

FINAL RESUME ON THE RESEARCH UNIT:  
Food and Digestive Microbiologie to serve  
Health (MICALIS)

UNDER THE SUPERVISION OF THE  
FOLLOWING INSTITUTIONS AND  
RESEARCH BODIES:

AgroParisTech - Institut des sciences et industries  
du vivant et de l'environnement  
Institut National de la Recherche Agronomique  
– INRA  
Université Paris-Saclay

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**EVALUATION CAMPAIGN 2018-2019**  
GROUP E



In the name of Hcéres<sup>1</sup>:

Michel Cosnard, President

In the name of the experts committee<sup>2</sup>:

Hilde De Reuse, Chairwoman of the  
committee

Under the decree No.2014-1365 dated 14 November 2014,

<sup>1</sup> The president of Hcéres "countersigns the evaluation reports set up by the experts committees and signed by their chairman." (Article 8, paragraph 5);

<sup>2</sup> 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

<b>Unit name:</b>	Food and Digestive Microbiologie to serve Health
<b>Unit acronym:</b>	MICALIS
<b>Requested label:</b>	UMR
<b>Application type:</b>	Restructuration
<b>Current number:</b>	1319
<b>Head of the unit (2018-2019):</b>	Mr Stéphane AYMERICH
<b>Project leader (2020-2024):</b>	Mr Stéphane AYMERICH (until 2021)
<b>Number of teams and/or themes:</b>	21

## EXPERTS COMMITTEE MEMBERS

<b>Chair:</b>	Ms Hilde DE REUSE, Institut Pasteur
<b>Experts:</b>	Mr André BADO, Inserm/Centre de Recherche sur l'Inflammation
	Ms Katri BJÖRKROTH, Helsinki University, Finland
	Ms Tanneke DENBLAAUWEN, University of Amsterdam, The Netherlands
	Mr Gillian DOUCE, University of Glasgow, UK
	Mr Simon FOSTER, University of Sheffield, UK
	Ms Inès MANDIC MULEC, University of Ljubljana, Slovenia
	Mr Xavier NESME, Centre Inra Auvergne Rhône Alpes (supporting personnel)
	Mr Jose R PENADES, University of Glasgow, UK
	Mr Sergio POLAKOF, Centre Inra Auvergne Rhône Alpes
	Ms Stéphanie SCHÜLLER, University of East Anglia, UK
	Mr Pascal SIMONET, École Centrale de Lyon (representative of Inra CSS)
	Mr Gilles TRUAN, INSA Toulouse
	Ms Maria URDACI, École Nationale d'Ingénieurs de Travaux Agricoles de Bordeaux (representative of CNECA)

## HCÉRES REPRESENTATIVE

Mr Steven BALL

## REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr Etienne AUGER, Université Paris-Sud

Mr Jean DALLONGEVILLE, Inra AlimH

Ms Sylvie DEQUIN, Inra MICA

Mr Thierry DORE, AgroParisTech

## INTRODUCTION

### HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The Micalis Institute was created on January 1<sup>st</sup> 2010. The new building in Jouy-en-Josas was delivered early July 2014. After several moving steps, all the teams of Micalis have been regrouped in Jouy-en-Josas in July 2016 and hosted in three different buildings among which two directly communicate. In June 2018, 336 persons were working at Micalis. The Micalis Institute is under the supervision of the MICA and AlimH departments of the Inra which are both associated to AgroParisTech. The Université Paris-Sud will join this association within a UMR in the next term.

### MANAGEMENT TEAM

The unit is directed by a directory board/college of directors (CoDir) with six members, a Unit Director (DU): Mr Stéphane AYMERICH and five deputy directors (DUAs). Three deputy directors (Mr Romain BRIANDET, Mr Philippe LANGELLA, Ms Ruf CARBALLIDO-LOPEZ) are responsible for the thematic departments, while 2 others (Ms Véronique MONNET and Mr Didier LERECLUS) help with human resources management and supervision of financial and administrative management.

### HCÉRES NOMENCLATURE

SVE3\_1 Microbiologie ; SVE3\_4 Immunologie ;

SVE2\_2 Génétique, génomique, bioinformatique, biologie systémique ; SVE2\_1 Biologie moléculaire et structurale, biochimie ; SVE2\_3 Biologie cellulaire ;

SVE1\_3 Biotechnologies biologie synthétique ;

SVE5\_1 Physiologie, endocrinologie, physiopathologie.

### SCIENTIFIC DOMAIN

The scientific domain of the Micalis Institute is Microbiology. The aim of the research performed at Micalis is to understand how food, food microorganism and the gut microbiota are linked to the promotion of well-being and health and to define how foodborne pathogens may cause pathologies. The three scientific priorities of Micalis are (i) molecular mechanisms of bacterial adaptation and pathogenesis, (ii) functional food-microbiome-host interactions, and (iii) systems and synthetic microbiology. The Micalis unit comprises 21 teams each being part of one of the three thematic departments, "bacterial adaptation and pathogenesis", "systems and synthetic microbiology" or "food and digestive ecosystems".

### UNIT WORKFORCE

		Unit workforce	
		MICALIS	
	Active staff	Number 30/06/2018	Number 01/01/2020
	Full professors and similar positions	5	7
	Assistant professors and similar positions	3	8

Full time research directors (Directeurs de recherche) and similar positions	33	30
Full time research associates (Chargés de recherche) and similar positions	47	48,50
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)	103	69,50
<b>Permanent staff</b>	<b>191</b>	<b>163</b>
Non-permanent professors and associate professors, including emeritus	0	
Non-permanent full time scientists, including emeritus, post-docs	89	
PhD Students	53	
Non-permanent supporting personnel	58	
<b>Non-permanent staff</b>	<b>147</b>	
<b>Total</b>	<b>338</b>	<b>163</b>

## GLOBAL ASSESSMENT OF THE UNIT

The research performed at the INRA Micalis Institute covers both fundamental and applied microbiology with the aim to understand how food, food microorganism and the gut microbiota are linked to the promotion of well-being and health and to define how foodborne pathogens may cause pathologies. The three scientific priorities of Micalis are (i) molecular mechanisms of bacterial adaptation and pathogenesis, (ii) functional food-microbiome-host interactions, and (iii) systems and synthetic microbiology. The Micalis Institute is unique in France for its scientific orientations and its impressive critical mass divided into 21 teams. The Micalis Institute benefits from an international leadership in gut microbiota and probiotics as well as in synthetic biology. The director of the institute has done an excellent work at setting up the Micalis Institute.

The scientific publications of Micalis have been excellent both qualitatively and quantitatively. Micalis has also been very efficient in translational research with industry and for health, in obtaining patents. The institute was co-founder of three start-ups based on its research on gut microbiota thus promoting innovative health strategies.

Micalis has been able to obtain important funding resources in a very competitive context. The outstanding level of Micalis leaders has been acknowledged by 5 prestigious European ERC grants obtained during the period and 22 prizes and distinctions. Members of Micalis have also been very active in training PhD students, in supervising postdocs, in teaching mainly at the Master level, and Micalis is associated to the development of the Paris-Saclay University. Micalis presents exciting projects for the future and, with important secured funding, should continue its route to success.

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

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