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Epilepsies de l'enfant et plasticité cérébrale

Rapport Hcéres

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

Department for the evaluation of research units

AERES report on unit:

Paediatric Epilepsies and Brain Plasticity

Under the supervision of the following institutions and research bodies:

Institut national de la santé et de la recherche médicale

Université Paris Descartes

Commissariat à l'énergie atomique et aux énergies alternatives

January 2013

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

Research Units Department

President of AERES

Didier Houssin

Research Units Department

Department Head

Pierre Glaudes

The president of AERES "signs[...], the evaluation reports, [...]countersigned for each evaluation department by the relevant head of department (Article 9, paragraph 3, of french decree n°2006-1334 dated 3 november 2006, revised).

Grading

Once the visits for the 2012-2013 evaluation campaign had been completed, the chairpersons of the expert committees, who met per disciplinary group, proceeded to attribute a score to the research units in their group (and, when necessary, for these units' in-house teams).

This score (A+, A, B, C) concerned each of the six criteria defined by the AERES.

NN (not-scored) attached to a criteria indicate that this one was not applicable to the particular case of this research unit or this team.

Criterion 1 - C1: Scientific outputs and quality;
Criterion 2 - C2: Academic reputation and appeal;
Criterion 3 - C3: Interactions with the social, economic and cultural environment;
Criterion 4 - C4: Organisation and life of the institution (or of the team);
Criterion 5 - C5: Involvement in training through research;
Criterion 6 - C6: Strategy and five-year plan.

With respect to this score, the research unit concerned by this report received the following grades:

- Grading table of the unit: Paediatric Epilepsies and Brain Plasticity

C1	C2	C3	C4	C5	C6
A+	A+	A	A	A+	A

Evaluation report

Unit name:	Paediatric Epilepsies and Brain Plasticity
Unit acronym:	UMR 663
Label requested:	Paediatric Epilepsies and Brain Plasticity
Present no.:	UMR 663
Name of Director (2012-2013):	Ms Catherine CHIRON
Name of Project Leader (2014-2018):	Ms Catherine CHIRON

Expert committee members

Chair:

Mr Fernando LOPES DA SILVA, Swammerdam Institute for Life Sciences, Amsterdam, Netherland

Experts:

Mr Massimo AVOLI, Montreal Neurological Institute, McGill University, Montreal, Canada

Ms Catherine BARTHELEMY, Centre Universitaire de pédopsychiatrie, Tours (representative of INSERM)

Mr Eric BELLISSANT, Centre d'Investigation Clinique, Inserm CIC-Rennes

Mr Jacques MOTTE, Neurologie pédiatrique, Reims (representative of CNU)

Ms Séverine SAMSON, Université de Lille

Ms Margitta SEECK, Hôpitaux Universitaires de Genève, Switzerland

Scientific delegate representing the AERES:

Mr Yves TROTTER

Representative(s) of the unit's supervising institutions and bodies:

Ms Anne FLURY-HERARD, CEA

Ms Chantal LASSERRE, Inserm

Mr Stefano MARULLO, Université Paris Descartes

1 • Introduction

History and geographical location of the unit:

The UMR 663 was created in January 2005 and reconducted in January 2009 (evaluated A by AERES).

It is located in *Hôpital Necker-Enfants Malades* (Paris) and also benefit from hosting resources at *CEA* (Neurospin and SHFJ, Orsay), at *Institut de Psychology* (Boulogne), and at the *Centre de Psychiatrie et Neurosciences* (Hôpital Sainte Anne).

Management team:

Director of the unit: Ms Catherine CHIRON

AERES nomenclature:

SVE1_LS5

Unit workforce:

Unit workforce	**Number as at 30/06/2012**	**Number as at 01/01/2014**	2014-2018 **Number of project producers**
N1: Permanent professors and similar positions *(PR, PUPH, DR)*	4 (2.5 FTE)	4 (2.5)	4
N2: Permanent researchers from Institutions and similar positions *(MCF, MCUPH, CEA)*	8 (3.35)	7 (3.25)	7
N3: Other permanent staff (without research duties) *(PH)*	7 (1.3)	6 (1)	6
N4: Other professors (Emeritus Professor, on-contract Professor, etc.)			
N5: Other researchers from Institutions (Emeritus Research Director, Postdoctoral students, visitors, etc.) *(Emeritus DR, Post-Doc, Interface Clinician, Contractual Researchers)*	4 (3)	6 (4.5)	4
N6: Other contractual staff (without research duties) *(TECH, Secretary, Vacations)*	5 (4.25)	5 (4)	
TOTAL N1 to N6	28 (14.1)	28 (15.25)	21

