



**HAL**  
open science

# Pathologies du système nerveux : recherche épidémiologique et clinique

Rapport Hcéres

► **To cite this version:**

Rapport d'évaluation d'une entité de recherche. Pathologies du système nerveux : recherche épidémiologique et clinique. 2010, Université Montpellier 1 - UM1, Institut national de la santé et de la recherche médicale - INSERM. hceres-02033330

**HAL Id: hceres-02033330**

**<https://hal-hceres.archives-ouvertes.fr/hceres-02033330>**

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.



agence d'évaluation de la recherche  
et de l'enseignement supérieur

Section des Unités de recherche

AERES report on the research unit

Pathologies of the Nervous System: Epidemiological  
and Clinical Research

From the

University of Montpellier 1

INSERM

Mai 2010



agence d'évaluation de la recherche  
et de l'enseignement supérieur

Section des Unités de recherche

## AERES report on the research unit

Pathologies of the Nervous System: Epidemiological  
and Clinical Research

From the

University of Montpellier 1

INSERM

Le Président  
de l'AERES

Jean-François Dhainaut

Section des unités  
de recherche

Le Directeur

Pierre Glorieux

Mai 2010



# Research Unit

**Name of the research unit:** Pathologies of the Nervous System: Epidemiological and Clinical Research

**Requested label:** UMR\_S

**N° in the case of renewal:** 888

**Name of the director:** Ms. Karen RITCHIE

## Members of the review committee

### Chairperson:

Mr Guy THOMAS, University Pierre & Marie Curie, Paris

### Other committee members:

Mr Ingmar SKOOG, University of Gothenburg, Sweeden

### Committee members nominated by staff evaluation committees (CNU, CoNRS, INSERM and INRA CSS....):

Mr Laurent SCHMITT (CNU),

Mr Bruno DUBOIS (Inserm CSS1)

## Observers

### AERES scientific advisor:

Mrs Dominique COSTAGLIOLA

### University or School representatives:

MR Jacques MERCIER, vice president of the Conseil Scientifique of Montpellier 1 University

### Research Organization representatives:

Mrs Viviane LEBOURQ, Déléguée Régionale Inserm Languedoc-Roussillon



# Report

## 1 • Introduction

- Date and execution of the visit

The visit took place on 25 January 2010, and started with a meeting in camera between the experts and the AERES representative, who explained the purpose and terms of the visit. Two members of the committee (Annie Bachelot and Catherine Faucher) were unable to attend. Oral presentations by the head of the unit and researchers followed, in the presence of all members of the unit. They led to scientific discussions between members of the committee and members of the unit. The visiting committee then split into three groups, which met with researchers and post-docs, PhD students, and engineers, respectively. The experts met with the University and Inserm representatives during lunch break. The visit ended with a further private meeting of the experts.

- History and geographical localization of the research unit, and brief presentation of its field and scientific activities

The unit was created in 2003. It is located in Montpellier, within the La Colombière hospital. Its field of activity is neuropsychiatry.

- Management team

The head of the unit is Inserm DR1 Karen RITCHIE. Edith MORENO (Inserm AI) is administrative assistant.

- Staff members (on the basis of the application file submitted to the AERES)

	Past	Future
N1: Number of researchers with teaching duties (Form 2.1 of the application file)	7	6
N2: Number of full time researchers from research organizations (Form 2.3 of the application file)	6	6
N3: Number of other researchers including postdoctoral fellows (Form 2.2 and 2.4 of the application file)	7	
N4: Number of engineers, technicians and administrative staff with a tenured position (Form 2.5 of the application file)	10	9
N5: Number of other engineers, technicians and administrative staff (Form 2.6 of the application file)	12	
N6: Number of Ph.D. students (Form 2.7 of the application file)	9	
N7: Number of staff members with a HDR or a similar grade	9	



## 2 • Overall appreciation on the research unit

- Overall opinion

Overall the committee formed a very positive opinion of the unit, based on high quality scientific output and impact, excellent international collaborations, and a relevant scientific project supported by well-thought strategy and governance.

