

FINAL RESUME ON THE RESEARCH UNIT:  
Laboratoire d'Imagerie Translationnelle en  
Oncologie (LITO)

UNDER THE SUPERVISION OF THE  
FOLLOWING INSTITUTIONS AND  
RESEARCH BODIES:

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

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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>:

Vincent Grégoire, 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>	Laboratoire d'Imagerie Translationnelle en Oncologie
<b>Unit acronym:</b>	LITO
<b>Requested label:</b>	UMR
<b>Application type:</b>	Restructuration
<b>Current number:</b>	U1023
<b>Head of the unit (2018-2019):</b>	Ms Irène BUVAT
<b>Project leader (2020-2024):</b>	Ms Irène BUVAT
<b>Number of teams and/or themes:</b>	1 team + 2 themes

## EXPERTS COMMITTEE MEMBERS

<b>Chair:</b>	Mr Vincent GREGOIRE, Université de Lyon
<b>Experts:</b>	Mr Arturo CHITI, Humanitas University, Milano, Italy Ms Catherine GHEZZI-BOUCHER, Université Grenoble Alpes (representative of Inserm CSS) Mr Elif HINDIE, Université de Bordeaux Mr Franck LAVENNE, Cermep, Bron (supporting personnel) Mr Wim OYEN, Institute of Cancer Research & The Royal Marsden Hospital, Sutton, United Kingdom

## HCÉRES REPRESENTATIVE

Mr Jean-Edouard GAIRIN

## REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr Franck LETHIMONNIER, Inserm  
Mr Pierre FUMOLEAU, Institut Curie  
Mr Bruno GOUD, Institut Curie  
Mr Thierry PHILIP, Institut Curie

## INTRODUCTION

### HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The "In Vivo Molecular Imaging (IMIV)" Research Unit will be based in Orsay until 2020. It mainly focuses on preclinical and clinical molecular brain and cancer imaging. In 2020, following a change in the CEA organization, the group of Irène Buvat plans to move to Institut Curie to focus on pre-clinical and clinical cancer imaging at large in the "Laboratoire d'Imagerie Translationnelle en Oncologie (LITO)".

### MANAGEMENT TEAM

The research unit is led by Irène BUVAT.

### HCÉRES NOMENCLATURE

SVE5\_3.

### SCIENTIFIC DOMAIN

The Research Unit LITO will focus: 1) on the development of new biomarkers for phenotype imaging (i.e. imaging tumor environment, development of innovative tracers and imaging for drug development and personalized medicine); and 2) on the integration of radiomics and artificial Intelligence for precision medicine, (i.e. methodological development and clinical application in several tumor sites, i.e. breast, lung, lymphoma and rare tumors).

### UNIT WORKFORCE

	Unit workforce	
	In Vivo Molecular Imaging	
Active staff	Number 30/06/2018	Number 01/01/2020
Full professors and similar positions	3	2
Assistant professors and similar positions	0	0
Full time research directors (Directeurs de recherche) and similar positions	6	2
Full time research associates (Chargés de recherche) and similar positions	9	3
Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	9	12
High school teachers	0	0
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	11	4
<b>Permanent staff</b>	<b>38</b>	<b>23</b>

Non-permanent professors and associate professors, including emeritus	0	
Non-permanent full time scientists, including emeritus, post-docs	4	
<i>PhD Students</i>	9	
Non-permanent supporting personnel	0	
<b>Non-permanent staff</b>	<b>13</b>	
<b>Total</b>	<b>51</b>	

## GLOBAL ASSESSMENT OF THE UNIT

The new unit LITO will bring together expertise in the field of radio-pharmaceutical development and production, and PET image analysis and quantitation to elucidate cancer treatment mechanisms in the framework of personalized patient management. LITO will be integrated in the Institut Curie, one of the leading institutions for cancer research and treatment in France.

Since 2015, within the IMIV unit, members of Irène Buvat's group showed a significant record of publications as first, last or corresponding authors in high-ranked journals in the field. They have been successful in obtaining major grants as leaders, among which an H2020 ITN grant, a Lidex Physics and Engineering in Medicine grant, two ANR grants, and a PHRC as main scientific investigator. They have developed very strong and fruitful socio-economic interactions with either industrial pharmaceutical partners (patents and numerous R&D contracts) or hospitals (clinical trials). They are deeply involved in training through research, showing a high capacity to attract post-docs, most of them from abroad, and to supervise PhD theses.

Appreciating the scientific output of the IMIV unit from which LITO will emerge, it is expected that the new structure will flourish and bring complementary expertise to one of the largest and most productive Cancer Centers in France.

LITO will take advantage of the scientific environment of the Institut Curie to integrate its molecular imaging program into ongoing research lines in medical and radiation oncology, data bases and existing infrastructures.

Through a very ambitious project, the expert committee is very confident that the LITO unit will succeed in opening a new research line at the "Institut Curie".

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