Régulation des fonctions effectrices anti-tumorales par les cellules dendritiques et les exosomes : vers la désignation de vaccins antitumoraux

Rapport Hcéres

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

Section des Unités de recherche

Evaluation report

Research unit :

Regulation of anti-tumoral effector functions by dendritic cells

University Paris 11

Mars 2009

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

Section des Unités de recherche

Evaluation report

Research unit :

Regulation of anti-tumoral effector functions by dendritic cells

University Paris 11

Le Président
de l'AERES

Jean-François Dhainaut

Section des unités
de recherche

Le Directeur

Pierre Glorieux

mars 2009

Evaluation report

The research unit :

Name of the research unit : Regulation of anti-tumoral effector functions by dendritic cells

Requested label : UMR_S INSERM

N° in case of renewal : U805

Head of the research unit : Mrs Laurence ZITVOGEL

University or school :

University Paris 11

Other institutions and research organization:

INSERM

Institut Gustave Roussy

Dates of the visit :

November 19th 2008

Members of the visiting committee

Chairman of the commitee :

Mr Joost VAN-MEERWIJK, University Toulouse 3, France

Other committee members :

Mr Cornelius MELIEF, LUMC, Leiden, The Netherlands

Mr Pedro ROMERO, LICR, Lausanne, Switzerland

Mrs Angela SANTONI, University of Roma, Italy

Mr Frank TOLEDO, University Paris 6, France

Mr Marcel DECKERT, University of Nice Sophia-Antipolis, France

CNU, CoNRS, CSS INSERM, INRA, INRIA, IRD... representatives :

Mrs Danila VALMORI, Nantes, CSS INSERM representative

Mrs Marie-Christine BENE, Nancy, CNU representative

Observers

AERES scientific representative:

Mr Nicolas GLAICHENHAUS

University or school representative:

Mr Claude BOUCHAIX, University representative

Mr Jacques BITTOUN, University representative

Research organization representatives :

Mrs Chantal LASSERRE, INSERM representative

Mr Eric SOLARY, Institut Gustave Roussy representative

Evaluation report

1 • Short presentation of the research unit

- Total number of lab members : 9
- Number of researchers with teaching duties : 1
- Number of engineers, technicians and administrative assistants : 3 (2.8 ETP)
- Number of PhD students : 4

- Number of HDR : 1
- Number of students who have obtained their PhD during the past 4 years : 6
- Number of PEDR : 1
- Number of “publishing” lab members : 1 out of 1

2 • Preparation and execution of the visit

Time : from 13 :15 to 13 : 45

Time length : 30 minutes

Presentation by the head of the unit: past activity and projects

Time : from 13:45 to 15 : 00

Time length: 75 minutes including questions

Presentation by team members: past activity and projects

Time : from 15 :00 to 15 : 45

Time length: 45 minutes

Coffee break and poster presentation

Time : from 15 :45 to 16 :15

Time length : 30 minutes

Three meetings at the same time

- Meeting with PhD students and postdoctoral fellows
- Meeting with engineers, technicians and administrative assistants
- Meeting with researchers with permanent position

Time : from 16 :15 to 16 :30

Time length : 15 minutes

Door-closed meeting : Committee members, AERES representative, Lab director

Time : from 16 :30 to 17 :00

Time length : 30 minutes

Door-closed meeting : Committee members, AERES representative, University and Research Organization Representatives

3 • Overall appreciation of the activity of the research unit, of its links with local, national and international partners

In the past 4 years, the Unité U805 entitled "Regulation of immune effectors by dendritic cells and exosomes for the design of cancer vaccines", has been particularly successful in its area of investigation, developing new concepts in cancer immunology, and providing relevant findings on the contribution of the immune system to the anti-tumor effects mediated by conventional therapies such as chemo- and radio-therapy. In an external collaboration, they have also defined the molecular basis of immunogenic cell death, unraveling the importance of calreticulin and Erp57 translocation on the tumor plasma membrane in order to allow dendritic cell phagocytosis of dying cells. They have also been very active in the definition of functionally distinct NK cell subsets and their involvement in tumor immunosurveillance. The results obtained thus far by this unit clearly demonstrate the tremendous capacity of its scientists to conduct high-level translational research. The research activity is highly visible and the publication record is excellent. The head of the unit is a recognized leader in the field of innate immunity and cancer immunotherapy, has achieved great accomplishments, and continues to have a formidable productivity in spite of very limited staff. In addition, her applied research has resulted in important outcomes in terms of patents. She is frequently invited as speaker in international meetings and to write reviews in top journals such as Nature Review Immunology, Immunological Reviews, etc. She has been involved in the organization of international conferences on the emerging topics of immunochemotherapy. The head of the unit has obtained substantial external funding from national and European agencies (she has conducted a very successful European project on exosomes) as well as from pharmaceutical companies such as Novartis and InnatePharma. Her work has a very important socio-economic impact and would merit support not only from the Ministry of Science but also from the ministry of Health.

The Committee would encourage the supporting bodies to develop the instruments necessary to create a more critical mass in the team, and to provide facilities needed to implement novel therapies based on the results obtained. In addition, it would be appropriate to concentrate on the strongest clinically relevant aspects.

The head of the unit brings outstanding visibility to the Unit, but she is the only researcher with a permanent position. Some concerns are raised on the lack of recruitment of staff scientists in the team.

4 • Appreciation of resources and of the life of the research unit

The scientific life of this small unit includes several unit-wide meetings and appears quite active. The unit appears to be able to obtain comfortable levels of funding.

5 • Recommendations and advice

– Strong points :

Very strong publication record.

Excellent international visibility.

High level translational research.

Good patent production.

Excellent funding from both public and private sources.

— Weak points :

Limited staff.

— Recommendations :

Recruit staff scientists.

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+