surgery and obstetrics at the 'Athenaeum Illustre'. From 1798 on, he only taught anatomy and surgery. He was one of the founders of the 'Genootschap ter bevordering der natuur-, genees- en heilkunde' (Amsterdam, 1791). He wrote a couple of important works, for example the treatise, entitled 'Verhandeling over het maaksel en de beweeglijke loswording der beenverbindingen van het bekken der vrouwen', which was published in 1777 by the 'Bataafsch genootschap der Proefondervindelijke Wijsbegeerte' (Rotterdam).

Bonn, Andreas Conradus (1783-1809)

Andreas Conradus Bonn, the eldest son of Andreas Bonn, started his studies of medicine in Amsterdam. He completed his formation in Leyden, where he obtained his doctorate in 1806. Thereupon he set up a practice of town physician in his native town. He was a most talented draughtsman and an excellent comparative anatomist.

Bondt, Nicolaas de (1764-1796)

Nicolaas de Bondt studied medicine in Amsterdam and Leyden, where he obtained his doctorate in 1788. He worked together with Abraham van Stipriaan Luiscius (Delft). Together, they wrote a treatise on the physical and chemical properties of human milk and the milk of other mammals. This treatise was entered in reply to the prize contest, which had been held by the 'Académie Royale de Médecine' (Paris). De Bondt was awarded the gold medal in 1790. In 1791 De Bondt was elected member of the 'Kring der Hollandsche Scheikundigen'. That same year he refused a chair of medicine at Leyden University. He died a year later.

Boon Mesch, George Johannes (1786-1822)

From 1806 to 1812 George Johannes van der Boon Mesch studied medicine at Leyden University. He obtained his doctorate on a thesis on respiration. In 1819 he was appointed extraordinary professor of agricultural economy at Leyden University. In 1821 this appointment was changed into a full professorate.

Boon Mesch, Hendrik Carel (1795-1831)

In 1814 and 1815 Hendrik Carel van der Boon Mesch studied medicine at Leyden University. From 1815 to 1820 he studied mathematics and physical sciences at the same university, where he also took his doctoral degree. In 1823 he was appointed professor of natural history, chemistry and pharmacy at Leyden University. He took a special interest in mineralogy.

Bory de St. Vincent, Jean-Baptiste-Geneviève-Marcellin (1780-1846)

Bory de St. Vincent was among others a zoologist, a physical geographer, a botanist and an explorer. Besides he wrote the *Histoire Naturelle des Hydrophytes du Voyage de la Coquille* (1829), dealing with the journey he made from 1822 to 1825. Together with Bourdon and Audoin he wrote the *Dictionnaire Classique d'Histoire Naturelle* (1822-1833).

Bosch, Jeronimo de (1740-1811)

Bosch was a literary man, who started his studies in Amsterdam under Petrus Burmannus II. Besides he was educated in pharmacy. In 1760 he was enlisted as a pharmacist. From 1793 until 1811 he was secretary of the municipality of Amsterdam. He had a great passion for the Greek and Latin languages and poetry. He was a member of several literary and scientific societies. He was one of the founders of the 'Koninklijk Hollandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten', which was founded in Amsterdam in 1808. From 1798 to 1811 De Bosch was a member of the board of governors of the Leyden Hoogeschool, until it was transformed into a department of the French 'Imperial University'.

Braconnot, Henri (1781-1855)

Braconnot was director of the botanical garden of Nancy (France). He wrote several books on agriculture and discussed the relation between the chemical and physical properties of the soil and the vegetation.

Breda, Jacob van (1743/1748?-1818)

Jacob van Breda (the father of J.G.S. van Breda) was a town physician of Delft. Besides he practised chemistry and physics. He was a member of the 'Bataafsch Genootschap der Proefondervindelijke Wijsbegeerte' (Rotterdam) and the 'Provinciaal Utrechtsch Genootschap van Kunsten en Wetenschappen'. He translated several works, written by Jan Ingenhousz, from the English, for example 'Proeven over den Electrophorus' (1780). In 1788 his treatise on atmospherical electricity was published by the 'Hollandsche Maatschappij der Wetenschappen' (Haarlem).

Breda, Jacob Gijsbert Samuel van (1788-1867)

Van Breda junior studied medicine at Leyden University. In 1816 he was appointed professor of botany, chemistry and pharmacy at Franeker University. In 1822 he became professor of botany, zoology and comparative anatomy at the University of Ghent. In 1830 he was forced to flee to Leyden. There he was appointed full professor of zoology and geology. In 1839 he accepted the invitation to become director of the Cabinet of 'Teyler's Foundation' (Haarlem) and secretary both of the 'Hollandsche Maatschappij der Wetenschappen' and of 'Teyler's Tweede Genootschap'. He was allowed to keep the title of professor at Leyden University and the right to return to that position, if he would wish to do so.

Brongniart, Alexandre (1770-1847)

Brongniart was a geologist and mineralogist. From 1822 to 1847 he was in office as professor of mineralogy at the 'Muséum National d'Histoire Naturelle' (Paris). Together with Georges Cuvier he prepared several publications.

Broussonet, Pierre Marie Auguste (1761-1807)

Pierre Broussonet studied medicine and botany at the University of Montpellier. He obtained his doctorate there at the age of 18. He became a well-known botanist, who adopted a critical attitude towards Linnaeus's *Systema Naturae* was a French naturalist, botanist, explorer and a member of the 'Royal Society' (London). He lived and studied in England for about three years, after which he was appointed assistant professor at the 'Collège de France' (Paris). In 1785 he was elected member

of the 'Académie des Sciences' (Paris). In 1793 he had to flee to Madrid, with the help of Joseph Banks. A couple of years later Chaptal, Minister of the Interior of the French republic, provided him with a professorate of botany at the University of Montpellier. His brother Victor held the chair of medicine at the same university.

Brown, John (1735-1788)

John Brown studied theology and medicine at the University of Edinburg. He developed a new concept of medicine, which was based on 'excitability' (sthenia and asthenia, administration of stimulating medicines; 'Brownianism').

Brunings Jr, Christiaan J. (1756-1826)

Brunings junior was director general of the polders of Nieuwkoop and Zevenhoven (in the province of Utrecht). Furthermore he carried out meteorological observations and measurements.

Camper, Adrien Gilles (1759-1820)

Adrien Gilles Camper was the eldest son of Petrus Camper. He was a naturalist, zoologist and palaeontologist. He was a member of the 'Eerste Klasse' of the 'Koninklijk Nederlandsch Instituut' (Amsterdam) and of the 'Hollandsche Maatschappij der Wetenschappen' (Haarlem).

Capadose, Abraham (1795-1874)

After having studied medicine at Leyden University and having obtained his doctorate in 1818, Abraham Capadose set up a practice as town physician in Amsterdam. He wrote an extensive laudation on Sebald Justinus Brugmans, which was published in 1825. He was a vehement adversary of the vaccination against smallpox.

Carus, Carl Gustav (1789-1869)

Carl Gustav Carus studied medicine at the University of Leipzig, where he obtained his doctorate in 1811. In that year he was appointed professor of comparative anatomy in Leipzig. In 1814 he was appointed professor of obstetrics and comparative anatomy at the University of Dresden, which position he held until

1827. In that year he was appointed personal physician to the King of Prussia, until his death in 1869. Carus was an outstanding physician, who declined many honourable invitations from other universities. From 1826 on he was president of the 'Leopoldino-Carolina' for several years. Carus was a romantic naturalist and natural philosopher. He opposed against the ideas of Franz Joseph Gall with respect to phrenology. Besides he was very interested in art and in its theory. He wrote among others *Die Symbolik der menschlichen Gestalt* (1853) and *Proportionslehre der menschlichen Gestalt* (1854).

Cessac, Jean-Girard Lacuée. Comte de (1752-1841)

Around 1811 Jean Lacuée was 'Ministre-Directeur de l'Administration de la Guerre' of the French empire.

Chaptal, Jean-Antoine (1756-1832)

From 1774 on Chaptal studied medicine at the 'Faculté de Médecine' (Montpellier). In 1778 he obtained his doctorate of medicine and went to Paris in order to complete his studies of medicine and chemistry. In 1780 a new chair of chemistry was created for him and he accepted the invitation. In 1781 he was elected member of the 'Société Royale de Médecine' (Paris) and member of the 'Académie des Sciences' (Paris). A few years later he founded his private chemistry works in Montpellier. From 1777 until 1799 he was State Councillor. For several years Chaptal was Minister of the Interior of the French empire.

