COSS - Chemistry, oncogenesis, stress and signaling

Rapport Hcéres

HCERES

High Council for the Evaluation of Research and Higher Education

Research units

HCERES report on research unit:

Chemistry, Oncogenesis, Stress and Signaling

COSS

Under the supervision of the following institutions and research bodies:

Université de Rennes 1

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

Éric Solary, chairman 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:	Chemistry, Oncogenesis, Stress, Signaling
Unit acronym:	COSS
Label requested:	UMR
Current number:	Creation
Name of Director (2015-2016):	
Name of Project Leader (2017-2021):	Mr Éric CHEVET

Expert committee members

Chair:	Mr Éric SOLARY, Gustave Roussy Cancer Campus, Villejuif
Experts:	Ms Eleonora CANDI, Universita di Tor Vergata, Roma, Italy
	Mr Vincent DIVE, CEA, Gif-sur-Yvette (representative of INSERM)
	Mr Erwan POUPON, Faculté de Pharmacie, Chatenay Malabry
	Mr Frédéric RIEUX-LAUCAT, Laboratory of Immunogenetics and Pediatric Autoimmune Diseases, Paris
Scientific delegate representing the HCERES:	Mr Pierre COUBLE
Representatives of supervising institutions and bodies:	Mr Éric BELLISANT, Faculty of Medicine Université de Rennes 1
	Mr François GUILLE, Centre de Lutte Contre le Cancer Eugène Marquis
	Mr Claude LABIT, University of Rennes 1
	Ms Stéphanie POMMIER, INSERM
Head of Doctoral School:	Ms Nathalie THERET, Doctoral School n° 92 "Vie, Agronomie et Santé"

1 • Introduction

History and geographical location of the unit

The proposal is to create in Rennes 1 University a new research unit made of 2 teams and ~50 persons. This new unit will bring together researchers with complementary expertise in biology and chemistry. The director, Mr Éric CHEVET, and the deputy director, Mr Patrick LEGEMBRE, both migrated from Bordeaux in the recent years. Mr Patrick LEGEMBRE rapidly interacted with a group of chemists headed by Mr Pierre van de WEGHE and they progressively planned to set up a new research unit that combines multiple expertise. This new unit will be located at two sites, Eugene Marquis Cancer Hospital for biology aspects and the Campus of Rennes 1 University for chemistry aspects. The objective is to include medical oncologists, cellular and molecular biologists, and chemists in a unique structure aiming at developing new therapeutic approaches in cancer. Three main pathways are targeted: IRE-1 unfolded protein response, ING2-mediated DNA damage repair, and death receptor dependent non-apoptotic signalling. Chemists will create molecules that could interact with these signalling pathways when deregulated in cancer. This unit will be highly connected to an efficient federative structure (the UMS Biosit) that manages 14 core facilities on the Rennes 1 University campus.

Management team

Before submission of the application, the proposed directors, Mr Éric CHEVET (general director) and Mr Patrick LEGEMBRE (deputy director), decided to join their efforts with Mr Rémy PEDEUX and Mr Pierre VAN DE WEGHE to create a common structure. They proposed to organise the unit in two teams headed by Mrs Éric CHEVET/ Mr Rémy PEDEUX and Mrs Patrick LEGEMBRE/Pierre VAN DE WEGHE, respectively.

HCERES nomenclature

SVE1_LS4 Physiology, Physiopathology, Endocrinology

SVE1_LS1 Molecular Biology, Structural Biology, Biochemistry

ST4 Chemistry

Scientific domains

Oncogenesis, resistance to therapy, signalling pathways, immuno-oncology, medicinal chemistry, chemical biology, solid tumors.

Unit workforce

Unit workforce	Number on 30/06/2015	Number on 01/01/2017
N1: Permanent professors and similar positions		7
N2: Permanent researchers from Institutions and similar positions		3
N3: Other permanent staff (technicians and administrative personnel)		4.2
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)		
N7: PhD students		
TOTAL N1 to N7		
Qualified research supervisors (HDR) or similar positions		

2 • Overall assessment of the unit

Introduction

The proposal is to create a new unit made of two teams by combining biologists, chemists and medical doctors aiming to identify targets and develop new drugs in the cancer field. These researchers were working in other environments so far. Two of them worked in another French town until recently, and found a common interest to associate their expertise with a group of chemists in an attempt to reach a common goal. Their unit will benefit from a federative structure (the UMS Biosit) managing all the needed core facilities and from interaction with medical oncologists.

Global assessment of the unit

Following the site visit and exchanges with the researchers and the funding bodies, the committee strongly supports the creation of this new research unit. This recommendation is based first on the quality of the team leaders and their research plans, the originality and interest of the questions raised, the strong wish to translate into clinics, the multidisciplinary approach that has been chosen and the strong support of the University and of the anticancer center in which most of the labs are located. A few weaknesses have been identified that can easily be overcome and should not preclude the success of the proposed programs. One of the challenges will be to efficiently coordinate biology and chemistry, which is actually already on-going with encouraging preliminary results, and to keep working the very good interaction established with clinicians by improving their embedding in the research activity. There is indeed a strong wish to translate the results of the research into clinical trials, patents and, when possible, start-up companies. This research unit may participate to the favourable evolution of the biological science landscape in Rennes 1 University.

Strengths and opportunities in the context

- the science is of quality;
- the structure is multidisciplinary, with biologists, chemists and medical oncologists working together;
- there is a strong local support (from CLCC and Rennes University to the regional council and Rennes metropole);
- the unit has original programs, solid proposals, with a very good to excellent background;
- there is a conductor thread based on a common wish to identify therapeutic targets and synthesize related compounds.

Weaknesses and threats in the context

- the proposal is a juxtaposition of scientific projects that could benefit from a stronger conductor thread;
- the role of embedded medical scientists could be optimized.

Recommendations

- maintain permanent scientific interactions between teams and between groups in the teams;
- in such a configuration, progressively introduce medical doctor knowledge, beyond only providing tumor samples.