- Strengths and opportunities

The main strengths of unit are its international and national collaborations, the scientific skill of some of the project leaders, the availability of databases from several epidemiological cohorts, the large number of publications in often high rank journals, and the quality of the unit's governance. The local environment in Montpellier is an opportunity for the development of a multidisciplinary approach to the field of neurosciences within the framework of a research campus. Teaching activities are also well developed.

- Weaknesses and threats

The committee felt that two research themes (Ageing-related cognitive disorders and Affective disorders: bioenvironmental risk and resilience) might benefit from more precisely specified research hypotheses, together with implementing methods for investigating the causal nature of statistical associations.

The committee noted that the vast majority of PhD students and Post-docs were medical doctors with near full time clinical duties. A more balanced distribution between medical and scientific staff might be considered.

- Data on the work produced :

(cf. [http://www.aeres-evaluation.fr/IMG/pdf/Criteres\\_Identification\\_Ensgts-Chercheurs.pdf](http://www.aeres-evaluation.fr/IMG/pdf/Criteres_Identification_Ensgts-Chercheurs.pdf))

A1: Number of permanent researchers with or without teaching duties (recorded in N1 and N2) who are active in research	11
A2: Number of other researchers (recorded in N3, N4 and N5) who are active in research	7
A3: Ratio of members who are active in research among permanent researchers [(A1)/(N1 + N2)]	92%
A4: Number of HDR granted during the past 4 years	2
A5: Number of PhD granted during the past 4 years	5



### 3 • Specific comments on the research unit

- Appreciation on the results

Over the past four years there is clear evidence that this unit has: (i) generated scientific research in neuropsychiatry at the competitive international level; (ii) established research networks involving internationally recognized centers of excellence; (iii) stimulated interest in neuropsychiatric research amongst clinicians, residents and students in other areas through teaching programs; (iv) transferred knowledge to both the clinical setting and organizations involved in public health policy.

Since 2005 the unit has published 387 papers in peer-reviewed journals. Amongst papers that members of the unit signed as first, second or last author, 50 have impact factors over 5 and one over 20. Furthermore, members of the unit have collaborated to 4 studies that have been published in journals with impact factors over 20. The articles published by the unit have been cited 10,935 times over this period.

Since 2005 the unit has hosted 7 academic colleagues on sabbatical from the U.K., Japan, Australia, Russia and Canada, and has obtained a senior research grant (Poste orange). The unit has developed excellent collaborative links with several institutions abroad) as well as national and regional networks (see below).

The following research honours have been awarded to members of the unit: IPA Research Prize, Gary Andrews Travelling Fellowship, EPA Young Researcher of the year 2009, Honorary Professor Imperial College London.

Researchers from the unit have been invited speakers at 76 national and international conferences.

Overseas Master and PhD students are currently supervised in the unit.

The unit has been successful in four ANR applications as principal investigator, raising a total of about one million Euro. Besides it has obtained funding through participation in four European FP7 projects. Other research funds were obtained from PHRCs and the industry.

A research collaboration was established with the Institute of Psychiatry, King's College, London, with the signature of a collaborative agreement in 2004, and the creation in 2008 of a European Associated Laboratory. This collaboration has been the source of joint research projects (ESPRIT, SESAME, STEP, EUROMERES) and co-supervision of 9 masters and three doctoral students. A close collaboration has been developed over the past ten years with the University Hospitals of Geneva and Lausanne for the development of projects in molecular genetics. These collaborations will be the basis of a future consortium (EUROPEAN RESEARCH CARTel - Suicide) which will also include the Universities of Madrid (Spain), Oviedo (Spain), and Molise (Italy). A European scientific collaboration on narcolepsy has led to the development of a European Narcolepsy Network (EU-NN). The unit is a member of the European Alzheimer's Disease Consortium (EADC), a network of European centres of excellence working in the field of ageing-related neurodegenerative disease. Collaborative research has also been undertaken with Columbia University, New York, Imperial College and University College London with an exchange of post-doctoral researchers subsequently leading to joint projects in cerebral imaging, and brain ageing and metabolism. At a national level the unit has been a founding member of the FondaMental translational psychiatric research network (Mental Health), and of the government sponsored scientific research group (GIS) in psychiatric epidemiology, and at a regional level has been part of a federative regional biomedical research institute (IFR 3), and also initiated collaboration with the Montpellier Institute of Neurosciences (INM).

