

FINAL RESUME ON THE RESEARCH UNIT: Risk factors and molecular determinants of aging-related diseases (RID-AGE)

UNDER THE SUPERVISION OF THE FOLLOWING INSTITUTIONS AND RESEARCH BODIES:

Université de Lille

Centre Hospitalier Régional et Universitaire de
Lille - CHRU Lille

Institut National de la Santé et de la Recherche
Médicale – Inserm

Institut Pasteur de Lille

EVALUATION CAMPAIGN 2018-2019 GROUP E



In the name of Hcéres¹:

Michel Cosnard, President

In the name of the experts committee²:

Judes Poirier, 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 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:	Risk factors and molecular determinants of aging-related diseases
Unit acronym:	RID-AGE
Requested label:	UMR
Application type:	Restructuration
Current number:	1167
Head of the unit (2018-2019):	Mr Philippe AMOUEL
Project leader (2020-2024):	Mr Philippe AMOUEL
Number of teams and/or themes:	5

EXPERTS COMMITTEE MEMBERS

Chair:	Mr Judes POIRIER, Université McGill, Verdun, Canada
Experts:	Ms Sandrine ANDRIEU, Université Toulouse 3 (representative of CNU)
	Mr Ivan BAUTMANS, Vrije Universiteit Brussel - VUB, Belgique
	Ms Florence DEMENAI, Inserm, Paris
	Mr Yves GAUDIN, CNRS Gif-sur-Yvette (representative of CoNRS)
	Mr Alain LACAMPAGNE, Inserm, Montpellier
	Ms Nicole LE MOUAL, Inserm Villejuif (supporting personnel)
	Mr Benoît LEPAGE, Université Toulouse 3 (representative of Inserm)

HCÉRES REPRESENTATIVE

Mr Serge BRIANÇON

REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Ms Corinne ALBERTI, Inserm

Mr Benoît DEPREZ, Institut Pasteur de Lille

Mr Frédéric GOTTRAND, CHRU Lille

Ms Fabienne JEAN, Institut Pasteur de Lille

Mr Lionel MONTAGNE, Université de Lille

Mr Patrick VERMESCH, Université de Lille

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The UMR-1167 entitled "Risk factors and molecular determinants of aging -related diseases" was created in 2006 (UMR-744) and renewed in 2010 and 2015 under the same name. The unit which has expertise in epidemiology, genetics, molecular biology and clinical studies proposes to expand the scope of the research to include a new structural biology component and novel age-related biomarkers team to the existing core teams and infrastructure. The unit is supported by INSERM, CNRS, Lille University, University Hospital and Medical School, and the Institut Pasteur de Lille. The teams are currently spread over two campuses (Institut Pasteur de Lille and Campus University Lille Villeneuve, d'Ascq) and three different buildings.

MANAGEMENT TEAM

The new unit is under the leadership of Mr Philippe Amouyel:

- Team 1: Public health and molecular epidemiology of cardiovascular diseases (Leader: Ms Aline Meirhaeghe);
- Team 2: Molecular determinants of cardiac remodelling and heart failure (Leader: Ms Florence Pinet);
- Team 3: Molecular determinants of AD and related disorders (Leader: Mr Jean-Charles Lambert);
- Team 4: Integrative structural biology (Leader: Ms Isabelle Landrieu);
- Team 5: Glycation: from inflammation to aging (Leader: Mr Éric Boulanger).

HCÉRES NOMENCLATURE

SVE6_1 Public health;
SVE6_2 Epidemiology;
SVE5_1 Physiology, endocrinology, physiopathology;
SVE5_2 Cardiology, cardiovascular;
SVE4_1 Neurology;
SVE2_1 Structural biology.

SCIENTIFIC DOMAIN

The unit which focuses on the analysis of risk factors and molecular determinants of age-related diseases examines common cardio- and cerebrovascular diseases as well as neurodegenerative diseases such as Alzheimer's disease through the angles of epidemiology, genetics, cellular and molecular biology, animal modelling, structural biology and biomarkers.

UNIT WORKFORCE

	Unit workforce	
	Risk factors and molecular determinants of aging-related diseases	
Active staff	Number 30/06/2018	Number 01/01/2020
Full professors and similar positions	4	8
Assistant professors and similar positions	4	14
Full time research directors (Directeurs de recherche) and similar positions	3	6
Full time research associates (Chargés de recherche) and similar positions	2	6
Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	1	2
High school teachers	0	0
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	23	33
Permanent staff	37	69
Non-permanent professors and associate professors, including emeritus	0	
Non-permanent full time scientists, including emeritus, post-docs	2	
PhD Students	6	
Non-permanent supporting personnel	2	
Non-permanent staff	10	
Total	47	69

GLOBAL ASSESSMENT OF THE UNIT

The unit has developed a very ambitious research program that includes multidisciplinary and interdisciplinary objectives in the fields of cardio- and cerebrovascular and neurodegenerative diseases. The proposed research program seeks to add novel experimental approaches from the fields of structural biology (NMR and X-ray crystallography) and glycation (age-related biomarkers) to the existing INSERM unit that has successfully integrated over the years strong epidemiological, genetic, molecular and cellular approaches to elucidate the molecular mechanisms underlying neurodegenerative diseases such as Alzheimer's disease as well as cardio- and cerebrovascular illnesses.

As a whole, the unit has demonstrated an outstanding publication record in excellent journals with landmark article in top tier journals. The unit has demonstrated a superb ability to foster national and international

collaborations in which the teams' directors exert significant influence. The unit is currently assuming leadership positions in several key national and international consortiums and serve as a technological reference in both epidemiology and genomics.

The unit, as well as its core components, have displayed an excellent ability to attract funding from national, European and international organizations. The research infrastructures at both campus: Institut Pasteur which is localised downtown the city of Lille and at the the Villeneuve d'ASCQ campus localised outside of the downtown area belong to a world class category. The ability of the unit and some of key teams to meaningfully interact with the economic/business environment (corporate partnership, licensing opportunities) is excellent whereas the knowledge transfer interventions aimed at the greater community certainly merit a strong endorsement, particularly in the lay public literature and electronic media exposures.

The proposed addition to the existing INSERM unit of the excellent proteomic expertise of the new team 4 and, of the wide-ranging expertise of the new team 5 on the phenomenon of inflammageing is bound to open up new avenues of research and exciting opportunities in modelling disease-related mechanisms in cellular and animal models, facilitating the translation of genomic/proteomic discoveries into usable diagnostics, leading ultimately to potential therapeutic tools to be used in human populations which are "at-risk" of developing cardio- and cerebrovascular and/or neurodegenerative diseases.

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