HAL
open science

TMCD2 - Transporteurs membranaires, chimiorésistance et drug-design

Rapport Hcéres

To cite this version:

Rapport d'évaluation d'une entité de recherche. TMCD2 - Transporteurs membranaires, chimiorésistance et drug-design. 2017, Aix-Marseille université - AMU. hceres-02030635

HAL Id: hceres-02030635

https://hal-hceres.archives-ouvertes.fr/hceres-02030635

Submitted on 20 Feb 2019

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

HCERES

High Council for the Evaluation of Research
and Higher Education

Department of Research Evaluation

HCERES report on the interdisciplinary research unit:

Membrane Transporters Chemo-resistance and Drug-Design

TMCD2

Under the supervision of the following institutions and research bodies:

Aix-Marseille Université

Institut National de la Santé et de la recherche médicale – INSERM

Ministère de la Défense - IRBA

Evaluation Campaign 2016-2017 (Group C)

HCERES

High Council for the Evaluation of Research
and Higher Education

Department of Research Evaluation

In the name of HCERES,[1]

Michel Cosnard, president

In the name of the experts committee,[2]

Alain Filloux, 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:	Membrane Transporters Chemo-resistance and Drug-Design
Unit acronym:	TMCD2
Label requested:	UMR
Current number:	UMR_MD1
Name of Director (2016-2017):	Mr Jean-Marie PAGES
Name of Project Leader (2018-2022):	Mr Jean Michel BOLLA

Expert committee members

Chair:	Mr Alain FILLOUX, Imperial College London, United Kingdom
Experts:	Ms Marie-José BUTEL, Université Paris-Descartes
	Mr Robert DODD, ICSN, Gif-sur-Yvette
	Ms Isabelle MORTIER-BARRIÈRE, LMGM Toulouse (representative of the supporting personnel)
	Mr Martin PICARD, IBPC, Paris
	Ms Valérie TALY, Université Paris-Descartes

Scientific delegate representing the HCERES:

Mr Théophile OHLMANN

Representatives of supervising institutions and bodies:

Mr Jean-Louis KOECK, Ministry of Defence

Mr Dominique NOBILE, INSERM

Ms Stéphanie POMMIER, INSERM

Mr Marc SENTIS, Aix Marseille University

Heads of Doctoral Schools:

Mr Thierry CONSTANTIEUX, Doctoral school n°250, “Chemistry”

Mr Jean-Louis MÈGE, Doctoral school n°62, “Health and Life Sciences”

1 • Introduction

History and geographical location of the unit

This unit has been created in 2011 as a result of aggregation of the former EA 2197 with chemists and bacteriologists from INSERM, University and Service de Santé des Armées (SSA). The unit benefited of the labels from both the Ministry of defence and University of Marseille. The unit is based on the Health-Campus La Timone, Faculty of Pharmacy and Medicine, and also has space and staff from the Health Army Service (SSA) previoulsy based in Grenoble and now moved on the IRBA Campus at Bretigny-sur-Orge (Essonne, France).

Management team

The head of the unit during the last period was Mr Jean-Marie PAGÈS and it is proposed that the director of the newly restructured unit will be Mr Jean-Michel BOLLA while the deputy director will be Mr Éric VALADE.

HCERES nomenclature

SVE2 Biologie Cellulaire, Imagerie, Biologie Moléculaire, Biochimie, Génomique, Biologie Systémique, Développement, Biologie Structurale;

SVE3 Microbiologie, Immunité;

ST4 Chimie.

Scientific domains

The unit is specialized in the field of bacterial membranes, transport regulation, drug susceptibility and drug design.

Unit workforce

Unit workforce	Number on 30/06/2016	Number on 01/01/2018
N1: Permanent professors and similar positions	8	7
N2: Permanent researchers from Institutions and similar positions	4	4
N3: Other permanent staff (technicians and administrative personnel)	9	10
N4: Other professors (Emeritus Professor, on-contract Professor, etc.)	3	
N5: Other researchers from Institutions (Emeritus Research Director, Postdoctoral students, visitors, etc.)		
N6: Other contractual staff (technicians and administrative personnel)	1	
N7: PhD students	8	
TOTAL N1 to N7	**33**	
Qualified research supervisors (HDR) or similar positions	5	

Unit record	From 01/01/2010 to 30/06/2016
PhD theses defended	4
Postdoctoral scientists having spent at least 12 months in the unit	6
Number of Research Supervisor Qualifications (HDR) obtained during the period	1

2 • Overall assessment of the interdisciplinary unit

Global assessment of the unit

During the period 2012-2016 the unit has strenghtened its effort and focus on understanding some of the main traits that are linked to emergence of bacterial resistance. This goes along 4 main streams which are: (i) transporters (e.g. porins) structure and activity; (ii) membrane permeability and efflux pumps; (iii) evolution of resistance in clinical isolates; and (iv) identification/design of chemicals as novel antibiotics. The range of organisms that have been under study is quite large and includes most of the ESKAPE members (i.e. Enterobacter, Klebsiella) and some others like Burkholderia or Providencia, the latter being mostly a problem for cosmetic companies.

The project has a clear translational dimension with fundamental aspects of the bacterial physiology used to develop antimicrobials, thanks to a real synergy between the biologists and chemists that belong to the unit. The significant participation of the health service of the French army, both with personnel and platforms, also highlights the problem associated with antibiotic resistance as a global health threat.

The productivity of the unit has been quite substantial with overall 76 publications, which is remarkable for a small unit like this one. Most of these publications are in specialized journals in the field and high impact factor publications are still missing, which contrasts with the international reputation of the leaders who are invited in the most prestigious conferences such as the Gordon Research Conferences.

The unit has also been extremely active in developing a network of industrial collaborations both at national and international levels and at the local level.

It is remarkable that the unit integrates staff with a highly complementary expertise and background, including basic researchers (INSERM and university), and clinically oriented scientists including MD, MCU-PH or staff from the SSA.

Funding has also been very good and, in addition to ANR or COST funding, the unit has obtained two key contracts which demonstrate international reputation, one being the IMI-Translocation network the main focus of which is about cell envelope permeability and also an European ITN program.

A number of members have left the unit over the period, mostly to join the IHU on the La Timone Campus, while 4 new staff have been recruited.