

REPORT ON THE RESEARCH UNIT:
Functional and Adaptive Biology (BFA)

UNDER THE SUPERVISION OF THE
FOLLOWING INSTITUTIONS AND
RESEARCH BODIES:

Université Paris Diderot

Centre National de la Recherche Scientifique -
CNRS

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

ÉVALUATION CAMPAIGN 2017-2018
GROUP D



In the name of Hcéres¹:

Michel Cosnard, President

In the name of the expert committee²:

Jean-François Liégeois, 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:	Functional and Adaptive Biology
Unit acronym:	BFA
Requested label:	UMR
Application type:	Restructuration
Current number:	UMR 8251
Head of the unit (2017-2018):	Mr Jean-Marie DUPRET
Project leader (2019-2023):	Mr Jean-Marie DUPRET
Number of teams:	8

COMMITTEE MEMBERS

Chair:	Mr Jean-François LIEGEOIS, Université de Liège, Belgique
Experts:	Ms Daniela COTA, INSERM, Université de Bordeaux Ms Joëlle DUPONT, Inra de Tours (representative of Inserm CSS) Ms Valérie FESSARD, Anses, Fougères Ms Claire HOEDE, Inra Toulouse (supporting personnel) Mr Alain LACAMPAGNE, Université de Montpellier (representative of CoNRS) Ms Anne-Dominique LAJOIX, Université de Montpellier Mr Patrick LAURENT, Université Libre de Bruxelles, Belgique Mr Jean-Yves LE GUENNEC, Université de Montpellier (representative of CNU) Mr Cédric MORO, Inserm, Université de Toulouse
Hcéres scientific officer:	Mr Jean-Paul LALLÈS
Representatives of supervising institutions and bodies:	Ms Armelle LETURQUE, CNRS Ms Laurence LOMME, Inserm Mr Reiner VEITIA, Université Paris 7

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The Functional and Adaptive Biology ("Biologie Fonctionnelle et Adaptative", BFA) laboratory was created in 2009 as a "Equipe d'Accueil Conventionnée" (EAC4413) and affiliated to the Life Sciences Department of Paris-Paris 7 university and to the National Institute of Biological Sciences of the CNRS. Initially, BFA teams came from laboratories affiliated to both CNRS (team 1 and 2 – UMR 7059; team 3 – UMR 7079; team 7 partially – UMR 7592) and University of Paris 6, and University of Paris 7 (team 4 – EA 300; team 7 partially – EA 3508; team 6 – EA 1553). BFA is one of the research laboratories located on the Paris Rive Gauche (PRG) campus of Paris Diderot University.

In 2014, BFA became a Joint Research Unit of Paris Diderot University and CNRS (UMR 8251). In addition, Inserm labelled team 3 as Labelled Research Team (LRT). The BFA laboratory is located in two main buildings (Buffon and Lamarck) of Paris Diderot University where some teams share the same floors.

MANAGEMENT TEAM

The director of the unit is Mr Jean-Marie Dupret and the deputy-director is Ms Joëlle Cohen-Tannoudji.

HCERES NOMENCLATURE

SVE2_1; SVE2_2 ; SVE5_1.

SCIENTIFIC DOMAIN

The BFA unit is involved in basic research related to integrative biology. Research topics concern the biological mechanisms underlying human adaptation to environmental and/or internal perturbations, i.e. endocrine, metabolic or genetic inputs, in physiological or pathophysiological conditions. Four main scientific areas are covered: nutrition, degenerative disorders and aging, reproduction and toxicology.

UNIT WORKFORCE

Unit workforce	Number 30/06/2017	Number 01/01/2019
Permanent staff		
Full professors and similar positions	8	10
Assistant professors and similar positions	18	21
Full time research directors (Directeurs de recherche) and similar positions	4	5
Full time research associates (Chargés de recherche) and similar positions	12	10
Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	2	3
High school teachers	0	0
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	28	33

TOTAL permanent staff	72	82
Non-permanent staff		
Non-permanent professors and associate professors, including emeritus	3	
Non-permanent full time scientists, including emeritus, post-docs	6	
Non-permanent supporting personnel	4	
PhD Students	12	
TOTAL non-permanent staff	25	
TOTAL unit	97	

GLOBAL ASSESSMENT OF THE UNIT

The BFA unit is an original multidisciplinary unit well positioned in the scientific landscape in France.

The unit has increased both the number and the quality of original publications as compared to the previous 2009-2013 period, with an overall scientific output that is now very good to excellent. In particular, inter-teams publications have increased and must remain an important objective of the next period of activity. Overall, capacity to attract funding from both National and European sources and participation in European networks are excellent. However, attractiveness for foreigner students and researchers as well as visibility is still quite low and stronger outreach is desirable. The unit has overall excellent interactions with industry partners and has been valorising the research activity through patent applications. Socio-economic interactions and valorisation are expected to increase even further thanks to the planned strengthening and expansion, in terms of both equipment and personnel, of the metabolic platform of the unit.

The BFA unit is also strongly implicated in teaching and training activities for both Master and PhD students within Paris Diderot University. This already excellent involvement provides good opportunities to attract the best graduate students for future PhD thesis. However, the unit organization and life is not optimal and currently lacks both scientific and social communication. Efforts to set-up the scientific life within the unit have been made, but are not sufficient. Better interactions and exchanges among the members of the unit should be facilitated by the planned use of an intranet and the use of both French and English for all official communications within the unit.

In 2019, a new organization of the unit is proposed, with the integration of a new team focusing on molecular modelling. It is expected that this team will create a real synergy among most of the teams of the unit and such interactions will certainly further facilitate the valorisation of research. Furthermore, the location of the unit within a large university campus gives real opportunities for close collaborative work, including interdisciplinary projects (for example with physics disciplines) that will further improve the visibility and International attractiveness of the unit.

The scientific strategy in each of the 4 scientific domains characterizing the research activity of the unit is excellent. It exists a wide array of complementary approaches from molecular to integrative studies, which represents a real strength of the unit. However, given the very different domains, the unit does not have yet a unified research project. Scientific integration and concerted efforts and collaborations among the different teams of the unit must be a strategic objective of the unit.

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