

FINAL RESUME ON THE RESEARCH UNIT:
Animal Genetics and Integrative Biology (GABI)

UNDER THE SUPERVISION OF THE
FOLLOWING INSTITUTIONS AND
RESEARCH BODIES:

Institut national de la recherche agronomique -
Inra

AgroParisTech - Institut des sciences et industries
du vivant et de l'environnement

EVALUATION CAMPAIGN 2018-2019
GROUP E

Report published on February, 01 2019



In the name of Hcéres¹:

Michel Cosnard, President

In the name of the experts committee²:

Mathilde Causse, Chairwoman 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 provided by laboratories and supervising bodies in the unit's application and in the Excel files "Données du contrat en cours" and "Données du prochain contrat".

UNIT PRESENTATION

Unit name:	Animal Genetics and Integrative Biology
Unit acronym:	GABI
Requested label:	UMR
Application type:	Renewal
Current number:	UMR 1313
Head of the unit (2018-2019):	Ms Claire ROGEL-GAILLARD
Project leader (2020-2024):	Ms Claire ROGEL-GAILLARD
Number of teams:	8

EXPERTS COMMITTEE MEMBERS

Chair:	Ms Mathilde CAUSSE, Inra, Montfavet (representative of Inra CSS)
Experts:	Mr Philippe GLASER, Institut Pasteur, Paris
	Mr Jérôme GOUDET, Université de Lausanne, Switzerland
	Ms Nathalie MANDONNET, Inra, Petit-Bourg
	Mr Xavier MONTAGUTELLI, Institut Pasteur, Paris
	Mr Cédric NOTREDAME, Centre for Genomic Regulation, Spain
	Mr Miguel PEREZ, Icrea Bellaterra, Spain
	Mr Pierre SICARD, Inserm, Montpellier (supporting personnel)

HCÉRES REPRESENTATIVE

Mr Pierre COUBLE

REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr Jean-Pierre BIDANEL, Inra

Mr Thierry DORÉ, AgroParisTech

Ms Marie-Claude PAULIEN, Inra

Mr Xavier FERNANDEZ, Inra

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The Integrative Biology and Animal Genetics research unit of Inra, UMR 1313, hereafter referred to as GABI, was launched in 2009 as a joint unit between Inra and AgroParisTech. GABI resulted from the merging of six independent laboratories, which were under the supervision of the Animal Genetics (GA) division of Inra. Bringing together these six laboratories contributed to build a coherent and strong task force on animal genetics and genomics with the aim to enhance research towards integrative biology. The Laboratory GPL supervised by the Inra division Animal Physiology and Livestock Systems (PHASE) closed in December 2013 and a few members from the PHASE division joined GABI. In 2014, GABI was thus renewed and restructured as a unit led by the GA division and including physiologists from the PHASE division. On the AgroParisTech side, GABI is under the supervision of the Life Science and Health department and the professors and assistant professors teach within the frame of the Breeding and Reproduction Group (UFR GER).

GABI is located on the Inra Jouy-en-Josas Ile-de-France research centre, 25 km South-West of Paris. Teacher-researchers share their time between the location of their institution (Paris downtown or Maisons-Alfort) and Jouy-en-Josas. A few members of GABI are located on other research centres: Inra research centre of Toulouse and Ifremer (French Research Institute for the Exploration of the Sea) research centre at Palavas-les-Flots (close to Montpellier).

MANAGEMENT TEAM

The senior level of the management team currently comprises the scientific manager and director, Claire ROGEL-GAILLARD, and two deputy directors, Hélène HAYES and Etienne VERRIER.

HCÉRES NOMENCLATURE

SVE2_2; SVE2_3; SVE5_1.

SCIENTIFIC DOMAIN

The GABI unit develops research on animal genetics, genomics and physiology, aiming to (1) enhance knowledge on animal genomes and metagenomes, (2) study the biological mechanisms that underlie phenotypic variability related to adaptation, health and welfare, reproduction and the tradeoffs of these with production traits and (3) develop tools and methods to promote efficient and sustainable breeding programs and manage animal biodiversity as a keystone towards adaptability of livestock systems for future generations.

UNIT WORKFORCE

		Unit workforce	
		Animal Genetics and Integrative Biology	
	Active staff	Number 30/06/2018	Number 01/01/2020
	Full professors and similar positions	3	3
	Assistant professors and similar positions	4	4
	Full time research directors (Directeurs de recherche) and similar positions	18	18

Full time research associates (Chargés de recherche) and similar positions	36	36
Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	15	14
High school teachers	0	0
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	54	53
Permanent staff	130	128
Non-permanent professors and associate professors, including emeritus	0	
Non-permanent full time scientists, including emeritus, post-docs	8	
PhD Students	19	
Non-permanent supporting personnel	12	
Non-permanent staff	39	
Total	169	

GLOBAL ASSESSMENT OF THE UNIT

The eight teams of GABI gather complementary skills in animal genetics, bioinformatics, genomics and physiology which allowed to carry excellent research focused on several animal species and scientific questions. This is highlighted by a very large number of publications including some in excellent journals, several patents and its participation in international consortia, European and national projects. Among the most important results of the period, the genomic selection was extended to several breeds and species, several genes/QTLs were characterised and the roles of microRNAs and microbiome were assessed. The unit received several distinctions among which the «Lauriers de l'Inra». Original and integrated approaches were developed thanks to interactions among teams and in collaboration with several other French and International groups. Furthermore the research projects benefit from large collections of genetic resources and excellent infrastructure, notably in the frame of the platform team, which provides facilities for genomic analysis, resource conservation and microscopy and from Inra experimental units. The research unit has strong and historical links with the industry of animal breeding for each animal species. The unit is also involved in teaching and student training. The organization and management of the unit is very efficient and particularly adapted to its size. The unit has been strongly involved in the creation of SAPS (Animal Science of Paris-Saclay) institute, which gathers all the research teams involved in animal science and will contribute to the visibility of their research at the national level. Nevertheless the committee noticed heterogeneity among teams in both scientific production and level of external collaborations and project funding, as well as, in the number of PhD students and postdocs. The project proposed for the next period is partly in continuity of the present project. It will be focused on understanding and exploiting the genetics and phenotypic variability of animals and the interactions with microbiomes and environments. It will benefit from the large sets of data obtained during the last years.

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