

FINAL RESUME ON THE RESEARCH UNIT
IGDR - Institut de Génétique et Développement de
Rennes

UNDER THE SUPERVISION OF THE
FOLLOWING INSTITUTIONS AND RESEARCH
BODIES:

Université de Rennes 1

Centre national de la recherche scientifique - CNRS

EVALUATION CAMPAIGN 2020-2021
GROUP B



In the name of Hcéres¹:

Mr Thierry Coulhon,
President

In the name of the experts committee²:

Mr Bernard de Massy, Chairman of the
committee

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

¹ The president of Hcéres "countersigns the evaluation reports set up by the experts committees and signed by their chairman." (Article 8, paragraph 5);

² The evaluation reports "are signed by the chairman of the experts committee". (Article 11, paragraph 2).

Tables in this document were filled with certified data submitted by the supervising body on behalf of the unit.

UNIT PRESENTATION

Unit name:

Institut de génétique et développement de Rennes

Unit acronym:

IGDR

Current label and N°:

6290

ID RNSR:

201220436R

Application type:

Renewal

Head of the unit (2020-2021):

Mr Reynald Gilet

Project leader (2021-2025):

Mr Reynald Gilet

Number of teams and/or themes:

13

EXPERTS COMMITTEE MEMBERS

Chair:

Mr Bernard de Massy, IGH Montpellier

Experts:

Mr R. Jürgen Dohmen, University of Cologne, Germany

Ms Cathie Erb, IGBMC, Strasbourg-Ilkirch (supporting personnel)

Mr Reto Gassmann, Instituto de Investigação e Inovação em Saúde (i3S), Portugal

Mr Benoit Ladoux, Institut Jacques Monod, Paris

Mr Patrick Müller, Friedrich Miescher Laboratory of the Max Planck Society, Germany

Ms Andrea Pichler, Max Planck Institute of Immunobiology and Epigenetics, GHermany

Mr Narendra Ramnani, Royal Holloway, University of London, UK

Mr Filippo Rosselli, Institut Gustave Roussy – PR2, Villejuif

Ms Martine Simonelig, IGH Montpellier

Mr Laurent Tiret, Ecole nationale vétérinaire d'Alfort - EnvA

Ms Marie-Hélène Verlhac, CIRB, Collège de France, Paris

Mr Marat Yusupov, IGBMC, Strasbourg-Ilkirch

HCÉRES REPRESENTATIVE

Mr Hinrich Gronemeyer

REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr. Patrick Blader, CNRS

Ms. Valerie Lecureur, University of Rennes

Mr. Xavier Le Goff, University of Rennes

Mr. Philippe Mabo, University of Rennes

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The unit in its current format was created in 2012 as a CNRS, University of Rennes 1 (UR1) unit, UMR6290. From the beginning, it gathered research in genetics, development and cellular biology.

It was directed by Mr C. Prigent until 2016, then by Mr R. Gillet, the current director. It is the main research institute dedicated to biology in Brittany along with interactions with medical sciences, hospital, and biotechnological developments. With the large number of assistant professors and professors, this institute contributes to the University of Rennes at all levels.

It is located for most of the current teams at the UR1 campus santé (Villejean). Only three teams are located at a different location, on the east side of Rennes at the Beaulieu science Campus. These teams will join the others in April 2022 when about a 920m² surface will be integrated in IGDR.

RESEARCH ECOSYSTEM

At the Villejean campus where most teams are located, most facilities are available. This campus also includes the Biosit UMS, which provides technical services in microscopy, histology, RMN, genomics, L3 rooms, animal facility, microfluidics and biological resources storage. Several members of the IGDR are directly involved in the organization of Biosit (Deputy director, Ms Y. Arlot) and managers of technological platforms (Mr M. Tramier for Mric with several other members; Ms V. Dupé for the mouse facility, Ms C. André for the CANI DNA biological resource).

The CHU is also located on this campus facilitating interactions for the several groups which research projects are linked to human pathologies.

HCÉRES NOMENCLATURE AND THEMATICS OF THE UNIT

SVE2 - Sciences du vivant et environnement

MANAGEMENT TEAM

The IGDR is directed by Mr R. Gillet with Ms M.D. Galibert as deputy director. The steering committee includes Mr R. Gillet with Ms M.D. Galibert, Mr G. Salbert (senior team leader), Mr G. Rabut (junior team leader), Mr Y. Audic (researcher), Ms G. Berthe (administrative and financial manager).

