

FINAL RESUME ON THE RESEARCH UNIT:
Laboratory of Biology and Modelling of the Cell
(LBMC)

UNDER THE SUPERVISION OF THE
FOLLOWING INSTITUTIONS AND
RESEARCH BODIES:

École Normale Supérieure de Lyon

Centre National de la Recherche Scientifique -
CNRS

Institut National de la Santé et de la Recherche
Médicale - INSERM

Université Claude Bernard Lyon 1 - UCBL

EVALUATION CAMPAIGN 2019-2020
GROUP A



In the name of Hcéres¹:

Nelly Dupin, Acting
President

In the name of the experts committee²:

Michel Labouesse, 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 data submitted by the supervising body on behalf the unit.

UNIT PRESENTATION

Unit name: Laboratory of Biology and Modelling of the Cell

Unit acronym: LBMC

Current label and N°: UMR 5239

ID RNSR: 200711906R

Application type: Fusion, scission, restructuring

Head of the unit (2019-2020): Mr Pierre JALINOT

Project leader (2021-2025): Mr Didier AUBOEUF

Number of teams: 15

EXPERTS COMMITTEE MEMBERS

Chair: Mr Michel LABOUESSE, Sorbonne Université, Paris

Experts: Ms Anaïs BAUDOT, CNRS, Marseille
Mr Marc BOUVILLAIN, CNRS, Orléans
Ms Aude-Isabelle DUPRE, CNRS, Paris
Ms Cathie ERB, Inserm, Illkirch
Mr Manolis FANTO, King's College London, United Kingdom
Mr Vincent GELI, CNRS, Marseille
Mr Matthieu GERARD, CEA, Gif-sur-Yvette
Ms Odile LECOMPTE, Université de Strasbourg
Ms Claire ROUGEULLE, CNRS, Paris
Ms Bénédicte SANSON, University of Cambridge, United Kingdom

HCÉRES REPRESENTATIVE

Mr Hinrich GRONEMEYER

REPRESENTATIVE OF SUPERVISING BODIES

Ms Catherine NGUYEN, INSERM

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The LBMC was created in 1987 at the opening of the "Ecole Normale Supérieure" (ENS) de Lyon. Since its creation, the activities of the LBMC have focused on fundamental research in cell biology, and are based on the use of various model organisms (yeasts, *C. elegans*, *Drosophila*, rodents, and human cells).

Since its creation, several individual teams have left the LBMC to create separate units, which is a strong mark of the LBMC success in terms of nurturing successful scientists and feeding the local community. In particular, they created a unit that led to the opening in 2013 of the CIRI (Centre International de Recherche en Infectiologie); LBMC teams working on nuclear receptors created the IGFL (Institut de Génomique Fonctionnelle de Lyon) in 2007; and LBMC teams working on neuromuscular processes created the INMG (Institut Neuro-Myo-Gène) in 2016.

The LBMC has taken a significantly different trajectory since the beginning of the present contract in 2016 with the hiring of four new teams (D. AUBOEUF, O. GANDRILLON, M. GRAMMONT, S. PANTALACCI/M. SÉMON) bringing new skills in computational biology and biophysics. As a consequence, the LBMC has changed its name from "Laboratory of Molecular Biology of the Cell" to "Laboratory of Biology and Modelling of the Cell".

Management team

The current Director is Pierre JALINOT who has headed the LBMC since 2016. Didier AUBOEUF, the current Deputy Director, will become the new LBMC Director. He will be assisted by Gaël YVERT as deputy director.

HCÉRES NOMENCLATURE

SVE2 Cellular Biology, Molecular Biology, Genomics, Systems Biology

THEMATICS

The research topics investigated by the LBMC include, the complexity of RNA expression, maturation and translation; the complexity of 4D genome organization; the collective properties of single cells; the function of cellular processes in development and disease and the cellular processes through time and evolution.

