ADEN - Nutrition, inflammation et dysfonction de l'axe intestin-cerveau

Rapport Hcéres

HCERES

High Council for the Evaluation of Research and Higher Education

Research units

HCERES report on research unit:

Nutrition, Inflammation and Gut-Brain axis dysfunction

ADEN

Under the supervision of the following institutions and research bodies:

Université de Rouen

Institut national de la Santé et de la Recherche Médical - INSERM

Evaluation Campaign 2015-2016 (Group B)

HCERES

High Council for the Evaluation of Research and Higher Education

Research units

In the name of HCERES,[1]

Michel Cosnard, president

In the name of the experts committee,[2]

Nathalie Vergnolle, chairwomen of the committee

Under the decree N°.2014-1365 dated 14 november 2014,

[1] The president of HCERES "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 expert committee". (Article 11, paragraph 2)

Evaluation report

This report is the sole result of 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 name:	Nutrition, Inflammation and Gut-Brain axis dysfunction
Unit acronym:	ADEN
Label requested:	UMR_S
Current number:	1073
Name of Director (2015-2016):	Mr Pierre DÉCHELOTTE
Name of Project Leader (2017-2021):	Mr Pierre DÉCHELOTTE

Expert committee members

Chair:	Ms Nathalie VERGNOLLE, INSERM, Toulouse
Experts:	Ms Carine BOSSENMEYER-POURIE, Université de Nancy (representative of the CSS INSERM)
	Mr Andreas STENGEL, Charité Berlin, Germany
Scientific delegate representing the HCERES:	
	Mr Jean GIRARD
Representatives of supervising institutions and bodies:	
	Mr Pierre FREGER, University of Rouen, Faculty of Medicine and Pharmacy
	Ms Isabelle LESAGE, CHU Rouen
	Ms Christelle MACQUET (representative of the INSERM)
	Ms Julie MAILLARD, CHU Rouen
	Ms Meriem MAROUF-YORGOF (representative of the INSERM)
	Mr Cafer ÖZKUL, University of Rouen
	M Laurent YON, University of Rouen
Head of Doctoral School:	
	Mr Vincent RICHARD, Doctoral School n°497 “École Normande Biologie Intégrative, Santé, environnement”

1 • Introduction

History and geographical location of the unit

The INSERM unit 1073, headed by Mr Pierre DÉCHELOTTE, was created on the 01/01/2012. INSERM U 1073 is located on the Clinical Campus (Medicine/Pharmacy School and Rouen University Hospital) and is involved in the "Institute for Research and Innovation in Biomedicine" (IRIB). U 1073 focuses its research on nutritional and gastrointestinal physiology and pathophysiology.

The current unit UMR 1073 is applying for renewal of both its university and INSERM labels. The research unit members propose for the next term is in close continuation with their on-going research theme. The unit is organized as an integrated single team unit, proposing a multidisciplinary approach on the physiology and pathophysiology of eating behaviour, gut barrier and visceral sensitivity, in the context of gut-brain axis dysfunction. The general project is structured by themes, and specific projects are run by principal investigators (PIs), often associated in tandems or trios to provide the best interdisciplinary or fundamental/clinical interactions.

Management team

The INSERM unit 1073 is headed by Mr Pierre DÉCHELOTTE, and Mr Moïse COËFFIER is associate director. An executive committee meets at least once a month and helps with all the decisions. It is composed of the director, the deputy director and representatives of scientists, technical staff and students.

HCERES nomenclature

Principal: SVE1_LS4 Physiologie, Physiopathologie, Endocrinologie

Secondary: SVE1_LS7 Recherche clinique, Santé publique

Scientific domains

The unit uses multidisciplinary approaches to explore the physiology and pathophysiology of eating behaviour, gut barrier and visceral sensitivity, in the context of dysfunctions of the gut-brain axis. The unit has anchored its activities in translational approaches, aiming at evaluating gut metabolism and gut-brain axis dysfunctions associated with eating disorders, irritable bowel syndrome and inflammatory bowel diseases. They focus their approaches on trying to propose new therapeutic avenues to treat these diseases.

