

FINAL RESUME ON THE RESEARCH UNIT
CRT²I - Center for Research in Transplantation and
Translational Immunology

UNDER THE SUPERVISION OF THE
FOLLOWING INSTITUTIONS AND RESEARCH
BODIES:

Université de Nantes
Institut national de la santé et de la recherche
médicale - INSERM

EVALUATION CAMPAIGN 2020-2021
GROUP B



In the name of Hcéres¹:

Mr Thierry Coulhon, President

In the name of the experts committee²:

Mr Philippe Pierre, Chairman of the committee

Under the decree No.2014-1365 dated 14 November 2014,

¹ The president of Hcéres "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 experts committee". (Article 11, paragraph 2).

Tables in this document were filled with certified data submitted by the supervising body on behalf of the unit.

UNIT PRESENTATION

Unit name:

Center for Research in Transplantation and Translational Immunology

Unit acronym:

CRT²I

ID RNSR:

201220148C

Application type:

Fusion, scission, restructuring

Head of the unit (2020-2021):

Mr Régis Josien

Project leader (2021-2025):

Mr Régis Josien

Number of teams and/or themes:

6

EXPERTS COMMITTEE MEMBERS

Chair:

Mr Philippe Pierre, CNRS, Marseille

Experts:

Ms Françoise Dantzer, CNRS, Illkirch (representative of INSERM CSS)

Mr Alain Doglio, Université Côte d'Azur, Nice (representative of INSERM CSS)

Mr François Lemoine, Sorbonne Universités, Paris (representative of CNU)

Mr Lennart Mars, Inserm, Lille

Mr Ferhat Meziani, Université de Strasbourg

Ms Lorna Marson, University of Edinburgh, United Kingdom

Ms Sophie Novault, Institut Pasteur, Paris (supporting personnel)

Ms Élodie Segura, INSERM, Paris

HCÉRES REPRESENTATIVE

Ms Birke Bartosch

REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr Bertrand Cariou, Université de Nantes

Ms Guia Carrera, INSERM

Mr Frédéric Delaleu, INSERM

Mr Olivier Grasset, Université de Nantes

Ms Anne Moes, CHU de Nantes,

Mr Benjamin Terrier, INSERM

Mr Sébastien Youinou, Université de Nantes

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The Center for Research in Transplantation and Translational Immunology (CRT²I), a research unit affiliated to INSERM and Nantes University (UMR 1064) is the latest evolution step of several past units. The unit was first created in 1996 by Mr Souillou and then directed by Mr Anegon in 2012. The CRT²I was restructured in 2017 under Mr Josien's leadership. The unit occupies 2900 m² of floor space located in the Hotel Dieu site (city center) of the 'Centre Hospitalier Universitaire de Nantes' (CHU Nantes, CHUN). The current frame is a five-team unit including for the next mandate a sixth team (EA 3826, Nantes University) which will be also accompanied by a restructuration of current teams (Teams 1-5).

RESEARCH ECOSYSTEM

The CRT²I is a biomedical research unit devoted to immunology, immunopathology and immune-intervention strategies in the context of transplantation, immune-mediated inflammatory diseases (IMIDs) and host-pathogen interactions. The CRT²I is the research laboratory of the Institute of Transplantation Urology and Nephrology (ITUN) at the CHUN, one of the largest French and European centers for kidney transplantation. The clinical (Nephrology and Clinical Immunology departments) and most laboratory areas of the ITUN are located in the same building on four floors (except Team 6), in order to favor translational and disease-driven research programs in the field of transplantation and nephrology. All CRT²I teams are part of the Laboratory of Excellence (LabEx) IGO network.

HCÉRES NOMENCLATURE AND THEMATICS OF THE UNIT

SVE3.4 (Immunology); SVE5.1 (Nephrology); SVE4.1 (Neurology); SVE2.2 (Genomic); SVE6.2 (Epidemiology); SVE2.3 (Dev. biology); SVE3.2 (Virology); SVE3.1 (Microbiology); SVE6.3 (Clinical research).

MANAGEMENT TEAM

The CRT²I is directed by Mr Régis Josien, assisted as deputy director Ms Sophie Brouard.