Chaudoir, Antoine (1749-1824)

Antoine Chaudoir, who was born in Theux, near Liège, went to Franeker, where he studied theology, oriental languages, mathematics and philosophy. More and more he devoted himself to the study of philosophy (astronomy, physics and mathematics). From 1779 until 1786 he was in office as minister of the Walloon Church in Leyden. In September 1786 he was appointed professor of philosophy at the University of Franeker, being the successor of his friend Sebald Justinus Brugmans. In order to make his appointment possible the University of Franeker gave him the titles of 'Master of Liberal Arts' and 'Doctor of Philosophy'. He retired in 1806/1807. He travelled to various countries. In 1819 he settled in

Leyden, in order to stay close to his friend Brugmans. After Brugmans had died a few months later, Chaudoir started travelling again. Finally he settled in Leyden.

Clifford, George (1681-1760)

Clifford was a banker in Haarlem and Amsterdam. He was a member of the board of governors (the 'Heeren XVII') of the 'Dutch East India Company'. In 1735 he took into his employment at his country estate 'Hartecamp' (near Haarlem) the Swedish botanist Carolus Linnaeus, who had taken his doctorate at the University of Harderwijk. Linnaeus put in order Clifford's herbarium and added new specimens.

Coste, Jean François (1741-1819)

In Napoleonic time Coste, French army physician, who finally became a high-ranked official of the medical health service of the French imperial army. As chief physician of the French army, he accompanied the French army, which set sail for North-America in order to sustain the struggle for independence. Back in France he organized the education in the major French military hospitals. Together with Percy he wrote *De la Santé des Troupes* (1806).

Craanen, Daniel (1777-1814)

From 1804 to 1806 Craanen studied medicine at Leyden University. He obtained his doctorate in 1806, after which he set up a practice as town physician in Rotterdam. Craanen was a distinguished member of the 'Bataafsch Genootschap der Proefondervindelijke Wijsbegeerte'.

Crawford, Adair (1749-11795)

Adair Crawford was active as a physician in London, working at the 'Saint Thomas Hospital'. Later on he was appointed professor of chemistry in Woolwich. He was also very much interested in physics. Among others he wrote *Experiments on animal heat, and the inflammation of combustible bodies*. He examined the specific warmth of various physical bodies and on the effects of cold on human bodies.

Cuvier, Georges Léopold Chrétien (1769-1832)

In his day Cuvier was a scientist, who managed to excel in many fields of the natural sciences. He had studied medicine and worked as a zoologist, geologist and palaeontologist most of the time. He was professor at the 'Muséum National d'Histoire Naturelle' (Paris). He was one of the founders of the scientific zootomy and comparative anatomy. He was the secretary for life of the 'Académie Nationale des Sciences' (Paris).

Daamen, Christiaan Hendrik (1755-1793)

Daamen was a physicist.

Daubenton, Louis-Jean-Marie (1716-1799)

Daubenton studied theology at the Paris 'Sorbonne'. He also studied medicine in Paris (see: E.C. Spary, 2000, p. 261). He was a member of the 'Académie des Sciences' (Paris) and of the 'Société d'Agriculture' (Paris). From 1745 until 1793 he worked as a custodian and demonstrator of the 'Cabinet d'Histoire Naturelle du Roy' and of the 'Jardin du Roi'. At the occasion of the foundation of the 'Muséum National d'Histoire Naturelle', Daubenton became its first director.

Deiman, Johan Rudolf (1743-1808)

Deiman was in office as town physician of Amsterdam. Besides he was active as a chemist and physicist. He was an active member of 'Kring der Hollandsche Scheikundigen'. Deiman especially investigated the medicinal applicability of electricity and also the influence of electricity on living plants. He was a member of the 'Eerste Klasse' of the Koninklijk Hollandsch Instituut van Wetenschappen, letterkunde en Schoone Kunsten' (Amsterdam).

DeLuc, Jean-André (1727-1817)

DeLuc – of Swiss origin (Geneva) – studied mathematics and physics in his native town. In 1768 he went to Paris, where he continued his studies. In 1773 he left for England. He was especially interested in geology, meteorology, natural philosophy and theology. He was not only a member of the 'Académie des Sciences' (Paris) but also of the 'Royal Society' (London). In 1773 he was appointed 'reader to Queen

Charlotte'. From 1798 until 1804 he stayed in Göttingen (Germany), where he held the chair of honorary professor of philosophy and geology.

Desault, Pierre-Joseph (1744-1795)

In 1788 Desault was appointed chief surgeon of the 'Hôtel-Dieu' (Paris). He taught many students, who became renowned surgeons, for example Corvisart, Bichat, Dupuytren and many others.

Desfontaines, René-Louiche (1750-1833)

Desfontaines studied medicine. In 1786 he was appointed professor of botany at the 'Jardin Royal' (Paris). From 1793 on until he died, Desfontaines was employed at the 'Muséum National d'Histoire Naturelle' and at the 'Jardin des Plantes' (Paris) as a professor of botany. He was a member of the 'Académie des Sciences' (Paris) and of the 'Société d'Agriculture' (Paris).

Desgenettes, Nicolas René Dufriche (1762-1837)

Desgenettes was a famous army physician, under the government of Napoleon Bonaparte, whom he served as inspector-general of the military health service (internal medicine).

De Wailly

In 1794 De Wailly was commissioned with the requisition of objects of science and art in the United Provinces and in the 'Staatse Nederlanden' ('Austrian provinces'). De Wailly held this position until 1796, when his task had been completed.

Dylius, Daniël (1773-1817)

From 1794 to 1798 Dylius studied medicine at Leyden University. In 1798 he obtained his doctorate. Thereupon he set up a practice as town physician in Amsterdam. In 1816 he was appointed full professor of surgery and obstetrics in Utrecht. Soon after, he died, even before having been able to deliver his first lectures.

Doeveren, Walter van (1730-1783)

From 1747 to 1752 Walter van Doeveren studied medicine at Leyden University. After having completed his studies he left for Paris. He stayed there for a year, in order to attend and to participate in as many demonstrations of surgery and obstetrics as possible. In 1754 he returned to Holland and took his doctorate at the University of Leyden. Thereupon he was active as town physician in Leyden for a while. In 1754 already he was appointed full professor of medicine, surgery and obstetrics at the University of Groningen. In 1770 he was called to Leyden, in order to occupy the vacant professorate of practical medicine, an office which he held until his death. In 1781 he was appointed personal physician to the Prince of Orange.

Driessen, Petrus (1753-1828)

Driessen studied medicine at Groningen University and took his doctoral degree in 1775. In 1787 he was appointed extraordinary professor of medicine at Groningen University, soon followed by his appointment as full professor of chemistry and natural history. He also taught agricultural chemistry. In 1806, after Munniks had died, Driessen was charged with the chair of natural history too. He made a valuable contribution to the *Pharmacopaea Batava* (1799-1806) and to the *Pharmacopaea Belgica* (1816-1819).

DuPui, Menno Simon (1754-1834)

In 1791 DuPui was appointed extraordinary professor of practical surgery and obstetrics at Leyden University. In 1815 he was offered the position of full professor of surgery. In 1815 he was appointed full professor of surgery and obstetrics. He widened the lessons of practical obstetrics in the 'Nosocomium Academicum', which had been introduced in 1747 in Leyden by Frederik Winter. DuPui had been inspired by his stays in London (attending the practical lessons of John Hunter, Percival Pott and Lowder) and in Paris, where he attended the lessons and demonstrations given by Louis, Baudelocque, Moreau, Desault and Pelletan).

Ekama, Cornelis (1773-1826)

Initially Ekama studied theology at the University of Franeker. In 1796 he was appointed minister of a nearby church. In 1800 he took the degree of Master of Liberal Arts and Doctor of Philosophy at Franeker University. In 1803 he was appointed lecturer of mathematics and navigation in Zierikzee (Zeeland). In 1809 he was appointed professor of rhetoric, metaphysics, physics and astronomy at the University of Franeker. In 1811 he moved to Leyden, after having been invited to become professor of mathematics and astronomy. He held this chair until his death in 1826.

