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IPBS - Institut de pharmacologie et biologie structurale

Rapport Hcéres

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HCERES

High Council for the Evaluation of Research
and Higher Education

Research units

HCERES report on research unit:

Institute of Pharmacology and Structural Biology

IPBS

Under the supervision of
the following institutions
and research bodies:

Université Toulouse 3 - Paul Sabatier - UPS

Centre National de la Recherche Scientifique - CNRS

HCERES

High Council for the Evaluation of Research
and Higher Education

Research units

In the name of HCERES,¹

Didier Houssin, president

In the name of the experts committee,²

Anne Ridley, chairwoman of the committee

Under the decree No.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 result of the evaluation by the experts committee, the composition of which is specified below.

The assessments contained herein are the expression of an independent and collegial deliberation of the committee.

Unit name:	Institute of Pharmacology and Structural Biology
Unit acronym:	IPBS
Label requested:	UMR Université-CNRS
Present no.:	UMR5089
Name of Director (2014-2015):	Mr Jean-Philippe GIRARD
Name of Project Leader (2016-2020):	Mr Jean-Philippe GIRARD

Expert committee members

Chair:	Ms Anne RIDLEY, King's College London, United Kingdom
Experts:	Ms Ines M ANTON, Centro Nacional de Biotecnología, Madrid, Spain
	Mr Yves BOURNE, AFMB, Université d'Aix-Marseille
	Mr Pierre FERRIER, CIML, Université d'Aix-Marseille
	Ms Julie GAVARD, Institut Cochin, Paris (representative of the CoNRS)
	Mr Hervé KOVACIC, CRO2, Faculté de Pharmacie, Université d'Aix-Marseille
	Mr Philippe MARIN, IGF, Université de Montpellier
	Ms Clotilde POLICAR, LBM-ENS, Paris
	Mr Pablo RADICELLA, CEA, Fontenay-aux-Roses
	Mr Ulrich E SCHAIBLE, Research Center Borstel, Lübeck, Germany
	Mr Harald SCHWALBE, Johann Wolfgang Goethe-Universität, Frankfurt am Main, Germany
	Mr François TROTTEIN, Institut Pasteur de Lille

Scientific delegate representing the HCERES:

Ms Catherine SCHUSTER

Representative(s) of the unit's supervising institutions and bodies:

Ms Florence NOBLE, INSB CNRS

Mr Alexis VALENTIN, Université Paul Sabatier, Toulouse 3

Mr Philippe VALET (Director of the Doctoral School ED N° 151 BHB)

1 • Introduction

History and geographical location of the unit

The Institute of Pharmacology and Structural Biology (Institut de Pharmacologie et de Biologie Structurale, IPBS) was created in 1996. It is a large research centre of the CNRS and University of Toulouse (University of Toulouse 3, University Paul Sabatier) on the CNRS 205 Campus, located at the heart of the University Paul Sabatier campus, close to the Rangueil hospital since 1997. The IPBS consists of three departments: the Cancer Biology department, the Structural Biology and Biophysics department, and the Tuberculosis and Infection Biology department. The Institute has several core facilities, including proteomics, imaging and spectroscopy, high-throughput screening platforms, a transgenic facility, and a new specialised imaging facility for visualising tuberculosis infections. The proteomics facility has recently become one of three core facilities of the French Proteomics Infrastructure.

Management team

Head: Mr Jean Philippe GIRARD

HCERES nomenclature

SVE1_LS1 Biologie moléculaire et structurale, biochimie

SVE1_LS6 Immunologie, microbiologie, virologie, parasitologie

SVE1_LS4 Physiologie, physiopathologie, biologie systémique médicale

SVE1_LS3 Biologie cellulaire, biologie du développement animal

Unit workforce

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
N1: Permanent professors and similar positions	37 (18,45)	39 (19,45)
N2: Permanent researchers from Institutions and similar positions	54 (53,7)	47 (46,9)
N3: Other permanent staff (without research duties)	64 (56,1)	61 (57,2)
N4: Other professors (Emeritus Professor, on-contract Professor, etc.)	3 (1,5)	2 (1)
N5: Other researchers from Institutions (Emeritus Research Director, Postdoctoral students, visitors, etc.)	33 (33)	10 (10) *
N6: Other contractual staff (without research duties)	32 (32)	1 (1) *
TOTAL N1 to N6	223 (194,75)	160 (135,55)

