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B2A - Adaptation biologique et vieillissement

Rapport Hcéres

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REPORT ON THE RESEARCH UNIT:
Biological Adaptation and Ageing (B2A)

UNDER THE SUPERVISION OF THE
FOLLOWING INSTITUTIONS AND
RESEARCH BODIES:

Centre National de la Recherche Scientifique -
CNRS

Institut national de la santé et de la recherche
médicale - Inserm

Université Pierre et Marie Curie

ÉVALUATION CAMPAIGN 2017-2018
GROUP D



In the name of Hcéres¹:

Michel Cosnard, President

In the name of the expert committee²:

Nektarios Tavernarakis, 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 expert committees and signed by their chairman." (Article 8, paragraph 5);

² 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

Unit name:	Biological Adaptation and Ageing
Unit acronym:	B2A
Requested label:	UMR
Application type:	Renewal
Current number:	UMR 8256
Head of the unit (2017-2018):	Mr Bertrand FRIGUET
Project leader (2019-2023):	Mr Bertrand FRIGUET
Number of teams:	8

COMMITTEE MEMBERS

Chair:	Mr Nektarios TAVERNARAKIS, University of Crete, Heraklion, Greece
Vice-Chair:	Mr Claude PRIGENT, Université de Rennes
Experts:	Ms Sophie ALLART, Inserm Toulouse (supporting personnel) Ms Tiziana BORSELLO, University of Milan, Italy Mr Gilles FAURY, Université Grenoble-Alpes (representative of CNU) Mr Germain GILLET, CRC, Lyon (representative of CSS) Ms Judith HAENDELER, University of Duesseldorf, Germany Mr Alban DE KERCHOVE, Université Libre de Bruxelles, Belgique Mr Richard TOMASINI, CRC, Marseille (representative of CoNRS)
HCERES scientific officer:	Mr Jean-Paul LALLÈS
Representatives of supervising institutions and bodies:	Mr Stéphane REGNIER, UPMC Ms Sylvie ROBINE, Inserm

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The UMR UPMC CNRS 8256 "Biological Adaptation and Ageing" (B2A) is a research unit located in the Cassan building of the Jussieu Campus. The B2A unit was created in 2014 to form a research group working on factors controlling healthy-ageing, longevity and vulnerability to age-related diseases. The 10 teams which currently form the B2A unit since 2014 originated from four previous research units of the Jussieu campus: (i) UMR UPMC/CNRS 7102 NPA "Neurobiology of Adaptive Processes", (ii) UR4 UPMC "Ageing, Stress and Inflammation", (iii) UR5 UPMC, "Plant Cellular and Molecular Physiology PCMP", and (iv) FRE3402 "RNA Biology", to which a group from UMR-S894 at University Paris Descartes joined. A new emerging team, "Stem cells and biotherapies" (team 10), was created at the end of 2013. The B2A unit has two teams affiliated to Inserm as ERL U1164. In order to continue the research unit's growth in the next five-year plan, the research unit proposes to concentrate the personnel into 8 teams. The B2A unit is one of the five constituent research units of the research federation Institute of Biology Paris-Seine (IBPS, FR 3631).

MANAGEMENT TEAM

The unit is headed by Mr Bertrand Friguet (UPMC), with Mr Rachel Sherrard (UPMC) as deputy.

HCERES NOMENCLATURE

SVE2_1; SVE2_3; SVE4_1; SVE5_1; SVE5_2.

SCIENTIFIC DOMAIN

The scientific objective of the UMR is to identify new mechanisms underlying cellular responses and adaptations to stress during advancing age. The scientific objective of the B2A unit is to identify new mechanisms underlying cellular responses and adaptations to stress during advancing age. B2A unit aims at limiting the fragmentation between system-centred biology fields (such as neurosciences, cardiovascular biology, etc.) and promoting the development of multi-disciplinary investigation of core biological processes that underlie common ageing processes (oxidative stress, inflammation ...) in different organ systems, as well as technological innovation.

UNIT WORKFORCE

Unit workforce	Number 30/06/2017	Number 01/01/2019
Permanent staff		
Full professors and similar positions	11	9
Assistant professors and similar positions	14	14
Full time research directors (Directeurs de recherche) and similar positions	7	7
Full time research associates (Chargés de recherche) and similar positions	8	8
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)	24	24
TOTAL permanent staff	64	62
Non-permanent staff		
Non-permanent professors and associate professors, including emeritus	4	
Non-permanent full time scientists, including emeritus, post-docs	12	
Non-permanent supporting personnel	11	
PhD Students	21	
TOTAL non-permanent staff	48	
TOTAL unit		
	112	

GLOBAL ASSESSMENT OF THE UNIT

Within the last 5-year period, the research unit has unified the goals and the functioning of the previous parent laboratories. As of today, the result of this effort are the presence of a strong laboratory, well integrated in the IBPS, with a very good activity of training through research, publication (with some articles in high impact journals) and fund raising in the public as well as the private sector. Some substantial differences between teams have however to be noted. A series of scientific results obtained by the B2A unit are important advances in the field, and improved collaborations with clinicians could lead to therapeutic strategy breakthroughs. The B2A unit is also strongly contributing to the economical/industrial activities, with several registered patents and the creation of several start-up companies. The scientific life of the unit is stimulated by the participation to and the organization of numerous scientific meetings in the unit or at the level of the IBPS, although the collaborative management of the unit issues could be strengthened (role of the laboratory council). The strategy of the 5-year period to come is clear: it aims at developing further the ongoing researches as well as emerging projects (e.g. molecular clocks, magneto-therapy, biomaterials and biotherapies) and is supported by the merging of several teams in order to constitute larger/stronger teams able to be more competitive at the international level. Future enhanced collaborations between teams working on closely related topics could potentiate the scientific outcomes. In summary, the B2A unit is well structured, has very good scientific results and its potential of attractiveness could lead some new teams to join in the future.

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2 rue Albert Einstein
75013 Paris, France
T. 33 (0)1 55 55 60 10

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