Ende, Adriaan van den (1768-1846)

From 1811 until 1813 Van den Ende was inspector general of Leyden University, which was at the time a department of the French 'Imperial University', being the superior of Van Swinden and Flament. After 1814 he served the Dutch government as inspector of primary and secondary schools. In 1826 he retired.

Ermerins, Jacobus (1725/1726-1795)

Ermerins was born in Lillo, on the island of Tholen (Zeeland), where his father was in office as secretary and Judge-Advocate. Ermerins junior was active as delegated judge in Lillo and secretary of the town of Veere. He was a member of the 'Maatschappij der Nederlandsche Letterkunde'.

Esenbeck, Theodor Friedrich Ludwig (1787-1837)

Nees van Esenbeck was a botanist, who stayed in Leyden from 1817 to 1819. In 1817 he devised a new plan for the Leyden hortus botanicus (drawing an 'English landscape garden'). In 1819 he was appointed director of the botanical garden of the University of Bonn (Germany) where his elder brother Chr.G.D. Nees von Esenbeck was professor of botany. He was close friends with Brugmans.

Escury van Heinenoord, Hendrik, Baron Collot D' (1773-1845)

In 1794 Collot D'Escury obtained his doctorate in law at Groningen University. In 1815 Collot d'Escury was elected member of the Board of Governors of Leyden University. He made contributions to the new 'Education Act' for the universities.

Collot D'Escury van Heinenoord was a member of the 'Tweede Kamer' ('Lower House') of the 'Staten-Generaal' ('States General'). He also was a poet.

Falck, Anton Reinhard (1777-1843)

In 1799 Anton Reinhard Falck obtained his doctorate in law at Leyden University. Successively he was in office as Secretary of State (that is to say Minister of the Interior), serving King Willem I, and Minister of Public Education, National Industry and Colonies.

Fas, Johannes Arent (1742-1817)

From 1763 to 1815 Fas was in office as lecturer of applied mathematics at Leyden University. In 1811 he was appointed extraordinary professor of applied mathematics.

Faujas de Saint Fond, Barthélemy (1741-1819)

Faujas de Saint Fond was a physicist, who occupied himself among others with the science of ballooning, experimenting with balloons, filled with hydrogen and focussing on aerostatics. This technique had been invented by Charles and Robert). From 1787 until 1793 he served as a guard of the 'Cabinet d'Histoire Naturelle du Roi' and was charged with its correspondence. From 1793 until 1819 he held the chair of professor of geology and mineralogy at the 'Muséum National d'Histoire Naturelle' (Paris). Besides, from 1794 to 1798 he was a member of the commission, which had been sent from Paris in order to steal large collections of natural history and other fields of science from the 'Vereenigde Provinciën' ('United Provinces') and the 'Oostenrijkse Nederlanden' ('Austrian Netherlands').

Flament, Carolus Sulpicius (1759-1836)

Carolus Flament studied theology at the 'Sorbonne' (Paris), took his doctoral degree there and was appointed professor of theology at that university. After a couple of years – in 1800 – he was appointed first librarian of the 'Royal Library' of the 'Bataafsche Republiek' (The Hague), which office he held until his death. From 1807 on he was a member of the 'Maatschappij der Nederlandsche Letterkunde'. Besides he was appointed inspector of public education, which position he held

until late October 1813, when Leyden University was a department of the 'French Imperial University'.

Fontanes, Louis de (1757-1821)

De Fontanes was a poet and journalist, who had to flee to London for some time. However, in 1810 he was appointed member of the French senate. In 1815 king Louis XVIII appointed him vice president of the 'Académie'. From 1810 to 1814 he held the position of 'Grand-maître' of the French 'Imperial University'.

Fourcroy, Antoine François de (1755-1809)

Fourcroy, holding a doctorate of medicine, was a member of the 'Académie des Sciences' (Paris) and of the 'Société d'Agriculture' (Paris). From 1784 until 1793 he was professor of chemistry at the 'Jardin des Plantes' (Paris). From 1793 until 1809 he was professor of chemistry in Paris. Together with Lavoisier, Berthollet and Guyton de Morveau he devised a new system of chemical nomenclature. It was published in 1786-1787. Fourcrouy advocated the distinction between organic and anorganic substances.

Fremery, Nicolaas Cornelis de (1770-1844)

From 1785 to 1790 De Fremery studied medicine at Leyden University and he took his doctoral degree there. In 1790 he was appointed town physician in Haarlem. Besides he worked in the laboratory of 'Teyler's Foundation'. In 1795 he was appointed full professor of chemistry, natural history and pharmacy at the University of Utrecht, occupying the vacancy as a consequence of the death of Steven Jan van Geuns.

Gall, Franz-Joseph (1758-1828)

Franz-Joseph Gall was a phrenologist. He wrote several books and treatises on this subject, among others the *Philosophisch-Medicinische Untersuchungen über Natur und Kunst im kranken und gesunden Zustande des Menschen* (1793), in which he gave an outline of his doctrine of the 'Hersen-Schedelleer'.

Gaubius, Hiëronymus David (1705-1780)

In 1722 and 1723 Gaubius studied medicine at the University of Harderwijk. In 1725 he took his doctoral degree there. He continued his studies at Leyden University and took his doctoral degree of medicine. Thereupon he travelled to Paris in order to enlarge his knowledge of practical surgery. In 1729 he set up a surgical practice in the town of Deventer. In 1731 he was appointed lecturer of chemistry and botany at Leyden University. In 1738, after Herman Boerhaave had died, he was appointed full professor of theoretical medicine and chemistry in Leyden. In 1744, after Herman Oosterdijk Schacht had died, he was also charged with the clinical instruction at the 'Sint-Caecilia gasthuis' (Leyden).

Geoffroy Saint-Hilaire, Etienne (1772-1844)

After having worked as a custodian (guard) and sub-demonstrator of zoology at the 'Cabinet d'Histoire Naturelle du Roi' from 1784 to 1793, he was appointed professor of zoology at the Muséum National d'Histoire Naturelle' in 1794 (lecturing on quadrupeds and birds).

Geuns, Matthias van (1735-1817)

From 1754 to 1758 Matthias van Geuns studied medicine at the University of Harderwijk. From 1758 to 1759 he completed his studies at the University of Groningen. From 1759 to 1761 he studied medicine in Paris, attending the lectures, demonstrations and operations delivered by Levret, in the 'Hôtel-Dieu' and the 'Hôpital de la Charité'. In 1776 he was appointed full professor of practical medicine at the University of Utrecht. He retired in 1815.

Geuns, Steven Jan van (1767-1795)

Steven Jan van Geuns was the eldest son of Matthias van Geuns. From 1782 to 1788 he studied philosophy and medicine at the University of Harderwijk. In 1788 he left for Leyden, returning to Harderwijk in 1790. In 1790 he obtained his doctorate of medicine in Harderwijk, after which he set up a practice as a town physician in Amsterdam. In 1791 he was appointed full professor of medicine, botany and physiology at the University of Utrecht.

Guyton de Morveau, Louis-Bernard (1737-1816)

Guyton de Morveau studied law and chemistry at the University of Dijon. He was appointed director of a gunpowder works near Dijon. He founded a sodium carbonate works. He was a member of the 'Assemblée Nationale'. In 1791 he was appointed professor at the 'Ecole Polytechnique' (Paris). He became its director in 1800. In 1796, when the 'Institut de France' was founded, he was elected member of this academy. In 1786-1787 he devised the 'Méthode de Nomenclature Chimique', together with his colleagues Lavoisier, Berthollet and Fourcroy.

Haaff, Gerardus Gijsbertus ten (1749-1800)

Ten Haaff was a town physician in Rotterdam. For several years he was in office as one of the directors of the 'Bataafsch Genootschap van Kunsten en Wetenschappen' (Rotterdam). Ten Haaff made a modest contribution to the *Pharmacopaea Batava*, which was published in 1807.

Häuy, René Just (1743-1822)

After he had been ordained in 1770, René Just Häuy studied botany. He especially devoted himself to mineralogy and crystallography. From 1781 on he wrote on these subjects, especially on theoretical aspects and mathematical models of growing crystals. He succeeded in adapting to the various political situations. After Dolomieu had died in 1802 he was appointed his successor as professeur-administrateur for the department of mineralogy of the 'Muséum National d'Histoire Naturelle' (Paris).

