

Research evaluation

FINAL RESUME ON THE RESEARCH UNIT: Pathophysiology of injury-induced immunosuppression (PI3)

UNDER THE SUPERVISION OF THE FOLLOWING INSTITUTIONS AND RESEARCH BODIES: Université Claude Bernard Lyon 1

EVALUATION CAMPAIGN 2019-2020 GROUP A

Report published on June, 22 2020



In the name of Hcéres¹:

Nelly Dupin, Acting President

In the name of the experts committee²:

Jean-Daniel Chiche, Chairman of the committee

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

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

² The evaluation reports "are signed by the chairman of the experts committee". (Article 11, paragraph 2).



Tables in this document were filled with data submitted by the supervising body on behalf the unit.

UNIT PRESENTATION

Unit name:	Pathophysiology of injury-induced immunosuppression	
Unit acronym:	PI3	
Current label and N°:	EA7426	
ID RNSR:	201622187B	
Application type:	Renewal	
Head of the unit (2019- 2020):	Mr Guillaume Monneret	
Project leader (2021-2025):	Mr Guillaume Monneret	
Number of teams and/or themes:	1	

EXPERTS COMMITEE MEMBERS

Chair:	Mr Jean-Daniel CHICHE, HUPC Site Cochin (AP-HP) & Institut Cochin
Experts:	Ms Marie-Thérèse Rubio, CHRU de Nancy
	Mr Emmanuel Samain, CHU de Besancon (representative of CNU)
	Mr Niclas Setterblad, Sorbonne Paris Cité (supporting personnel)
	Mr Manu Shankar-Hari, Kings College London, UK

HCÉRES REPRESENTATIVE

Ms Sophie Ezine

REPRESENTATIVES OF SUPERVISING BODIES

Mr François Lacoste, bioMérieux (partenaire) Mr Bruno Lina, Université Claude Bernard Lyon 1 Ms Lucilla Mansuy, Hospices Civils de Lyon



INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The EA7426 unit was created in 2016 at the Edouard Herriot University hospital in Lyon to formalize the longlasting collaboration between the Hospice Civils de Lyon (HCL) and bioMérieux which had first led to the development of the collaborative LCR research lab (Laboratoire Commun de Recherche) in 2008. This structure evolved to become an EA unit.

Management team

The Unit is directed by Guillaume Monneret.

HCÉRES NOMENCLATURE

SVE3 Microbiologie, Virologie, Immunité

THEMATICS

The main research theme of the unit was the discovery of biomarkers involved in inflammation and immune dysfunction. It evolved from projects strictly focused on monitoring of sepsis and immunosuppression to address questions related to lymphocyte alterations, viral reactivation, and immune-monitoring. More recent topics have emerged and the team aims to refocus projects on monitoring immune failure, acute kidney failure as well as sepsis and organ failure in pediatrics.

UNIT WORKFORCE

Pathophysiology of injury-induced immunosuppression (PI3)		
Active staff	Number 06/30/2019	Number 01/01/2021
Full professors and similar positions	3	4
Assistant professors and similar positions	2	2
Full time research directors (Directeurs de recherche) and similar positions	0	0
Full time research associates (Chargés de recherche) and similar positions	0	0
Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	9	9
High school teachers	0	0
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	2	15
Permanent staff	16	19
Non-permanent professors and associate professors, including emeritus	0	
Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	0	
PhD Students	3	
Non-permanent supporting personnel	0	
Non-permanent staff	3	
Total	19	19



GLOBAL ASSESSMENT OF THE UNIT

The EA7426 proposes the renewal of a structure that involves academic physician scientists who originate from the Hospices Civils de Lyon (HCL) and Lyon 1 University as well as from the diagnostics company bioMérieux. Set up in 2002, this unique model has been adapted to result in the creation of the current EA. The scientific orientation of the team remains focused on the development of a translational program aiming to decipher immune dysfunction after sepsis and critical illness, with the addition of investigations related to identification and treatment of acute kidney injury in the same clinical context.

Over the past 5 years, this unit has achieved what was highlighted in their original project. The scientific production of the team has been prolific, allowing to reinforce the visibility of the team at an international level. The team leaders are internationally recognized experts in the field, and the work developed has significantly advanced the understanding of post-aggression immune suppression. Considering the partnership with bioMérieux as well as other biomedical companies, the interaction with the non-academic world is remarkable and several patents have been filed over the past 5-years. Five PhD students have been trained and have transitioned to full-time positions after completion of their training.

The governance of the team is clearly defined and involves the main constituting partners. At the functional level, the unit is well organized and shows an excellent capacity to evolve and develop new topics. The gender ratio is balanced, as is the contribution of all partners (HCL and bioMérieux) to sustain this collaborative research laboratory. The team leaders have put in place all the elements that favor the development of new techniques as well as the training of young scientists.

They propose a scientific program that builds on the strengths and previous achievements of the team over the past 5 years. More specifically, the team plans to take advantage of the availability of a wealth of immunological measurements obtained in carefully phenotyped patient's cohorts to better characterize immune dysfunction during critical illness in adults and children. The overall goal is to develop immune monitoring platforms allowing bedside identification of patients with immune dysfunction and subsequent enrollment in interventional clinical trials. To that end, they have set up academic and industrial collaborations at the international level and appear as important contributors in clinical trials of immunotherapeutics. The weaknesses identified in this evaluation are i) the imbalance between descriptive observational studies and hypothesis-driven experiments leading to mechanistic insights into the pathophysiology of SIIS, ii) the limited resources in bioinformatics, iii) the potential threats represented by the addition of new fields of investigation.

Overall, the global assessment of the PI3 Unit by the Committee is excellent.

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