Unit workforce

Unit workforce	Number on 30/06/2015	Number on 01/01/2017
N1: Permanent professors and similar positions	15	18
N2: Permanent researchers from Institutions and similar positions	8	6
N3: Other permanent staff (technicians and administrative personnel)	5	7
N4: Other professors (Emeritus Professor, on-contract Professor, etc.)		
N5: Other researchers from Institutions (Emeritus Research Director, Postdoctoral students, visitors, etc.)		
N6: Other contractual staff (technicians and administrative personnel)	3	
N7: PhD students	8	
TOTAL N1 to N7	**39**	
Qualified research supervisors (HDR) or similar positions	11	

Unit record	From 01/01/2010 to 30/06/2015
PhD theses defended	13
Postdoctoral scientists having spent at least 12 months in the unit	2
Number of Research Supervisor Qualifications (HDR) obtained during the period	4

2 • Overall assessment of the unit

Introduction

The INSERM unit 1073 has been created in 2012 and is headed by Mr Pierre DÉCHELOTTE. The scientific scope of the unit for the next 5-years contract will be closely related to the research that has been conducted during the last term. Almost the same staff of principal investigators and directors will compose the research unit propose for the next term, with the reinforcement of two additional professors (M. David MALTÊTE and M. Jean-Nicolas CORNU, the latter planned to be nominated as professor in 2016)

Members of the unit focus their experimental and clinical research projects on subjects that represent major concerns for public health, namely three groups of diseases: “Eating Disorders” (ED) (including anorexia nervosa, bulimia nervosa, hyperphagia and Obesity), “Irritable Bowel Syndrome” (IBS) and “Inflammatory Bowel Diseases” (IBD). All these pathologies are interconnected and overlap on different aspects. It is therefore logical to address them all, considering the expertise represented in this research unit.

Global assessment of the unit

The unit is composed of researchers with a long-standing history of very good scientific input, with excellent in house expertise covering most aspects of nutritional and gastrointestinal pathophysiology. An important strength of the unit is the expertise in epidemiological, clinical, biological and technical (neurostimulation devices) fields.

Research is made in an integrated and translational manner. It covers both epidemiological and clinical research, as well as physiology and cellular biology. Bench to bedside and bedside to bench approaches constitute the main core of the research activities of the unit. Over the years, the research performed within the unit has led to innovative therapeutic approaches, and to the validation of experimental models.

A combination of original research topics and a multidisciplinary approach uniquely positions the unit to perform very high quality research.

Strengths and opportunities in the context

The laboratory performs authentic translational research and benefits from strong university and hospital support.

The unit is very well integrated into a SFR "Structure Fédérative de Recherche", which offers a number of state-of-the-art core facilities to the scientific community in Rouen.

The unit has demonstrated very powerful technological transfer abilities, with 2 start-up companies. A licence is presently pending, and 5 patents are currently negotiated with "TargEDys", a start-up company. Another start-up company, "Stimulics", which has developed a very promising nerve stimulation device, is presently in the process of being created within the "Normandie incubator" (local SEINARI).

The unit is recognized at the national and international levels on the themes of gut metabolism, visceral sensitivity and regulation of food intake.

The INSERM label provided in 2012 had a very strong positive impact on the research activities of the unit, both with regard to the production, with highly visible and high impact factor publications, and from an operational point of view.

Weaknesses and threats in the context

The unit would benefit from having a full time researcher.

The expert committee acknowledged that the unit has nicely refocused its research interests as compared to the previous term; however, further prioritizing its scientific priorities would be beneficial.

Recommendations

Staff members of the unit are encouraged to apply (at the university or at INSERM) for a complete discharge of teaching and/or of clinical activities, in order for at least some of them to be present within the research unit on a full-time basis.

The recruitment of post-docs should be further developed.