Hahn, Johann David (1729-1794)

From 1753 to 1775 Hahn was full professor of botany and chemistry at the University of Utrecht. In 1775 he was appointed professor of medicine and botany at Leyden University.

Harbau(e)r

Harbau(e)r was a military surgeon. He was appointed successor of Sebald Justinus Brugmans as inspector general of the military health service of the kingdom of the Netherlands.

Heekeren, Jan van (1733-1803)

From 1792 to 1797 Jan van Heekeren studied medicine at Leyden University. He obtained his doctorate. In 1797 and set up a practice as physician in Amsterdam. In 1798 he was appointed secretary of Professor Th. van Kooten, 'Agent van Nationaale Opvoeding' ('Agent of Public Education' or Minister of Education). In 1799 he was offered a professorate of medicine at the 'Athenaeum Illustre' (Amsterdam), but he resigned. He wrote several important documents relative to medical legislation.

Herschel, Sir Frederick William (1783-1822)

William Herschel (of German origin) started a musical career as an oboist in his father's band. He got more and more interested in astronomy. In 1773 he made his first astronomical observations, using reflecting telescopes. Around 1780 he discovered the planet Uranus. In 1789 he discovered the sixth moon of Saturn. Furthermore he developed a theory with respect to the structure and development of the heavens. He also paid attention to the structure of our solar system and to the Milky Way. Finally he made observations with respect to comets.

Heyne, Christian Gottlob (1729-1812)

In 1763 the German philologist Christian Gottlob Heyne was appointed chief librarian and director of the library of Göttingen University. In 1770 he was appointed secretary and director of the 'Koninklijk Genootschap der Wetenschappen' ('Royal Society of Sciences') of Göttingen. He was in charge of the editorial board of the *Göttingsche Gelehrten Anzeigen*.

Hoffmann, Georg Franz (1761-1826)

From 1782 until 1787 Georg Franz Hoffmann studied medicine in Erlangen. In 1787 he obtained his doctorate there. In 1788 he was offered a professorate of medicine at the University of Erlangen. In 1792 he was appointed full professor of botany and director of the botanical gardens of the University of Göttingen. In 1803 he was invited to come to Moscow and so he did. He was appointed professor of medicine and surgery there. In 1812 the various scientific facilities were completely

destroyed. Hoffmann rebuilt the library collections and restored the botanical gardens.

Hoorn, Paulus Gotfried van (1778-1850)

Van Hoorn studied medicine at Leyden University. He took his doctoral degree in 1803. He settled in Leyden as a town physician. Later on he was appointed custus of the department of geology and mineralogy of the 'State Museum of Natural History' ('Rijksmuseum van Natuurlijke Historie', Leyden).

Hufeland, Chirstoph Wilhelm (1762-1836)

In 1780 began to study medicine at the University of Jena. Later on he moved to Göttingen. In 1783 he took his doctoral degree there and was appointed honorary full professor at the University of Jena. Later on he was offered a professorate of medicine at the University of Berlin, which he accepted. He was also appointed personal physician to the King of Prussia. He wrote several works, among others 'Makrobiothik'.

Hultman, Carel Gerard (1752-1820)

In 1808 Carel Hultman was appointed prefect ('governor') of the Vaucluse (Southern France). In 1810 he returned to Holland, after having been appointed prefect of the department of Boven-IJssel. In 1814 he was appointed Governor of the province of Noord-Brabant.

Hunter, John (1728-1793)

John Hunter started his medical career as an army surgeon. From 1763 on he taught anatomy in London. Besides he practised zoology and built up an extensive zoological collection, comprising both living animals and preparations. In 1767 he was elected member of the 'Royal Society' (London). In 1768 he was appointed surgeon at 'Saint George's Hospital' (London). In 1776 he was appointed personal surgeon of the King of England George III.

Hussem, Bernard (1733-1808)

Hussem was admitted as a surgeon in Amsterdam. He became a prominent navy surgeon. He was elected member of the 'Bataviaasch Genootschap der Proefondervindelijke Wijsbegeerte' and of the 'Genootschap ter Bevordering der Natuur-, Genees- en Heelkunde' (Amsterdam). In 1764 he was admitted as surgeon in Amsterdam'.

Jacquin, Joseph-Franz von (1766-1839)

In 1797 Von Jacquin junior succeeded his father Nicolas Joseph von Jacquin as professor of botany and chemistry at the Faculty of Medicine of the University of Vienna (Austria).

Jefferson, Thomas (1743-1826)

Thomas Jefferson was educated as agriculturist, botanist, cartographer, ethnologist, palaeontologist and explorer. In 1779 he was elected governor of the state of Virginia. In 1780 he was elected member of the 'American Philosophical Society' (Philadelphia). In 1790 he became Secretary of State of the United States of America. In 1791 he was elected vice-president. Later on he was elected president of the United States.

Jussieu, Antoine Laurent de (1748-1836)

From 1765 until 1770 Antoine Laurent de Jussieu studied medicine in Paris. He was a member of the 'Académie des Sciences' (Paris). He is the author of 'Genera Plantarum' (1789), which took him 15 years of his life. From 1793 – when the 'Muséum National d'Histoire Naturelle' was founded, he held the chair of botany at the 'Jardin des Plantes' ('professeur de botanique dans les champs'; see: E.C. Spary, 2000, p. 260). He was an advocate of the 'scala naturae'-concept.

Jussieu, Bernard de (1699-1777)

After having studied medicine, Bernard de Jussieu obtained doctorates at the universities of Paris and Montpellier in 1726. Later on he was working as a botanist in the 'Jardin du Roi' (Paris). He was the uncle of Antoine Laurent de Jussieu.

Kemper, Joan Melchior (1776-1824)

Kemper studied law at Leyden University (Wyttenbach) and Amsterdam (Cras). In 1799 was appointed professor of constitutional law in Harderwijk. In 1806 he was given the same chair in Amsterdam. In 1809 he was appointed professor of natural law, constitutional law and international law at Leyden University. In 1814 he started conceiving the main concepts of civil law of the Kingdom of the Netherlands.

Kirwan, Richard (1733?-1812)

Kirwan was a renowned Irish chemist and physicist, who studied chemistry at the University of Poitiers from 1750 on. He worked in London for many years, but returned to Ireland in 1787. Kirwan was a fervent adherent to the phlogiston doctrine. He wrote among others the *Essay on Phlogiston* (1787).

Kieser, Dietrich Georg (1779-1862)

Kieser was a professor of medicine and psychiatry at the University of Jena. He was an advocate of natural philosophy. He carried out many experiments and also was an experienced microscopist. He also worked on animal magnetism. He is the author of *System der Medizin*. Together with Lorenz Oken he developed a theory, which has to be regarded as the predecessor of the 'Recapitulation Theory', which was later on developed by Ernst Haeckel and Karl Ernst von Baer.

Kluyskens, Joseph François (1771-1843)

Kluyskens was trained as a surgeon's apprentice in the town of Ghent. He attended lessons in surgery and obstetrics. In 1794 he was appointed battalion's physician of the Austrian army. In 1795 he received the rank of surgeon major. In 1795 he became first surgeon and first obstetrician of the hospital of Ghent. In 1806 he was appointed professor of surgery in Ghent. In 1817 he became first medical officer of the army of the Netherlands. At the occasion of the foundation of the University of Ghent he was appointed extraordinary professor of theoretical and clinical surgery. On the recommendation of the senate of the university His Majesty King Willem I conferred an honorary doctorate of surgery and an honorary doctorate of medicine to him. In 1813 Kluyskens was appointed chief physician of the Belgian army in

Luxemburg. A few weeks later he was appointed chief physician of the Belgian army. In 1833 he was appointed personal physician to King Leopold I. In 1835 he was appointed full professor of clinical medicine at the University of Ghent. In 1837 he retired as physician of the Belgian army. In 1841 he retired from his professorate.

Kooten, Th. van

In 1795 Th. Van Kooten was appointed 'Agent van Nationale Opvoeding' ('Agent of National Education') of the 'Bataafsche Republiek' ('Batavian Republic'). In 1799 he was succeeded by the Leyden professor J.H. van der Palm, who was in office until 1805.

