

FINAL RESUME ON THE RESEARCH UNIT
CRCI²NA - Centre de Recherche en
Cancérologie et Immunologie Intégrée Nantes
Angers

UNDER THE SUPERVISION OF THE
FOLLOWING INSTITUTIONS AND
RESEARCH BODIES:

Université de Nantes

Université d'Angers

Centre National de la Recherche Scientifique -
CNRS

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

EVALUATION CAMPAIGN 2020-2022
GROUP B



In the name of Hcéres¹:

Mr Thierry Coulhon, President

In the name of the experts committee²:

Mr Pascal Meier, 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:	Centre de Recherche en Cancérologie et Immunologie Intégrée Nantes Angers
Unit acronym:	CRCI ² NA
Current label and N:	INSERM UMR1232 CNRS ERL 6001
ID RNSR:	201722308D
Application type:	Restructuration
Head of the unit (2020-2021):	Mr Marc Grégoire
Project leader (2021-2025):	Mr Philippe Juin and Ms Catherine Pellat
Number of teams:	12

EXPERTS COMMITTEE MEMBERS

Chair:	Mr Pascal Meier, Institute of Cancer Research, London, United Kingdom
Experts :	Ms Patrizia Agostinis, KU Leuven, Belgium
	Mr Marc Billaud, CNRS, Lyon (representative of CoNRS)
	Ms Nathalie Bonnefoy, INSERM, Montpellier
	Ms Sophie Duchez, CNRS, Paris (supporting personnel)
	Ms Sylvie Fournel, Université de Strasbourg, Illkirch (representative of CNU)
	Mr Dietrich Kabelitz, University Medical Center Schleswig-Holstein, Germany
	Mr Valery Krizhanovsky, Weizmann Institute of Science, Israel
	Ms Ilaria Malanchi, The Francis Crick Institute, London, United Kingdom
	Ms Cristina Munoz Pinedo, The Bellvitge Biomedical Research Institute, Spain
	Ms Gudrun Schleiermacher, Institut Curie, Paris
	Mr Eric Soler, INSERM, Montpellier
	Ms Pelagia Tsoutsou, Hôpitaux Universitaires de Genève, Suisse
	Mr Andreas Villunger, Medical University of Innsbruck, Austria

HCÉRES REPRESENTATIVE

Ms Sophie Ezine

REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr Jean-Marie Bach, Oniris

Mr Loïc Carballido, CHU d'Angers

Mr Yvan Delaunoy, CNRS

Mr Alain Eychene, INSERM

Mr Olivier Grasset, Université de Nantes

Ms Sidonie Lavergne, Institut de Cancérologie de l'Ouest

Ms Anne Royer-Moes, CHU de Nantes

Mr Philippe Simoneau, Université d'Angers

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

CRCINA is a structure initially created as an INSERM research center in 2008. It is located in Nantes and in Angers and is part of Nantes University and Angers University, which closely interact with the University Hospitals of both cities, and with the Nantes-Angers Cancer Center (Institut de Cancérologie de l'Ouest, ICO). The main objective is to create a platform for basic and clinical cancer research. Eight teams are based in Nantes University. Team 9 of the future unit is based at the Medicine Faculty of Nantes, and three teams are based at the Angers Health Campus (90 km from Nantes).

RESEARCH ECOSYSTEM

The teams are linked with the National Veterinary School of Nantes allowing the use of *in vivo* imaging technologies such as microPET/CT and RMI and histological analysis of spontaneous models of tumours. The partnership with Health Institutions goes beyond accessing samples and sharing expertise: they enrolled permanent staff fully dedicated to the research teams. The teams benefit from an agreement between INSERM and ICO for the use of spaces dedicated to translational research.

The unit is involved in the French network of excellence, three teams are involved in LabEx IGO (Immunology Graft Oncology), two teams with LabEx IRON (Innovative Radiopharmaceuticals in Oncology and Nuclear Medicine) and all teams in SIRIC ILIAD (Imaging and Longitudinal Investigation to Ameliorate Decision making), as one of its eight sites. The unit is part of EquipEx ARRONAXPLUS.

In term of (inter)regional networks, four teams are members of the CNRS GDR "MicroNIT" or "Innate T Lymphocytes". Teams are leading actors of the Cancéropôle Grand-Ouest, with members coordinators.

