Project 18: New Molecules of Infection of the Central Nervous System

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Background:

Infections with the lymphocytic choriomeningitis virus can result in chronic infection due to exhaustion of anti-viral T cells. Several mechanisms have been identified to regulate anti-viral T cell immunity including key molecules triggering exhaustion (e.g.: PD-1) or regulatory effects of other immune subsets (e.g.: NK cells).

Own previous work:

Following infection of the central nervous system, LCMV can be controlled efficiently. Proteomics analysis uncovered proteins expressed during infection, which could potentially regulate viral infection.

Aim of the project:

To analyze novel molecules during viral infection and their impact on immunity.

Work program:

The new molecular targets will be characterized following infection using flow cytometry, Western Blot, histology, immunofluorescence, ELISA, RT-PCR, and further immunological techniques.