

**BCI - Biologie du cancer et de l'infection : des
mécanismes moléculaires aux applications technologiques**
Rapport Hcéres

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HCERES

High Council for the Evaluation of Research
and Higher Education

Research units

HCERES report on research unit:

Biology of Cancer and Infection

BCI

Under the supervision of
the following institutions
and research bodies:

Université Joseph Fourier - Grenoble - UJF

Institut National de la Santé et de la Recherche
Médicale - INSERM

Centre National de la Recherche Scientifique - CNRS

Commission à l'Énergie Atomique et aux Énergies
Alternatives - CEA

HCERES

High Council for the Evaluation of Research
and Higher Education

Research units

In the name of HCERES,¹

Didier HOUSSIN, president

In the name of the experts committee,²

Michael DETMAR, 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 result of the evaluation by the experts committee, the composition of which is specified below. The assessments contained herein are the expression of an independent and collegial deliberation of the committee.

Unit name:	Biology of Cancer and Infection
Unit acronym:	BCI
Label requested:	UMR_S UMR
Present no.:	UMR_S1036
Name of Director (2014-2015):	Mr Jean-Jacques FEIGE
Name of Project Leader (2016-2020):	Mr Jean-Jacques FEIGE

Expert committee members

Chair:	Mr Michael DETMAR, ETH Zurich, Switzerland
Experts:	Ms Giuseppina CALIGIURI, Université Paris 7 (representative of the INSERM)
	Ms Xuefen LE BOURHIS, Université de Lille 1 (representative of the CNU)
	Ms Florence NIEDERGANG (representative of the CoNRS)

Scientific delegate representing the HCERES:

Mr Jean ROSENBAUM

Representatives of the unit's supervising institutions and bodies:

Mrs Christelle BRETON (representative of the Doctoral School "Chimie et Sciences du Vivant" EDCSV - ED n°218)

Ms Alix DE LA COSTE, CEA

Mr Franck FIESCHI, Université Grenoble 1

Ms Chantal LASSERRE, INSERM

Mr Frank LAFONT, CNRS

1 • Introduction

History and geographical location of the unit

The Biology of Cancer and Infection (BCI) laboratory was created in January 2011 by unifying 3 INSERM teams (headed by Mr. Jean-Jacques FEIGE, Mr. Philippe HUBER and Mr. Jacques BAUDIER) and one CNRS unit (headed by Mr. François BOULAY). The BCI was integrated into the Research Institute in Technology and Life Science (iRTSV) which is located on the campus of CEA-Grenoble. Based on the last AERES evaluation, the BCI was organized in 5 teams, headed by Ms. Ina ATTRÉE, Ms. Sabine BAILLY, Mr. Claude COCHET, Jean-Jacques FEIGE and Ms. Danielle GULINO. Restructuring of the BCI Unit was now performed into 3 teams, headed by Ms. Ina ATTRÉE (Bacterial Pathogenesis and Cellular Responses), Ms. Sabine BAILLY (BMP family in Angiogenesis and Lymphangiogenesis) and Ms. Isabelle VILGRAIN (Cell Invasion in Angiogenesis and Cancer).

No new team was hired during the period considered.

All teams are located in the same building but on two separate floors. A project for a new building gathering all the teams of iRTSV was presented. This would represent a major opportunity for the research entity as it would increase their contacts with other research teams.

Management team

After restructuring of the BCI Unit, there are 3 teams, headed by Ms. Ina ATTRÉE, Ms. Sabine BAILLY and Ms. Isabelle VILGRAIN. The Unit is headed by Mr. Jean-Jacques FEIGE (director) and Ms. Ina ATTRÉE (co-director).