UNIT WORKFORCE

Laboratory of Biology and Modelling of the Cell (LBMC)		
Active staff	Number 06/30/2019	Number 01/01/2021
Full professors and similar positions	2	2
Assistant professors and similar positions	5	6
Full time research directors (Directeurs de recherche) and similar positions	8	9
Full time research associates (Chargés de recherche) and similar positions	13	19
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)	23	23
Permanent staff	51	59

Non-permanent professors and associate professors, including emeritus	0	
Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	4	
PhD Students	14	
Non-permanent supporting personnel	5	
Non-permanent staff	23	
Total	74	59

GLOBAL ASSESSMENT OF THE UNIT

The current activities of the LBMC are to understand in space and time the basic biological processes controlling cell proliferation, death and/or differentiation in response to internal and external cues. After the early years, which have been dominated by molecular biology approaches to describe the regulation of cellular processes, the LBMC has progressively developed novel analysis tools. In particular, during the current contract, the LBMC has progressively evolved towards a higher emphasis on systems biology approaches. From this evolution came the strategic decision to invest at multiple levels in computational, mathematical and biophysical modelling. This strategic decision has been implemented in three ways, (1) the hiring of 8 team leaders performed before and during the present contract, (2) the development of a biocomputing hub at the LBMC to assist LBMC teams in handling and interpreting large datasets, including a newly appointed engineer in bioinformatics. The biocomputing hub also provides training, a common server, plus tutelage and training for biologists. It has helped to raise the level of several publications, (3) taking the lead in steering the local community of system biologists through the Biosyl network, which is currently headed by two LBMC team leaders.

In parallel, the LBMC has kept developing the SFR-Biosciences Gerland frame by strengthening the genomic/transcriptomic facility. O. Gandrillon has become the SFR deputy director, which facilitates this objective. Altogether, the clear strategy taken by the LBMC and its implementation are truly impressive. It has already started to pay off, since the global level of publications has raised, and since the LBMC could attract new groups with a high profile (ERC laureates in particular). The current management team should thus be congratulated for their work and their coherent vision.

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Evaluation of clusters of higher education and research institutions

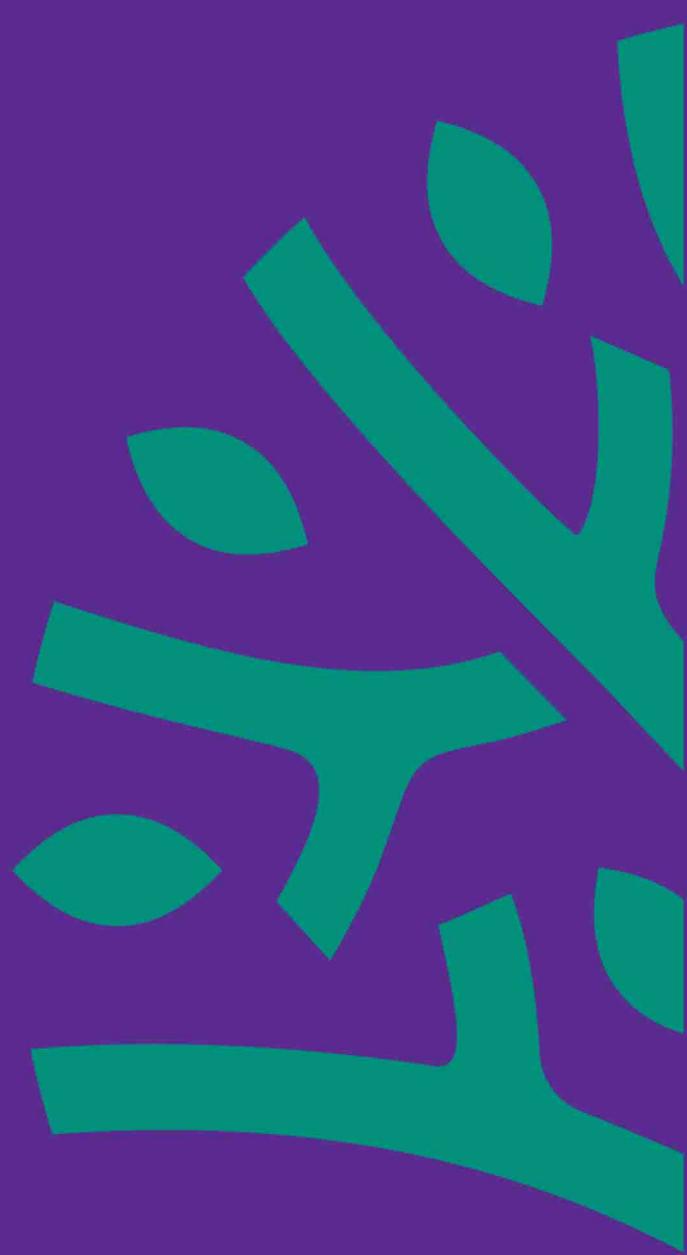
Evaluation of higher education and research institutions

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