Transfer of knowledge to the clinical setting is the main purpose of projects designed to improve current clinical practice (SESAME, COGICARE), diagnosis procedures and care quality (STEP, PHOENIX). Three members of the unit have obtained Inserm/Regional University Hospital Interface grants for translational research. With regard to public health, members of the unit have worked in collaboration with the French Ministry of Health, the French Institute for Health Surveillance, the European Government and the Mental Health Section of the World Health Organization. Members of the unit were consultants to the government's Alzheimer Plan, acted as advisors to the government's Sleep Plan. Researchers from the unit also provide expertise to patient organizations (France Alzheimer; Alzheimer International; Association for Narcolepsy and Catalepsy).



- **Appreciation on the strategy, governance and life of the research unit**

The unit is organized around 4 research themes. The governance by the head of the unit is felt as very adequate and satisfying by all members, - researchers, students, and engineers.

Engineers and technicians who apply for promotion receive adequate support. They sign publications as co-authors, whenever they have contributed to the work.

PhD students and Master students supervision is effective.

A seminar brings the members together on a weekly basis.

A statistics and modelling platform with well-defined formats is used by all researchers, thereby ensuring a high level of quality control with respect to data management and statistical methodology.

Unit members have initiated and participated in a wide range of teaching programs, notably a summer school in methods in psychiatric research in collaboration with the Institute of Psychiatry. Supervision has also been given to Master and Doctoral students from both French as well as overseas universities.

- **Appreciation on the project**

Although the unit is presented in the format of a single-team unit, members of the unit are grouped according to four research themes.

**Affective disorders: bioenvironmental risk and resilience :** The theme involves 13 members of the unit, among whom two from King's College. The scientific output is good. The committee felt that the research hypotheses underlying the project were sometimes insufficiently specified.

**Suicidal behaviour:** The theme involves 9 members of the unit. The scientific output is good. The committee considered that the approach taken to study suicidal behaviour was both original and relevant.

**Age-related cognitive disorders:** The theme involves 14 members of the unit. The scientific output is very good, with publications in journals such as the British Medical Journal and the Archives of Internal Medicine, as well as neurology and psychiatry journals. The committee felt that the research hypotheses underlying the project might be more sharply specified, and that statistical findings should be more often discussed in terms of potential causal relationships.

**Sleep disorders:** The theme involves a small group of 6 members of the unit, among whom 4 engineers. The scientific output is excellent, with publications in top-level journals. The committee welcomes a strengthening of the group by the recruitment of academics in the near future.

The 4 themes of the unit's scientific project (Affective disorders, Ageing-related cognitive disorders, Suicide, and Sleep) are without dispute highly relevant Public Health issues. The feasibility of the project is ensured by the availability of epidemiological cohorts and corresponding databases, well-established collaborations that guarantee access to multidisciplinary expertise, and successful fund raising.

Ressources are allocated on a project by project basis, the ressources of the unit being predominantly obtained through applications for grants.

The main originality of the project is the multidisciplinary approach, based on linking together the tools and methods of epidemiology, statistics, genetics, neuroimaging, neurology, and psychiatry to investigate psychopathology.



Note de l'unité	Qualité scientifique et production	Rayonnement et attractivité, intégration dans l'environnement	Stratégie, gouvernance et vie du laboratoire	Appréciation du projet
A+	A+	A+	A+	A



Montpellier, le 19 mars 2010

**Le Président**

Ph A/ NG

Départ n° 105.

