

LECTURE SERIES & WORKSHOPS

INFECTION & IMMUNITY

01

FEBRUARY 2018

Thursday

LECTURE

*Lycée Technique
d'Esch/Alzette
Salle de Projection**

11.00 am - 12.00 pm

MEET & EAT*

light lunch provided
*House of BioHealth,
Room Française
Barré-Sinoussi*

12.30 - 2.00 pm



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



SPEAKER

Prof Sylviane Muller

Distinguished Class CNRS Director
Professor University of Strasbourg Institute for
Advanced Study / Chair Therapeutic Immunology,
Director of the CNRS Institut de Biologie
Moléculaire et Cellulaire (IBMC),
Director of the CNRS laboratory Immunopathology
and therapeutic chemistry,
Head of the Laboratory of Excellence Drug
Discovery Center Medalis

HOST:

**Department of Infection
and Immunity / IBBL**

RESPONSIBLE LIH SCIENTISTS:

Dr Catherine Larue
(catherine.larue@ibbl.lu)

Prof Dirk Brenner
(dirk.brenner@lih.lu)

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PEPTIDE-BASED TREATMENT OF AUTO-INFLAMMATORY DISEASES

ABSTRACT

Since several years, I have concentrated my activity on systemic lupus erythematosus (SLE), which represents a prototype of autoimmune rheumatic disease. SLE is characterized by inflammation and damage to various tissues, complement deficiencies, modification of cytokine secretion and production of autoantibodies. At least 100 different antigens, often nuclear, targeted by specific antibodies have been characterized in SLE. The cause of the illness is poorly understood, multifactorial in essence, depending on risk factors that are genetic, hormonal (with a female prevalence) and environmental.

Over the recent years, I have focused my research activity on the pathways involved in autoreactive lymphocytes activation and on molecular events leading to cell death/living phenomena (apoptosis, autophagy) that are central in lupus.

Combining my fundamental knowledge of lupus with my long lasting experience in peptide chemistry has enabled me, with my team, to develop very novel strategies to

modulate the aberrant immune response and restore normal immune functions using synthetic peptides. The results of a Phase IIb clinical trial directed by ImmuPharma including one of our peptides in ~150 lupus patients gave extremely promising results. This peptide is currently evaluated in a phase III clinical trial both in the US and Europe (LUPUZOR program). More recently, I have been involved in studies dealing with neuropsychiatric lupus with the objective to better understand the molecular basis of this dramatic form of lupus and propose specific strategies to treat affected patients.

My approaches are based on fundamental immunology, immunochemistry, cellular and molecular biology, biochemistry, organic chemistry and pharmacology, structure-function studies, chemoinformatics, physiology, cellular imaging and manipulation of animal models.