Krayenhoff, Cornelis Rudolphus T. van (1758-1840)

Van Krayenhoff studied medicine but between 1803 and 1813 he was exercising the office of inspector of fortifications.

Kros, Simon (1747-1813)

Kros was an experienced and well-known lock builder and designer of windmills. Besides he was inspector of the lakes of Nieuwkoop and Zevenhoven, in the province of Utrecht.

Krusenstern, Adam Johann von (1770-1846)

Adam Krusenstern was an admiral of the Russian navy and an oceanographer. In 1805-1806 he travelled around the world. Particularly he visited the north-western coastal regions of the Pacific Ocean, north of Japan (such as the Koeriles and the peninsulas of Kamschatka and Sachalin).

Lacépède, Bernard-Germain-Etienne de (1756-1825)

Lacépède, a well-known herpetologist – he was given the nick-name 'le roy des serpentes' – worked at the 'Muséum National d'Histoire Naturelle' (Paris). After he died he was succeeded by Etienne Geoffroy Saint-Hilaire.

Larrey, Dominique Jean (1766–1842)

Larrey served the French Imperial army as a surgeon and inspector general (especially charged with surgery). He designed and developed the concept of the ambulances.

Lavoisier, Antoine Laurent (1743/1745–1794)

Lavoisier was one of the founders of modern chemistry. Besides he was the director of the French powder works. He made valuable contributions to our modern understanding of the process of oxidation. He dealt the ‘coup de grace’ to the ‘phlogiston’ concept. In 1782 he started to design a new chemical nomenclature.

Leblond, Auguste Savinien (1780–1811)

Between 1794 and 1796 Leblond, art-theoretician, technician and historian, was charged with the requisition of objects of art and science in the United Provinces and in the Southern provinces (which were in the possession of Austria until 1793–1794).

Leurs, Hendrik Willem (1750–1799?)

Hendrik Leurs was surgeon major of the lifeguard of Prince Willem V, in The Hague. In 1795 he was appointed member of the ‘Bureau van Gezondheid over de armée en de hospitalen in de Bataafsche Republiek’.

Lichtenberg, Georg Christoph (1742–1799)

Lichtenberg was professor of physics at the University of Göttingen (Germany).

LeFrancq van Berkhey, Joan (1729–1812)

Lefrancq van Berkhey was lecturer of natural history at Leyden University, initially under Allamand and later on under Brugmans. He was a fervent adherent of the House of Orange and remained faithful to it until he died, shortly before it returned to Holland.

LeRoy, Jean-Baptiste (1720-1800)

LeRoy was a French physicist, who was especially interested in the research with respect to ballooning and the construction of balloons. He was the director of the 'Hôtel-Dieu' in Paris. In 1751 he was elected member of the 'Académie des Sciences' (Paris). He was also a member of the 'Royal Society' (London) and of the 'American Philosophical Society'. He kept a lively and lasting correspondence with Benjamin Franklin, the American physicist (for about 30 years). LeRoy also made several contributions to Diderot's *Encyclopédie*. He had a special interest in mathematics and physics.

Logger, Jacob (1759-1841)

Logger was a town surgeon in Leyden. For some time he studied medicine at the local university, but he never completed his studies.

Logger, Hendrik Jan (1789-1829)

In 1807 and 1816 Logger junior was enlisted as a student of medicine at Leyden University. In 1816 he obtained his doctorate. In 1818 he left for Paris, in order to attend the lessons and demonstrations given by Dupuytren, Dubois and Larrey. In 1819 he was appointed town physician of Leyden.

Luchtmans, Pieter (1733-1800)

Luchtmans studied medicine at Leyden University and took his doctoral degree in 1758. In 1800 he was appointed full professor of medicine, surgery and anatomy at the University of Utrecht. He was the first professor, who introduced the instruction on a university level of midwives.

Maanen, Pieter Jacobus van (1770-1854)

Van Maanen studied medicine at Leyden University. In 1795 he was appointed full professor of theoretical medicine, surgery and obstetrics at the University of Harderwijk. In 1808 he decided to end his career in Harderwijk. Early 1811 he succeeded Bruno Giraud as professor of surgery at the 'Athenaeum Illustre' (Amsterdam), who died in Paris in January 1811.

Marck, Jean Baptiste Pierre Antoine Monet. Chevalier De La (1744-1829)

Through the intercession of the Comte de Buffon DeLaMarck was appointed assistant of the department of botany of the 'Muséum Royal' (Paris) in 1788. In June 1793, after the revolution had caused the establishment of the 'Muséum National d'Histoire Naturelle', he was appointed professor of invertebrate zoology. In spite of that fact he spent most of his time on botany for the following thirty years. He was a very prolific author in this field.

Marum, Martinus van (1750-1837)

From 1764 to 1773 Martinus van Marum studied medicine at Groningen University. In 1773 he took his doctorate in philosophy. Thirteen days later he obtained a doctorate of medicine, after which he settled in Haarlem and began to practise medicine. In 1784 he was appointed director and librarian of 'Teyler's Foundation'. He was especially active in the fields of botany, chemistry and physics. In 1795, after the first secretary of the 'Hollandsche Maatschappij der Wetenschappen' (founded in 1752) had died, Van Marum was appointed its secretary. He remained in office until he died in 1837. In 1839, after painstaking negotiations, he was succeeded by J.G.S. van Breda.

Meerten, L.A. van

Van Meerten was a member of the 'Geneeskundig Bureau' ('Medical Bureau') or 'Bureau van Gezondheid over de hospitalen van de armée in de Bataafsche Republiek' ('Bureau of Healthcare of the Army and the Hospitals of the Batavian Republic'), which was later on transformed into the 'Conseil de Santé' ('Medical Council'). From the beginning this service was directed by Sebald Justinus Brugmans.

Mertrud, Antoine-Louis-François (†1802)

From 1787 on Antoine-Louis-François Mertrud was working in Paris as a demonstrator of anatomy and surgery. At the occasion of the foundation of the 'Muséum National d'Histoire Naturelle' in 1793 he was appointed professor of zootomy.

Mirbel, Charles François Brisseau de (1776-1854)

Brisseau de Mirbel was a self-educated botanist, who worked at the 'Muséum National d'Histoire Naturelle' (Paris). He carried out investigations on plant embryos. In 1806 Louis Bonaparte, King of Holland, appointed him as his servant in the field of botany. In 1807 he was elected correspondent of the 'Académie des Sciences' (Paris). In 1808 he was elected member of this society. In the same year he was appointed supplementary professor of botany at the 'Faculté des Sciences' (Paris). In 1815 his *Elémens de Botanique* was published. That same year, after the Emperor Napoléon Bonaparte had been exiled, Mirbel was appointed Secretary General to the Minister of the Interior of the Kingdom of France. In 1829 Mirbel was appointed 'professeur-administrateur' of the Paris Muséum, after Bosc had died. His scientific activity was at its pinnacle between 1825 and 1846. Mirbel paid special attention to the development of the cambium. He took a great interest in cytochemistry.

Moll, Gerard (1785-1838)

Gerard Moll studied physics at the 'Athenaeum Illustre' (Amsterdam) under Van Swinden. He also attended the lectures delivered by Cras and Van Lennep. After a couple of years he went to Leyden, where he took his first degree ('kandidaats-examen') in the Faculty of Philosophy, Mathematics and Physics in 1809. From 1810 on he studied astronomy in Paris, attending the lectures delivered by Delambre. In 1812 he was appointed director of the observatory of the University of Utrecht, thanks to the support given to his application by Delambre and Van Swinden. That same year he was appointed professor of mathematics and astronomy in Utrecht. In 1815 the chair of physics was also entrusted to him. Moll was a famous scientist, not only in the Netherlands, but also abroad. In spite of several invitations he stayed in Utrecht.

Mons, Jean-Baptiste van (1765-1842)

Van Mons was professor of chemistry in Leuven (Belgium). In 1816-1817 he made several important contributions to the *Pharmacopea Belgica*. This project was directed by Sebald Justinus Brugmans.