**Monsieur Pierre GLORIEUX**  
**Directeur de la section des unités**  
**de recherche**  
**Agence d'Evaluation de la Recherche et de**  
**l'Enseignement Supérieur (AERES)**  
**20, rue Vivienne**  
**75002 PARIS**

Monsieur le Directeur,

Je vous adresse mes remerciements pour la qualité du rapport d'évaluation fourni à l'issue de la visite du comité d'expertise concernant l'unité de recherche **«Pathologies du système nerveux : recherche épidémiologique et clinique (U888)»**

Vous trouverez ci-joint les réponses du Directeur de l'unité auxquelles le Vice Président du Conseil Scientifique et moi-même n'avons aucune remarque particulière à rajouter.

Je vous prie d'agréer, Monsieur le Directeur, l'expression de ma considération distinguée.

**Philippe AUGE**



Montpellier, March 17<sup>th</sup>, 2010

### U 888 REPLY TO AERES EVALUATION REPORT

The report reliably reflects both the scientific strengths and organization of the unit's research. The committee has, however, indicated that they felt two themes, *Ageing-related Cognitive Disorder* and *Affective disorders: bioenvironmental risk and resilience* could have more specific hypotheses. It should be noted that whereas the other two themes (Suicidal Behaviour and Sleep Disorders) are very specific clinical projects based on single hypotheses and targeting well characterized gene-environment interactions, our research on cognitive and affective disorders are two large epidemiological programmes based on multidisciplinary population studies integrating a very large number of hypotheses (and with subsequently a much larger and more heterogeneous number of publications). Unfortunately given the time limits, clinical studies and epidemiological programmes were each given the same amount of presentation time. The two epidemiological studies do in fact have quite precise aims: in one case the identification of potentially reversible risk factors for dementia which may delay onset, and in the second case the hypothesis that depression is a multifactorial stress-related disorder involving interactions between polygenetic and environment factors with an accumulative effect over time. A subsidiary hypotheses is that there are sub-types of depression (eg hormonal dependant, vascular, trauma-induced) with specific biological and clinical characteristics, which are likely to respond to different treatments. These two epidemiological programmes (which have now been running for over ten years) have also produced PHRC funded clinical satellite studies relating to specific aspects of aetiological models. The principal problem for an evaluation committee is that after ten years these studies now investigate a very large number of hypotheses which it is difficult to prioritize : the generation of new hypotheses in the course of follow-up is in one sense a marker of success of a good epidemiological programme.



The committee also indicated the need to implement statistical methods to establish causality. Population studies generally can only establish maximum likelihood models for disease manifestation and ideally these should then be followed by randomized controlled intervention trials. Hopefully we will reach this stage of “interventional epidemiology” in the near future.

Finally the committee evoked the large proportion of medical graduates undertaking PhDs, and that a more balanced distribution might be considered. In past years we were faced by the opposite problem of having post-graduate students principally from the science faculty, and thus actively pushed to recruit more medical graduates (this also coincided with a general politic at Inserm to encourage more medical graduates towards research). We seem to have become victims of our success.

Karen RITCHIE, Ph.D.  
Director of U 888 Inserm

Pour le Président Directeur Général de l'Institut de la Santé et de la Recherche Médicale,

La Déléguée

**Viviane LEBOURO**

Délégation régionale  
Languedoc-Roussillon  
60, rue de Navacelles  
34394 Montpellier cedex 5  
Tél. : 33 (0)4 67 63 61 34  
Fax : 33 (0)4 67 63 70 25

**Inserm**  
Institut national  
de la santé et de la recherche médicale

U 888 Inserm  
Hôpital La Colombière  
39 Avenue Charles Flahault, BP 34493  
34093 Montpellier Cedex 5  
Tél. : 04 99 61 45 60 ; Fax : 04 99 61 45 79  
edith.moreno@inserm.fr  
<http://u888.montp.inserm.fr>