UNIT WORKFORCE

Active staff	Number 06/01/2020	Number 01/01/2022
Full professors and similar positions	11	16
Assistant professors and similar positions	8	7
Full time research directors (Directeurs de recherche) and similar positions	4	4
Full time research associates (Chargés de recherche) and similar positions	10	12
Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	0	0
High school teachers	0	0
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	32	32
Permanent staff	65	70
Non-permanent professors and associate professors, including emeritus	3	
Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	12	
PhD Students	42	
Non-permanent supporting personnel	37	

Non-permanent staff	94	
Total	159	70

GLOBAL ASSESSMENT OF THE UNIT

The CRT²I is a University of Nantes and INSERM research unit dedicated to basic and clinical immunology. The organization of the unit will be changed and expanded to six research teams located on two different sites and fusing the current unit with another research unit (EA 3826).

The scientific production of the unit is excellent, with a clear improvement in the quality of its publications in high profile journals as exemplified by the publication track record of 388 original articles (226 being directly from the unit) and 99 review articles (86 from the unit, 56 % of original articles and 83 % of reviews being signed as first, last or corresponding author by members of CRT²I) published in journals like *The Lancet*, *Nature Reviews in Immunology*, *Cancer Cell*, *Nature Immunology*, *Cell Metabolism*, *Nature Reviews in Nephrology*, *Journal of Hepatology*, *Blood*, *JAMA Neurology*, *Journal of Clinical Investigation*, *Nature Communications*, *EMBO Molecular Medicine*,... However, the unit could increase the proportion of publications in the highest ranked journals.

The capacity of the unit to raise funding, including European and industrial sources, is outstanding as exemplified by the 26 M€ between 2015-2019 with participations in highly competitive European network grants (7 in total, 4 H2020) but could benefit from additional funding from ANR.

The clinical and industrial translation of the research performed in the unit is excellent to outstanding as illustrated by the coordination of the European TRAIN consortium, of the RHU Kidney Transplantation Diagnostic Innovation, the coordination of several multi-center clinical trials in the Nantes CHU and the Institute of Transplantation Urology Nephrology (ITUN) the unit is belonging to, the creation of two start-up (Ose Immunotherapeutics in 2017, GoLiver Biotherapeutics in 2019) or the filing of 35 patent applications, with forty-one currently active patents and the 26 contracts with private companies obtained during the period (TxCell/SANGAMO, Teneobio, Genoway, Sanofi, Ose Immunotherapeutics, Novartis, Sandoz, Roche, Genzyme, Ligand). The development and maintenance by the unit of patients' cohorts and clinical databases (new implementation of NALVANCA for ANCA-associated vasculitis and maintenance of DIVAT, COLT and CENTAURE,...), as well as their use, in particular for multiple sclerosis is remarkable. Overall, the quality of all the teams participating to the unit is relatively homogeneous.

Through its achievements, the unit is considered a flagship of the "Pôle Santé" of the University of Nantes and the Nantes regional area. Although the national visibility and recognition of the unit is excellent, its international appeal and recognition could still be improved beside publications for example by the implementation of an international PhD program in translational immunology and transplantation research and by increasing the international recruitment of young scientists bringing creativity and dynamism.

The unit has trained 42 PhD students (37 defences) during the evaluated period for 32 HDR (seven being defended during the current term) with an excellent supervision of PhD students illustrated by an average of nearly four articles published per student after a mean length of 40 months. Overall a large proportion of the unit staff is affiliated to the Nantes University, however their participation to teaching activities was not emphasized enough during the evaluation, and thus can only be considered as very good.

The integration of basic research with clinical translation is remarkable with an excellent overall organization of the unit. However, the recent changes in the teams' structures require further work at integration within and between teams to ensure the smooth development of the unit. The atmosphere across the unit is excellent, reflecting the quality of the management over the last five years.

The proposed project for the next five years is aiming at understanding the mechanisms by which the immune system promotes or control diseases or lesions in transplantation, immune-mediated inflammatory diseases and infectious diseases, with translation of these advances from the laboratory to the clinic. While the scientific remit is broad, the expertise and quality are available within the individual teams to deliver this.

