

FINAL RESUME ON THE RESEARCH UNIT:  
Signaling, Radiobiology and Cancer (SRC)

UNDER THE SUPERVISION OF THE  
FOLLOWING INSTITUTIONS AND  
RESEARCH BODIES:

Institut Curie

Centre national de la recherche scientifique -  
CNRS

Institut national de la santé et de la recherche  
médicale - Inserm

Université Paris-Sud

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**EVALUATION CAMPAIGN 2018-2019**  
GROUP E



In the name of Hcéres<sup>1</sup>:

Michel Cosnard, President

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

Gilles Favre, Chairman 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 experts committees and signed by their chairman." (Article 8, paragraph 5);

<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

<b>Unit name:</b>	Signaling, Radiobiology and Cancer
<b>Unit acronym:</b>	SRC
<b>Requested label:</b>	UMR
<b>Application type:</b>	Renewal
<b>Current number:</b>	UMR 3347
<b>Head of the unit (2018-2019):</b>	Mr Simon SAULE
<b>Project leader (2020-2024):</b>	Mr Alain EYCHENE
<b>Number of teams:</b>	7

## EXPERTS COMMITTEE MEMBERS

<b>Chair:</b>	Mr Gilles FAVRE, CRCT, Toulouse
<b>Experts:</b>	Mr Pierre CLOSE, Université de Liège, Belgium
	Mr Joel DREVET, Inra Clermont Ferrand (representative of CNU)
	Mr Charles DUMONTET, CRCL Lyon, (representative of Inserm CSS)
	Ms Véronique MAGUER-SATTA, CRCL Lyon (representative of CoNRS)
	Ms Simone NICLOU, Luxembourg Institute of Health (LIH), Luxembourg
	Mr Serge ROCHE, CRBM Montpellier
	Mr Jacques ROUQUETTE, CNRS Toulouse (supporting personnel)

## HCÉRES REPRESENTATIVE

Ms Urszula HIBNER

## REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr Etienne AUGE, Université Paris-Sud  
Mr Emmanuel BERTHENAND, Inserm  
Ms Christine CHOMIENNE, Inserm  
Mr Yvan DE LAUNOIT, CNRS  
Mr Bruno GOUD, Institut Curie

## INTRODUCTION

### HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The proposal to create the Signaling, Radiobiology and Cancer Unit is a continuation of the ETIC Unit "Normal and pathological signaling: from Embryo to Innovative Therapy in Cancer" created on January 1<sup>st</sup> 2010 and renewed on January 1<sup>st</sup> 2015. This unit is currently headed by Simon Saule with Lionel Larue as the Deputy Director.

At its creation, the unit consisted of 6 teams. When recreated in 2015, the unit welcomed Olivier Ayrault's team, holder of an ATIP-AVENIR grant. The new team provided a diversification of the pathologies studied by introducing the study of medulloblastoma into the unit. The team was labelled by Inserm and CNRS at the end of the ATIP-AVENIR contract. In 2017, the unit recruited Giorgio Seano, also a laureate of an ATIP/AVENIR contract, who obtained an ERC Starting grant in 2018.

The team of Simon Saule will close at the end of the current mandate because of the PI's retirement, the unit will thus be composed of 7 teams, 6 of which are under evaluation by Hcéres.

The unit is part of the Institut Curie and is located on the Orsay site, on the campus of the University of Paris Sud. The unit benefits from the infrastructure of the Institut Curie's platforms. On the Orsay site, the unit teams have access to the Imaging and flow cytometry facilities, the Radexp (experimental radiotherapy), the 2D/3D structural and chemical imaging and the histology platforms as well as the flow cytometry core facility and the *in vivo* experiments platforms including mouse, Xenopus, and zebrafish facilities.

### MANAGEMENT TEAM

The unit is currently headed by Simon Saule with Lionel Larue as Deputy Director. Alain Eychène is the candidate for the unit's direction for the next mandate.

### HCÉRES NOMENCLATURE

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### SCIENTIFIC DOMAIN

The unit teams investigate molecular signaling during the embryonic development, tumor initiation, progression and metastasis. They focus on two models derived from the neural tube: melanocytes and melanomagenesis as well as cerebellum development and genesis of medulloblastoma. The teams aim at deciphering the signaling pathways and their crosstalks involved in the development of these models particularly, RAS/RAF, WNT/beta-Catenin, PI3K/AKT, TGF-beta, Hippo and Sonic Hedgehog. The scientific strategy covers different disciplines, including molecular and cellular biology, animal models and translational approaches to the clinic. Many of the teams develop a radiobiology theme, which is becoming a transversal area of research that is particularly favored in the context of the Curie Institute.

