

#### Research evaluation

# FINAL RESUME ON THE RESEARCH UNIT:

Physiopathogenesis and treatment of liver diseases (HEPAREG)

# UNDER THE SUPERVISION OF THE FOLLOWING INSTITUTIONS AND RESEARCH BODIES:

Université Paris-Sud Institut national de la santé et de la recherche médicale - Inserm

# **EVALUATION CAMPAIGN 2018-2019**GROUP E

Report published on April, 04 2019



In the name of Hcéres<sup>1</sup>:

Michel Cosnard, President

In the name of the experts committee2:

Simon Taylor-Robinson, Chair of the committee

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

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

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



Tables in this document were filled with data provided by laboratories and supervising bodies in the unit's application and in the Excel files "Données du contrat en cours" and "Données du prochain contrat".

#### **UNIT PRESENTATION**

**Unit name:** Physiopathogenesis and treatment of liver diseases

Unit acronym: HEPAREG

Requested label: UMR

**Application type:** Restructuration

Current number: UMR 1193

Head of the unit

(2018-2019): Mr Didier Samuel and Mr Laurent Combettes

**Project leader** 

(2020-2024): Mr Didier Samuel

Number of teams: 5

#### **EXPERTS COMMITTEE MEMBERS**

Chair: Mr Simon Taylor-Robinson, Imperial College London, United Kingdom

**Experts:** Ms Carmen Berasain, CIMA-Universidad de Navarra, Spain

Mr Jérôme Boursier, CHU d'Angers

Ms Sophie LOTERSZTAJN, Inserm Créteil

Ms Valérie Paradis, Hôpitaux de Paris (representative of Inserm CSS)

Ms Perrine Paul-GILLOTEAUX, CNRS Nantes (supporting personnel)

Mr Olivier Plot, Université de Reims Champagne Ardenne

Ms Christine Silvain, Faculté de médecine et pharmacie Poitiers

(representative of CNU)

## **HCÉRES REPRESENTATIVE**

Mr Jean-Paul Lallès

### REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr Etienne Augé, University of Paris-Sud

Ms Laurence PARMANTIER, Inserm



#### INTRODUCTION

#### HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The UMR\_\$1193 is an Inserm and University Paris-Sud joint research unit. It is part of the Centre Hépatobiliaire (CHB), located at Paul Brousse Hospital, Villejuif. The UMR\_\$1193 was formed in January 2015 from the fusion of the Inserm-Paris South Unit 785 and the Paris South EA 4530. This created a Liver Disease Clinical research unit with scientists, hepatologists, pharmacists and liver surgeons working together with a translational research approach into clinical applications.

The UMR 1174 laboratory (Inserm U1174) was created in 2013. It is located in the Faculty of Sciences Campus (Université Paris Sud, Orsay), and conducts work on cell signalling and hepatobiliary pathophysiology. This unit was formed from the former Inserm laboratories (successively Inserm U274, U442 and U757), in which the central activity had been to study calcium signaling in hepatocytes, their mechanisms, their spatiotemporal organization, and their functional roles. The UMR 1174 laboratory was joined by the group of Pediatric Hepatology, Kremlin-Bicêtre Hospital, contributing as a research group centered on genetic cholestasis. Under the new contract UMR 1174 will form a 5th research grouping in UMR-S-1193.

For the new contract, the unit will be organized in 5 teams led by the present Director of UMR-S-1193. The new team (UMR 1174) in this new organisation currently localized on the Orsay site of Paris-Sud University will share with one team of UMR-S-1193 a new localization within the Saclay campus in 2022.

#### MANAGEMENT TEAM

Director's name (current contract): Mr Didier Samuel (UMR-S-1193) and Mr Laurent Combettes (UMR 1174).

Director's name (future contract): Mr Didier Samuel.

#### HCÉRES NOMENCLATURE

SVE5\_1; SVE6\_3.

#### SCIENTIFIC DOMAIN

The research unit UMR\_S1193 includes four complementary expert teams to address key medical and physiopathological issues in acute and chronic liver diseases including inflammatory, metabolic and malignant liver disease. The field of expertise of basic and clinician researchers in the UMR\_S1193 Unit comprises cell biology-based studies of key liver signalling pathways, liver transplantation and therapeutic strategies for acute liver failure and hepatocellular carcinoma. It also includes molecular virology and molecular epidemiology of hepatitis B virus (HBV) and hepatitis C virus (HCV) infections, mechanisms of liver carcinogenesis induced by HBV and HCV and new therapies for primary liver cancers and acute liver failure.

The research unit UMR 1174 focuses on liver pathophysiology with a special interest in biliary homeostasis and genetic cholestasis, using cell line models displaying hepatocyte polarity, in particular the formation of fully developed functional bile canaliculi. The role of cilia proteins on biliary epithelial cells has been investigated with in vitro experimental approaches to study the involvement of ciliary proteins in the differentiation of cholangiocytes.



#### UNIT WORKFORCE

ONIT WORK ORCE	Unit workforce		
	Physiopathogenesis and Treatment of Liver Diseases	Cellular Interactions and Liver Pathophysiology (UMR 1174)	Physiopathoge nesis and treatment of liver diseases
Active staff	Number 30/06/2018	Number 30/06/2018	Number 01/01/2020
Full professors and similar positions	19	3	18
Assistant professors and similar positions	11	4	11
Full time research directors (Directeurs de recherche) and similar positions	3	2	4
Full time research associates (Chargés de recherche) and similar positions	1	0	1
Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	13	0	10
High school teachers	0	0	0
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	14	7	13
Permanent staff	61	16	57
Non-permanent professors and associate professors, including emeritus	4	0	
Non-permanent full time scientists, including emeritus, post-docs	21	3	
PhD Students	34	8	
Non-permanent supporting personnel	7	0	
Non-permanent staff	66	11	
Total	127	27	

#### GLOBAL ASSESSMENT OF THE UNIT

The scientific objectives of the UMR \$1193 Research Unit are to discover new mechanisms, new therapeutics and new biomarkers of progression in a set of liver diseases that ranges from rare liver diseases to the most common ones: non-alcoholic fatty liver disease, cirrhosis and liver cancer. The unit has multidisciplinary expertise in cell biology, biochemistry, genetics, bioinformatics, animal disease models and applied biostatistics, and has direct access to large cohorts of patients with various acute and chronic liver diseases, and to their clinical databases and biobanks. The five research teams lead translational research from bench to bedside, where basic and clinical approaches are equally considered. The unit has international leadership in viral hepatitis, liver failure, liver transplantation, biliary diseases, and liver cancer. New areas on the microbiome (gut-liver, gut-adipose-liver axes) have been developed. An additional team (made of present UMR 1174), will reinforce scientific partnership between the other four UMR 1193 teams around liver diseases, developing new fields of investigation by studying the physiological and pathological mechanisms of the biliary tract and their medical implications. The unit as a whole produces internationally recognised research, teaches to a good standard and provides a good working environment, liked by students and staff alike, although collaboration between groups should be stronger within the unit. The proposed project builds on past achievements in a logical and iterative fashion. The proposal concentrates on areas of known scientific achievement, while developing new themes through the integration of UMR1174.

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