Protection from Autoimmune Disease

OCR Number: OCR 7021

Description:

Treating Autoimmune Diseases by Preventing Translocation of the Autoimmune-Promoting Pathobiont

- The group of Dr. Kriegel at Yale has developed treatment methods to suppress a gram-positive gut commensal species in autoimmune-prone animal models.
- Such protection is achieved against lethal autoimmune clotting leading to heart attacks, lung clots and strokes mirroring antiphospholipid syndrome, liver inflammation as seen in autoimmune hepatitis, and kidney damage due to lupus nephritis in human.
- It is shown that commensal species present in human liver biopsies of autoimmune patients.

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Figure 1. Schematic illustration of the mechanism of action of a gut pathobiont on autoimmunity, and how the antibiotic vancomycin or a vaccine against the pathobiont protect from autoimmune diseases by preventing translocation of the autoimmune-promoting pathobiont.