



Research evaluation

FINAL RESUME ON THE RESEARCH UNIT  
IINS - Interdisciplinary Institute for Neuroscience

UNDER THE SUPERVISION OF THE  
FOLLOWING INSTITUTIONS AND RESEARCH  
BODIES:

Université de Bordeaux

Centre national de la recherche scientifique - CNRS

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**EVALUATION CAMPAIGN 2020-2021**  
GROUP B

Report published on May, 27 2021

High Council for evaluation of research and higher education



In the name of Hcéres<sup>1</sup>:

Mr Thierry Coulhon, President

In the name of the experts committee<sup>2</sup>:

Ms Geneviève Rougon, Chairwoman of the committee

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

<sup>1</sup> The president of Hcéres "countersigns the evaluation reports set up by the experts committees and signed by their chairman." (Article 8, paragraph 5);

<sup>2</sup> 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:**

Interdisciplinary Institute for Neuroscience

**Unit acronym:**

IINS

**Current label and N°:**

**ID RNSR:**

201119452A

**Application type:**

Fusion, scission, restructuring

**Head of the unit (2020-2021):**

Mr Daniel Choquet

**Project leader (2021-2025):**

Mr Daniel Choquet and Mr Laurent Groc

**Number of teams:**

14

## EXPERTS COMMITTEE MEMBERS

**Chair:**

Ms Geneviève Rougon (Professeur émérite), CNRS & Aix-Marseille Université, Marseille

**Experts:**

Ms Claudia Bagni, Université de Lausanne, Suisse

Mr Karim Benchenane, ESPCI, CNRS, Paris

Mr Alain Buisson, Communauté Université Grenoble Alpes, Grenoble, (representative of CNU)

Ms Valentina Emiliani, Institut de la Vision, Paris

Mr Stefan Jakobs, University Medical Center Göttingen, Germany

Ms Dija Krueger-Burg, Max-Planck-Institute of Experimental Medicine, Germany

Mr Cédric Matthews, CNRS, Marseille (representative of PAR)

Mr Marcelo Nollmann, CNRS, Montpellier

Ms Daniela Popa, IBENS-ENS, Paris (Representative of CoNRS)

## HCÉRES REPRESENTATIVE

Ms Nadia Soussi-Yanicostas

## REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr Philippe Moretto, Université de Bordeaux

Mr Bernard Poulain, CNRS

## INTRODUCTION

### HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The Interdisciplinary Institute for Neuroscience (IINS) has been created as a Research Center January 1<sup>st</sup>, 2011 and renewed in 2016, with the aim to gather scientists from multidisciplinary backgrounds and complementary expertise. Until 2016, IINS was situated in the INSERM building "Institute Francois Magendie," on the campus of University Bordeaux 2, with additional laboratory space in the "Génomique Fonctionnelle" building on the same campus. In the fall of 2016, IINS was relocated on the first and second floors of the newly built "Centre Broca Nouvelle Aquitaine," (CBNA) thanks to the Neurocampus project promoted by the Region Nouvelle Aquitaine. IINS has since its creation been directed by Mr Daniel Choquet and initially included eight teams. A new group emerged internally before 2016. IINS attracted over the last four years four new team leaders and two internal teams are also applying for creation. Altogether, fourteen teams, representing approximately 150 people, are applying for renewal of IINS.

### RESEARCH ECOSYSTEM

IINS had been the driving force behind the Bordeaux Neurocampus project that already improved all aspects of research, training and collaborative scientific culture.

Presently IINS is part of the newly created Bordeaux Neurocampus Department of Bordeaux University that comprises approximately 650 neuroscientists. The Bordeaux Neurocampus includes six research centers. The Bordeaux Neurocampus Department is home to a number of core facilities which gather essential shared equipment and expertise that considerably benefit IINS' scientists. These include: the Bordeaux Imaging Center (BIC), initiated by Mr D. Choquet, now part of the national infrastructure France Bio-Imaging (FBI), itself part of the EuroBioImaging European infrastructure (EuBI ERIC), launched in the fall of 2019. The IINS director is also head of the Bordeaux node of FBI, adjunct director of FBI in charge of European affairs and French representative at the EuBI ERIC board.

IINS teams have developed an extensive network of collaborations with these centers, thanks in part to the incitative funding proposed by the LabEx BRAIN (Bordeaux Region Initiative for Neuroscience) for transversal projects. BRAIN is an excellence cluster funded for ten years also directed by the IINS director, who is also the coordinator of the project BRAIN 2030 submitted to "Bordeaux Région Aquitaine Initiative for the future of Neuroscience" presently under evaluation. IINS teams also benefit from numerous partnerships with other local institutes and facilities outside the Bordeaux Neurocampus. Complementary to these local partnerships, all IINS teams have developed a network of international collaborations, several of them institutionalized through grants, and international laboratories.

