



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

Section des Unités de recherche

AERES report on the
Federative Research Structure:
Cell and Tissue Engineering
From the:
Université de Franche-Comté

March 2011



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Le Président de l'AERES

Didier Houssin

Section des unités
de recherche

Le Directeur

Pierre Glorieux

March 2011



Federative Research Structure

Name of the Federative Research Structure: Cell and Tissue Engineering

Requested label: SFR

N° in the case of renewal: 133

Name of the director: M. Dominique FELLMANN

Members of the review committee

Committee chairman:

M. Juergen SIEPMANN, Université de Lille 2, Lille

Other committee members:

M. Laurent DUBUQUOY, Université de Lille 2, Lille

M. Pierre LEHN, Université de Bretagne Occidentale, Brest

M. Stéphane ROCCHI, Université de Nice Sophia Antipolis, Nice

M. Michel PLOTKINE, Université de Paris Descartes, Paris, CNU representative

Observers

AERES scientific advisor:

M. David DOMBROWICZ

University, School and Research Organization representatives:

M. Jacques BAHY, Université de Franche-Comté



Report

1 • Introduction

- **Date and execution of the visit:**

The visit took place on 2nd March 2011 and included presentations of the director of the Federative Research Structure as well as of some of his collaborators. The presentations were followed by discussions with the review committee. In addition, separate discussions were held with the review committee members and the following two groups of personal: (i) the directors of the research units included in the proposal and the directors of the included Clinical Investigation Centers (CIC), (ii) engineers, technicians and administrative assistants specifically dedicated to the Federative Research Structure. The review committee also met the vice-president for research of the University of Franche-Comté as well as other representatives of the Faculty of Medicine and Pharmacy, University, University hospital and a representative of the Inserm (“Institut National de la Santé Et de la Recherche Médicale” = French National Institute of Health and Medical Research).

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

The Federative Research Structure, entitled “Cell and Tissue Engineering” was created as an “IFR” (“Institut Fédérative de Recherche” = Federative Research Institute) in 2004 and its renewal was approved in 2008. The present proposal seeks the renewal of this research structure as a “SFR” (Federative Research Structure). The new SFR is intended to encompass 8 “EA” (“Equipe d’Accueil”) research units, 1 Inserm research unit and 2 Clinical Investigation Centers (CIC). The Federative Research Structure is located at the Université de Franche-Comté and the University hospital in Besançon. Its major research activities include the :

- Development of innovative biotherapies, in particular in oncology and transplantation,
- Investigation of macromolecular interactions, in particular associated with biosensors,
- Conduction of clinical trials, especially on the new biotherapies,
- Technological developments, in particular in the nano- and micro-technology field.

- **Management team**

The management team consists of the director of the Federative Research Structure, the directors of the involved research units and the directors of the involved Clinical Research Centers.

- **Staff members of the research structure**

One engineer, 2 technicians and 3 assistants are specifically dedicated to the Federative Research Structure.



2 • Appreciation of the Federative Research Structure

- **Overall appreciation:**

The Federative Research Structure “Cell and Tissue Engineering” is very well organized and efficiently managed. The scientific animation is of outstanding quality and contributes to a significantly facilitated translational research between the Université de Franche-Comté and the University hospital.

The SFR has been created as an IFR in 2004 and since then steadily and significantly increases in size and importance.

Particular strengths include in implication of two Clinical Investigation Centers and the close collaboration with the FEMTO institute (Franche-Comté Electronique Mécanique Thermique et Optique - Sciences et Technologies).

The SFR offers several technology platforms, which are highly valuable for numerous researchers in this region.

Very clearly the SFR plays a key role and acts as a motor for the very fruitful and highly synergistic collaborations of the research groups in Besançon.

The Université de Franche Comté actively supports the SFR: The Vice-president for research announced an annual funding of about 100 k EUR during the next 4 to 5 years.

- **Strengths and opportunities:**

- The SFR is very well managed and presents a key element for the organization of the scientific research at the Université de Franche-Comté and the University hospital.

- A good indication for the outstanding importance of the SFR for the research in this region is the significant increase in the number of researchers since its creation in 2004. For example, in 2006 about 270 persons were part of this research structure, in 2012 this number is intended to increase to 370.