### UNIT WORKFORCE

Unit workforce		
Signalling radiobiology and cancer		
Active staff	Number 30/06/2018	Number 01/01/2020
Full professors and similar positions	2	2

Assistant professors and similar positions	6	7
Full time research directors (Directeurs de recherche) and similar positions	6	6
Full time research associates (Chargés de recherche) and similar positions	6	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)	15	16
<b>Permanent staff</b>	<b>35</b>	<b>36</b>
Non-permanent professors and associate professors, including emeritus	0	
Non-permanent full time scientists, including emeritus, post-docs	13	
PhD Students	16	
Non-permanent supporting personnel	18	
<b>Non-permanent staff</b>	<b>47</b>	
<b>Total</b>	<b>82</b>	

## GLOBAL ASSESSMENT OF THE UNIT

The UMR3347 "Signalling radiobiology and cancer " is an internationally recognized research centre that achieves breakthroughs in understanding the molecular mechanisms of tumor initiation and metastasis. Overall, the research developed in the unit is considered as excellent with some outstanding contributions to the field.

The unit develops research programs ranging from basic mechanism of embryonic development to tumor initiation and progression, focusing on two main models melanoma and medulloblastoma. Several teams also develop research in radiobiology. This scientific orientation is a continuation of the previous unit. Novel emerging projects, resulting from the recruitment of new team leaders these last 4 years, generated a positive impact in terms of the scientific output. The expert committee has appreciated the fruitful collaborations between teams, leading to high impact publications and the dynamism in the implementation of new models and new technologies, such as proteomics. Further collaborations within the unit should be encouraged. It is noted that the creation of the scientific domain "Biology and chemistry of radiation, cell signalling and cancer", gathering all the Curie Institute's units on the site of Orsay, is a real opportunity to widen the multidisciplinary collaborative projects.

The arrival of a ATIP/AVENIR team that will reinforce the radiobiology represents a good opportunity to increase visibility of this theme in the context of the Curie institute scientific strategy. The members of the unit are very successful in obtaining grants and are active in evaluation process for national and international agencies.

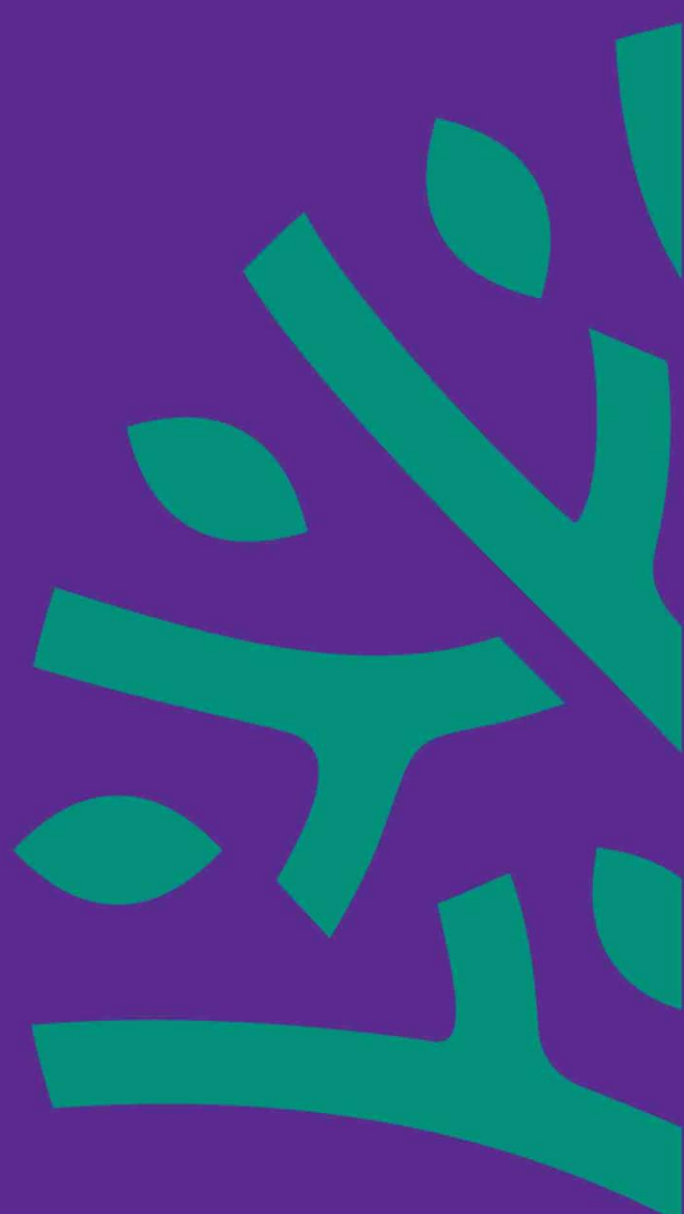
There is a strong involvement in teaching and an excellent activity of training PhD students.

The expert committee endorses the scientific strategy presented by the unit. There are many excellent projects which are internationally competitive, which are expected to give rise to high impact generalist publications as well as attract major grants within the next 5 years. While the reinforcement of research in medulloblastoma is a real success, the unit is advised to pay attention to focus on not too large a number of other cancer pathologies.

The strategy to attract new teams is clearly defined and supported by the Curie Institute, however, the unit is advised not neglect the recruitment of fresh blood (post-doc and full time researchers) into existing teams.

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