

FINAL RESUME ON THE RESEARCH UNIT: Research Center on Animal Cognition - CRCA

UNDER THE SUPERVISION OF THE FOLLOWING INSTITUTIONS AND RESEARCH BODIES:

Université Toulouse 3 - Paul Sabatier - UPS
Centre National de la Recherche Scientifique -
CNRS

EVALUATION CAMPAIGN 2019-2020 GROUP A



In the name of Hcéres¹:

Nelly Dupin, acting
President

In the name of the experts committee²:

Darren Croft, 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 data submitted by the supervising body on behalf the unit.

UNIT PRESENTATION

Unit name:	Research Center on Animal Cognition
Unit acronym:	CRCA
Current label and N°:	UMR 5169
ID RNSR:	200311842N
Application type:	Renewal
Head of the unit (2019-2020):	Ms Claire RAMPON
Project leader (2021-2025):	Ms Claire RAMPON
Number of teams and/or themes:	5

EXPERTS COMMITTEE MEMBERS

Chair:	Mr Darren CROFT, University of Exeter, United Kingdom
Experts:	Ms Anne-Émilie ALLAIN, CNRS Bordeaux (supporting personnel)
	Ms Olga CORTI, Sorbonne Université
	Mr José HALLOY, Université de Paris
	Ms Elli LEADBEATER, Royal Holloway University of London, United Kingdom
	Ms Chantal MATHIS, CNRS Strasbourg (representative of CoNRS)
	Mr Alain TREMBLEAU, Sorbonne Université (representative of CNU)

HCÉRES REPRESENTATIVE

Ms Céline SOUCHAY

REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr ARLAT, University of Toulouse

Mr Bernard POULAIN, CNRS

Mr VALENTIN, University of Toulouse

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The Research Centre on Animal Cognition (CRCA) was founded in 2003 and is located at the University Paul (UPS) Sabatier in Toulouse. Since its creation, CRCA has been under the institutional supervision of both the UPS and the National Centre of Scientific Research (CNRS). Over the review period 2016-19 CRCA has been part of The Centre for Integrative Biology (CBI) at UPS which has provided shared technical and administrative resources. Over this period the financial management of the CRCA has also been shared with the CBI Federation

The unit has previously been reviewed four times during which time it was under the directorship of M. Giurfa. The last review was conducted in 2014. During the review period, the unit has changed in structure from having three teams to 5 teams. This was achieved through the formation of a new team - IVEP (inter-individual Variability and Emergent Plasticity) and by incorporating the team MINDING (mitochondria - & experience-dependent plasticity, neurodegeneration) which was previously part of another research unit (The Center of Development Biology, Toulouse) into CRCA. This growth and expansion have further strengthened the multi-disciplinary and multi-level approach of the CRCA.

Looking forward the CRCA will continue to be organised into five teams focused on the multi-disciplinary study of the phenotypic and experience-dependent plasticity underlying cognition.

MANAGEMENT TEAM

Over the review period the management team has consisted of C. Rampon as director with M. Giurfa and R. Jeanson acting as deputy directors. Over the next project period the management team will consist of C. Rampon as director and R. Jeanson as deputy director.

HCÉRES NOMENCLATURE

SVE4.

THEMATICS

The unit is organised into five research teams which take a multi-disciplinary approach to the study of phenotypic and experience-dependent plasticity underlying cognition. The first team MINDING (Mitochondria- & experience-dependent plasticity, neurodegeneration), studies the contribution of mitochondrial plasticity to neuronal plasticity and investigates how lifestyle modulation can provide neuroprotection. The second team REMEMBeR (Revealing Memory Mechanisms of the Brain), examines the formation of enduring memories in the brain, and how environmental factors influence these processes. The third team ExPlaln (Experience-Dependent Plasticity in Insects), examines the rules and mechanisms underlying the cognitive richness of insect models. The fourth team IVEP (Inter-individual Variability and Emergent Plasticity), investigates the mechanistic determinants of phenotypic plasticity and variability across different biological scales. The final team CAB (Collective Animal Behaviour), investigates collective processes in both group-living animals and humans and how social groups interact to coordinate their actions and solve problems.

UNIT WORKFORCE

Research Center on Animal Cognition		
Active staff	Number 06/30/2019	Number 01/01/2021
Full professors and similar positions	6	5
Assistant professors and similar positions	12	11
Full time research directors (Directeurs de recherche) and similar positions	4	4
Full time research associates (Chargés de recherche) and similar positions	11	10

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)	15	13
Permanent staff	48	43
Non-permanent professors and associate professors, including emeritus	2	NA
Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	25	NA
PhD Students	65	NA
Non-permanent supporting personnel	178	NA
Non-permanent staff	270	NA
Total	318	43

GLOBAL ASSESSMENT OF THE UNIT

The CRCA is an extremely competitive research unit in the study of individual learning, memory and collective behaviour and is one of the largest and most internationally recognised unit in the study of animal cognition. The unit has a very good organisational structure which ensures that all staff have a voice in important matters relating to the unit. The unit provides a stimulating environment for research and education through its regular seminars, symposia and staff training. The unit as a whole has an outstanding record of publication in high-level journals (e.g., *Science*, *Brain*, *PNAS*, *Current Biology*). The CRCA has an outstanding track record of winning prestigious and highly competitive national (National research Agency, CNRS momentum) and international funding (e.g., European Research Council, European Joint Program and the Human Frontier Science Program). A considerable strength of the unit is the breadth of research in terms of the questions and multilevel approaches it uses. The research teams are highly complementary and allow for the study of cognition across all levels of biological organisation, from the level of the cell to animal societies.

The CRCA has a high level of national and international recognition which is evidenced by unit members been awarded many distinctions and prizes at all levels, numerous invitations to speak at international conferences, organisation of international and national collaborative networks and symposia. The high level of international recognition makes the unit an attractive environment for both international PhD students and post-docs. The research strategy of the CRCA is driven by basic science, it has however delivered high-quality socio and economic impact. Links with industry have recently been strengthened which have opened up new funding opportunities from pharmaceutical industries and private companies. Education and training are a key priority for the CRCA and members of the unit have an active role in the planning, development, management and delivery of teaching across all levels. This includes membership of six Master and Bachelor programs. The unit has an excellent track record in its training of Doctoral students.

The proposed project represents an integrated, dynamic and exciting research program which will focus on the processes and rules governing plasticity related to cognitive processes. A considerable strength of this project is the multilevel approach that it will take to addressing this objective which ranges from cells to individuals to animal societies. The combination of biological models used by the CRCA is a further strength which underpins the ability of the research team to address their research questions at different levels of biological organisation.

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