Host-Pathogen Interactions in Guillain-Barré Syndrome:
The role of Campylobacter jejuni lipooligosaccharide sialylation

Astrid P. Heikema

1. Monosialylated, Guillain-Barré syndrome-associated Campylobacter jejuni strains specifically bind to sialoadhesin, a receptor expressed on macrophages. *(This thesis)*

2. Disialylated, oculomotor weakness-associated Campylobacter jejuni strains specifically bind to Siglec-7, a receptor expressed on dendritic cells. *(This thesis)*

3. Binding of Campylobacter jejuni to sialoadhesin and Siglec-7 is sialic acid-dependent. *(This thesis)*

4. Binding of Campylobacter jejuni to sialoadhesin results in increased bacterial uptake and enhanced cytokine production. *(This thesis)*

5. Sialylated Campylobacter jejuni strains invade intestinal epithelial cells more efficiently than nonsialylated Campylobacter jejuni strains. *(This thesis)*


7. The prevalence of anti-ganglioside antibodies in patients with Guillain-Barré syndrome is higher than currently described in literature.

8. In lymphoid tissues, sialoadhesin binding to sialylated lipooligosaccharides enhances the production of anti-ganglioside antibodies. *(Vaccine. 2011; 24:4813-4820)*

9. Preventive medication for high blood pressure is prescribed too frequently. *(Radar, December 10th, 2012)*

10. Ook in de wetenschap moeten we ons realiseren dat “het is wat het is”. *(Erich Fried)*

11. Combining two scientific careers and two children requires excellent balancing skills.