- The scientific animation is very well organized and assures an intense and very fruitful exchange between the researchers at every level.

- A particular strength is the presence of two Clinical Investigation Centers: One dedicated to new biotherapies and one dedicated to innovative technologies, in particular micro-technologies for health care.

- The technology platforms provided by the SFR are well organized and highly valuable for the researchers. Importantly, 6 staff members are specifically dedicated to these SFR platforms.

- The SFR closely works together with the FEMTO institute (Franche-Comté Electronique Mécanique Thermique et Optique - Sciences et Technologies), which is affiliated with the French National Centre of Scientific Research (“Centre National de la Recherche Scientifique” = CNRS), the Université de Franche-Comté, the National School of Mechanical Engineering and Microtechnology and the Belfort-Montbéliard University of Technology. This is a highly promising collaboration, which is intended to be further intensified in the future.

- The SFR plays a key role for translational research in this region. It helps to strengthen the highly fruitful partnership of the University and Inserm laboratories, the University hospital as well as the Clinical Investigation Centers.

- There is a strong and very fruitful link between the SFR and the “French Blood Agency” (EFS = “Etablissement Français du Sang”).

- The collaboration between the various research groups of the SFR is very intense and fruitful. For example, 94 articles have been published between 2006 and the submission date of this proposal in 2010, involving authors from at least two different research groups of the SFR.

The SFR is well supported by the Université de Franche-Comté: The Vice-president of the University (vice-president for research) announced an annual funding of about 100 k EUR from 2012 to 2015/16.



- **Weaknesses and threats:**

Yet, none of the technology platforms has received the IBISA (“Infrastructures en Biologie Sante et Agronomie”) label (a national quality label for technical platforms).

- **Recommendations:**

Create a permanent position for an administrative staff, assisting the director of the SFR.

Take action to receive the IBISA label at least for some of the technical platforms.

Adapt the positions of the personal specifically dedicated to the technology platforms to the qualifications of the currently employed personal: some of them are “overqualified”, performing work of higher quality than foreseen in their current positions.

3 • Specific comments

- **Scientific activity and synergy of the research structure:**

The scientific activity and synergy of the research structure is highly remarkable. For example, 94 articles have been published between 2006 and the submission of this proposal in 2010, involving authors from at least two different research groups of the SFR.

The collaborations between the various research groups of the SFR is very intense and fruitful. It allows for instance for a significantly facilitated translational research, covering the entire range from more fundamental/basic sciences to clinical applications for the patient.

- **Reality and quality of the scientific animation:**

The scientific animation is very well established and intense. For example in 3.5 years 29 internal seminars, 27 external seminars 4 seminars of the research council and 9 technical seminars were organized.

- **Relevance and quality of the common technical platforms:**

The provided technical platforms are highly relevant for the researchers in this region. They offer even smaller research teams access to high technology equipment and know-how. Particular strengths include a newly constructed animal facility and the envisaged participation at inter-regional platforms.

- **Reality and degree of pooling of the research units’ funding:**

Fund pooling is reality: 5 % of the recurrent research funding of each group is used for the funding of the SFR.

- **Valorization of the research results:**

The research groups of the SFR actively collaborate with industrial partners and frequently patent their new research findings. This allows for a facilitated transfer of new knowledge obtained in the more fundamental sciences into practical applications.

- **Relevance of the scientific project strategy, complementarities/implementation with respect to other Federative Research Structure at this location.**

There is no other Federative Research Structure at this location.

SERVICE DE LA RECHERCHE

Besançon, le 27 avril 2011

Dossier suivi par
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Le Président de l'Université
à
Monsieur Juergen SIEPMANN
Président du comité d'experts AERES
De l'IFR 133 IBCT

Réf :
S2SF120003060_IBCT_0251215K

Objet : Rapport d'évaluation de l'IFR 133 IBCT

Nous avons bien reçu le rapport d'évaluation de l'IFR 133 Ingénierie et biologie cellulaire et tissulaire (IBCT) et vous en remercions.

Nous vous informons que nous n'avons aucune observation à formuler.

