



Research evaluation

REPORT ON THE RESEARCH UNIT:  
Immunity and Cancer

UNDER THE SUPERVISION OF THE  
FOLLOWING INSTITUTIONS AND  
RESEARCH BODIES:

Institut Curie

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

**ÉVALUATION CAMPAIGN 2017-2018**  
GROUP D



In the name of Hcéres<sup>1</sup>:

Michel Cosnard, President

In the name of the expert committee<sup>2</sup>:

Frances Brodsky, Chairwoman of the  
committee

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

<sup>1</sup> The president of Hcéres "countersigns the evaluation reports set up by the expert 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).

This report is the sole result of the unit's 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 PRESENTATION

<b>Unit name:</b>	Immunity and Cancer
<b>Unit acronym:</b>	
<b>Requested label:</b>	U932
<b>Application type:</b>	Renewal
<b>Current number:</b>	932
<b>Head of the unit (2017-2018):</b>	Mr Sebastian AMIGORENA
<b>Project leader (2019-2023):</b>	Mr Sebastian AMIGORENA

**Number of teams or themes:** 8

## COMMITTEE MEMBERS

<b>Chair:</b>	Ms Frances BRODSKY, University College London, United Kingdom
<b>Experts:</b>	Mr Monsef BENKIRANE, Institut de Génétique Humaine, Montpellier Ms Doreen CANTRELL, University of Dundee, United Kingdom Mr Nicolas FAZILLEAU, CHU Purpan, Toulouse (representative of INSERM CSS) Mr Toby Lawrence, Centre d'Immunologie Marseille-Luminy Mr Daniel OLIVE, Centre de Cancérologie de Marseille Mr Nicolas SETTERBLAD, Institut Universitaire d'Hématologie (supporting personnel)

**HCERES scientific officer:**

Ms Sophie EZINE

**Representatives of supervising institutions and bodies:**

Ms Geneviève ALMOUZNI, Institut Curie  
Mr Henri BERESTYCKI, Paris Sciences et Lettres (PSL)  
Ms Evelyne JOUVIN-MARCHE, Inserm

## INTRODUCTION

### HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The INSERM Unit 932 was created in 2005 as the result of the fusion between two existing immunology units (U520 and U653) at Curie Institute. The unit is composed of 8 teams, dispatched in two nearby located buildings within the Research Campus.

### MANAGEMENT TEAM

The INSERM Unit 932 is headed by Mr Sebastian AMIGORENA, supported in his duties by the deputy director Mr Olivier LANTZ.

### HCERES NOMENCLATURE

SVE3\_4 Immunologie

### SCIENTIFIC DOMAIN

The main topics addressed by the unit support an integrative research program focused on tumor biology and immunology. The common objective of the teams is to gain a better understanding of the basic molecular and cellular mechanisms that underlie immunity, by analyzing critical molecular and cell biological mechanisms of adaptive and innate immune responses.

### UNIT WORKFORCE

Unit workforce	Number 30/06/2017	Number 01/01/2019
<b>Permanent staff</b>		
Full professors and similar positions	3	3
Assistant professors and similar positions	1	1
Full time research directors (Directeurs de recherche) and similar positions	7	7
Full time research associates (Chargés de recherche) and similar positions	5	5
Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	0	0
High school teachers	0	0
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	12,5	12,5
<b>TOTAL permanent staff</b>	<b>28,5</b>	<b>28,5</b>
<b>Non-permanent staff</b>		
Non-permanent professors and associate professors, including emeritus	0	

Non-permanent full time scientists, including emeritus, post-docs	33	
Non-permanent supporting personnel	9,5	
PhD Students	16	
<b>TOTAL non-permanent staff</b>	<b>58,5</b>	
<b>TOTAL unit</b>	<b>87</b>	

## GLOBAL ASSESSMENT OF THE UNIT

The unit under review is one of the premier immunology research units in France. They also enjoy a high-profile international reputation as world-leading scientists. Their research program is globally attractive to young researchers. The scientific highlights of the unit are evidenced by publications from all the teams, uniformly appearing in high profile journals. Examples of these findings are new discoveries about the cell biology (membrane traffic) and molecular mechanisms (cytoskeleton) of antigen presentation (conventional and cross-presentation), which are relevant to eventual manipulation for vaccination strategy. Other fundamental discoveries include characterization of the role of chromatin dynamics in regulating gene expression during T cell development and the role of the nuclear envelope in the function of innate immune cells, as well as biophysical analysis of T cell and B cell immune responses. Several studies had key findings regarding cells that are active during HIV infection (both T cells and innate immune cells), and others made significant advances in understanding gut immunity. An important output of the unit that emerged during the period of support under review was the initiation of studies on breast cancer immunotherapy, including identification of biomarkers. Other studies made progress in translational areas including characterization of auto-antibodies that develop in type 1 diabetes. Since the last evaluation of the unit they have continued their world-leading basic research but also extended this enterprise to translational and clinical studies. This new direction of translational research is flourishing and is embodied in a new cancer immunotherapy center, located in the Curie Hospital.

Overall the unit was assessed as outstanding with strengths in productivity, international reputation, collegial atmosphere, student training and world-leading science, as well as recognition of clinical applications of their work. No weaknesses were noted in the review.

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