Molecular Determinants of Pathogenicity in *Leptospira*

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The first step in bacterial infection is colonisation of host tissues, in some cases followed by invasion of host cells. Because culturing of *Leptospira* leads to loss of virulence, it might be that culturing leads to loss of expression of adhesion/invasion molecules. Our work shows, that long time cultured *Leptospira* do indeed adhere less to kidney cells. The possible role of leptospiral LPS in this process was studied by incubation of kidney cells with various extracts of leptospiral LPS. These experiments showed, that LPS does not function as an adhesion factor.

Another likely candidate virulence factor of *Leptospira* is haemolysin. Haemolysins have been shown to be important for pathogenesis in many bacteria. We have cloned and sequenced the gene for a leptospiral haemolysin. Our experiments showed, that the gene is present in many pathogenic strains of *Leptospira*. The gene bears no ressemblance to previously cloned haemolysins from *Leptospira*, nor to any of the DNA sequences published to date. Further characterisation of the gene product is needed to clarify a role in leptospiral pathogenesis.

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