

SFB 900 SEMINAR SERIES

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TITLE

Iron uptake in *Pseudomonas aeruginosa*
networks different virulence and metabolic
pathways

SPEAKER

Dr. Pierre Fechter
Group: Prof. Schalk, UMR 7242 „Biotechnology and cell
signaling“, CNRS/University of Strasbourg, France

LOCATION

Lecture Hall Q, Building J6
MHH, Carl-Neuberg-Str. 1
Hannover



04.04.
2019

5.00 PM (s.t.)

» Research of Pierre Fechter

The main focus of Pierre's research is the investigation of iron homeostasis in bacteria. Iron is poorly bioavailable, thus bacteria produce siderophores to scavenge iron(III) from their environment. The human opportunistic pathogen *Pseudomonas aeruginosa* uses at least 20 different iron uptake pathways. Pierre and the rest of Prof. Schalk's team investigate the molecular mechanisms involved in iron uptake of *P. aeruginosa*, especially during the infection process, and the associated gene regulation.

Moreover, Pierre and his colleagues are looking for innovative new antibiotics and try to synthesize inhibitors of the proteins involved in iron uptake or siderophore-antibiotic conjugates. These conjugates behave like "Trojan Horses" and use iron uptake pathways to transport antibiotics into the bacteria and kill them.

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