

# HCERES

High Council for the Evaluation of Research  
and Higher Education

Department of Research Evaluation

## Report on research unit:

Unité des Virus Émergents

UVE

Under the supervision of  
the following institutions  
and research bodies:

Aix-Marseille Université

Institut National de la Santé Et de la Recherche  
Médicale - INSERM

Institut de Recherche pour le Développement - IRD

Evaluation Campaign 2016-2017 (Group C)

Report published on May, 31 2021

# HCERES

High Council for the Evaluation of Research  
and Higher Education

Department of Research Evaluation

*In the name of HCERES,<sup>1</sup>*

Michel Cosnard, president

*In the name of the experts committee,<sup>2</sup>*

François Clavel, chairman of the committee

---

Under the decree No.2014-1365 dated 14 november 2014,

<sup>1</sup> The president of HCERES "countersigns the evaluation reports set up by the experts committees and signed by their chairman." (Article 8, paragraph 5)

<sup>2</sup> The evaluation reports "are signed by the chairman of the expert committee". (Article 11, paragraph 2)

# Evaluation report

This report is the sole result of evaluation by the expert committee, the composition of which is specified below.

The assessments contained herein are the expression of an independent and collegial reviewing by the committee.

Unit name:	Unité des Virus Émergents
Unit acronym:	UVE
Label requested:	UMR AMU IRD INSERM
Current number:	UMR IRD 190
Name of Director (2016-2017):	Mr Xavier de LAMBALLERIE
Name of Project Leader (2018-2022):	Mr Xavier de LAMBALLERIE

# Expert committee members

Chair:	Mr François CLAVEL, Université Paris 7, Paris
Experts:	Ms Valériane LEROY, Université de Toulouse (representative of the IRD CSS)
	Mr Bruno POZZETTO, Université Jean Monnet de Saint-Étienne (representative of the CNU)
	Mr Jean-Claude SIRARD, Institut Pasteur de Lille (representative of the CSS INSERM)
	Mr Marc TRAMIER, Université de Rennes (representative of supporting personnel)
	Mr Guido VANHAM, Institute of Tropical Medicine of Antwerp, Antwerpen, Belgium

Scientific delegate representing the HCERES:

Ms Catherine SCHUSTER

Representatives of supervising institutions and bodies:

- Mr Jacques MARTIN, IRBA
- Ms Dominique NOBILE, INSERM
- Ms Stéphanie POMMIER, INSERM
- Ms Valérie SALIN, IRD
- Mr Marc SENTIS, Aix-Marseille Université
- Mr Pierre TIBERGHEN, EFS

Head of Doctoral School:

Mr Philippe NAQUET, Doctoral school n° 52 "Sciences de la vie et de la santé"

## 1 • Introduction

### History and geographical location of the unit

UVE (Unité des Virus Émergents) is a virology research unit based in Marseille, France. It is located in the main building of the Aix-Marseille University (AMU) Medical School, and part of the La Timone Hospital campus complex. This complex also hosts the brand-new Infectious Diseases University Hospital Institute (IHU) building, which is set to host UVE in the near future. The unit was created in 2008 under the leadership of Mr Xavier de LAMBALLERIE and received a very positive AERES (ex-HCERES) review in 2011 for a 5-year (2012-2017) mandate. Institutional support was provided by IRD (Institut de Recherche pour le Développement), AMU, and EHESP (École des Hautes Études en Santé Publique). In 2015, EHESP withdrew from supporting biological research, and INSERM (Institut National pour la Santé Et la Recherche Médicale) expressed strong interest in UVE. In 2016, INSERM officially became one of the institutional supports of UVE. The connexion of UVE with IRD and INSERM makes total sense. IRD aims at monitoring and controlling health issues across the world through development, while INSERM leads public health research aspects nationally. UVE is right at the crossroads of these two challenges. Nowadays, UVE has a rather complex array of administrative and academic institutional roots: INSERM, IRD, and AMU are its three main supporting institutions. It also has strong connexions with IRBA (Institut de Recherche Biomédicale des Armées), the biological research branch of the French Army, and with EFS (Établissement Français du Sang), a national institution in charge of screening and handling blood and blood-derived products. UVE research is aimed at detecting, studying and developing vaccines or chemical treatments against emerging viral diseases, with a strong emphasis on insect-borne viruses (arboviruses).

