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FINAL RESUME ON THE RESEARCH UNIT BFP - Biologie du Fruit et Pathologie / Fruit Biology and Pathology

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FINAL RESUME ON THE RESEARCH UNIT

BFP - Biologie du Fruit et Pathologie / Fruit Biology and Pathology

UNDER THE SUPERVISION OF THE FOLLOWING INSTITUTIONS AND RESEARCH BODIES:

Institut national de recherche pour l'agriculture,
l'alimentation et l'environnement - INRAE
Université de Bordeaux

EVALUATION CAMPAIGN 2020-2021

GROUP B



In the name of Hcéres¹:

Mr Thiery Coulhon, President

In the name of the experts committee²:

Mr Jan Traas, 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:

Biologie du Fruit et Pathologie / Fruit Biology and Pathology

Unit acronym:

BFP

Current label and N°:

UMR

ID RNSR:

201119465P

Application type:

Renewal

Head of the unit (2020-2021):

Mr Thierry Candresse

Project leader (2021-2025):

Mr Yves Gibon

Number of teams and/or themes:

5

EXPERTS COMMITTEE MEMBERS

Chair:

Mr Jan Traas, INRAE, Lyon

Experts:

Ms Mireille Chabaud, INRAE, Castanet-Tolosan (supporting personnel)
Ms Sophie Gaudriault, INRAE, Montpellier (representative of CSS INRAE)
Mr Michael Kube, University of Hohenheim, Germany
Mr Enrique Moriones, Spanish National Research Council, Spain
Mr Said Mouzeyar, Université Clermont Auvergne (representative of CNU)
Mr Stéphane Ravanel, INRAE, Grenoble

HCÉRES REPRESENTATIVE

Mr Thierry Ameglio

REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr Jérôme Joubès, Université de Bordeaux
Mr Christina Lanou, INRAE
Mr Olivier Lavialle, INRAE
Mr Philippe Moretto, Université de Bordeaux
Mr Peter Rogowsky, INRAE
Mr Martin Teichmann, Université de Bordeaux

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The Fruit Biology and Pathology research unit (UMR 1332, "Biologie du Fruit et Pathologie", INRAE and University of Bordeaux) (BFP) was created in 2011 to constitute a major pillar of plant biology in Nouvelle Aquitaine. The current unit is the result of a continuous restructuring process of former units including staff transfers, scientific profile formation, structural connection of buildings and of experimental facilities. Ongoing processes further promote integration, provide additional facility space and improve co-operations with the University of Bordeaux on site of the INRAE Grande Ferrade campus. BFP broadly belongs to the plant sciences discipline and is organized in six teams for the present contract: OrFE, the development and quality traits build-up in fleshy fruits (tomato and strawberry); GFDF, Functional Genomics of Fruit Development; Meta, influence of metabolism on plant performance; A3C, the adaptation of fruit trees (cherry) to climate change; Viro and Molli teams: non-cultivable plant pathogens (viruses and phytoplasmas) and their interactions with their host plants and vectors. Until May 2019, and after some internal tensions in the GFDF team, a new organisation for BFP was made. GFDF people were split in two parts: one group joined other teams (OrFE and Meta) and a second group was maintained in a temporal team SURF (fruit surface topic) until the end of 2021 and will join the strawberry component of the OrFE team for the next contract with a new team name (FLODEFE: "Flowering, Fruit Development and Environmental Constraints").

