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## BIO DEV - Département de biologie du développement et cellules souches

Rapport Hcéres

► **To cite this version:**

Rapport d'évaluation d'une entité de recherche. BIO DEV - Département de biologie du développement et cellules souches. 2015, Institut Pasteur Paris, Centre national de la recherche scientifique - CNRS, École nationale vétérinaire d'Alfort - EnvA, Institut national de la santé et de la recherche médicale - INSERM. hceres-02033955

**HAL Id: hceres-02033955**

**<https://hal-hceres.archives-ouvertes.fr/hceres-02033955v1>**

Submitted on 20 Feb 2019

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# HCERES

High Council for the Evaluation of Research  
and Higher Education

Research units

HCERES report on research unit:

Department of Developmental and Stem Cell Biology

DSBD

Under the supervision of  
the following institutions  
and research bodies:

Institut Pasteur

Centre National de la Recherche Scientifique – CNRS

École Nationale Vétérinaire d'Alfort

Institut National de la Santé et de la Recherche

Médicale - INSERM

# HCERES

High Council for the Evaluation of Research  
and Higher Education

Research units

*In the name of HCERES,<sup>1</sup>*

Didier HOUSSIN, president

*In the name of the experts committee,<sup>2</sup>*

Roger PATIENT, chairman of the committee

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Under the decree N<sup>o</sup>2014-1365 dated 14 november 2014,

<sup>1</sup> The president of HCERES "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 expert committee". (Article 11, paragraph 2)

## Evaluation report

This report is the result of the evaluation by the experts committee, the composition of which is specified below. The assessments contained herein are the expression of an independent and collegial deliberation of the committee.

Unit name:	Department of Developmental and Stem Cell Biology
Unit acronym:	DSBD
Label requested:	Department of Institut Pasteur, URA CNRS
Present no.:	URA CNRS 2578
Name of Director (2014-2015):	Mr Shahragim TAJBAKHSH
Name of Project Leader (2016-2020):	Mr Shahragim TAJBAKHSH

## Expert committee members

Chair:	Mr Roger PATIENT, Weatherall Institute of Molecular Medicine, Oxford, UK
Experts:	Mr Markus AFFOLTER, University of Basel Biozentrum, Basel, Switzerland Mr James BRISCOE, MRC National Institute for Medical Research, London, UK Mr Giacomo CAVALLI, Institute of Human Genetics, Montpellier, France Mr Freddy RADTKE, EPFL, Lausanne Switzerland Mr Claudio STERN, UCL, Department of Cell & Developmental Biology, London, UK Mr Azim SURANI, Wellcome Trust/Cancer Research UK Gurdon Institute, Cambridge, UK

### Scientific delegate representing the HCERES:

Mr Pierre COUBLE

### Representatives of the unit's supervising institutions and bodies:

Mr Alain ISRAEL, Institut Pasteur

Mr Laurent KODJABACHIAN, CNRS

## 1 • Introduction

### History and geographical location of the unit

The Department of Developmental and Stem Cell Biology evolved from the Department of Developmental Biology which was last reviewed in 2010. There is still an emphasis on mouse genetics but it is strongly supported by other model organisms and systems, including embryonic and induced pluripotent stem cells, with a greater emphasis on stem cell biology more generally. Research covers the developmental processes that occur from fertilisation to the generation and homeostasis of multicellular organisms. Areas of research emphasis include cell differentiation and the balance with self-renewal necessary for adult stem cells, organogenesis, gene regulation, epigenetics, Notch signalling and disease resistance.

### Management team

The Department is being led with flair and great energy by Mr Shahragim TAJBAKHSH, aided and abetted by Mr Christian MUCHARDT, and in very close liaison with Mr François SCHWEISGUTH, the head of the URA CNRS 2578. They have created a highly cohesive, interactive and productive environment in which cutting edge, world class research can thrive.

### HCERES nomenclature

SVE1\_LS3 Cell Biology, Animal Developmental Biology

SVE1\_LS2 Genetics, Genomics, Bioinformatics

### Unit workforce

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
<b>N1:</b> Permanent professors and similar positions	2	2
<b>N2:</b> Permanent researchers from Institutions and similar positions	28	25
<b>N3:</b> Other permanent staff (without research duties)	82 (77,6)	72 (64)
<b>N4:</b> Other professors (Emeritus Professor, on-contract Professor, etc.)		
<b>N5:</b> Other researchers (Emeritus Research Director, Postdoctoral students, visitors, etc.)	25	24
<b>N6:</b> Other contractual staff (without research duties)	4 (3)	
<b>TOTAL N1 to N6</b>	<b>141</b>	<b>123</b>

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
Doctoral students	16	
Theses defended	23	
Postdoctoral students having spent at least 12 months in the unit	15	
Number of Research Supervisor Qualifications (HDR) taken	4	
Qualified research supervisors (with an HDR) or similar positions	18	15

## 2 • Overall assessment of the unit

### Global assessment of the unit

The Department of Developmental and Stem Cell Biology is considered one of the top Departments in the world in this field, with multiple internationally recognised stars. The research themes under study comprehensively cover the central questions in developmental and stem cell biology. The great tradition and strength in mouse genetics has been continued, reinforced by cutting edge studies in other model organisms and systems. There have been four high quality appointments at the G5 level, in large part funded by the LabEx REVIVE consortium. There is a good critical mass of research teams and a good balance of tenured scientists, postdoctoral fellows, graduate students and technical staff. The Department has a strong record of training, reflected in the number of post-docs appointed to PI positions in good institutions around the world, and the number of graduate students landing prestigious post-doctoral positions. The publication record is outstanding, both in number and quality, and the Department has outstanding European and international visibility, with international recognition widely evident. The Department is very cohesive and well-run, with excellent research seminar programs, including cutting edge technologies, student-led initiatives and Departmental retreats.

The committee was overall very impressed with the Department. However, the panel identified one or two areas for improvement. The committee feels that the G5 group leaders should be mentored by at least one senior member of staff as they take the substantial step from hugely successful post-doc to effective group leaders. In addition, although we found a very positive atmosphere in the Department, which is appreciated by students, post-docs, staff scientists and technicians alike, we did identify some concerns amongst them. These centred on better communication, mentoring, careers advice and, for the students and postdocs, a greater appreciation of the difficulties of working in Paris.

### Strengths and opportunities in relation to the context

The productivity and reputation of the Department is outstanding. All groups are studying topics at the cutting edge of their fields and many are showing great scientific bravery in going after key, but difficult, questions. The support facilities are of a very high standard and the cohesion between teams is excellent.

### Weaknesses and threats related to the context

The committee was a little concerned that the G5 group leaders were in danger of being over ambitious and felt that their research could be a little more focussed. The panel also feels that the future of mouse genetics at the Institut Pasteur needs to be addressed with the imminent retirement of Mr Jean-Jacques PANTHIER.

### Recommendations

The committee recommends supporting all groups in full and maintaining an appropriate level of support for the core facilities. We feel that the G5 PIs should be mentored by at least one senior member of staff as they take the substantial step from hugely successful post-doc to effective PI. The committee also feels that the future of mouse genetics at the Institut Pasteur needs to be addressed.