Research evaluation

FINAL RESUME ON THE RESEARCH UNIT:

Nutrition, Diabetes and the Brain (NUDICE)

Under the supervision of the following institutions and research bodies:

Université Claude Bernard Lyon 1 - UCBL

Institut National de la Santé et de la Recherche Médicale - INSERM

EVALUATION CAMPAIGN 2019-2020

GROUP A

Report published on June, 24 2020

In the name of Hcéres[1]:

Nelly Dupin, Acting President

In the name of the experts committee[2]:

Paul Pfluger, 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 data submitted by the supervising body on behalf the unit.

UNIT PRESENTATION

Unit name:	Nutrition, Diabetes and the Brain
Unit acronym:	NUDICE
Current label and N°:	UMR_S1213
ID RNSR:	200716500J
Application type:	Renewal
Head of the unit (2019-2020):	Mr Gilles MITHIEUX
Project leader (2021-2025):	Mr Gilles MITHIEUX
Number of teams and/or themes:	mono-équipe

EXPERTS COMMITEE MEMBERS

Chair:	Mr Paul PFLUGER, Helmholtz Zentrum München GmbH & Technical University of Munich (TUM), Neuherberg, Germany
Experts:	Mr Pierre COSTET, Centre BROCA Nouvelle Aquitaine (CBNA), Bordeaux (suporting personnel)
	Mr Xavier PRIEUR, Inserm, Nantes (representative of Inserm CSS)

HCÉRES REPRESENTATIVE

Mr Jean-Paul LALLÈS

REPRESENTATIVES OF SUPERVISING BODIES

Mr Raymond BAZIN, Inserm

Mr Jean-François MORNEX, Claude Bernard Lyon 1 University

Mr Dominique PELLA, Inserm

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The "Nutrition, Diabetes and the Brain" research unit is a relatively new entity founded in January 2016. It is embedded into the Lyon-Est-Laennec faculty of the University of Lyon 1 with 15 laboratories, 2 research centers and several technical platforms including animal facilities, histology, electronic and confocal microscopy, high resolution and life cell imaging or FACS analyses.

Management team

The "Nutrition, Diabetes and the Brain" research unit is headed by Gilles MITHIEUX.

HCÉRES NOMENCLATURE

SVE5

THEMATICS

The research unit focuses on two major topics of research: 1) intestinal gluconeogenesis (IGN) and metabolic control; 2) glycogen storage disease type 1 and 3.

First, the unit has pioneered research on how intestinal gluconeogenesis plays an important role in the systemic control of glucose and energy homeostasis. The topic is hereby separated into four major arms of research: a) IGN and energy expenditure, b) IGN and hepatic glucose production, c) IGN and anti-obesity/diabetes medications (including translational gut microbiome research) and d) IGN and neonatal development.

Second, the unit focuses on two related inherited genetic disorders, type 1 and type 3 glycogen storage disease (GSD). Four major areas of work can be distinguished: a) hepatic tumorigenesis, b) renal fibrosis, c) nutritional & pharmacological interventions against GSD type 1 and d) gene therapies against GSD types 1 and 3.

UNIT WORKFORCE

Nutrition, Diabetes and the Brain (NUDICE)		
Active staff	**Number 06/30/2019**	**Number 01/01/2021**
Full professors and similar positions	1	0
Assistant professors and similar positions	0	0
Full time research directors (Directeurs de recherche) and similar positions	2	2
Full time research associates (Chargés de recherche) and similar positions	1	1
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)	4	4
Permanent staff	**8**	**7**

Non-permanent professors and associate professors, including emeritus	0	
Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	2	
PhD Students	4	
Non-permanent supporting personnel	6	
Non-permanent staff	**12**	
Total	**20**	**7**

