

## PROFESSOR CHARLES RICE RECEIVES THE BAILLET LATOUR HEALTH PRIZE 2016 FOR HIS FUNDAMENTAL DISCOVERIES IN THE FIELD OF INFECTIOUS DISEASES

The Baillet Latour Fund has awarded its 2016 Health Prize to Professor CHARLES M. RICE, Professor and Director of the Center for the Study of Hepatitis C, Rockefeller University, New York (USA). This prize is the most important international scientific Prize granted in Belgium. Prof. Rice is honoured for his outstanding contributions to unravel the complex interactions between hepatitis C virus and humans. This virus, which infects 150-200 million people worldwide, causes a disease that can evolve to liver cirrhosis and sometimes liver cancer. Dr. Rice's team helped understand the biogenesis and structure of the proteins coded by this virus, discovered a highly conserved element in its genome, produced the first infectious molecular clone of the virus, and established cell culture systems and animal models for studying its replication and the efficacy of drugs against this virus.

### ■ BELGIUM'S MOST IMPORTANT INTERNATIONAL SCIENTIFIC PRIZE : € 250,000

The Baillet Latour Fund was established to promote outstanding achievements in the area of science, academy or art. Since 1979, this Fund awards the Baillet Latour Health Prize to a scientist for his or her contribution in the field of medical research. The Prize, worth € 250,000, has been awarded annually since 2000. This Prize is intended to promote not only fundamental research, but also its applications to human health.

The Prize rewards medical research in one of the following areas: Infectious diseases (2016), Neurological diseases (2017), Cancer (2018), Cardiovascular diseases (2019) and Metabolic disorders (2020). It is managed by a Scientific Committee which sets up annually an international jury of seven members who are experts in the field.

### ■ PROFESSOR CHARLES RICE, RECIPIENT OF THE 2016 BAILLET LATOUR HEALTH PRIZE



Professor Charles M. Rice is a molecular virologist who obtained in 1974 a B.S. from the University of California at Davis and completed his education with a Ph.D. in Biochemistry at the California Institute of Technology in 1981. After further training at Caltech, he assumed faculty positions at Washington University and at the Rockefeller University where he is Maurice R. and Corinne P. Greenberg Professor and Scientific and Executive Director of the Center for the Study of Hepatitis C. Dr Rice is a Fellow of the American Association for the Advancement of Science, a Member of the U. S. National Academy of Sciences, and a recipient of the M. W. Beijerinck, Dautrebande, and Robert Koch prizes.

Dr. Rice's early work focused on arboviruses, which include the yellow fever, dengue and Zika viruses. The genome of these viruses is not made of DNA, but of a single strand of RNA; hence the challenge to understand their life cycle and how they infect target cells. In 1989, with the discovery of the hepatitis C virus (HCV), Dr. Rice shifted his study to this important pathogen which is also an RNA virus. Dr. Rice's contributions include: a description of the HCV proteins and how they are produced by cleavage of the long viral polyprotein; identification and characterization of two HCV-coded enzymes that cleave proteins (proteases); discovery of a conserved RNA sequence at the end of the HCV genome, which is essential for viral replication and infectivity; construction of the first HCV clone that can infect chimpanzees; optimization of a system first described by Bartenschlager's team to create a tractable genetic system for studying HCV replicative functions in cell culture; with the Wakita, Bartenschlager and Chisari groups, establishing the first cell cultures that could efficiently produce an infectious virus; discovery of two cellular proteins required for HCV entry into target cells; characterization of an HCV nonstructural protein which is important for both replication and assembly of the virus. This protein (NS5A) became the target of the most potent class of antivirals ever developed.



These and other contributions have revealed key targets and tools for antiviral drug discovery and optimization. These advances helped lead to the current revolution in the treatment of hepatitis C, with regimens that can achieve >95% cure rates with minimal side effects. This remarkable medical research success story promises to save millions of lives over the coming decades.

### THE JURY OF THE 2016 BAILLET LATOUR HEALTH PRIZE

**Prof. Françoise BARRÉ-SINOUSI (Chairperson):** Nobel Laureate - Institut Pasteur, Paris, France

**Prof. Fernando BAQUERO:** Research Professor - Ramón y Cajal Institute for Health Research (IRYCIS), Madrid, Espagne

**Prof. Jean-Laurent CASANOVA:** Head of the St Giles Laboratory of Human Genetics of Infectious Diseases - The Rockefeller University, New York, USA

**Prof. Ron DAGAN:** Distinguished Professor of Pediatrics and Infectious Diseases - Soroka University Medical Center, Beer-Sheva, Israël

**Prof. David W. DENNING:** Professor of Infectious Diseases in Global Health - University Hospital of South Manchester, Manchester, UK

**Prof. Niels FRIMODT-MØLLER:** Department of Clinical Microbiology - Rigshospitalet, Copenhagen, Denmark

**Prof. Ab OSTERHAUS:** Erasmus MC - Department of Viroscience, Rotterdam, The Netherlands

### ■ FOR FURTHER INFORMATION

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FWO: [www.fwo.be](http://www.fwo.be)



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## Excellence on the move

The Baillet Latour Foundation was established in 1974, on the initiative of Count Alfred de Baillet Latour. Its aim? To promote, encourage and reward excellence, principally in Belgium, by focussing **its work on people.**

### ■ Building a better future

For over 40 years, the Foundation has sought to support initiatives that are remarkable for their influence, the excellence they inspire or their innovative approach to meeting the challenges faced by tomorrow's society.

Its support generates concrete spin-offs with specific future benefits in four areas: **health, education, culture and sport.**

### ■ Making a difference

The Health Prize, the Grant for Medical Research or the Environmental Prize, university and sports management chairs, the restoration of iconic elements of Belgium's movable heritage, support for high achievement in music and sport or for initiatives in societal development and citizenship education encouraging the involvement of young people in particular... The Foundation contributes on an ongoing basis to the development of **projects that make a difference.**

### ■ Dynamism and good governance

With its sights set firmly on the future, the Baillet Latour Foundation is keen to maintain natural discretion, while the hundreds of projects that it has supported since its inception make it a widely recognised, indispensable member of civil society. The backdrop to this commitment is a mode of operation that is absolutely rigorous and ensures good governance.

The General Secretary and President jointly manage its day-to-day work – namely the pre-selection, supervision and monitoring of projects. The Board of Directors, supported by experts of international renown, is then responsible for validating its work and **undertakings.**

Go further

Like to know more?

All the projects supported by the Baillet Latour Foundation and the remarkable work it rewards can be found on its website: **[www.fondsbailletlatour.com](http://www.fondsbailletlatour.com)**. Welcome!