

FINAL RESUME OF THE RESEARCH UNIT
MMNP - Maintenance myélinique et neuropathies
périphériques

UNDER THE SUPERVISION OF THE
FOLLOWING INSTITUTIONS AND
RESEARCH BODIES:
Université de Limoges

EVALUATION CAMPAIGN 2020-2021
GROUP B



In the name of Hcéres¹:

M. Thierry Coulhon, President

In the name of the experts committee²:

Mme Pascale Bomont, 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:

Maintenance myélinique et neuropathologie périphériques

Unit acronym:

MMNP

Current label and N:

EA 6309

ID RNSR:

201220218D

Application type:

Renewal

Head of the unit

(2020-2021):

Mr. Franck Sturtz

Project leader

(2021-2025):

Mr. Franck Sturtz

Number of teams and/or themes: 4

EXPERTS COMMITTEE MEMBERS

Chair :

Ms Pascale Bomont, INSERM

Experts :

Mr. Orestis Faklaris, Centre national de la recherche scientifique - CNRS

Mr. Pascal Reynier, Université et CHU d'Angers

Mr. Giovanni Stevanin, Sorbonne Université – INSERM, Paris

HCÉRES REPRESENTATIVE

Mme Céline Souchay

Mme Nadia Soussi-Yanicostas

REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mme. Véronique Blanquet, Université de Limoges

Mme. Claire Corbel, Université de Limoges

M. Dominique Gros, Université de Limoges

Mr. David Jourdan, CHU de Limoges

Mme Isabelle Klock-Fontanille, Université de Limoges

Mme. Muriel Mathonnet, CHU de Limoges

Mr. Pierre-Yves Robert, CHU de Limoges

Mr. Yves Salle, CHU de Limoges

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The research unit EA6309, entitled "Myelin Maintenance and Peripheral Neuropathies" (MMNP) is a pluridisciplinary unit which aims to study the physiopathological mechanisms underlying disorders of the peripheral nervous system and to develop innovative therapeutic approaches.

The research unit was created on January 1st 2012, under the dual affiliation of the University and the University Hospital Center of Limoges. Located at the faculty of Medicine and Pharmacy, the EA6309 unit integrates several neighboring hospital departments within the biology building and the Dupuytren University Hospital. The associated departments include the services of Biochemistry and Molecular Genetics, Neurology, Anatomopathology, as well as a National Reference Center for rare peripheral neuropathies.

For the next contract, the research unit changes its name to "Neuropathies and therapeutic innovations" (NEURIT).

RESEARCH ECOSYSTEM

The research unit is well inserted in its academic and clinical ecosystem.

The research unit is member of the GEIST Institute (Genomique, Environnement, Immunité, Santé, et Thérapeutiques) which comprises all research units in the fields of Biology, Health and Chemistry-environment in Limoges. Integrated into this network, the research unit is connected to the eight research teams of GEIST, and benefits from the numerous technical platforms (animal facilities, cellular and tissue analyses, molecular analyses) regrouped in the BISCEm ("Biologie Intégrative, Santé, Chimie et Environnement") structure. The research unit is part of the Omega-Health project, whose vision is to engage the transition from GEIST to a larger institute for interdisciplinarity and innovation on Health. To foster interactions, the Omega-Health program is supposed to regroup the research units in a single location, and the research unit will be unified in the years to come within a new extension of the biology building.

The research unit is very well integrated into clinical activities. Members of the team run different structures on clinical investigations (National Reference Center), diagnosis (Molecular and bioinformatics) for peripheral neuropathies, and are at the board of regulatory authorities (Comité de Protection des Personnes) that approve clinical trials. The national recognition is established for the National Reference Center, which is part of the French rare neuromuscular diseases network called "FILNEMUS". Locally, the research unit is in close interaction with different centers: the EA7500-PEIRENE, the UMR CRIBL, the CHU/DRCI, the X-LIM UMR and the UMS BISCEm. At the international level, the research unit has integrated EuroNMD (European Reference Center for neuromuscular diseases) and the Toxic Neuropathy Consortium within the Peripheral Nerve Society.