HCERES nomenclature

SVE1_LS4 Physiologie, physiopathologie, biologie systémique médicale

SVE1_LS6 Immunologie, microbiologie, virologie, parasitologie

SVE1_LS3 Biologie cellulaire, biologie du développement animal

Unit workforce

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
N1: Permanent professors and similar positions	5	5
N2: Permanent researchers from Institutions and similar positions	17	13
N3: Other permanent staff (without research duties)	17 (15,8)	18 (16,8)
N4: Other professors (Emeritus Professor, on-contract Professor, etc.)	1	2
N5: Other researchers from Institutions (Emeritus Research Director, Postdoctoral students, visitors, etc.)	6	2
N6: Other contractual staff (without research duties)	2	
TOTAL N1 to N6	48 (46,8)	40 (38,8)

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
Doctoral students	6	
Theses defended	11	
Postdoctoral students having spent at least 12 months in the unit	10	
Number of Research Supervisor Qualifications (HDR) taken	3	
Qualified research supervisors (with an HDR) or similar positions	17	14

2 • Overall assessment of the unit

Global assessment of the unit

Excellent scientific quality and output, based on number and quality of scientific publications in leading scientific journals and of patents.

Sound scientific strategy of the teams and the unit overall with focus on the role of endothelium in infection and cancer, enabling intense scientific interactions and collaborations between the research entity members.

Excellent collaborations among research entity scientists and with clinicians are in place. The translational orientation represents a major strength of the unit and has led to the creation of a start-up company, as well as involvement in several clinical trials that are based on discoveries made by research entity members.

Excellent international and national scientific reputation of the director and the team leaders with many invited congress presentations and organisational responsibilities.

Outstanding interactions with the social, economic and cultural environment.

Adequate and transparent distribution of funds between unit and teams.

Highly motivated staff and well suited organization for staff representation in decision-making and for scientific training of students and post-doctoral fellows.

Excellent track record in training through research, based on continuous work of previous PhD students in science. Excellent education and motivation of PhD students and post-doctoral researchers. Excellent training opportunities in a large variety of methods and technical applications. PhD students and post-docs are well trained and have received a number of scientific awards.

Strengths and opportunities in relation to the context

Excellent scientific originality, quality and output of the director, team leaders and scientists.

Excellent translational impact with 4 clinical trials and one start-up company distinguishes the unit.

Excellent technology platforms are available and/or maintained by the unit.

Outstanding interactions with the social, economic and cultural environment.

Strong involvement in a number of national infrastructures.

Highly motivated staff and excellent training environment for students at the Master and PhD levels.

Weaknesses and threats related to the context

For all teams, and thus for the unit as a whole, the current funding scheme represents a potential weakness since the team leaders spend a considerable amount of time in preparing relatively small, short-term grant applications. This, however, is balanced by the fact that common facilities, supported by the CEA campus, are freely accessible to the teams, which explains that external funding can be kept relatively low without being a major threat.

International scientific involvement, e.g. in EU projects/initiatives/training and high-level competitive funding is not well developed.

There are rather few post-doctoral fellows and some difficulties with the recruitment of excellent junior scientists.

No clear description of the strategy to determine the future areas of investigation of the unit and to continue to ensure the renewal of the team leaders is provided. In addition, no external scientific advisory board is scheduled to promote the reflection.

Recommendations

The unit members are encouraged to continue their excellent research strategies and to continue to publish in the leading journals in their areas.

It is encouraged to further foster the interactions between team 1 and teams 2 and 3.

There is a large number of creative individual projects pursued within each team, despite a rather low number of staff. To further increase international competitiveness, a prioritization of the projects and increased collaborations and technology sharing might be helpful.

More comprehensive and/or internationally competitive funding for research and training networks, including ATIP-Avenir, Equipe FRM and ERC programs, should be sought, given the scientific excellence of the team leaders.

More international visibility at conferences is encouraged, as well as writing of general reviews, also to facilitate recruitment of young scientists and of post-doctoral fellows with international fellowships.

Based on the rather elevated average age of the senior scientific staff, team leaders and PIs are strongly encouraged to brainstorm together to promote the unit and define strategies for its development. A strong institutional support, e.g. by the university, might facilitate the recruitment of outstanding younger scientists or established teams who are competitive for the ATIP-Avenir, ERC or @RAction ANR fundings.