UNIT WORKFORCE

IGDR - Institut de Génétique et Développement de Rennes

Active staff	Number 06/01/2020	Number 01/01/2022
Full professors and similar positions	13	10
Assistant professors and similar positions	23	18
Full time research directors (Directeurs de recherche) and similar positions	10	7
Full time research associates (Chargés de recherche) and similar positions	25	24
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)	57	58
Permanent staff	128	117

Non-permanent professors and associate professors, including emeritus	1	
Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	13	
PhD Students	28	
Non-permanent supporting personnel	5	
Non-permanent staff	47	
Total	175	117

GLOBAL ASSESSMENT OF THE UNIT

The IGDR has currently two major axes of research, (i) genetics, genomics and cancer and (ii) cell biology, cell development and biophysics. Research at the IGDR is based on fundamental research projects aimed to understand a diversity of biological processes, from the atomic to the organism levels using a variety of methodological approaches. With the axis "Genetics, Genomics and Cancer and Cell Biology", the IGDR is developing projects related to development, cancer, neurobiology, gene regulation and translation with multiple connections and investments into human pathologies. With the axis "Cell Biology, Cell Development and Biophysics", the IGDR is developing projects related to cell division, mobility and proliferation through analyzing intra and inter-cellular events. Several of these projects are interdisciplinary and include technological and methodological developments for image acquisition, analysis and modelling. This provides active and original interactions with the non-academic environment.

The unit (71 scientists and 55 ITA) composed of thirteen teams has produced a large number of publications including 351 original research articles (180 as first or last author) and 76 reviews. Several research projects have led to excellent publications in *Nature Communications*, *Nature Cell Biology*, *Current Biology*, *Cancer Research*, *Nucleic Acids Research*, *Genome Research*, *Brain*, *Gut*, *eLife*, *PNAS*, *EMBO Reports*, *Blood*, *Development*, *Journal of Cell Science*, *PLOS genetics* among the most notable journals.

IGDR has a fundraising capacity of 5.8 M€ per year, representing 90 % of its annual budget at the local, national and international level, however there is room to improve funding from international and in particular from European source.

International recognition, although heterogeneous between teams, is attested by the numerous invitations to international conferences (143), the involvement in evaluation of scientific papers and grant applications and the organization of several international meetings in Rennes by IGDR members such Xenopus international meeting (2017), EMBO practical course (2016, 2020-postponed), Pigment Cells and Melanoma Research (2018), Interdisciplinary approaches in *C. elegans* biology (2015) and Imaging the Cell (2017). The international recognition of the IGDR as a whole could be improved by an incitative policy of more active engagement of PIs in participating to international meetings but potentially also through the organization of international meetings (EMBO workshop, etc..), application for international competitive grants, of publications of reviews, and of increasing number of high-quality papers.

IGDR interactions with the socio-economic world is excellent with interactions with hospitals and clinicians resulting from research projects linked to human pathologies, the CRB CanidDNA biobank, patents and start-ups developing novel microscopy and imaging technologies. Strong technological support is also possible due to the number of staff technicians and engineers and IGDR investment into the UMS BioSit.

IGDR has trained 73 PhD over the period (for 61 HDR, 7 having been defended during the period), 28 PhD theses are ongoing. The training of PhD students is of quality as most of them that entered the program have proceeded through their PhD efficiently and when completed, had published first author papers. The situation is quite heterogeneous between teams with respect to the number of students supervised, taking into account the number of HDR in each team. The average duration of PhD is 42 months.

The permanent staff thus provides a rich environment for training of students and young researchers, a potential that should be further developed. The unit has a high involvement in teaching with around 35 assistant-professors and professors. The IGDR is affiliated to the doctoral school Biologie-Santé and also trained students from other doctoral schools (ED SDLM, ED Matisse, ED Math STIC).

This research activity is based on a well-organized unit, thanks to the investment of the director, the deputy director and the unit members who were associated into this process.

This led to many improvements in the unit organization over the last years. The unit has developed multiple opportunities to discuss, exchange information both for the scientific activities and the every-day organization within the institute.

Altogether, with the arrival of new teams and available space, the scientific potential of the IGDR is excellent. The unit thus has the ingredients to promote and develop even more ambitious projects and raise in international visibility.

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