

## REPORT ON THE RESEARCH UNIT:

Dynamics of Genetic Information: fundamental bases and cancer (DIG-Cancer)

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

Institut Curie

Centre National de la Recherche Scientifique - CNRS

Université Pierre et Marie Curie

**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>:

Philippe Pasero, 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 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>                    | Dynamics of Genetic Information: fundamental bases and cancer |
| <b>Unit acronym:</b>                 | DIG-Cancer  |
| <b>Requested label:</b>              | UMR   |
| <b>Application type:</b>             | Renewal   |
| <b>Current number:</b>               | UMR 3244  |
| <b>Head of the unit (2014-2018):</b> | Mr Arturo LONDOÑO-VALLEJO                                     |
| <b>Project leader (2019-2023):</b>   | Mr Antonin MORILLON   |
| <b>Number of teams:</b>              | 4   |

## COMMITTEE MEMBERS

**Chair:** Mr Philippe PASERO, IGH Montpellier

**Experts:** Mr Pascal BARBRY, IPMC Nice  
Ms Christelle DANTEC, CRBM Montpellier (supporting personnel)  
Ms Giuseppina GIGLIA, INMG Lyon (representative of CoNRS)  
Ms Marie-Josèphe GIRAUD-PANIS, IRCAN Nice  
Ms Eva HOFFMANN, University of Copenhagen, Denmark  
Ms Varda ROTTER, Weizmann Institute, Israel  
Ms Joëlle SOBCHAK, UPMC Paris (representative of CNU)

**HCERES scientific officer:**

Ms Urszula HIBNER

**Representatives of supervising institutions and bodies:**

Ms Geneviève ALMOUZI, Institut Curie  
Mr Frédéric BOCCARD, CNRS  
Mr Bertrand MEYER, Université Pierre et Marie Curie  
Mr Stéphane MAZEVET, Université de recherche Paris Sciences et Lettres

## INTRODUCTION

### HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The UMR 3244 is one of the 12 mixed research units of the research center of Institut Curie, led by Ms Geneviève ALMOUZI since 2013. This research center brings together 1100 people organized in 86 teams distributed between the Paris and Orsay sites. The research center hosts also a translational research unit connected to the hospital group, a training unit and technological platforms organized in a structure called CurieCoreTech. The research center is organized in four scientific domains to foster interactions between research units. The UMR3244 is part of domain 2 - Development, Cancer, Genetics and Epigenetics- based on the Paris site and led by Ms Edith HEARD. This domain is supported by the Labex DEEP (Développement, Épigenèse, Épigenétique et Potentiel), which associates two departments of the Curie Institute : Dynamique Nucléaire et Plasticité du Génome and Génétique et Biologie du Développement.

The UMR3244 is the continuation of the laboratory headed by Mr Bernard DUTRILLAUX, who retired in 2002. It was created in 2005 after a period of restructuration and was led until 2013 by Ms Michèle DEBATISSE. The unit is located on two different floors of the Trouillet-Rossignol Pavilion.

### MANAGEMENT TEAM

The UMR 3244 is currently headed by Mr Arturo LONDOÑO-VALLEJO. Mr Antonin MORILLON, the project leader, served as deputy director during the review period.

### HCERES NOMENCLATURE

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### SCIENTIFIC DOMAIN

The UMR 3244 investigates the molecular mechanisms that maintain the integrity of the genome and the epigenome, as well as the consequences of deregulations of these mechanisms on cancer development. More specifically, research topics concern DNA replication, non-coding RNAs, p53 biology, telomere stability and meiotic recombination, with a specific emphasis on genomic-based assays and bioinformatics.

### UNIT WORKFORCE

| Unit workforce  | Number<br>30/06/2017 | Number<br>01/01/2019 |
|---|----------------------|----------------------|
| <b>Permanent staff</b>  |                      |                      |
| Full professors and similar positions   | 1                    | 1                    |
| Assistant professors and similar positions  | 4                    | 4                    |
| Full time research directors (Directeurs de recherche) and similar positions                    | 3                    | 3                    |
| Full time research associates (Chargés de recherche) and similar positions                      | 4                    | 4                    |
| Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.") | 1                    | 1                    |

|   |           |           |
|---|-----------|-----------|
| High school teachers  | 0         | 0         |
| Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)     | 14        | 14        |
| <b>TOTAL permanent staff</b>  | <b>27</b> | <b>27</b> |
| <b>Non-permanent staff</b>  |           |           |
| Non-permanent professors and associate professors, including emeritus | 1         |           |
| Non-permanent full time scientists, including emeritus, post-docs     | 11        |           |
| Non-permanent supporting personnel                                    | 6         |           |
| PhD Students  | 4         |           |
| <b>TOTAL non-permanent staff</b>                                      | <b>22</b> |           |
| <b>TOTAL unit</b>   |           |           |
|   | <b>49</b> |           |

## GLOBAL ASSESSMENT OF THE UNIT

The UMR3244 investigates the mechanisms that maintain the integrity of the genome and epigenome and how perturbations of these processes contribute to cancer and age-related human diseases, in line with the scientific objectives of the research center of Institut Curie. This relatively small unit -six research teams- has an excellent international reputation and a very good scientific production. They are strongly involved in teaching and have trained 18 PhD students during the period under evaluation. The unit is well funded, with many national and international grants, including an ERC grant and two ATIP-Avenir starting grants. At the end of the previous contract, the unit was facing a major threat with the planned retirement of two of its influential team leaders. This has been well compensated by the recruitment of an excellent senior and two junior teams, which demonstrates the attractiveness of the unit. Importantly, the expertise in bioinformatics of two of the new PIs will significantly reinforce the potential of the unit in bioinformatics and bioanalysis studies, which will be instrumental to the success of the five-year project of the unit. This project builds on current research program and will incorporate state of the art approaches to take into account the heterogeneity of cell populations and genetic/epigenetic instability at the level of individual cells. The feasibility of this research program is excellent considering the expertise and past achievements of the teams.

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