GLOBAL ASSESSMENT OF THE UNIT

The unit aims to decipher the implication of endogenous glucose production following two strategies: the role in intestinal glucose production in energy balance, in the context of obesity and type 2 diabetes (T2D), and the consequences of glucose 6-phosphatase (G6P) deficiency as a model of glycogen storage disease type 1 and 3 (GSD1/3). The unit has developed unique animal models and technological tools and has an outstanding scientific contribution to both fields in those past 5 years. This led to the publication of high impact papers in journals such as *Cell, Cell Metabolism, Gut, J Hepatol, Hum Mol Genetics,* etc., and put them at the forefront of research on GSD1/3 and intestinal glucose production (IGN). The researchers of the unit are regularly invited to national and international conferences and their international recognition is outstanding. They are involved in dissemination activities to share their knowledge with the general public and society, and are part of scientific evaluation committees *e.g.,* of the CNRS and of organizing committees for conferences, meetings and highly prestigious European courses. The unit is scientifically managed by 3 senior scientists with very complementary skills that nicely synergize their efforts in managing the respective project themes and their overall unit. The unit staff together constitute a well-balanced and efficient group. Inner communication and scientific exchange are excellent.
The scientific project relies on the unique expertise of the unit and on quite substantial funding and is excellent to outstanding.
The 5-year strategy to identify inducers of the IGN and the planed studies on developing gene therapies against GSD could likely attract the interest of the pharmaceutical industry. The ability to study the relevance of the unit findings in the context of human physiology and physiopathology, for example through the use of organoids of intestine and liver, could reinforce and strengthen the physiological relevance of their work. Overall, this translational focus, built upon an outstanding performance in the past 5 years, contributes to the outstanding 5-years-research strategy of the unit.

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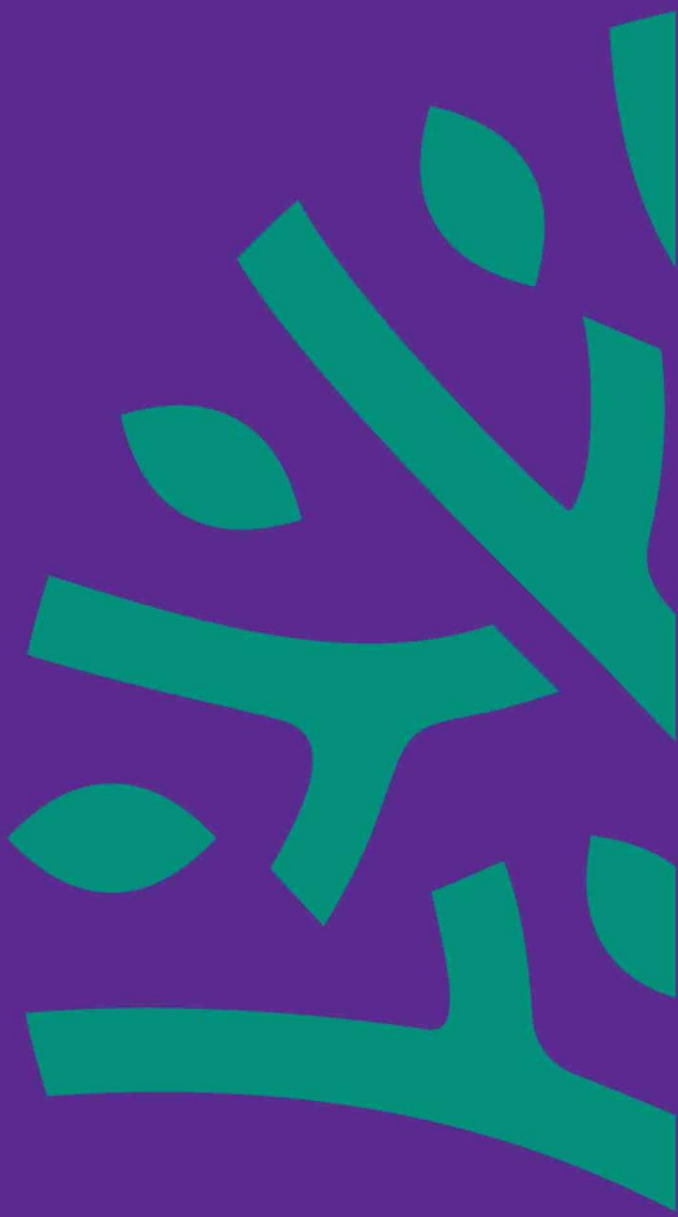
Evaluation of clusters of higher education and research institutions
Evaluation of higher education and research institutions
Evaluation of research
Evaluation of doctoral schools
Evaluation of programmes
International evaluation and accreditation



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