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AMAROC - Cancers animaux modèles pour la recherche en oncologie comparée

Rapport Hcéres

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HCERES

High Council for the Evaluation of Research
and Higher Education

Research units

HCERES report on research unit:

Animal cancers as Models for Research in comparative
OnCology
AMaROC

Under the supervision of
the following institutions
and research bodies:

ONIRIS - École Nationale Vétérinaire, Agroalimentaire
et de l'Alimentation, Nantes Atlantique

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

Guus VAN DONGEN, chairman of the committee

Under the decree No.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 cancers as Models for Research in comparative OnCology

Unit acronym: AMaROC

Label requested: UPR

Current number:

**Name of Director
(2015-2016):** Mr Jérôme ABADIE

**Name of Project Leader
(2017-2021):** Mr Jérôme ABADIE

Expert committee members

Chair: Mr GUUS VAN DONGEN, VU University Medical Center, Amsterdam, The Netherlands

Experts: Mr Pascal BOIREAU, ANSES Maisons Alfort (representative of the CNECA)

Mr Jean-Ehrland RICCI, University of Nice

Scientific delegate representing the HCERES:

Mr Jean ROSENBAUM

Representative of supervising institutions and bodies:

Ms Dominique BUZONI-GATEL, École Nationale Vétérinaire, Agroalimentaire et l'Alimentation Nantes-Atlantique, ONIRIS

Head of Doctoral School:

Mr Bruno LE BIZEC, École Doctorale Biologie Santé Nantes Angers, ED n° 502

1 • Introduction

History and geographical location of the unit

The AMaROC research unit (Animal cancers as Models for Research in comparative OnCology) officially emerged on the 1st of January 2012 after the last national evaluation procedure. The unit is located in Oniris - Nantes Atlantic National College of Veterinary Medicine, Food Science and Engineering, site Chantrerie (where the veterinary school, platforms and hospital are located). AMaROC's domain of research is comparative oncology, i.e. naturally occurring cancers in dogs and cats as models for research and advancements in human medicine. At the time of emergence, the AMaROC unit brought together several competences from several complementary fields. This includes veterinarians and physicians associated to multi-domain scientific competences, such as biology, pathology, clinical practice and physics in order to favor translational researchers in oncology. The team participates in DGER ("Direction Générale de l'Enseignement et de la Recherche" from the Ministry of Agriculture).

Management team

This is a small team where the direction team is composed by the director assisted by the senior scientists responsible for the 3 research axes.

HCERES nomenclature

SVE1_LS4 Physiologie, physiopathologie, biologie systémique médicale

SVE1_LS7 Epidémiologie, santé publique, recherche clinique, technologies biomédicales

Scientific domains

Spontaneous animal cancers; dosimetry in nuclear oncology; preclinical trials in domestic animals.

Unit workforce

| Unit workforce | Number on 30/06/2015 | Number on 01/01/2017 |
|---|----------------------|----------------------|
| N1: Permanent professors and similar positions | 5 | 5 |
| N2: Permanent researchers from Institutions and similar positions | 2 (0.6FTE) | 2 (1.2FTE) |
| N3: Other permanent staff (technicians and administrative personnel) | 4 (2.2FTE) | 4 (2.2FTE) |
| 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) | 3 (2.2FTE) | |
| N7: PhD students | 3 | |
| TOTAL N1 to N7 | 17 | |
| Qualified research supervisors (HDR) or similar positions | 1 | |

| Unit record | From 01/01/2010 to 30/06/2015 |
|---|-------------------------------|
| PhD theses defended | 4 |
| Postdoctoral scientists having spent at least 12 months in the unit | 1 |
| Number of Research Supervisor Qualifications (HDR) obtained during the period | |

2 • Overall assessment of the unit

Introduction

The research of the unit has a unique position and expertise, and tight connections with local partners for 3 research areas (axes): (1) studies to look for pathophysiological homology between spontaneous canine and feline cancers and human cancers, with focus on mammary cancer, glioma and diffuse large B-cell lymphomas; (2) studies related to dosimetry in nuclear oncology, aiming at the improvement of dosimetric methods and the assessment of dose-effect relationships in internal radiation therapy; (3) development of a cutting edge translational infrastructure for preclinical trials in domestic animals, according to guidelines and standards as used in human medicine.

Global assessment of the unit

AMaROC is providing a unique environment for preclinical research *in vivo* and has a strong unique national position in the veterinary field. Because of this, important partnerships have been established, while three INCa projects were obtained. AMaROC is a small team with a light organization. Each of the 3 axes is well defined, with at

least 6 team members involved, and with well-chosen strategic collaborations. Also the interaction between the different axes is sound. A plan is available for strategic, operational and scientific meetings. The scientific agenda is evolving in time. There is a good interaction between AMaROC and CRIP (“Centre de Recherche et d’Investigation Préclinique”), which is important for the availability of infrastructure/equipment/platforms. There is no formal contract between these two structures.

Within the team everything is well organized, everybody knows what to do and expect. Despite the fact that they are located in different buildings, the communication is fluid between the members.

Strengths and opportunities in the context

- strong network and biobanking;
- capacity to manage large cohorts;
- attempt for in-depth characterization of models;
- setting up very attractive imaging infrastructure;
- strong connection with the CRCNA (“Centre de Recherches sur le Cancer de Nantes-Angers”);
- synergy between various competences: excellent expertise in clinical management of cancer in animals;
- very good fund raising.

Weaknesses and threats in the context

- diversity of projects. For each project the question should be asked: do canine and feline tumor models provide added value?
- publication output needs improvement in numbers and quality;
- staffing is mainly based on young researchers with a heavy teaching load.

Recommendations

- implement a more “publication directed policy”: get more, faster and better publications;
- try to obtain an IBISA label for the biobank;
- obtain several additional habilitations (HDR), enabling the supervision of more PhD projects;
- try to establish and/or participate in European/international networks (e.g. COSTS);
- increase the number of persons in research.