*Figures at 01/01/2014

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
Doctoral students	34	
Theses defended	70	
Postdoctoral students having spent at least 12 months in the unit	21	
Number of Research Supervisor Qualifications (HDR) taken	9	
Qualified research supervisors (with an HDR) or similar positions	59	53

2 • Overall assessment of the unit

Global assessment of the unit

The unit consists of three departments: the Cancer Biology department, consisting of 8 teams; the Structural Biology and Biophysics department, consisting of 6 teams; and the Tuberculosis and Infection Biology department, consisting of 5 teams. The unit has an executive committee composed of the director, the general secretary, and two research group leaders from each Department. It also has a scientific advisory board of 9 scientists, 3 of whom work in France and 6 in other countries (USA, UK, Netherlands). The unit is well staffed, with approximately 90 permanent researchers from CNRS, Inserm and the University of Toulouse, and 64 permanent administrative and technical staff, as well as approximately 100 non-permanent staff (graduate students, postdoctoral fellows and technicians). The unit has strong links with the University of Toulouse 3 (Paul Sabatier), hosting approximately 35 Professors and Assistant/Associate Professors. Together with 5 other CNRS units in basic molecular, cellular biology and genomics on the University of Toulouse 3 campus, it has formed the 'Fédération de Recherche en Biologie de Toulouse'.

The unit has several core facilities, including proteomics, imaging and spectroscopy, high-throughput screening platforms, a transgenic facility, and a new specialised imaging facility for visualising tuberculosis infections. The proteomics facility has recently become one of three core facilities of the French Proteomics Infrastructure.

Strengths and opportunities in relation to the context

The unit has produced many publications in high-level journals in the last five years. The unit has an interdisciplinary research base, allowing for the development of some strong interactions between research groups within the unit, as well as collaborations with research groups from other CNRS units in Toulouse. The unit has a coherent management structure, allowing the departments and Core Facilities managers to be involved in decision-making processes. The staffing levels are stable, indicating that permanent staff find the working conditions good. The unit has successfully managed the promotions of several engineers and technicians as well as permanent researchers over the last five years. Financial resources are also stable, and the unit has a pooling policy for financial resources, allowing it to support purchase of communal equipment and provide valuable assistance for new teams. The Tuberculosis and Infection Biology department is particularly well funded: several groups are part of EU networks. The unit's core facilities are state-of-the-art and very well equipped. The Proteomics platform has recently become one of three nodes for the French Proteomics Infrastructure. The Integrated Screening platform is a partnership between different CNRS units in Toulouse, with this unit providing excellent biophysical equipment, including NMR spectrometers and robotic crystallisation capacity. The core facilities have contributed to multiple publications, indicating that they are well used.

Weaknesses and threats related to the context

The diverse disciplines of the research teams between departments and within departments could mean that resources are spread thinly and it is difficult to keep high levels of funding and maintain equipment for all the research interests. Funding is stable but not increasing, which could affect the ability to keep core equipment and facilities adequately maintained or updated. The loss of some core and highly experienced engineering staff over the last few years is also of concern, because they played important roles in running the unit successfully. Not all groups have an associated technician, which could limit their capacity to carry out their research programmes optimally.

Recommendations

The unit should encourage teams in the Cancer Biology department and the Structural Biology and Biophysics department to diversify their funding sources, including involvement in more EU networks and contracts with pharmaceutical companies. In addition, it would help to have senior unit research staff provide advice to teams on their grant applications, for example ensuring they focus strategically on their research strengths. Building more interactions between teams will allow joint interdisciplinary grant applications, which can be stronger than individual team applications.

As a main priority, the unit should ensure that each team has at least one engineer/technician. Existing staff may have to be re-trained if it is not possible to recruit new staff. As a second priority, the unit should recruit new teams to complement and strengthen its existing teams.

The unit website could be improved to include information for the general public on the research in the unit. The unit could also consider changing its name to reflect more accurately its current research profile, which is not focused on pharmacology anymore.