

FINAL RESUME ON THE RESEARCH UNIT
PHAR2 - Pharmacology of Antimicrobial Agents and
Antibioresistance

UNDER THE SUPERVISION OF THE
FOLLOWING INSTITUTIONS AND RESEARCH
BODIES:

Université de Poitiers
Institut national de la santé et de la recherche
médicale - INSERM

EVALUATION CAMPAIGN 2020-2021
GROUP B



In the name of Hcéres¹:

Mr Thierry Coulhon, President

In the name of the experts committee²:

Mr Gérard Lina, 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 certified data submitted by the supervising body on behalf of the unit.

UNIT PRESENTATION

Unit name:

Pharmacology of Antimicrobial Agents and Antibioresistance

Unit acronym:

PHAR2

Current label and N°:

U1070

ID RNSR:

201220154J

Application type:

Renewal

Head of the unit (2018-2021):

Mr William Couet

Project leader (2021-2025):

Mrs Sandrine Marchand

Number of teams and/or themes:

1

EXPERTS COMMITTEE MEMBERS

Chair:

Mr Gérard Lina, Université Claude Bernard Lyon 1

Experts:

Mr Xavier Decleves, Université de Paris

Mr Sylvain Goutelle, Hospices Civils de Lyon - CHU Lyon

Mrs France Mentré, Université de Paris

Mr Paul Tulkens, Professeur émérite, Université de Louvain, Belgique

HCÉRES REPRESENTATIVES

Mr Bernard Tardy

Mr Jean Edouard Gairin

REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mrs Anne Costa, CHU de Poitiers (partenaire)

Mrs Hélène Costa, CHU de Poitiers (partenaire)

Mr Yves Gervais, Université de Poitiers

Mrs Evelyne Jouvin-Marche, INSERM

Mrs Marie-Joséphine Leroy-Zamia, INSERM

Mr Marc Paccalin, Université de Poitiers

Mr Richard Salives, INSERM

Mr François Seguin, Université de Poitiers

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The unit "Pharmacology of Antimicrobial Agents" (PHAR) was created by Mr William Couet, initially recognized in 2007 as ERI, becoming in 2012 an UMR between the University of Poitiers and INSERM (UMR 1070) and renewed in 2018. The unit is located on the university campus within the 'Pôle Biologie Santé', close to the UFR of Medicine and Pharmacy, and the university hospital. This localization has been used to foster the collaborations between the research laboratories and the clinics, an important point to consider taken into account the scientific topics studied by the unit, which are largely translational in nature.

RESEARCH ECOSYSTEM

The unit is located on the university campus, within the 'Pôle Biologie Santé' (PBS), close to the faculty of medicine and pharmacy and of the university hospital (CHU). The building also hosts two other INSERM research units (Renal Ischemia and Neurosciences), one ERL CNRS/university team (ion channels) and several university units.

All these units are functionally organized to facilitate sharing equipment and facilities, among which an animal care facility named PREBIOS (agreement number 86-050) and an imagery platform: Image UP. In addition, the unit has access to the Physico-Chemistry analytics Platform (Institut de Chimie des Milieux et Matériaux de Poitiers (IC2MP) UMR CNRS 7285), and the Hospital and University NGS Platform Sequencing Platform (Département des Agents Infectieux, CHU de Poitiers).

The unit is strongly supported by the CHU of Poitiers, with five Hospital supporting personnel (ITA) seconded to the team.

HCÉRES NOMENCLATURE AND THEMATICS OF THE UNIT

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MANAGEMENT TEAM

Mr William Couet heads the unit PHAR and Mr Olivier Minoz is the deputy director. Ms Sandrine Marchand will be the head for the next term of the unit renamed PHAR2.

UNIT WORKFORCE

Active staff	Number 06/01/2020	Number 01/01/2022
Full professors and similar positions	7	7
Assistant professors and similar positions	7	6
Full time research directors (Directeurs de recherche) and similar positions	0	0
Full time research associates (Chargés de recherche) and similar positions	0	0
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)	6	6
Permanent staff	20	19
Non-permanent professors and associate professors, including emeritus	1	

Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	2	
PhD Students	11	
Non-permanent supporting personnel	5	
Non-permanent staff	19	
Total	39	19

GLOBAL ASSESSMENT OF THE UNIT

The PHAR unit has a strong expertise in pharmacology of antimicrobial agents. It is a multidisciplinary group focused on optimisation of drug administration through the combination of PK and PK/PD modelling, experimental infection in animals and microbiological analysis thanks to the presence of technological core facilities in the unit or in the surrounding (animal care facility named PREBIOS, imagery platform: Image UP, Physico Chemistry analytics Platform (Institut de Chimie des Milieux et Matériaux de Poitiers).

The PHAR unit shows a high robustness (European grants, critical mass) and a strong interdisciplinary research with clinicians.

The quality of the research in the PHAR unit and scientific production (92 research papers, of which 53 % with members as first and/or last authors in journals like *Clinical Microbiology and Infection*, *Journal of Antimicrobial Chemotherapy*, *Antimicrobial Agents and Chemotherapy*, *European Journal of Pharmaceutical Sciences*) is overall very good. However, increasing use of novel and original approaches should help to target high profile publications, which are lacking.

The PHAR unit has got a very good number of regional, national grants (5 ANR/PHRC, 3 as coordinator and 2 as partner), in addition to 5 European grants (1 as coordinator and 4 as partner) among which three IMI projects (COMBACTE-CARE, AB-DIRECT, GNA-NOW) and two ANR projects (JPIAMR CO-ACTION, ANR/BMTF CO-PROTECT). The excellent visibility, recognition and attractiveness of the unit at the national level, should be further enhanced at the international level in particular by increasing the international academic collaborations.

The strong interaction with the socio-economic environment is illustrated by three patents during the period, collaborative contracts with private companies (Pfizer, MSD, Beckton Dickinson, Cooper) including one CIFRE funding (Roche). However, the PHAR unit should take advantage of its capacity to interact with private companies to raise the level of funding issued from these interactions and could consolidate clinical application of its technologies.

Training through research has been excellent during the period with a substantial number of students in collaborative projects and international students, reflecting the appeal of the unit. Members of the PHAR unit have been highly involved into student training through ESCMID Postgraduate Education courses with an excellent professional integration of the students.

In the next contract, the PHAR2 unit will remain as a single team unit and will focus on pharmacology of antimicrobial agents and antimicrobial resistance that is currently a very hot topic. This focalization aims at positioning the unit members as experts in this field, favoring the socio-economic interactions with pharmaceutical companies and fostering future collaborations. Higher implications of microbiologists in addition to pharmacologists to elaborate and explore models should provide new knowledge and advances in the field of relationship between antimicrobial administration and resistance. A reduction in the number of sub-projects by prioritizing those with the best potential in terms of innovation, clinical translation and benefiting from the team's expertise should strengthen the unit in the international competition.

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