Research evaluation

FINAL RESUME ON THE RESEARCH UNIT:

Interactions hôtes-agents pathogènes (IHAP)

UNDER THE SUPERVISION OF THE FOLLOWING INSTITUTIONS AND RESEARCH BODIES:

École nationale vétérinaire de Toulouse - ENVT
Institut National de la Recherche Agronomique - INRA

EVALUATION CAMPAIGN 2019-2020
GROUP A

Report published on April, 27 2020

In the name of Hcéres[1]:

Nelly Dupin, Acting President

In the name of the experts committee[2]:

Prof. Dr. W.H.M. Van der Poel, 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:	Interactions hôtes-agents pathogènes
Unit acronym:	IHAP
Current label and N°:	UMR 1225
ID RNSR:	198117930B
Application type:	Renewal
Head of the unit (2019-2020):	Ms Christine CITTI
Project leader (2021-2025):	Ms Christine CITTI
Number of teams and/or themes:	3

EXPERTS COMMITTEE MEMBERS

Chair:	Mr Wim VAN DER POEL, Wageningen University and Research, Netherlands
Experts:	Ms Anne BALKEMA-BUSCHMANN, Friedrich-Loeffler-Institut, Germany
	Mr Baptiste MONSION, Inra Maisons-Alfort (supporting personnel)
	Ms Tatiana ROCHAT, Inra Jouy-en-Josas (representative of Inra CSS)
	Mr Tony WILSMORE, University of Reading, United Kingdom

HCÉRES REPRESENTATIVE

Ms Birke BARTOSCH

REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Ms Nicole HAGEN, Ecole Nationale Vétérinaire de Toulouse

Mr Pierre SANS, Ecole Nationale Vétérinaire de Toulouse

Ms Murielle VAYSSIER TAUSSAT, Inra

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

IHAP was created in 2003 by fusion of the UMR959 "Pathology of infectious and parasitic diseases of ruminants" and the UMR960 "Molecular Microbiology". IHAP laboratories are located at the National Veterinary School of Toulouse (ENVT) campus. The unit is under the supervision of Animal Health division of Inra and ENVT and is part of the Federal University of Toulouse. In 2009, IHAP and Idele created a Joint Targeted Unit comprising six groups. By its expertise in animal infectious diseases, IHAP is part of an EquipEx (the "Aninfimip" project). Housing buildings have been refurbished from 2014 to 2016. In connection with this refurbishing activity, IHAP groupsworking with highly infectious agents have been placed in the proximity of the BSL3 facilities. The administrative support team is housed in a separate building together with one full scientific group (group 6) and a part of one other scientific group (group 4). IHAP has access to several platforms and technological facilities located and managed by the Toulouse Inra Center. These platforms are part of the regional Genotoul network and of national infrastructures. IHAP is a contributing member of the Genotoul network via the platform Axeplo for animal phenotyping.

MANAGEMENT TEAM

IHAP is managed by Christine CITTI, appointed in 2015. Mathilde PAUL joined in 2016, as co-Chair.

HCÉRES NOMENCLATURE

SVE 3_1; SVE3_4; SVE6_2.

THEMATICS

IHAP research relates directly or indirectly to infectious/transmissible diseases caused by typical (virus, bacteria and parasites) or atypical pathogens (prions). The unit is currently organised in six scientific groups contributing to three broad research themes: theme 1: Evolution, plasticity and emergence of pathogens; theme 2: Understanding infectious process and the host response; and theme 3: Contribution to a better control of diseases assessment and reliability of diagnostic methods.

The first theme includes biodiversity and molecular factors involved in pathogenicity. Theme 2 includes pathogen dynamics within and in relation to the host, and immune response mechanisms, etc. Theme 3 is about disease control and diagnostics and also includes epidemiology, resilience and development of methods alternative to drug treatments. With the aim to reduce treatment and prevent antibiotic resistance, the unit also develops strategies to (i) preserve health (*i.e.,* production of resistant and robust animals via genetic selection, nutrition or immuno-training rather than treating), (ii) promoting animal welfare in relation to health (according to the WHO definition) and the farmers' behaviours/beliefs or economic welfare.

UNIT WORKFORCE

Name of the unit Host-Pathogens Interactions		
Active staff	**Number 06/30/2019**	**Number 01/01/2021**
Full professors and similar positions	10	9
Assistant professors and similar positions	13	13
Full time research directors (Directeurs de recherche) and similar positions	5	5
Full time research associates (Chargés de recherche) and similar positions	4	3
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)	27	29
Permanent staff	**59**	**59**
Non-permanent professors and associate professors, including emeritus	0	
Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	7	
PhD Students	22	
Non-permanent supporting personnel	0	
Non-permanent staff	**29**	**0**
Total	**88**	**0**

GLOBAL ASSESSMENT OF THE UNIT

The IHAP unit has a strong expertise and an international reputation in the field of infectious diseases including prion diseases, as well as animal health with focus on ruminants and poultry. During the evaluated period, the unit proved to be very active with excellent scientific outputs and training. The IHAP unit demonstrates the development of innovative science, particularly that using new technologies, especially those of molecular biology. It is impressive how the different groups in IHAP are collaborating and working together, also how IHAP is working with and getting support from other groups at the local, national and international levels, *e.g.,* Oxford Nanopore Technologies.

There is a balance in IHAP between research on endemic diseases, such as pneumonias, parasitic gastro-enteritis and mastitis, which have perennial economic effects on the one hand, and emerging and/or epidemic disease, some with zoonotic potential on the other hand. The innovative research being done on these pathogens by IHAP proves to be very important. By integrating the 'One Health-One welfare' concept and the role of the microbial communities to host-pathogen interactions studies, the future project of IHAP is perfectly in line with the main scientific priorities of Inra and ENVT and should allow the unit to tackle new societal challenges.

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