SFB 900

SFB 900 Seminar Series

ALL GUESTS ARE WELCOME

TITLE
Ironing out the immune system.

SPEAKER
Prof. Alexander Drakesmith, Professor of Iron Biology, Medical Science Devision, University of Oxford, GB

LOCATION
Lecture Hall Q, building J6, MHH Campus

06.10.2022

1.00 PM (s.t.)

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We are investigating how iron and anaemia influence immunity and infectious diseases. Our research inspires treatments that control iron physiology to benefit the host at the expense of pathogens.
Iron is critical for life: too little can halt DNA synthesis and energy metabolism; too much can generate toxic reactive oxygen species. Furthermore, iron is essential for the growth of pathogens, but also for the immune system that fights infections. For example, during infection the host sequesters iron to deprive pathogens as part of the innate immune response, while T cells and B cells need iron for their function to clear the infection. Iron levels in the body are controlled by a hormone called hepcidin, which acts analogously to how insulin controls glucose. Through collaborators in Europe, the US, Africa and Sri Lanka we have made significant contributions to how hepcidin and iron are controlled in health and disease, including anaemia, HIV, HCV and typhoid fever. We utilise experimental models of key diseases, including malaria, to manipulate hepcidin during infection and understand how iron affects immunity and the outcome of infection.

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