RESEARCH ECOSYSTEM

BFP is permanently supported by the departments of Plant Biology and Breeding (BAP) and Plant health and environment (SPE) of INRAE. Locally it receives strong support from the University of Bordeaux. At the university level, BFP is involved in the Fédération de Recherche "Integrative Biology and Ecology", a component of the new "Sciences de l'Environnement" Department of the University of Bordeaux (see also below). Several other closely located units are working in strong collaboration with the BFP (UMR 5200 Laboratory of Membrane Biology LMB, UMR 1287 EFFV, Ecophysiology and Grape Functional Genomics, UMR 1065 SAVE, health and agroecology of the vineyard). Furthermore, the Molli Team of BFP belongs to the Institute for Vine and Wine Sciences, ISVV (Bordeaux University Institute). Synergistic effects due to the local concentration of research institutions and leadership position resulted in highest national ranking of BFP's impact on research on fruits and vegetable. In addition, the BFP director will coordinate the "Grands Projets de Recherche" named "Bordeaux Plant Sciences" and BFP will be involved in another GPR called "Frontiers of Life".

HCÉRES NOMENCLATURE AND THEMATICS OF THE UNIT

Main field: SVE2_LS3 Cell biology and plant development biology;

Secondary Fields: SVE1_LS6 Immunology, microbiology, virology, parasitology; SVE1_LS2 Genetics, genomics, bioinformatics ; SVE1_LS1 Molecular and structural biology, biochemistry.

MANAGEMENT TEAM

Current management of the BFP unit is composed of the director, Mr T. Candresse, and two deputy directors, Mr C. Chevalier and Mr Y. Gibon. Weekly meetings take part between director, deputy directors, team leaders and at least one representative of the financial and administrative team.

UNIT WORKFORCE

Active staff	Number 06/01/2020	Number 01/01/2022
Full professors and similar positions	4	3
Assistant professors and similar positions	13	13
Full time research directors (Directeurs de recherche) and similar positions	12	12
Full time research associates (Chargés de recherche) and similar positions	15	13
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)	73	71
Permanent staff	117	112
Non-permanent professors and associate professors, including emeritus	0	
Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	0	
PhD Students	20	
Non-permanent supporting personnel	15	
Non-permanent staff	35	
Total	152	112

GLOBAL ASSESSMENT OF THE UNIT

The BFP was created just over ten years ago, as a fusion of several other laboratories. It is currently a relatively large research unit with about 150 staff members, organised into six teams for the present contract and five for the next term, which enjoy a high level of independence. The laboratory performs mostly basic research in plant science which is strongly oriented towards species of economic interest (strawberry, tomato, cherry, vine, ...) and has an important translational aspect. Indeed, although there is some variability between the individual teams, BFP has developed overall excellent interactions with the private sector. Supported by INRAE and the University of Bordeaux, it has become a major pillar of plant research in the region with an excellent national and international reputation.

The scientific output is overall very good to excellent, although quantitative and qualitative differences between the teams exist, OrFE, Molli, Viro and Meta being the most visible ones at the international level. These differences are linked to the research topics of the individual teams. These can be quite fundamental in nature (OrFE, Viro, Molli, Meta) or more focused on the development of technology (Meta), which can favour higher impact publications. This is somewhat in contrast to A3C, interested in more applied aspects, with publications in the more specialised literature. During the last years, BFP has actively participated in both national and international projects (e.g., FReQUenCE international associated laboratory (LIA); FP7 MARS project; or Plant KBBE COBRA project). The research unit is well integrated in the university landscape, as it is involved in the management of several technical platforms. In addition, it plays a very active role in teaching and training through research.

Scientific interests still reflect the original interests of the founding laboratories and mostly relate to host pathogen interactions as well as fruit development. This diversity provides a broad basis for innovative research. However, it also brings challenges related to communication and synergy between the teams. Several initiatives to address this issue have been taken, including the creation of a scientific council, increasing the frequency of meetings of the service council combined with other initiatives to improve the sense of belongingness amongst staff members.

For the future, BFP will largely base its projects on ongoing research. In addition, several teams have started to strengthen projects based on the interactions between plants and the environment, which corresponds to both local and national research priorities. During the coming years, a significant proportion of the permanent staff will retire, which is both a challenge and an opportunity to clarify research priorities, to set up adequate long-term recruitment plans and to put in place scientific strategies.

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