Mulder, Johannes (1769-1810)

Johannes Mulder studied philosophy and medicine at the University of Franeker (Friesland). In 1790 he moved to Leyden, in order to complete his studies. On the advice of his teacher DuPui, he delivered many births at home. From October 1792 until the end of 1793 he studied in London ('Guy's Hospital', 'Saint-Thomas Hospital' and 'London Hospital', attending among others the lessons and operations carried out by John Hunter and by Lowder). He designed a new obstetric forceps. In 1794 he obtained his doctorate of medicine, after which he was appointed lecturer of surgery and obstetrics at the University of Franeker. In 1797 he was appointed full professor in these domains of medicine. He kept on carrying out deliveries of births at home in the presence of students. In 1807 he was appointed full professor of anatomy, human physiology ('natuurkunde van de mens'), surgery and obstetrics. Mulder was a very prominent and modern teacher.

Munniks Wijnold (1744-1806)

From 1764 until 1767 Munniks studied medicine at Groningen University. In 1767 he continued his studies in Leyden. After having spent some time in Paris and Lyon, in order to attend lectures and demonstrations, he obtained his doctorate at Leyden University in 1769. In 1770 he was appointed professor of medicine at the University of Groningen and assisted Camper and Van Doeveren.

Noel, Fr.

Noel was commissioned by the Emperor of France – together with Georges Cuvier – to investigate the quality of the Dutch educational system. They arrived in June 1811. Their findings resulted in an imperial decree, dated 22 October 1811, which guaranteed the existence of the Leyden Hoogeschool as a department of the French Imperial University.

Ontijd, Conrad Gerhard (1766-1844)

From 1792 to 1797 Ontijd studied medicine at Leyden University. After having obtained his doctoral degree in 1797 he spent some time in London, where he attended the lectures and demonstrations given by Forster and Ashley Cooper. After his return to Holland he set up a practice as town physician in The Hague. In

February 1807 he was appointed personal physician to King Louis Bonaparte. He was a passionate advocate of the new way of vaccination.

Oosterdijk, Nicolaas George (1740-1817)

In 1760 and 1761 Oosterdijk studied medicine at Leyden University. He continued his studies at the University of Utrecht, focusing more and more on chemistry and obtained his doctorate of medicine in 1762. Soon after he was appointed Town Physician in Leyden. In 1770 he was appointed professor of medicine, chemistry and botany at the University of Harderwijk. In 1775, after Adriaan van Royen had died, he was appointed professor of theoretical medicine at Leyden University. In 1778 he was offered a second chair (practical medicine).

Pallas, Pieter Simon (1741-1811)

From 1754 to 1759 Pieter Simon Pallas studied medicine in Halle, Göttingen and Leyden and obtained his doctorate there in 1759. From 1761 to 1766 he stayed in England and spent some time in Holland again. In 1763 he was elected fellow of the 'Royal Society' (London) and of the 'Academia Caesarae Leopoldino-Carolina'. Thereupon he worked for the 'Academy of Sciences' of St. Petersburg. In 1793 he explored the southern regions of Russia and between 1799 and 1801 he travelled through the Crimean region. Pallas rejected Linnaeus's *Systema Naturae*.

Palm, Johan Hendrik van der (1763-1840)

After having completed his studies of theology at Leyden University, Van der Palm was offered the chairs of Hebrew and Arabic languages, as well as the one of sacred eloquentia. In 1833 he retired. During the 'Bataafsche Republiek' ('Batavian Republic') he was president of the 'Raad van Binnenlandsche Zaken' (Council of the Interior). In 1809 he was appointed 'Agent of National Education' ('Minister of Education'). This position he held until 1805. In 1833 he retired from Leyden University.

Paradijs, Nicolaas (1740-1812)

From 1758 to 1763 Paradijs studied medicine at Leyden University and obtained his doctorate there. Thereupon he travelled to Paris, where he attended the lessons and

demonstrations given by Levret, Lorry and Sanches. After having arrived in Lyon he attended the lectures and demonstrations given by LeCat. After his return to Holland he set up a practice as town physician in Amsterdam. In 1784 he was appointed full professor of medicine at Leyden University, in which office he succeeded van Doeveren. In 1787 he was also appointed full professor of practical medicine, as a colleague of Oosterdijk.

Perre, Johan Adriaen van der (1738-1790)

Van der Perre was a Maecenas. He was one of the directors of the ‘Zeeuwsch Genootschap der Wetenschappen’ (Flushing). Van der Perre was very much interested in the physical sciences and meteorology.

Parrot, Georg Friedrich (1767-1852)

Parrot was professor of physics at the University of Dorpat.

Percy, Pierre François (1754-1825)

During the French Empire Percy was in office as inspector general of the French imperial military health-service.

Persoon , Christiaan Hendrik (1755-1837)

After his parents had died Persoon left Capetown (South-Africa) and went to the Netherlands. For some time he lived in Amsterdam. In the course of 1783 he left for Halle (Germany), in order to study theology. In 1786 he left Halle and returned to Holland, in order to study medicine. In 1787 he went to Göttingen, where he studied botany. The ‘Academia Caesarea Leopoldino-Carolina’ (Erlangen) conferred an honorary doctorate to him. In 1803 he left for Paris and stayed there for the rest of his life, living under rather poor conditions. He completely devoted himself to the study of Fungi and became a famous mycologist. After he died his collections were given to the ‘Rijksherbarium’ (Leyden).

Plaisance, Charles LeBrun, Duc de (1739-1824)

Charles Lebrun was a lieutenant general in the French imperial army and ‘Architrésorier’ (arch-treasurer) of the Empire. In July 1810, after the abdication of

King Louis Bonaparte, he was appointed governor general of Holland. He had his residence in Amsterdam.

Plato, J.C.

When Brugmans was in office as inspector-general of the military health-service of the Kingdom the Netherlands, Plato was in office as first medical officer in the town of Namur.

Priestley, Joseph (1733-1804)

Joseph Priestley was a vicar (minister), who was also a very keen researcher and experimentator in the field of chemistry and physics. Among others he carried out research with respect to phlogiston. He kept a lively and international correspondence, among others with Lavoisier. Priestley proved the existence of oxygen.

Pruys van der Hoeven, Cornelis (1792-1871)

Cornelis Pruy van der Hoeven studied medicine at Leyden University. In 1824 he obtained his doctoral degree. From that year on he held the office of full professor of practical medicine at Leyden University.

Reinwardt, Carl Georg Caspar (1773-1854)

In Amsterdam Reinwardt attended the lessons of botany, given by Gerard Vrolik. In 1800 the University of Harderwijk conferred two honorary doctorates to him and appointed him professor of botany, chemistry and natural history. In 1808 he was appointed professor of natural history at the 'Athenaeum Illustre' (Amsterdam). Two years later, in 1810, King Louis Bonaparte made him director of the 'Cabinet of Natural History' (Amsterdam) and director of the 'Royal Zoological Garden' (Haarlem). In 1815 King Willem I appointed him Director of Agriculture, Arts and Sciences' in the Dutch East Indies. Late April 1816 Reinwardt arrived in Batavia. He also held the office of president of the 'Bataviaasch Genootschap van Kunsten en Wetenschappen' and founded 's Landsch Plantentuin' ('Botanical Garden') at Buitenzorg. He had (too) many tasks to carry out. In October 1822 he returned to the Netherlands and arrived in April 1823. Meanwhile he was appointed professor

of natural history, chemistry, geology and botany at Leyden University. Only a few years later he left his teaching commitment of natural history to a younger colleague. In 1845 he retired.

Repelaer van Driel, Ocker (1795-1832)

In 1795 Repelaer van Driel was appointed Commissioner General of the Batavian army. From 1806 to 1810 he was a member of the 'Raad van State' ('State Council'). From 1810 to 1813 he was a private citizen. In 1813 King Willem I ennobled him, made him commander of the 'Nederlandsche Leeuw' ('Order of the Dutch Lion') and appointed him Commissioner general of Public Works, Public Education and Protestant Worship. Until 1830 he held the office of governor of the Dutch Bank in Brussels. Besides he was one of the directors of the 'Hollandsche Maatschappij der Wetenschappen' (Haarlem).

Riemer, Pieter de (1769-1831)

From 1793 to 1796 De Riemer studied medicine at the University of Harderwijk. In 1796 he left for Duisburg (Germany), where he completed his studies and took his doctoral degree. Thereupon he returned to Holland and started to give private lessons of anatomy and physiology. In 1804 he was appointed lecturer of anatomy. In 1810 he was appointed honorary town surgeon in The Hague. In 1812 the municipality gave him the honorary title of professor of anatomy, surgery and obstetrics. In December 1813 – after Brugmans had fallen into royal disgrace – De Riemer was appointed director general of the military health service of the Kingdom of the Netherlands. In 1814 – after Brugmans's rehabilitation – he was elected member of the management of the military health service and he was appointed personal surgeon to King Willem I.