### Management team

The unit is structured as a single research team. It is headed by Mr Xavier de LAMBALLERIE, the unit founder, assisted by Mr Rémi CHARREL.

### HCERES nomenclature

SVE2 Biologie Cellulaire, Imagerie, Biologie Moléculaire, Biochimie, Génomique, Biologie Systémique, Développement, Biologie Structurale.

### Scientific domains

Virology; Arboviruses; Emerging Viruses; Antiviral Vaccines; Antiviral Treatments.

## Unit workforce

Unit workforce	Number on 30/06/2016	Number on 01/01/2018
N1: Permanent professors and similar positions	7 (FTE 2.7)	6 (FTE 2.2)
N2: Permanent researchers from Institutions and similar positions	3 (FTE 2.5)	3 (FTE 2.5)
N3: Other permanent staff (technicians and administrative personnel)	11 (FTE 8.5)	17* (FTE 12.5*)
N4: Other researchers	12 (FTE 7.75)	
N5: Emeritus		
N6: Other contractual staff (technicians and administrative personnel)	13 (FTE 9)	
N7: PhD students	13	
TOTAL N1 to N7	59 (FTE 43.45)	
Qualified research supervisors (HDR) or similar positions	6	

\* does not include personnel from the IRBA virology unit

Unit record	From 01/01/2011 to 30/06/2016
PhD theses defended	17
Postdoctoral scientists having spent at least 12 months in the unit	5
Number of Research Supervisor Qualifications (HDR) obtained during the period	

## 2 • Assessment of the unit

## Global assessment of the unit

UVE is an extremely active small research unit. The laboratory is dedicated to the study of emerging viral diseases with a specific expertise in arboviruses. Funding of UVE is provided by an impressive number of research grants. The majority of these grants were obtained through EU research funding programs. UVE is part of several important EU-funded networks. Of note, the majority of grant-based UVE funding is used to support temporary personnel expenses, which is due in great part to the lack of personnel funded by supporting institutions.

Research by the unit is aimed at detecting and responding to emerging viral diseases. It has developed an impressive portfolio of diagnostic and rapid description tools for pathogens belonging to several viral classes, with a particular emphasis on arboviruses: Toscana, Rift Valley Fever, Dengue, Zika, Chikungunya, etc. It has also conducted important research on filoviruses, in particular during the latest Ebola virus outbreak in Western Africa.

The tasks conducted at UVE are based on a remarkably solid background and experience in viral diagnostics and quantitative virology. As such, UVE holds four key technical assets: a highly controlled L3 and L3+ laboratory environment for virus cultivation and experimental biology; a sophisticated viral diagnostics platform performing high-

throughput PCR and serodiagnostic assays; a high-performance sequencing platform; and a growing collection of viruses and related products. This background and strong infrastructures makes UVE the ideal environment for hosting the CNR (Centre National de Référence) for arboviruses and more recently, for poxviruses. Moreover, UVE is the coordinating laboratory for EVA (European Virus Archive) and for the ZIKAlliance INSERM network.

Besides diagnostics and rapid characterization of emerging pathogens, UVE aims at being a key player in the development of antiviral drugs. This aim is pursued by a small research group with connexions to the Rega institute at KU Leuven, Belgium.

As expected from a laboratory that aims at responding to outbreaks of highly epidemic viral diseases from all over the world, UVE has collaborations and strong research and academic ties with a number of research institutions in the developing world. This explains the primary institutional support of UVE by IRD, an institute connected to a large number of developing countries. Most prominent is the strong link between UVE and a research center in Laos, where equipment and personnel training is under direct management by UVE. Other links include several medical and research institutions around the Mediterranean basin in Turkey, Iran, Lebanon, Tunisia, Algeria and Morocco.