RS2GP - Rongeurs sauvages, risques sanitaires et gestion des populations

Rapport Hcéres

HCERES

High Council for the Evaluation of Research
and Higher Education

Research units

HCERES report on research unit:

Rongeurs Sauvages, Risques sanitaires et Gestion des Populations

RS2GP

Under the supervision of the following institutions and research bodies:

VetAgroSup

Evaluation Campaign 2014-2015 (Group A)

HCERES

High Council for the Evaluation of Research
and Higher Education

Research units

In the name of HCERES,[1]

Didier HOUSSIN, president

In the name of the experts committee,[2]

Herwig LEIRS, 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 result of the evaluation by the experts committee, the composition of which is specified below.

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

Unit name:	Rongeurs Sauvages, Risques sanitaires et Gestion des Populations
Unit acronym:	RS2GP
Label requested:	USC
Present no.:	1233
Name of Director (2014-2015):	Mr Etienne BENOIT
Name of Project Leader (2016-2020):	Mr Etienne BENOIT

Expert committee members

Chair:	Mr Herwig LEIRS, Universiteit Antwerpen, Belgium
Experts:	Mr Jean-Francois FAUCHER, CHRU de Besançon
	Ms Virginie SIGURET, Université Paris Descartes

Scientific delegate representing the HCERES:

Mr Gabriele SORCI

Representatives of the unit's supervising institutions and bodies:

Ms Emmanuelle CANET-SOULAS (representative of the Doctoral School « École Doctorale Interdisciplinaire Sciences-Santé » - EDISS - n°205)

Mr Thierry PINEAU, INRA

Mr Thierry ROGER, VetAgroSup

1 • Introduction

History and geographical location of the unit

The unit was formerly focused on mycotoxin toxicology of xenobiotics, but the research areas moved over the past decade to the study of resistance against anticoagulant rodenticides. After the previous report (2009) the research on mycotoxins was dropped and in 2013 a team studying rodent-borne diseases joined the unit. The name of the unit was accordingly changed to RONGEURS SAUVAGES, RISQUES SANITAIRES ET GESTION DES POPULATIONS in 2013. The research unit is located at VetAgroSup (formerly Lyon Veterinary School).

Management team

The unit consists of two teams and is managed by one director (Mr Etienne BENOIT) and two team leaders.

HCERES nomenclature

Principal : SVE1_LS1 Biologie moléculaire et structurale, biochimie

Secondaire : SVE1_LS6 Immunologie, microbiologie, virologie, parasitologie

SVE2_LS8 Evolution, écologie, biologie des populations

Unit workforce

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
N1: Permanent professors and similar positions	12	11
N2: Permanent researchers from Institutions and similar positions		
N3: Other permanent staff (without research duties)	9	8
N4: Other professors (Emeritus Professor, on-contract Professor, etc.)		
N5: Other researchers (Emeritus Research Director, Postdoctoral students, visitors, etc.)	1	1
N6: Other contractual staff (without research duties)	5	4
TOTAL N1 to N6	**27**	**24**

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
Doctoral students	9	
Theses defended	10	
Postdoctoral students having spent at least 12 months in the unit	1	
Number of Research Supervisor Qualifications (HDR) taken	3	
Qualified research supervisors (with an HDR) or similar positions	7	7

2 • Overall assessment of the unit

Global assessment of the unit

The unit consists of two teams "Resistance to anti-Vitamin K (AVK)" and "Leptospirosis" that have a common base through their link with wild rats. The teams differ in size and maturity and the transversality is limited, therefore the assessment of the unit as a whole should be interpreted with care. Both teams address independent research questions, in both cases there is a mix of basic studies, applied issues and collaborations with industry. The range of activities is broad, particularly for a group of this size, but both teams have a strong reputation and national and international networks. The productivity in terms of scientific publications is average, but this can be explained by the dissemination restrictions required by the excellent industry collaborations. The unit successfully participates in the education of MSc and PhD students.

Strengths and opportunities in relation to the context

The unit has a very good reputation, good networks and visibility and there is an excellent collaboration with the industry. The multidisciplinary research topics allow for flexibility in addressing new aspects as the scientific domain develops.

The unit has a rather unique position in France, and at the European level, in focusing on wild rodents, combining aspects of public health with rodent control and the ecotoxicity considerations linked to that.

A valuable unique asset is the collection of different strains of AVK rodenticide resistant rats which offers opportunities for studies on alternative rodenticides. Resistance against anticoagulant rodenticides is an increasing problem in Europe and since the unit is one of the rare and, in any case, most active groups studying this phenomenon, the unit can further strengthen its leader position in Europe. Since the resistance against AVK anticoagulants shares similar mechanisms in humans, the collaboration with medical research also offers further opportunities for the future.

Weaknesses and threats related to the context

The two teams are, on their own, fairly small (particularly the leptospirosis team) which may constitute a risk for their persistence.

The research vision for the teams separately and particularly for the unit as a whole requires further elaboration.

The age pyramid of the unit is cause of some concern because the mean age of the faculty in the unit is above 50 (but the team leaders are younger). Nearly all faculty are assistant professors with a heavy teaching load, with no dedicated research professors. The technical staff has been gradually decreasing.

Recommendations

The unit should consider whether both teams get sufficient added value out of being part of a joint unit, in addition to the shared biological systems (=rats). There should be a continued attention for more synergic and transversal collaboration between the teams.

The unit must consider increasing the capacity in molecular epidemiology, which will improve the link between rodent control and rodent disease research. The opening of a position in molecular epidemiology has been decided, but the unit must make sure that the appointed assistant professor will be affiliated to the unit, on site; such person will further increase the links with the EPIA unit in Clermont-Ferrand. The unit should also include population dynamics and population genetics into the expertise by strengthening collaboration with experts in these fields.

The unit should work on its international visibility, which is lagging a bit behind given the excellent quality of the research. Efforts should be made to attract more international PhD-students and postdocs and increase the international atmosphere in the unit, including opportunities for the students to practice English language skills. The successful attention for increasing the publication profile (higher IF journals) must be maintained and can be strengthened even further (aiming for papers with a larger impact on the scientific community, stressing the importance of the results for paradigm shifts).

The unit should ensure continued technical staff capacity, in view of coming retirements, and ensure its availability for research activities.