TRR 167

USP18 as a key regulator for microglia activation (B16*)

Funding Period:
since 2021

Project Leaders
Professorin Dr. Antje Beling
Charité - Universitätsmedizin Berlin
Charité Campus Mitte
Institut für Biochemie
Virchowweg 6
10117 Berlin
Telephone: +49 30 450528187
Fax: +49 30 450528921
E-Mail: antje.beling@charite.de

Privatdozent Dr. Klaus-Peter Knobeloch
Universitätsklinikum Freiburg
Neurozentrum
Institut für Neuropathologie
Breisacher Straße 64
79106 Freiburg
Telephone: +49 761 27051060
Fax: +49 761 27050500
E-Mail: klaus-peter.knobeloch@uniklinik-freiburg.de

Project Description:

USP18, a major negative regulator of the type I IFN response, is controlled by the interacting proteinsSTAT2 and ISG15. USP18 loss-of-function mutations cause hyperactivation of microglia andinterferonopathy in humans. This project aims to define how USP18 controls specific myeloid cellsubsets in the CNS both in steady state and upon infection. Focusing on the crosstalk of ISG15 withUSP18 in a novel humanized mouse model and new interacting partners, we will investigate the IFNdependentactivation of microglia, held in check by USP18 with the final aim of therapeuticintervention.

Reference: https://gepris.dfg.de/gepris/projekt/452450891?language=en