HCÉRES NOMENCLATURE AND THEMATICS OF THE UNIT

SVE5-4

MANAGEMENT TEAM

For the present mandate, the director is Mr Marc Gregoire. For the next mandate, Mr Philippe Juin will be the director and Ms Catherine Pellat, the deputy director.

UNIT WORKFORCE

CRCI2NA		
	Active staff	
	Number 06/01/2020	Number 01/01/2022
Full professors and similar positions	28	29
Assistant professors and similar positions	33	42
Full time research directors (Directeurs de recherche) and similar positions	14	14
Full time research associates (Chargés de recherche) and similar positions	16	21
Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	9	10
High school teachers	0	0
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	57	68
Permanent staff	157	184
Non-permanent professors and associate professors, including emeritus	1	

Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	8	
PhD Students	56	
Non-permanent supporting personnel	18	
Non-permanent staff	83	
Total	240	184

GLOBAL ASSESSMENT OF THE UNIT

The CRCI²NA, which is composed of twelve research teams, is the leading cancer research Centre in the North-West of France. It is a multi-disciplinary cancer research centre, where scientists and clinicians are working side-by-side to advance knowledge into fundamental biological processes in cancer and develop innovative therapeutic approaches for patient benefit.

The scientific output of the CRCI²NA unit is very good to excellent with some outstanding contributions from several teams and clinicians, producing 809 papers, 455 as first/last/corresponding (PDC) author, and 354 as co-authors. High-profile publications with a CRCI²NA member as PDC author were for instance published in *New England Journal of Medicine* (1), *Journal of Clinical Oncology* (2), *Cell Reports*, *Nature Communications*(2), *Blood* (8), *EMBO Journal* (1). However, the unit could publish more frequently in high profile journals.

The members of the CRCI²NA are connected by an excellent network of national and international collaborators and institutions. This is further fostered by CRCI²NA effort in hosting the French BioBank for glioblastoma (FGB), which places CRCI²NA at the centre of glioblastoma research coordination.

Members of the CRCI²NA were highly successful in obtaining funding, including one NIH, four European (FEDER CIMA, FEDER TEP-IRM, NANOFAR Erasmus Mundus, PHC Tournesol) and 27 national grants as coordinators (4 ANR, 9 INCA, ...) and 34 local grants. In addition, they are coordinating LabEx IRON and LabEx IGO, both renewed for five more years. Three teams obtained the 'Équipe FRM' label. Despite, this funding capacity, the unit should apply more for national and international (European) competitive funding. The CRCI²NA organized five international meetings, and some members were invited to Keystone and Gordon Conferences. Overall, this indicates a very good international recognition, but it could be significantly improved by coordination of European grants or consortia and publishing in top generalist journals, the Teams 6 'Signaling in Oncogenesis, Angiogenesis, and Permeability' and 7 'Stress Adaptation and Tumour Escape' having being highly competitive at the international level during this term.

With regards to interactions with the non-academic world, CRCI²NA teams translated their research by filing eighteen patents, one invention, 55 industrial contracts, ten CIFRE fellowships, and giving birth to three start-ups. Moreover, CRCI²NA contributed to more than fifteen clinical trials. This has to be pursued, even reinforced.

The involvement in training is excellent with 75 members of CRCI²NA having an HDR and about 100 PhDs defended. Moreover, CRCI²NA hosted eleven foreign postdoctoral fellows.

The organization of the unit and laboratory life revealed weaknesses in gender parity and communication strategies.

Concerning the projects and the strategy for the next five years, the trajectory of the twelve teams shows highly innovative and promising research lines that link the teams together and create synergistic opportunities for the benefit of patients. Focussing on tumours as ecosystems is an excellent vision, and a strategy that has already unearthed novel, and actionable tumour vulnerabilities, suppressing tumour evolution and the emergence of resistant clones. Particularly, studying how such ecosystems adapt to therapeutic perturbation and immune evasion represents an important avenue for the future with considerable clinical value and potential. Progress in this area will not only guarantee significant patient benefit but also lead to the necessary international recognition.

Overall, CRCI²NA has a clear roadmap to strengthen and consolidate its strategic position as the leading Cancer Research unit in the North-West of France. The continuous striving to enhance its visibility, publish in high impact journals and apply to international grants, will ensure its path on an upward trajectory to become an excellent translational Cancer Centre within the next quinquennium.

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