EthoS - Éthologie animale et humaine

Rapport Hcéres

HCERES

High Council for the Evaluation of Research and Higher Education

Research units

HCERES report on research unit:

Animal and human ethology

EthoS

Under the supervision of the following institutions and research bodies:

Université de Rennes 1

Centre National de la Recherche Scientifique - CNRS

Université de Caen Basse-Normandie - UCBN

Evaluation Campaign 2015-2016 (Group B)

HCERES

High Council for the Evaluation of Research and Higher Education

Research units

In the name of HCERES,[1]

Michel Cosnard, president

In the name of the experts committee,[2]

Donald Broom, 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 sole result of evaluation by the expert committee, the composition of which is specified below.

The assessments contained herein are the expression of an independent and collegial reviewing by the committee.

Unit name:	Animal and human ethology
Unit acronym:	EthoS
Label requested:	UMR
Current number:	6552
Name of Director (2014-2016):	Mr Alban LEMASSON
Name of Project Leader (2017-2021):	Mr Alban LEMASSON

Expert committee members

Chair:	Mr Donald BROOM, University of Cambridge, UK
Experts:	Ms Audrey DUSSUTOUR, Université Paul Sabatier Toulouse 3 (representative of the CoNRS)
	Mr Gilles GHEUSI, Université Sorbonne Paris 13 (representative of CNU)
	Ms Christelle LEMOINE-LARDENNOIS (representative of supporting personel)
	Ms Sarah VICK, University of Stirling, UK
Scientific delegate representing the HCERES:	
	Mr Jean-François HOCQUETTE
Representatives of supervising institutions and bodies:	
	Ms Anne GUESDON, University of Caen-Basse Normandie
	Mr Claude LABIT, University of Rennes 1
	Mr Bernard POULAIN, CNRS INSB
Heads of Doctoral Schools:	Mr Alain OURRY, Doctoral School n°497 “École Doctorale Normande Biologie Intégrative, Santé, Environnement - ED NBISE”
	Ms Nathalie THERET, Doctoral School n°092 “Vie-Agro-Santé, Rennes – ED VAS”

1 • Introduction

History and geographical location of the unit

The EthoS research unit has a long history of expertise in the study of animal (since the 50's) and human (since the 70's) behaviour. It was created in 1955 by Mr Gaston RICHARD. At that time, the research unit included approximately 10 members and was housed in Rennes city centre. In the 60's, the lab moved to Rennes 1 University campus (Beaulieu). In 1967, some staff members moved to the Station Biologique de Paimpont, a "field" station of Rennes 1 University, about 50 Km west of Rennes, where a housing facility for non-human primates was built. After 14 years of direction by Ms Martine HAUSBERGER, Mr Alban LEMASSON took the lead in 2014. Currently, EthoS includes approximately 50 members: 28 permanent staff (5 CNRS researchers, 10 faculty researchers, and respectively 6 and 7 CNRS and faculty technical and administrative staff), one third are based at Paimpont and two thirds at Rennes. For the next contract, EthoS proposes to restructure slightly by integrating another team of ethologists (i.e. 4 faculty researchers, 3 technical staff) who are currently and will continue to be based at Caen University.

Management team

The current director, Mr Alban LEMASSON, will continue to assume this role during the 2017-2021 contract. He was elected by all the members of the EthoS unit council. The director presides over this unit council, which is composed of 14 people and advises him on important decisions. This council is systematically opened for discussions to all researchers (CNRS and faculty members) and, according to topic, also opened to other staff members (e.g. financial manager). The council meets on average once a month to discuss scientific policy and recruiting (researchers, technical staffs, PhD students) priorities, budget organization and any particular request and need concerning unit life (e.g. training actions, internal rules, health and safety actions). Every important decision is discussed and voted upon by secret ballot during the council meetings. Moreover, for confidential and urgent matters as well as to schedule the inter-team working programme of some technical staff members, the director consults all team leaders (Ms Catherine BLOIS-HEULIN, Ms Sophie LUMINEAU, Ms Martine HAUSBERGER), functioning as a directing board. In addition Mr Alban LEMASSON is supported by an assistant director, Ms Sophie LUMINEAU.

