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NPsy-Sydo - NeuroPsycho-Pharmacologie des systèmes dopaminergiques sous-corticaux

Rapport Hcéres

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HCERES

High Council for the Evaluation of Research
and Higher Education

Research units

HCERES report on research unit:

Neuro-psycho-pharmacologie des Systèmes dopaminergiques sous-corticaux

NPsy-Sydo

Under the supervision of the following institutions and research bodies:

Université d'Auvergne – UDA

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]

Angelo ANTONINI, 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:	Neuro-psycho-pharmacologie des systèmes dopaminergiques sous-corticaux
Unit acronym:	NPsy-Sydo
Label requested:	EA
Current number:	7280
Name of Director (2015-2016):	Mr Franck DURIF
Name of Project Leader (2017-2021):	Mr Franck DURIF

Expert committee members

Chair:	Mr Angelo ANTONINI, Padua University Hospital, Italy
Experts:	Mr Pierre-Olivier FERNAGUT, CNRS, Université de Bordeaux
	Mr Olivier PIERREFICHE, Université de Picardie Jules Verne (representative of the CNU)
Scientific delegate representing the HCERES:	Mr Jacques NOËL
Representative of supervising institutions and bodies:	Mr Alain ESCHALIER, Université d'Auvergne
Head of Doctoral School:	Mr Jean-Marc LOBACCARO, Doctoral school n° 65, "Sciences de la vie, santé, agronomie, environnement"

1 • Introduction

History and geographical location of the unit

The team EA 7280 "neuro-psychopharmacology of subcortical dopaminergic systems" was created in 2004 from the collaboration among basic researchers, neurologists and psychiatrists sharing a common clinical and scientific interest on the dopaminergic system in neurological and psychiatric disorders. Initially the focus was on the study of the non-motor symptoms in Parkinson's disease but subsequently they decided to concentrate on the psycho-behavioural disorders, and particularly Impulse Control Disorders (ICD), in both idiopathic Parkinson's disease and in addictive behaviours. The team is located at the faculty of medicine at Clermont-Ferrand and is currently under contract with Auvergne University.

Management team

The team is led by Mr Franck DURIF.

HCERES nomenclature

SVE1_LS4 Physiologie, Physiopathologie, Endocrinologie ;

SHS4_4 Sciences et techniques des activités physiques et sportives ;

SVE1_LS5 Neurosciences ;

SHS4_2 Psychologie.

Scientific domains

The team "neuro-psychopharmacology of dopaminergic subcortical systems" focuses primarily on physiology and psychology, as well as clinical disciplines like neurology, psychiatry and addictology in two models of dopaminergic dysfunction, namely Parkinson's disease and addictive behaviours. The expertise of its members is multidisciplinary, and includes physiology and psychology as well as preclinical studies of PD.

Unit workforce

Unit workforce	Number on 30/06/2015	Number on 01/01/2017
N1: Permanent professors and similar positions	3	4
N2: Permanent researchers from Institutions and similar positions	2	2
N3: Other permanent staff (technicians and administrative personnel)	6	5
N4: Other professors (Emeritus Professor, on-contract Professor, etc.)	1	
N5: Other researchers from Institutions (Emeritus Research Director, Postdoctoral students, visitors, etc.)	2	
N6: Other contractual staff (technicians and administrative personnel)		
N7: PhD students	3	
TOTAL N1 to N7	**17**	
Qualified research supervisors (HDR) or similar positions	5	

Unit record	From 01/01/2010 to 30/06/2015
PhD theses defended	4
Postdoctoral scientists having spent at least 12 months in the unit	3
Number of Research Supervisor Qualifications (HDR) obtained during the period	2

2 • Overall assessment of the unit

Introduction

The team “neuro-psychopharmacology of dopaminergic subcortical systems” has been active in the field of psycho-behavioural disorders in Parkinson Disease (PD) and addictions, focusing on the phenomenology of these disorders, and on developing assessment scales in parkinsonian and non-parkinsonian subjects. The research team makes use of experimental models in humans and rodents, behavioural analysis and neuroimaging to improve description, measurement and comprehension of the pathophysiology underlying psycho-behavioural disorders (i.e. Impulse Control Disorders), in two models of dopaminergic dysfunction, namely Parkinson’s disease and addictive behaviours. They also published some preclinical studies aiming to investigate the pathophysiology of impulse control disorders in preclinical models of Parkinson’s disease. Achievements of the team include the demonstration of an association between Impulsive behaviour disorders and REM sleep behaviour disorders in Parkinson. They also conducted a descriptive study on clinical phenomenon associated with alcohol misuse in patients admitted to the emergency department. The team has also contributed to validate an international scale assessing the whole field of psycho-behavioural disorders in Parkinson and has developed and translated scales to evaluate psycho-behavioural

dysfunction associated with addiction. At the preclinical level, the team has investigated the relationships between degeneration of specific dopaminergic pathways and the rewarding properties of dopamine agonists.

Global assessment of the unit

The unit is multidisciplinary and involves different clinical teams particularly in the field of psychiatry and neurology. Several permanent members of the lab have clinical and/or teaching responsibilities in different departments of the university hospital, either at the Neurology or at the Psychiatry department. An established collaboration is effective with clinicians at the Neurosurgery department for studies of deep brain stimulation in Parkinson's disease. Members regularly interact with lay patients associations (France Parkinson, etc...) and the general public. They also regularly contribute to scientific French medical journals. They were also able to attract funding from private companies and industry, either direct funding or through participation in clinical trials, to support their projects. The team is engaged in national and international scientific networks.

Strengths and opportunities in the context

The unit's projects focus on the description, measurement, comprehension of the pathophysiology underlying psycho-behavioural disorders, and more precisely impulse control disorders, in two models of dopaminergic dysfunction, namely PD and addictive behaviours. Overall they are presenting a total of 14 subprojects in 3 different axes including clinical and preclinical studies. If successful, the implementation of a comprehensive and multidisciplinary research strategy will increase our understanding of the various processes associated with impulse dis-control.

Weaknesses and threats in the context

There are too many subprojects ongoing in a scientifically very competitive research environment and this may represent a challenge considering the available research facilities and human resources. In particular given the past research background of the unit, studies on the description and measurement (including development of clinical scales) of behavioural disorders underlined by dopaminergic dysfunctions in addiction should be prioritized.

Recommendations

The scientific content of the projects and the outlook are very good. However, given the number of researchers and current characteristics of the unit, some of the objectives may be too ambitious. The recommendation would be to focus on a restricted number of projects.