Percentage of producers	***100 %***

Unit workforce	Number as at 30/06/2012	Number as at 01/01/2014
Doctoral students	24	
Theses defended	11	
Postdoctoral students having spent at least 12 months in the unit*	2	
Number of Research Supervisor Qualifications (HDR) taken	3	
Qualified research supervisors (with an HDR) or similar positions	10	

2 • Assessment of the unit

Strengths and opportunities:

- The unit constitutes a multi-disciplinary research group with a well-defined area: Pediatric Epilepsy;
- Within this area, the field "Encephalopatic Epilepsies" constitutes the core of the unit's research;
- The unit occupies a world leading position in this field;
- The unit publishes in the best journals in the field, and it has a strong international profile;
- The unit receives substantial additional funds from ANR (Agence Nationale de la Recherche), diverse Foundations/Associations, Industry, European (FP7) and other sources;
- The unit attracts foreign visitors and PhD students;
- The translational character of the unit's research is an asset;
- The assurance that Catherine Chiron can continue the leadership for the coming 5 years.

Weaknesses and threats:

- The lack of manpower specifically with respect to the following functions: research engineer for the development of advanced tools for imaging processing, senior researcher with tenure for the basic experimental program; administrative assistant with tenure;
- The forthcoming retirement of the leader of the Pharmacology team;
- The spread among separated sites;
- The very modest funding from the University;
- Few junior group members.

Recommendations:

- Better use of management tools to increase the efficiency of unit's governance;
- Carry out an active search for the manpower indicated above by using the national INSERM competition calls;
- Reduce the number of groups to 4, by fusing the groups Nosology & Genetics with the group Basic Epileptology, while keeping the other 3 (Imaging, Neuropsychology and Pharmacology) as they are;
- Try to find a young clinical pharmacologist interested in pediatrics to help to carry on the project of the Pharmacology team;
- Active recruitment of excellent junior researchers or PhD-MDs.

3 • Detailed assessments

Assessment of scientific quality and outputs:

The unit constitutes a multi-disciplinary research group clearly dedicated to the theme "Pediatric Epilepsy" in its various facets, extending to relevant aspects of human brain plasticity. The whole consortium constitutes a harmoniously entity where multiple synergies operate. The unit is unique since it has the core focus on Encephalopatic Epilepsies ranging from the neonate to the school-going child. The unit encloses a number of disciplines, ranging from genetics, pathophysiology, pharmacology, neuropsychology, clinical nosology with very strong links to brain imaging, both morphologic and functional. The unit publishes in the best journals in the field (Nature Genetics, Lancet Neurol, Nat review Neurol, Neuron, Neuroimage, Cortex, …) , and it has a strong international profile. Substantial funding, additional to INSERM and a small donation of the University, is obtained from European sources and from Industrial partners.

Assessment of the unit's academic reputation and appeal:

Members of the unit are regularly invited to attend important international meetings. In the field of Pediatric Epilepsies, the unit can be considered one of the world leaders. Unit members participate in and organize advanced courses not only in France but also internationally. The unit attracts foreign visitors and students as indicated below (criterion 5).

Assessment of the unit's interaction with the social, economic and cultural environment:

Several research findings that emerged from the unit have been already incorporated in clinical practice, particularly in the diagnostic of children epilepsies using brain imaging methodologies, and in the field of anti-epileptic drugs, where contracts with pharmaceutical enterprises were established and specific funds were obtained.

Assessment of the unit's organisation and life:

The unit's organization is rather informal and it appears to run smoothly, notwithstanding the rather complicated structure with groups spread over different sites. The communication between these groups internally and also externally is very satisfactory. Although the governance is recognized as efficient and collegial by the staff, management tools are minimally utilized.

Assessment of the unit's involvement in training through research:

Unit's members participate in several courses both at the undergraduate and at the graduate levels. In the last years, the unit has increased appreciably the number of PhD students: in 2012 there were 24. Some of these come from foreign countries: Czech Republic, Belgium, Italy, Russia, Portugal. All students have a supervisor, and some also a co-supervisor; the students rate the coaching they obtain in the unit as very positive. There is a good supply of courses. The students appear well integrated in the various research projects notwithstanding their diverse backgrounds and seem to be systematically involved in publications. There are regular seminars for the whole unit where students take also an active part.

Assessment of the five-year plan and strategy:

The unit is regarded as having a very good research program and high-standard goals for the coming years. It should be able to reinforce its unique position in Pediatric Epilepsy at the forefront of the international field, with important scientific contributions. A strong multidisciplinary approach focusing on clearly defined objectives constitutes an important asset. In addition the translational character of the research with multiple cross-links between basic research and clinical practice, in both directions, is highly valuable.

