

Doctor Xavier Delamballerie

Professor of Microbiology at Marseille Medical University's Emerging Viruses Unit

Frenchman Xavier Delamballerie has a degree in Chemistry and a Doctorate in Medicine from the University of Marseilles, where in 1995 he also obtained his PhD.



He is currently Professor of Microbiology at Marseille Medical University's Emerging Viruses Unit, where he is also responsible for overseeing the Virology Department research programme. Dr. Delamballerie is also in charge of the Virology Unit of the Microbiology Department at La Timone Hospital, Marseille.

In 1996 Dr. Delamballerie was the first to demonstrate the nosocomial transmission of the Hepatitis C virus in haemodialysis units using phylogenetic tools.

During the same year he established the first research laboratory dealing with clinical virology in collaboration with Professor Ph. De Micco. This unit is specialised in diagnosis, genomics and genetics of RNA viruses and established the complete sequences of more than 40 RNA viruses including flaviviruses, arenaviruses and reoviruses.

In 1997 he was the first to conduct epidemiological and molecular studies in Europe on the GB virus-C and on the TT virus, and in 1998 he established the first genomic sequences and taxonomic classification of Coltiviruses and a new genus - the Seadornavirus genus - within the Reoviridae family.

Regarding avian/human influenza, Dr. Delamballerie is the coordinator of Section 2 (Virus Production and Genome Sequencing) of the EU-funded VIZIER programme. This programme aims to have a ground-breaking impact on the identification of potential new drug targets against RNA viruses by providing a comprehensive structural characterization of the replicative machinery of a carefully selected and diverse set of viruses.

Dr. Delamballerie is thrilled to be part of VIZIER, which he describes as unique because it gathers experts from a vast range of scientific disciplines and gets them working together in a major structural effort, within a broad multidisciplinary study that has virology upstream and target validation downstream.

To date, more than 350 species of viruses that possess an RNA genome and can infect vertebrates have been identified, but only 30% have been sequenced. VIZIER has developed a strategy for the rapid characterization of the missing genomes; work which Dr. Delamballerie endorses with great enthusiasm. Moreover, he is particularly appreciative of the efforts that the EU has taken to get this complex project up and running. He is confident that it will have an extremely beneficial effect on society.

VIZIER: Comparative structural genomics on viral enzymes involved in replication

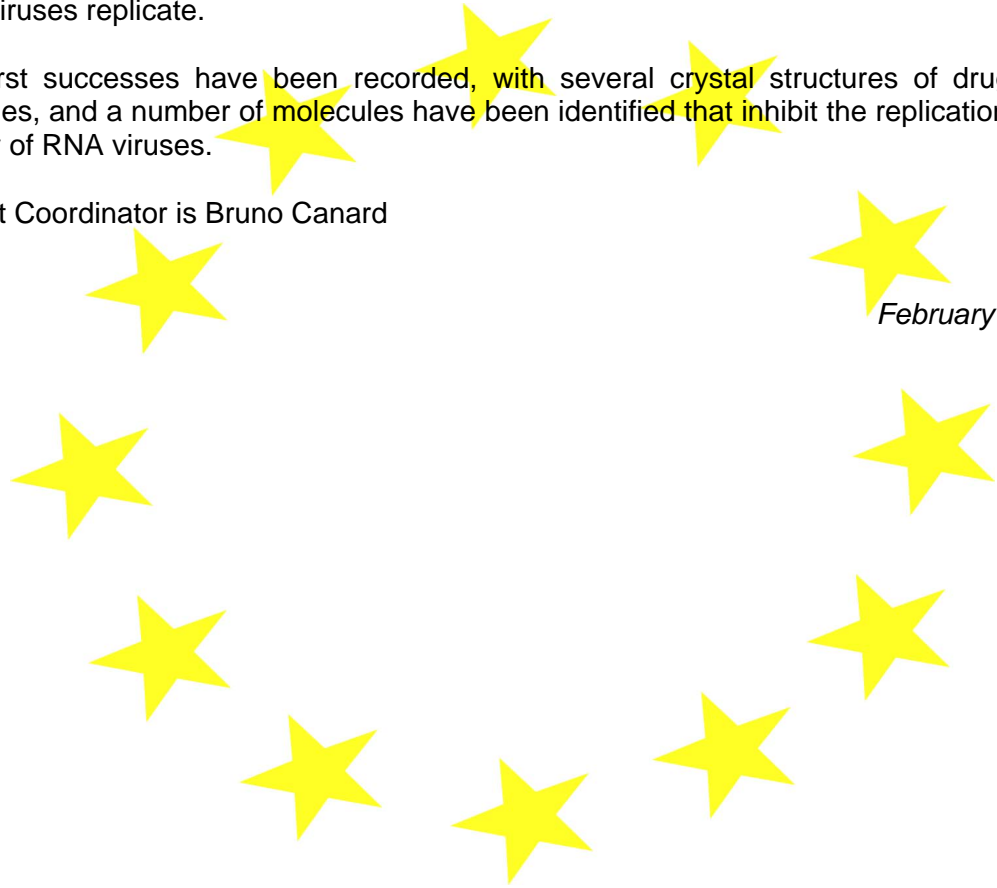
This project aims to have a ground-breaking impact on the identification of potential new drug targets against RNA viruses by characterising their replicative machinery. RNA viruses can cause many life-threatening diseases such as hemorrhagic fevers, gastroenteritis, measles, influenza, dengue fever, encephalitis, and hepatitis.

The project team brings together leading authorities on RNA viruses in the EU and elsewhere. They are characterising the core enzymes/proteins of the replication machinery of a range of different RNA viruses. Understanding the sequence, structure and function of these enzymes is expected to greatly advance our understanding of how RNA viruses replicate.

The first successes have been recorded, with several crystal structures of drugable enzymes, and a number of molecules have been identified that inhibit the replication of a variety of RNA viruses.

Project Coordinator is Bruno Canard

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Dr. Xavier Delamballerie
UVE, Université Aix-Marseille II, Faculté de Médecine
27, Bd Jean Moulin
13005 Marseille Cedex 05 France

Tel: +33 49 132 4553
E-mail: Xavier.De-Lamballerie@medecine.univ-mrs.fr