HCERES nomenclature

Main subdomain: SVE1_LS5

Secondary subdomains: SVE2-LS8, SVE1 LS6

Scientific domains

EthoS has a clear "Ethology" disciplinary identity. All investigations are centred around a common aim to understand animal and human behaviour, that is, organism-environment relationships based on comparative and integrative approaches. EthoS investigations are all guided by the four questions defined by the ethologist Mr Nikolaas TINBERGEN, i.e. ontogeny, causality, function and evolution of behavior. EthoS' research projects aim to improve the understanding of how and why social relationships, communication abilities and cognitive processes in particular change and interact during individual development and species evolution. Integrative and comparative approaches lead EthoS to investigate the physiological and neurological mechanisms underlying behavioural expressions and intra- and inter-individual as well as intra- and inter-species behavioural variations. Evolutionary approach combines homology and homoplasy as potential motors of evolution. In particular, EthoS concentrates on functional convergences, through a large comparison between phylogenetically distant species living under similar, notably social, constraints. For this, the biological models of the EthoS research teams include species that are phylogenetically diverse and socially more or less complex and varied. EthoS investigations focus on a broad range of models: invertebrates (spiders), birds (non-singing: gallinaceans, singing: oscines), terrestrial (horses) and aquatic (cetaceans and otters) mammals, as well as non-human (new world and old world monkeys and apes) and human primates. Functional investigations involve observing individuals under both captive free-ranging conditions and experimental, controlled environment conditions. In ways adapted to the different study species, EthoS researchers question how social factors, as well as other environmental factors, influence emotional and social development (prenatal and postnatal experience, early experience and long-term consequences), communication modality (visual, chemical, vocal and gestural) and complexity (signal variability, flexibility and plasticity, signal production, usage, perception and comprehension) and cognitive processes (brain processing and structuring, hemispheric laterality) and human and animal well-being. The importance of sociality during individual development and species evolution is

investigated at a very broad level by studying intraspecific (parental, sexual and social bonds), as well as interspecific (association between different vertebrate species, human – domestic animal interactions) relationships.

Unit workforce

Unit workforce ("Full Time Employee" (FTE) between brackets).	Number on 30/06/2015	Number on 01/01/2017
N1: Permanent professors and similar positions	10 (4.90)	15 (7.40)
N2: Permanent researchers from Institutions and similar positions	5 (4.70)	4 (3.70)
N3: Other permanent staff (technicians and administrative personnel)	13 (10.80)	15 (13.10)
N4: Other professors (Emeritus Professor, on-contract Professor, etc.)		
N5: Other researchers from Institutions (Emeritus Research Director, Postdoctoral students, visitors, etc.)		
N6: Other contractual staff (technicians and administrative personnel)	5 (4.1)	
N7: PhD students	11	
TOTAL N1 to N7	**44 (35.5)**	
Qualified research supervisors (HDR) or similar positions	9	

Unit record	From 01/01/2010 to 30/06/2015
PhD theses defended	19
Postdoctoral scientists having spent at least 12 months in the unit	6
Number of Research Supervisor Qualifications (HDR) obtained during the period	2

2 • Overall assessment of the unit

Introduction

The main scientific research is ethology and development of the nervous system with some work on brain function. The subject matter is a wide range of species including humans. This has not changed greatly since the last report but the cephalopod group is now being incorporated in EthoS.

Global assessment of the unit

The unit has a long-standing international reputation in ethology. It continues to be coherent and well organised. EthoS is publishing well with respect to the number of publications appearing in ISI-listed peer- reviewed journals. The unit has been successful to publish in high-ranking journals such as *Journal of Experimental Biology*, *Animal Behaviour* and *Proceedings of the Royal Society*. While the number of publications is relatively low for some

unit members, others are very prolific and there are many publications in high-ranking journals. It is not easy for those writing papers on ethology to get them published in journals that are high profile but tend to focus on molecular biology, astrophysics or breakthroughs in human medicine.

The whole unit has a high level of international visibility and is well connected with other groups nationally and internationally. There is a good balance of pure and applied research and evidence of innovation in both aspects.

The extent of work publicising the research results in popular publications and other media outputs is unusually good for an academic research group and this is commendable.

Strengths and opportunities in the context

The main strength of the group is the high scientific quality of most of the publications. The group has extensive collaborations and publicises some aspects of its work well to the general public. The opportunity to extend the area of work, in relation to brain function and species studied, by amalgamating with the cephalopod group from Caen is valuable and should be mutually beneficial.

Weaknesses and threats in the context

The expert committee considers that the current policy of trying hard to get publications in high quality journals is the right one but there are opportunities to improve this. The unit success relies greatly on the excellent performance of a very small number of people so there is a risk to the group if any of these leave.

Although the group from Caen should strengthen the unit, there can be difficulties with multi-site groups so there is a threat to deal with in managing this situation.

Recommendations

It is important to have a clear strategy to integrate the cephalopod group from Caen into the unit. This group is influential and well regarded in the scientific world so its presence enhances EthoS. Efforts should be made to learn from that group and to work together with its members. In general, groups located on two or more relatively distant sites are less successful that those with the close and frequent contacts that are only possible with offices and laboratories near one another. The Caen group needs laboratories with running seawater so could not move to Rennes at present. Hence there should be frequent group meetings and seminars on both sites.

The most demanding work of the unit should be distributed among more people so that there is less dependence on small numbers of individuals who are also very productive scientifically. Efforts should be made to recruit more international post-doctoral researchers to work in the unit.