4 • Conduct of the visit

Visit date:

Start: Monday 28, January, 2013 at 8.30

End: Monday 28, January, 2013 at 18.30

Visit site: Hôpital Necker, INSERM unité 663

Institution: Université Paris Descartes

Address: 149, rue de Sèvres, 75015 Paris

Conduct or programme of visit:

8h30 -9h00 Huis clos - Présentation de l'AERES au comité par le Délégué

9h00 -9h15 Devant l'unité, présentation du Comité de visite et Présentation de l'AERES par le Délégué

9h15-10h Présentation de l'unité, bilan et projet (Ms Catherine CHIRON)

AUDITION DES GROUPES *(30 mn chacun dont la moitié du temps pour la discussion, et 5 mn en tête à tête avec le chef de groupe, si demandé par le président ou les chefs de groupes)*

10h00-10h30 Bilan et projet groupe Neuropsychologie (Ms Isabelle JAMBAQUE / Ms Nathalie ANGEARD)

10h30-11h00 Bilan et projet groupe Imagerie (Ms Lucie HERTZ-PANNIER / Ms Anna KAMINSKA)

11h00-11h15 Pause

11h15-11h45 Bilan et projet groupe Phénotype/Génotype/Epileptologie fondamentale (Ms Rima NABBOUT-TARANTINO / Mr. Jacques LASCHET)

11h45-12h15 Bilan et projet groupe Pharmacologie (Mr. Gérard PONS / Mr. Vincent JULLIEN)

12h45-14h Déjeuner de travail

SESSION RENCONTRE AVEC LE PERSONNEL PERMANENT ET NON PERMANENT

Le comité se répartit en trois sous-groupes (Amphithéâtre et Mezzanine)

14h -14h45 Rencontre avec les ITA titulaires, CDD

Auditoire : membres du Comité, Délégué AERES, représentant tutelle ITA, sans la Direction

Rencontre avec les doctorants et post-doctorants et/ou CDD « chercheurs »

Auditoire : membres du Comité, Délégué AERES, sans la Direction

Rencontre avec les chercheurs et enseignants chercheurs titulaires

Auditoire : membres du Comité, Délégué AERES, sans la Direction

14h45-15h Pause

15h-15h45 Rencontre avec les représentants de la Tutelle:

Auditoire : membres du Comité, Délégué AERES

15h45-16h15	Rencontre avec la direction de l'unité
	Auditoire : membres du Comité, Délégué AERES
16h30-18h30	Réunion du comité à huis clos
	Présence : membres du Comité, délégué AERES

Specific points to be mentioned:

The visit was well organized and the Agenda was fulfilled satisfactorily.