Roy, Cornelis Henricus à (1750-1833)

From 1770 to 1774 Cornelis à Roy studied medicine at Leyden University and obtained his doctorate. Thereupon he started a practice as physician in Amsterdam, which office he exercised until his death in 1833. He was a fervent advocate of vaccination according to Jenner's prescriptions. After his death he left the largest private library in Europe, containing more than 17.500 books.

Royen, David van (1727-1797)

David van Royen was the son of one of the curators of Leyden University. He studied medicine and obtained his doctorate in 1752. In 1754 he was appointed professor of botany. He kept a correspondence with Carolus Linnaeus. In June 1786 he turned his office over to Sebald Justinus Brugmans. Van Royen considerably enlarged the Leyden hortus.

Rudolphi, Karl Asmund (1771-1832)

Rudolphi was a botanist and a veterinary surgical doctor. After having taught at the University of Greifswald, he was appointed professor of medicine and botany at the University of Berlin. He was a member of the Prussian Academy of Sciences of Berlin and a close friend of Carl Gustav Carus. Among others he wrote *Beiträge zur Anthropologie and allgemeinen Naturgeschichte* (1812),

Salomon, Gottlieb (1774-1865)

Gottlieb Salomon, of German origin, studied medicine at the University of Königsbergen. In 1797 he obtained his doctorate of medicine there. Initially he had the intention to emigrate to North-America through Holland, but Brugmans (Leyden) made him change his mind. He was appointed town physician in Leyden, which office he exercised until 1863.

Sande, Johan Baptiste Augustin van der (1746-1820)

Van der Sande worked in Brussels as a pharmacist and chemist. He was a honorary member of the ‘Sociëteit van Emulatie der Wetenschappen’ (‘Society for the Advancement of Sciences’) of Liège.

Sandifort, Eduard (1741-1814)

From 1758 to 1763 Eduard Sandifort – of English origin – studied medicine at Leyden University and took his doctorate there in 1763. Immediately after, he was appointed town physician in The Hague. In 1770 he was appointed lecturer of anatomy at Leyden University. In 1771 he was given the chair of extraordinary professor of anatomy and surgery. From 1772 on he was in office as full professor in the same fields of medicine. He resigned in 1813.

Sandifort, Gerard (1779-1848)

Gerard Sandifort was the eldest son of Eduard Sandifort. At the age of 14 he started to assist his father as a prosector of anatomy. He himself developed also into a skilled prosector. In 1801 he a honorary doctorate was conferred to him, after which he was appointed extraordinary professor of anatomy. In 1812 he was appointed full professor of anatomy, which office he held until he died in 1848. From 1819 (when Brugmans had died) until the spring of 1823 (when Reinwardt returned from the Dutch East Indies) he was also in office as professor of botany and director of the botanical garden at Leyden University. Sandifort junior was a fervent and skilled draughtsman, who was also in office as a member of the board of directors of 'Ars Aemula Naturae' (the Leyden academy of fine arts).

Saussure, Theodore de (1767-1845)

De Saussure made many meteorological and ornithological observations. In 1793 he fled to England. From 1797 on he carried out many experiments in plant physiology, regarding the major subjects of this field of experimental botany, such as photosynthesis, fermentation, germination, and so on. In 1802 he returned to France, in order to be appointed professor of botany at the University of Geneva. However this chair was no longer vacant, so he was appointed professor of mineralogy and geology, which chairs he only held for a couple of days, because he retired as until 1835, when he retired because he was dissatisfied with the situation (he wanted to devote himself to experimental plant physiology). However he kept the title of honorary professor until 1835.

Scheele, Carl Wilhelm (1742-1786)

Scheele was educated as a pharmacist apprentice. Later on he was active as a pharmacist as well as a chemist and physicist in Malmö, Stockholm and Uppsala, both working in the fields of anorganic and organic chemistry. Scheele was a faithful adherent of the 'phlogiston' theory.

Senebier, Jean (1742-1809)

Senebier studied theology in Geneva (Switzerland) and was in office as an evangelical minister there. He practised botany and chemistry in his native town and investigated the various aspects of photosynthesis. His ideas with respect to this subject distinctly differed from those of Ingenhousz and Lavoisier.

Sprengel, Kurt Polycarp Joachim (1766-1833)

Kurt Sprengel was full professor of medicine and botany at the University of Halle (Germany). He was a very eminent researcher. He had also a special interest in the history of pharmacy, surgery and pathology. He was well acquainted with the *Geschichte der wichtigsten Operationen*, written by Carus, which was published in Halle between 1805 and 1819.

Spürzheim, Johann Caspar (1776-1832)

Spürzheim was the assistant of Franz Joseph Gall, who invented and developed the doctrine of phrenology ('hersen-schedelleer') Together they wrote *Anatomie et Physiologie du système nerveux en général et du cerveau en particulier*, which was published between 1810 and 1819.

Stipriaan Luiscius, Abraham van (1763-1829)

Van Stipriaan Luiscius studied medicine at Leyden University and was in office as town physician in Leyden. He also taught chemistry there and lectured botany at the clinical school of Rotterdam for several years. Besides he took a great interest in problems, related to the purification of water and in the improvement of drinking-water.

Stratingh, Sibbrand (1785-1841)

From 1802 until 1808 Stratingh studied medicine and pharmacy at the University of Groningen. In 1808 he was admitted as pharmacist. In 1809 he obtained his doctorate of medicine. In 1824 Stratingh succeeded Driessen as full professor of chemistry.

Suringar, Lucas (1770-1833)

Lucas Suringar studied theology at the University of Franeker. In 1792 he took his doctorate in theology there. In 1804 he was promoted doctor honoris causa of theology at Leyden University. In 1815 he was appointed professor of church history, comparative theology and homiletics. He held these chairs until 1827. He was also in office as minister of the Dutch reformed church.

Swinden, Jan Hendrik van (1746-1823)

Initially Jan Hendrik van Swinden was professor of philosophy (mathematics, physics and astronomy) at the University of Franeker, where he had succeeded Antonius Brugmans. Later on – in 1785 – he moved to Amsterdam, where he was appointed at the ‘Atheneum Illustre’. From 1811 until 1813 he was inspector of public education and member of the ‘Conseil Académique’ of Leyden University.

Temminck, Coenraad Jacob (1778-1858)

Temminck was the son of the treasurer of the ‘Verenigde Oost-Indische Compagnie’ (the ‘Dutch East India Company’). At an early age already he was in the possession of a considerable and exquisite collection of objects of natural history. He offered this collection to the Kingdom of the Netherlands, in exchange for an annuity until the end of his days. Anton Reinhard Falck, the Minister of Public Education, National Industry and Colonies, agreed. Temminck had also proposed to establish a ‘State Museum of Natural History’, which proposition was soon put into effect. The museum was established in Leyden and it would be independent of the (other) university collections. Temminck became its first administrator. He held his office until 1858.

Thomassen à Thuessink, Everhardus Johannes (1762-1832)

Thomassen à Thuessink, descendant of a noble family from Groningen, studied medicine at Groningen University. At the same university he held the chair of full professor of medicine from 1794 until his death.

Thouïin, André (1747-1824)

André Thouïin spent his entire life in the 'Jardin du Roi' (Paris), which later on became the 'Jardin des Plantes'. From 1778 until 1793 André Thouïin was chief-gardener of the 'Jardin du Roi'. In 1787 he was elected member of the 'Académie des Sciences' (Paris). In 1793 he was appointed 'professeur de culture' at the 'Jardin des Plantes' (Paris). From 1794 to 1797 he carried out his assignments in Belgium, Holland and Italy with great honesty. He corresponded with Sebald Justinus Brugmans and with his successor, Caspar Georg Carl Reinwardt. In 1824 his brother Jean Thouïin succeeded him as chief-gardener.

Thunberg, Carl Peter (1743-1828)

Thunberg was a student of Linnaeus at the University of Uppsala (Sweden). From 1774 to 1777 he travelled to the Dutch East Indies and Japan. Among others he wrote the *Flora Japonica* (1784), the *Icones Plantarum Japonicarum* (1794-1802) and the *Flora Capensis* (1820).

