LUXEMBOURG INSTITUTE OF HEALTH
RESEARCH DEDICATED TO LIFE

LECTURE SERIES & WORKSHOPS

INFECTION & IMMUNITY

23
MAY 2019
Thursday

LECTURE
Lycée Guillaume Kroll
d'Esch/Alzette
Salle de Projection *
11.00 - 12.00 pm

MEET & EAT *
light lunch provided
House of BioHealth,
Room Françoise
Barré-Sinoussi
12.30 - 2.00 pm

9 10 11 12 1 2 3 4

*Please register by sending a mail to florence.henry@lih.lu

SPEAKER

Prof Alain VANDERPLASSCHEN

Immunology-Vaccinology ,
Faculty of Veterinary Medicine,
University of Liège, Belgium

HOST:
Department of Infection and Immunity (LIH)

RESPONSIBLE LIH SCIENTIST:
Dr Andy Chevigné (andy.chevigne@lih.lu)

CONSERVED FEVER PATHWAYS ACROSS VERTEBRATES: A HERPESVIRUS DELAYS FISH BEHAVIORAL FEVER THROUGH EXPRESSION OF A DECOY TNFα RECEPTOR

ABSTRACT

When infected by pathogens, endotherms and ectotherms can both increase their body temperature to limit the infection. Ectotherms do so by moving to warmer places, hence the term "behavioral fever". We studied the expression of behavioral fever by common carp infected by cyprinid herpesvirus 3. We showed that carp maintained at 24°C all died from the infection, whereas those housed in multi-chamber tanks encompassing a 24°C-32°C gradient all survived as a consequence of their transient migration to the warmest compartment. As the expression of behavioral fever occurred only at an advanced stage of the disease, we hypothesized that the virus might delay this phenomenon in order to promote its replication. The data support this hypothesis, and the delay mechanism was found to rely on the expression of a soluble viral decoy receptor for Tnfα. This study is the first to report the control of behavioral fever by a pathogen.

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