### HCERES NOMENCLATURE AND THEMATICS OF THE UNIT

SVE2 Biologie Cellulaire, Imagerie, Biologie Moléculaire, Biochimie, Génomique, Biologie Systémique, Développement, Biologie Structurale.

### MANAGEMENT TEAM

The research unit is directed by Mr Daniel CHOQUET, Mr Marc LANDRY serving as a deputy director has been replaced by Mr Laurent GROG. At mid-term, Mr Laurent GROG will become director. A steering committee consisting of the individual team leaders meets with the director and deputy director on a bimonthly basis and sets the organizational and scientific policies of the Institute. The director is also assisted by an efficient "general secretary" and several advisory structures.

## UNIT WORKFORCE

Name of the unit: IINS

Active staff	Number 06/01/2020	Number 01/01/2022
Full professors and similar positions	3	
Assistant professors and similar positions	4	
Full time research directors (Directeurs de recherche) and similar positions	10	
Full time research associates (Chargés de recherche) and similar positions	16	
Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	0	
High school teachers	0	
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	26	
<b>Permanent staff</b>	<b>59</b>	0
Non-permanent professors and associate professors, including emeritus		
Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	33	
PhD Students	33	
Non-permanent supporting personnel		
<b>Non-permanent staff</b>	<b>66</b>	
<b>Total</b>	<b>125</b>	0

## GLOBAL ASSESSMENT OF THE UNIT

The IINS benefits from an outstanding management and vision of its director. IINS common objective is to use a wide variety of approaches for the understanding of the functioning of cell-to-cell communication at various levels in the central nervous system in normal conditions, but also in models of neurological disorders. IINS studies revealed new mechanisms that control excitatory synaptic transmission, studied at the molecular, cellular and network level. These findings have allowed to decipher fundamental issues on developmental as well as neurodegenerative diseases. IINS is competitive with the best neuroscience institutes worldwide, and has an international reputation for its contribution to the basic understanding of the central nervous system function at different scales.

Among recent IINS innovative and major achievements one can cite:

- data implementing the statistical laws of the dynamic organization of complex molecular systems at a nanometric scale obtained thanks to the set-up of accurate models (bio-mimetic cell contacts, synapses, adhesion sites).
- description of the basic mechanisms underlying the establishment and function of excitatory synaptic transmission in the nervous system in normal and pathological conditions.
- use of this acquired knowledge to decipher mechanisms at play at the network level, in brain adaptive functions and their dysfunctions in pathological situations.

IINS outstanding quality is reflected by :

- the extremely successful funding records of all the teams on competitive grants and networks (ANR, PIA, FRM, FRC, Regional Council, European Research Council representing approximately 55 % of the IINS consolidated budget including permanent salaries, the IINS resources from competitive calls have increased by 32 % over the term (4.7 M€ in 2016 versus 6.2 M€ in 2019);

- the attribution of international and national awards e.g., Prix Jerphagnon 2017 (team leader Team 14), Prix Jansen 2018 (member of Team 6), Fullbright Fellowship 2018 (team leader Team 2);

- the editorial activities, invitations to write reviews and keynote lectures to international meetings (e.g., Presidential lecture USA Neuroscience meeting team 4 in 2018, Gordon conferences);

- the involvement in training through research e.g., 36 defended PhD, team leader Team 7 is the founder and director of the Bordeaux School of Neuroscience (BSN), coordinator of the Bordeaux Neurocampus Graduate Program);

- the attraction of high-profile new investigators (Teams 9,10,11,13), the creation of two start-up companies REFLECT and Corlieve Therapeutics, and of a joint academic-private (ALVEOLE) new team (Team 14). IINS also plays an important role in the local environment (e.g., coordination of LabEx BRAIN).

What is distinct for IINS is its interdisciplinarity and strategy shared by all IINS teams. Since its creation, IINS has developed cutting edge methods and investigation tools dealing with imaging but also with molecular and structural biology, physiology, chemistry, physics and computer science which create dynamism and genuine synergy within the Institute. The IINS has proven to be highly productive over the review period, with scientific output exhibiting extreme creativity and scientific rigor. IINS disseminates their approaches by making them available to the community through world class imaging core facilities and by being significantly active in training activities and industrial technological transfer. The smooth transition to a new director sharing a similar research vision, combined with recruitments of high-profile young team leaders bringing competences in the integrative field or structural biology, ensures that this institute is poised for an exciting period of discovery in the years ahead.

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