5 • Statistics by field: SVE on 10/06/2013

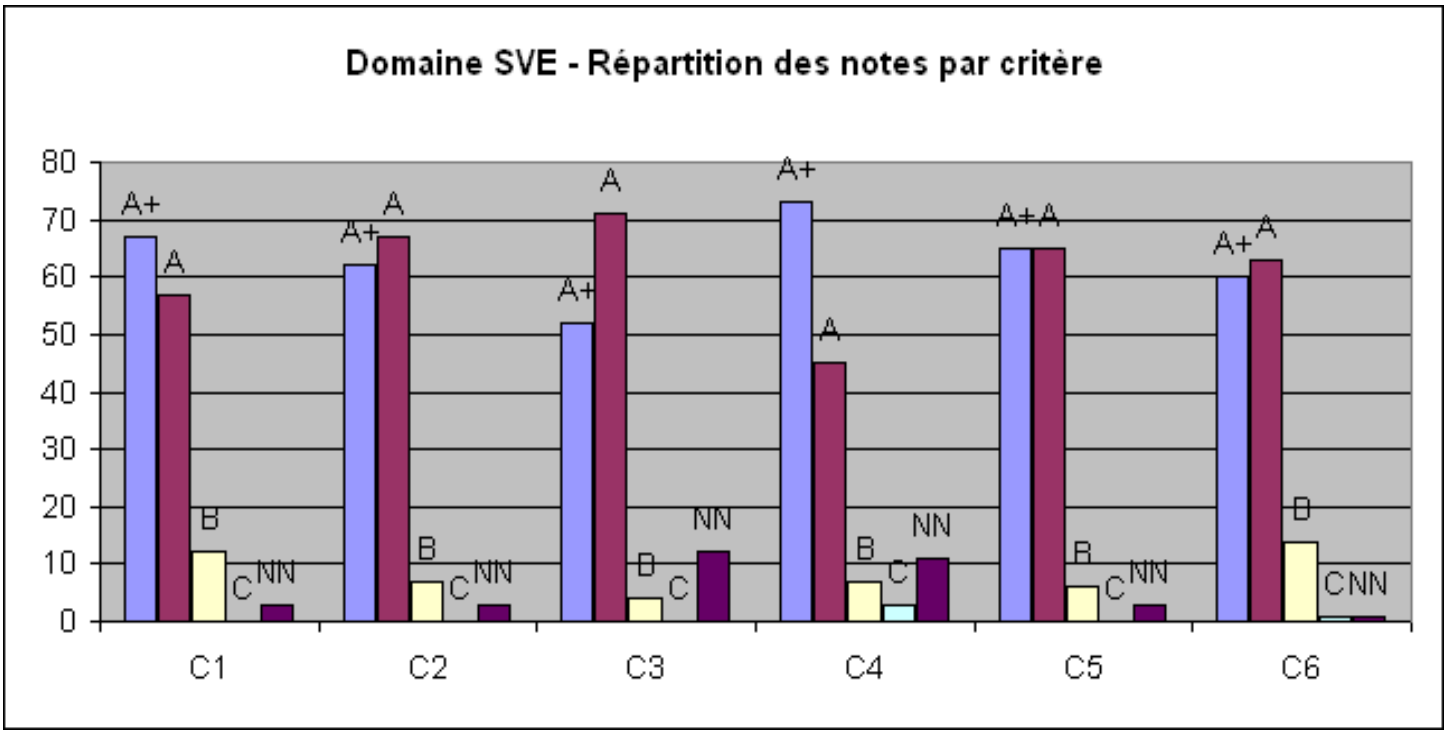
Grades

Critères	C1 Qualité scientifique et production	C2 Rayonnement et attractivité académiques	C3 Relations avec l'environnement social, économique et culturel	C4 Organisation et vie de l'entité	C5 Implication dans la formation par la recherche	C6 Stratégie et projet à cinq ans
A+	67	62	52	73	65	60
A	57	67	71	45	65	63
B	12	7	4	7	6	14
C	0	0	0	3	0	1
Non Noté	3	3	12	11	3	1

Percentages

Critères	C1 Qualité scientifique et production	C2 Rayonnement et attractivité académiques	C3 Relations avec l'environnement social, économique et culturel	C4 Organisation et vie de l'entité	C5 Implication dans la formation par la recherche	C6 Stratégie et projet à cinq ans
A+	48%	45%	37%	53%	47%	43%
A	41%	48%	51%	32%	47%	45%
B	9%	5%	3%	5%	4%	10%
C	0%	0%	0%	2%	0%	1%
Non Noté	2%	2%	9%	8%	2%	1%

Histogram



6 • Supervising bodies' general comments

UNIVERSITÉ PARIS DESCARTES

Vice Président du Conseil Scientifique

Paris le 09.04.2013

Vos ref : S2PUR140006239 –
Epilepsies de l'enfant et plasticité
cérébrale- 0751721N

Monsieur Pierre GLAUDES
Directeur de la section des unités de recherche
Agence d'Evaluation de la Recherche et de
l'Enseignement Supérieur
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 « Epilepsies de l'enfant et plasticité cérébrale »

Vous trouverez ci-joint les réponses du Directeur de l'unité, Catherine CHIRON, auxquelles le Président et moi-même n'avons aucune remarque particulière à apporter.

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

Le Vice Président du Conseil Scientifique

Stefano Marullo, DM, DesSci

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UMR 663
Paediatric Epilepsies and Brain Plasticity

Paris, 9 April 2013

General observations on the Evaluation report
UMR 663

We are very grateful to the visiting committee for his helpful report and recommendations that we will seriously take into consideration. In addition, we would like to make three specific comments.

The first comment regards "*the lack of senior researcher with tenure for the basic experimental program*". We just finalized the process to recruit a senior MCU-PH on this program who has a recognized high-quality expertise on basic epileptology (H index 10). He will join the unit in January 2014.

The second comment regards "*the forthcoming retirement of the leader of the Pharmacology team*". We did anticipate this retirement (planned for 2016) in order to avoid any weakness for the team: Vincent Jullien (MCU-PH 1st class, HDR authorized to be defended in 2013) is already currently co-head of the Pharmacology team (see Organigram in Results p27 and Project p16). In addition, V.Jullien's leadership in PK/PD and modeling will be reinforced by C.Chiron's expertise in clinical trials (DR1, 0.5 FTE for Pharmacology).

The third comment regards the recommendation to "*fusing the groups Nosology and Genetics with the group Basic Epileptology*". In practice, this process is already on going: both groups share the same tenure researchers, the same translational projects, and they gave a common presentation to the visiting committee.

Catherine CHIRON
Director UMR 663

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