

Master of Biology and Health Lectures Abstract from infection, inflammation and immunity. Thursday March 25, 2021 - 6:15 pm

Research in Infection-Inflammation-Immunity

An important characteristic of inflammatory and infectious diseases is that they are intimately linked and can mutually modulate the effectiveness of their treatments. These two types of pathologies can cause complications affecting the functional and vital prognosis of the patient. COVID-19 is a demonstrative example because it is an infectious disease quickly leading to an inflammatory reaction that can be major and lead to the dysfunction of several organs. Despite efforts in their prevention and treatment, infectious diseases are far from being eradicated since the increased global population, overuse of antibiotics, aging, travel, urbanization and climate change favor the emergence, evolution, and spread of existing, new or re-emerging pathogens, as recently observed with the COVID-19 crisis. In addition, the prevalence of chronic inflammatory diseases is also on the rise, especially in the industrialized world with no curative treatment. This is mostly related to the modification of our environment including the exposure to air pollution which in turn will impact both the microbiota and the host response. The Center for Infection and Immunity of Lille (CIIL) develops research programs on the molecular and cellular mechanisms of infectious and chronic inflammatory diseases with the aim of applying this knowledge to the development of improved diagnostics, vaccines and therapeutics. To achieve these goals, the CIIL gathers complementary expertise, covering a wide range of disciplines including epidemiology, microbiology, virology, parasitology, molecular and cellular biology, immunology, chemistry and biophysics.

Complementary to the CIIL research, Infinite - U1286 seeks to understand the origins, mechanisms and consequences of chronic inflammation and to develop innovative treatments and biomarkers in the field of chronic inflammatory diseases. This multidisciplinary team gathers clinicians, epidemiologist, biologists and chemists to address the complexity of inflammatory diseases and to accelerate innovation for patient care. A few examples of models investigated at the CIIL and Infinite will be presented.

See you on March 25, 2021 - 6:15 pm



Dr Jean DUBUISSON

Jean Dubuisson is Doctor in Veterinary Medicine from the University of Liège in Belgium and he received his PhD degree in 1989 from the same university. He did a post-doc in the laboratory of Charles Rice (Noble Price 2020 for his work on hepatitis C virus) at the Washington University School of Medicine in St. Louis, Missouri, in the United States. In 1994, he obtained a tenure position at the CNRS and he started to develop his own group at the Institut Pasteur de Lille. Since the beginning of his scientific career, he has been developing research programs in the field of virology by working on herpesviruses, alphaviruses, hepatitis C virus, hepatitis E virus and more recently coronaviruses, including SARS-CoV-2. In 2003, he received the Silver Medal Award from the CNRS and between 2005 and 2010, he was an HHMI (Howard Hughes Medical Institute) International Research Scholar.



Dr Laurent DUBUQUOY

Laurent Dubuquoy obtained his PhD at the University of Lille in 2002. During this period, he moved in the Center of Genomic Research, Karolinska Institutet, Stockholm, Sweden, for a training period to improve his skills in Molecular Biology. From 2003 he moved to the Institut de Génétique et de Biologie Moléculaire et Cellulaire, Illkirch, France, headed by Prof. Pierre Chambon for a postdoctoral training. In 2005 he obtained a tenure position at Inserm to develop projects exploring pathophysiological role of the gut-liver axis on the Lille University campus. He has now more than 20 year-experience in deciphering pathophysiology of inflammatory digestive diseases by first determining the role of nuclear receptors in pathogenesis and treatment of IBD and then progressively exploring the gut-liver axis to recently focus on liver disease (e.g. alcoholic hepatitis) where he explores the complex balance between liver inflammation, cell death, tissue repair and liver regeneration.