Finally, the research unit is very active in the pedagogical ecosystem, with a strong involvement in the teaching in health and medical studies, and with the piloting of a digital teaching axis in medicine, pioneer methods that the university wishes to deploy on a larger scale in Limoges and at the national level.

HCÉRES NOMENCLATURE AND THEMATICS OF THE UNIT

SVE Sciences du vivant et environnement
SVE4 Neurologie

MANAGEMENT TEAM

M. Franck Sturtz

UNIT WORKFORCE

Name of the unit MMNP		
Active staff	Number 06/01/2020	Number 01/01/2022
Full professors and similar positions	6	6
Assistant professors and similar positions	7	8
Full time research directors (Directeurs de recherche) and similar positions	0	
Full time research associates (Chargés de recherche) and similar positions	0	
Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	0	
High school teachers	0	
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	5	5
Permanent staff	18	19
Non-permanent professors and associate professors, including emeritus	1	
Non-permanent full time scientists, including emeritus, post-docs (except PhD students)		
PhD Students	6	
Non-permanent supporting personnel	2	
Non-permanent staff	9	
Total	27	19

GLOBAL ASSESSMENT OF THE UNIT

The research unit EA 6309 has a strong identity, unique in France in the field of peripheral neuropathies. One original aspect, particularly relevant to human health is the integration to the research program not only of inherited pathologies, but also more common acquired neuropathies such as those caused by chemotherapy.

In this coherent perimeter, the unit has the ambition to improve the diagnosis, elucidate pathophysiological mechanisms and propose therapies for several peripheral neuropathies. The proposal is solid and consolidated by the close interaction with the Reference Center for rare peripheral neuropathies (members of the unit belong to this Reference Center), a unity of site with infrastructures and departments, and secured collaborations with academics and industrials.

The research unit is small (33 members, only 4 technical staff) but is highly dynamic in its scientific missions but also in medical/academic teaching and societal interaction. Noteworthy, every category of personnel expressed a considerable motivation for the research unit and for the scientific program, which was certainly an asset for the impressive evolution of the unit since the last evaluation. Indeed, over the last period, the unit increased its attractiveness and performance at multiple levels: 1) recruitment (8 PhD students and 4 young researchers from different countries), 2) academic and industrial collaborations (leading to 3 patents), 3) publication impact (170 per-reviewed articles with increased quality as compared to the previous contract), 4) funding (ANR, AFM, region, hospital, Canceropole...) summing up to 2 M€. This exceptional progress should be further stimulated, to the level where the strong identity of the unit becomes more recognized at the national and international level.

The research unit proposes to develop an ambitious program, which has the potential to bring novelty in the four themes (1: clinics, 2: diagnosis, 3: models and mechanisms, 4: therapy). Indeed,

Theme 1 initiates clinical studies on acquired and inherited neuropathies, while Theme 2 will develop a technique for the detection of long repeats for diagnosis purpose, that can be useful for various conditions. Theme 3 brings innovation through the deciphering of mechanisms in both genetic and acquired diseases of the peripheral nervous system, using iPSC-derived cells and mouse models generated by the unit. Theme 4 exploits models created in Theme 3 and relevant collaborations to boost preclinical development for the therapy of numerous forms of Charcot Marie Tooth diseases and various chemo-induced peripheral neuropathies. To conduct this research program, the research unit has developed numerous expertise, and has seized opportunity to implement adequate methodologies for the scientific questions. Thus, with a clever use of limited resources, and efficient interactions with partners, the unit was able to acquire (or is acquiring) techniques as various as iPSC-cell differentiation, microfluidic chambers, electrophysiology, bioinformatics, OMIC studies and analysis.

The main recommendation to the research unit is to avoid dispersion, as functional investigations, and particularly OMIC studies, on various models will dilute efforts in reaching high quality stories. On the other hand, the university and Hospital are essential for the expansion of this research unit, which urgently needs to recruit technical personnel (electron microscopy, animal care, cell culture, lab manager, bioinformatics). Additionally, in view of the preparation of the unit for a certification at a national academic research institution in the next contract, the committee recommends the allocation, to the unit of additional space in the extension of the biology building, for the recruitment of permanent researchers/team and/or an ATIP-avenir team in the future.

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