Research evaluation

FINAL RESUME ON THE RESEARCH UNIT:
Microbes, Intestine, Inflammation and Susceptibility of the Host (M2iSH)

UNDER THE SUPERVISION OF THE FOLLOWING INSTITUTIONS AND RESEARCH BODIES:
Institut national de la santé et de la recherche médicale - Inserm
Université Clermont-Auvergne - UCA

EVALUATION CAMPAIGN 2019-2020
GROUP A

Report published on February, 10 2020

In the name of Hcéres[1]:

Nelly Dupin, Acting President

In the name of the experts committee[2]:

Teresa Frisan, 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 submitted by the supervising body on behalf the unit.

UNIT PRESENTATION

Unit name:	Microbes, Intestine, Inflammation and Susceptibility of the Host
Unit acronym:	M2iSH
Current label and N°:	UMR 1071
ID RNSR:	201220155K
Application type:	Renewal
Head of the unit (2019-2020):	Mr Nicolas BARNICH
Project leader (2021-2025):	Mr Nicolas BARNICH
Number of teams and/or themes:	1

EXPERTS COMMITTEE MEMBERS

Chair:	Ms Teresa FRISAN, Umeå University, Sweden
Experts:	Ms Cécile FREMOND, CNRS Orléans (supporting personnel)
	Ms Cosette GRANDVALET, Agrosup Dijon (representative of CNU)
	Mr Paul O'TOOLE, University College Cork, Ireland
	Mr Nicolas VEZIRIS, Sorbonne Université (representative of Inserm CSS)

HCÉRES REPRESENTATIVE

Mr Jean-Paul LALLÈS

REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr Raymond BAZIN, Inserm

Ms Anne FOGLI, Université Clermont Auvergne

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The UMR 1071 Inserm/University of Clermont Auvergne, UMR 1071-M2iSH was created in 2012. It has developed from the original research group founded in 1994 and named "Intestinal Bacterial Pathogenesis". In 2008, the research group was re-named as "Evolution of pathogenic bacteria and host genetic susceptibility".

MANAGEMENT TEAM

Director: Mr Nicolas BARNICH; deputy director: Mr Richard BONNET.

HCÉRES NOMENCLATURE

SVE3, SVE5 and SVE2.

THEMATICS

The scientific focus of the unit is the role of bacterial infections on intestinal chronic inflammation (*e.g.,* Inflammatory Bowel disease) and colorectal cancer, CRC, with specific focus on the Adherent-Invasive *Escherichia coli* (AIEC). The research plan is developed into three major subprojects: i) *E. coli* and intestinal inflammation; ii) *E. coli* and carcinogenesis, iii) diagnostic and therapeutic tools. The first two subprojects aim at dissecting the molecular mechanisms by which this type of infection can contribute to alteration of the intestinal homeostasis, in association with genetic and environmental factors (polymorphism of autophagy and innate immunity genes, predisposition to tumor of inflammation), diet (high fat), xenobiotics, co-infections (microsporidia), and will form the basis for the development of biomarkers (diagnostic tools) or therapeutic interventions, once the key pathogenic mechanism have been identified.

UNIT WORKFORCE

Microbes, Intestine, Inflammation and Susceptibility of the Host		
Active staff	**Number 06/30/2019**	**Number 01/01/2021**
Full professors and similar positions	8	9
Assistant professors and similar positions	8	9
Full time research directors (Directeurs de recherche) and similar positions	0	
Full time research associates (Chargés de recherche) and similar positions	1	1
Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	1	1
High school teachers	0	0
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	10	10
Permanent staff	**28**	**30**
Non-permanent professors and associate professors, including emeritus	0	
Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	8	
PhD Students	10	

Non-permanent supporting personnel	6	
Non-permanent staff	**24**	
Total	**52**	**30**

GLOBAL ASSESSMENT OF THE UNIT

The overall assessment of the unit is excellent. On the scientific focus, the unit is taking a global and translational approach to address the proposed research plan using molecular and structural biology, *in vitro,* including 3D organoid cultures, *ex vivo*, *in vivo* models, validation of the findings in patients, and implementation of clinical trials. The national and international reputation of the unit is indisputable, and certified by the invitation to international and national meetings, invitations to review from international scientific journals, the ability to attract national and European financial support, the level of scientific publications, the interaction with local institutional policies, which can have a direct impact on the public health care. The scientific production of the unit during the period 2014-2019 is excellent in terms of scientific papers published either by unit members as principal investigators or in collaboration with national and international researchers in very good and good journals. The past activity further serves as a strong base for the scientific strategy for the period 2020-2025. The unit has developed a long-standing and fruitful interaction with non-academic industrial partners, which not only contribute to the implementation of diagnostic and therapeutic interventions, but represents a significant source of funding. The unit organization has a strong and charismatic scientific leadership, which has demonstrated to have a viable long-term planning competence both scientifically and administratively, and has designed a more collegial approach for strategic planning by instituting an executive committee to assist the unit director from 2021. The strategy plan is considered excellent, and it is based on a holistic approach to assess: i) how environmental and host-associated factors modulates microbial traits (Axis I); ii) how this interaction alters the intestinal homeostasis, and affect chronic conditions, mainly focusing inflammation and cancer (Axis II). Data produced from Axis I and II can be developed into diagnostic and therapeutic tools to fill gaps for unmet clinical needs (Axis III). The committee has identified some issues that in long term may represent a vulnerability and has provided some recommendations that can help to overcome them.

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