Toulon, Lodewijk van (1767-1840)

Lodewijk van Toulon – of a prominent family of Gouda – studied law at the University of Utrecht, where he obtained his doctorate in 1785. From 1806 to 1813 he was a member of the Court of Cassation. After the restoration of the House of Orange, Van Toulon was appointed mayor of Gouda and member of the Lower Chamber of the State General. In 1830 he was appointed State Councillor.

Troostwijk, Adriaan Paets van (1752-1837)

Paets van Troostwijk was a merchant in Amsterdam, who was a self-taught scientist in the fields of the natural sciences and especially in physics. He became a member of the 'Kring der Hollandsche Scheikundigen' (the 'Circle of Dutch Chemists'). Together with Van Marum he carried out several experiments with the electrostatic generator. He succeeded in dissociating water into its elementary components, oxygen and hydrogen.

Tydeman, Meinard (1778-1863)

From 1792 until 1795 Tydeman studied law at the Deventer 'Athenaeum'. In 1796 he went to Groningen. In 1797 and 1798 he studied law at Leyden University. In 1797 already he obtained his doctorate of law in Leyden. For a short period he was in office as professor of law in Deventer. In 1803 he delivered his inaugural address at the University of Franeker. In 1812 he was called to Leyden, where he was appointed professor of law, ordered to teach the 'Code Napoléon'. At the same time he was appointed secretary of the order of advocates. In 1815 he was reappointed professor of law at Leyden University. Tydeman was also a poet.

Valckenaer, Johan (1759-1821)

Valckenaer was a patriot in heart and soul, a writer and professor of law at the University of Franeker. In 1785 he was discharged from office and had to flee to France, together with many other patriots. He lived in France until he returned to Holland in 1795, in the service of the French government. In 1796 he was appointed diplomatic representative of the 'Batavian Republic' at the royal court in Madrid (Spain). Around 1811-1812 he was in office as French imperial ambassador in Spain. In 1813 he was imprisoned for a short time. After his return to Holland he resided in Amsterdam as a private citizen.

Vaucher, Jean Pierre Etienne (1763-1841)

Jean Pierre Etienne Vaucher studied theology and physical sciences and later on botany at the University of Geneva. He was ordained priest in 1787. From 1797 to 1822 he worked in a parish in Geneva. From 1794 on he taught botany there. Alphonse de Candolle was one of his students and later on became one of his close friends. In 1798 Vaucher was appointed honorary professor of botany at the University of Geneva. In 1827 he transferred to the chair of ecclesiastical history, which he held until his death in 1829. Vaucher was one of the founders of the 'Société de Physique et d'Histoire Naturelle de Genève'. Among others he wrote a *Histoire des Conservees d'Eau Douce*, which was published in 1803.

Vaucquelin, Louis Nicolas (1763??-1829)

Vaucquelin started his carrier as a pharmacist apprentice in Rouen. Later on he went to Paris, where he worked in a pharmacy as well. In 1784 he became Fourcroy's laboratory assistant. He also lectured chemistry. In 1792 he was appointed manager of a pharmacy, in 1793 he became hospital pharmacist and he was elected member of the 'Académie des Sciences'. In 1794 he was appointed assistant chemist and physician at the 'Muséum National d'Histoire Naturelle' (Paris). In 1794 he was appointed assistant professor of chemistry at the 'Ecole Centrale des Travaux Publics' (the predecessor of the 'Ecole Polytechnique', Paris). In 1795 he was made Master of Pharmacy. In 1797 he was appointed inspector of mines and professor of assay at the 'Ecole des Mines'. In 1801 he succeeded Jean D'Arcet as professor of chemistry there. In 1804 he succeeded A.L. Brongniart as professeur-administrateur at the 'Muséum National d'Histoire Naturelle', in order to teach applied chemistry.

Verschuier, Wolter Forsten (1739-1793)

Verschuier was a student of Van Doeveren (Leyden). There he obtained his doctorate in 1766. Thereupon he travelled through France and England. In 1770 he was appointed professor of chemistry at Groningen University. He was a practical researcher and experimentator.

Volta, Alessandro Giuseppe Antonio (1745-1827)

From 1757 on Alessandro Volta studied at the Jesuite College of Como. He was a physicist, who carried out many experiments in the field of electricity. He wrote several important treatises on animal electricity, galvanism and pneumatics. In 1786 he was elected member of the 'Academie der Wissenschaften' (Berlin). In 1791 he was elected fellow of the 'Royal Society' (London). In 1799 Volta fled to Paris and later on he returned to Italy in the company of the French republican army. In 1801 he was elected correspondent of the 'Académie des Sciences' (Paris). Volta invented the electrophore, with which it became possible to produce statical electricity. He was appointed professor of physics in Como and later on in Pavia (Italy) Volta also invented the electrical eudiometer.

Voltelen, Floris Jacob (1753-1795)

From 1775 to 1777 Voltelen studied theology and medicine at the University of Utrecht. He obtained his doctorate of medicine there. Thereupon he set up a practice as town physician in Utrecht. In 1783 he was appointed extraordinary professor of medicine and chemistry at Leyden University, in order to assist professor Hahn. After Hahn died, Voltelen succeeded him as full professor medicine, chemistry and botany.

Vosmaer, Jacob (1783-1824)

From 1801 on Jacob Vosmaer studied medicine at the University of Harderwijk. In 1807 he obtained his doctorate in medicine under Reinwardt. In 1807 he matriculated in Utrecht as a student of medicine, attending the lessons of M. van Geuns and N.C. de Fremery. He took his doctorate of medicine in 1808 (under P.J. van Maanen). That same year he set up a practice as town physician in Haarlem. In 1811 he moved to Zutphen. When in 1818 the University of Harderwijk was closed down, he was appointed professor of botany, chemistry and pharmacy at the athenaeum of Harderwijk, which replaced the university. After its closing down Vosmaer was called to Utrecht, where he was appointed extraordinary professor of medicine. There he taught semiotics, general therapeutics, encyclopaedia medica and medical history. In 1820, when the veterinary school was founded, Vosmaer was appointed full professor of chemistry, pharmacology and pharmacy.

Vrolik, Gerardus (1775-1859)

From 1796 on Gerardus Vrolik was professor of botany at the 'Athenaeum Illustre' in Amsterdam. In 1798 he was also appointed professor of anatomy, physiology and practical obstetrics there. He was the first professor of obstetrics in Holland, who had an obstetric clinic (established in the 'Binnen-Gasthuis'). Vrolik was the son-in-law of Jan Hendrik van Swinden.

Wallerius, Johann Gottschalk (1709-1785)

Wallerius began his studies in 1725. In 1731 he took his Master's degree in philosophy. In 1732 he was appointed assistant professor of medicine at the University of Lund. In 1735 he took his doctoral degree in medicine at that

university. From 1732 on he became more and more interested in mining science and mineralogy. In 1741 he was appointed assistant professor of medicine, *materies medica* and anatomy at the University of Uppsala. In 1750 he was appointed professor of chemistry at the same university. He kept on teaching pharmacy and metallurgics. He also practiced mineralogy. He developed chemical theories with respect to agriculture. Together with Häuy (Paris) he is one of the founders of a scientific mineralogy.

Wauters, Pierre Engelbert (1745-1840)

Pierre Wauters studied philosophy at the University of Leuven and obtained his licentiate of medicine in 1773. Thereupon he went to Ghent, where he set up a large practice as a town physician.

Werner, Abraham Gottlob (1750-1817)

Abraham Werner was the founder descriptive mineralogy on a natural historical basis ('Oryktognosie'). He succeeded in changing geology from a descriptive science into an empirical and practical science. He brought into prosperity the 'Bergschule' of Freiburg, in Breisgau, Germany). He was a teacher of the famous German geologist Leopold von Buch, who became later on president of the 'Mineralogische Gesellschaft'. Werner was an unconditional advocate of the theory of 'Neptunism'.

Ypey, Adolf (1749-1820)

In 1785 Adolf Ypey started his scientific career as a lecturer of botany at the University of Franeker (Friesland). Later on he was appointed professor of medicine and anatomy there. After the reorganisation of the universities which took place in Holland in 1812, he was appointed professor of medicine and pathology at the University of Leyden.

