



The ICLAS Laboratory Animal Science Training Fellowship Report

Awardee:	Dr. Gabriela Dumitrita STANCIU (DMV, PhD) Scientific researcher and Head of the Animal Facility Unit of the Advanced Center for Research and Development in Experimental Medicine (CEMEX), part of the "Grigore T. Popa" University of Medicine and Pharmacy Iasi, Romania
Host institution:	UMS 28 Phenotypage du Petit Animal, Faculty of Medicine, Sorbonne University, Paris, France
Period:	November 29 - December 11, 2021

Towards a more in-depth understanding of compliance programs and regulatory frameworks on the care and use of laboratory animals in research and education, I started my ICLAS training fellowship with the 46th Conference "*Expérimenter c'est aussi anticiper*" of AFSTAL (*L'Association Française des Sciences et Techniques de l'Animal de Laboratoire*).

The conference began with a session that looked at the place of animals in the progress of research to meet the expectations of society. Then, all the other sessions were dedicated to "anticipation in the broad sense in order to carry out the projects" with a particular focus on the variability factors, ethical reflection in project design, implementation of protocols, their reproducibility and the anticipation of unforeseen events up to crisis management. In order to discover the latest news on materials and services in the field of laboratory animal sciences, the scientific program was complemented by a trade exhibition of their suppliers and distributors.

The second part of my fellowship program conducted at UMS 28 Phenotypage du Petit Animal, Faculty of Medicine, Sorbonne University focused on an extensive training to boost my knowledge in laboratory and experimental design (in health and disease) in relation to the species that are intended to be used, in a transversal approach that promotes medical and scientific collaborations and accelerates the discovery of innovative therapeutic strategies.



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The SOPF (*Specific Opportunist and Pathogen Free*) rodent facility dedicated to the breeding and housing of transgenic strains for various areas of research like genetics, neuroscience, cardiovascular function study, myology or COVID-19 strongly enriched my know-how in technical and operational requirements of its specialized function. The Biological Safety Level 3 Platform, an infrastructure developed to meet research needs on highly-pathogenic microorganisms, adapted for handling airborne risk-group 3 pathogens such as: *SARS-CoV2*, *Mycobacterium leprae* or *Mycobacterium tuberculosis*; it brought me added value in enriching this knowledge.

In the imaging research platform, evaluation of specific radiolabeled peptides with gallium-68 using PET-CT (*Positron Emission Tomography - Computed Tomography*) on tumor mouse models to determinate the targeting and biodistribution of drugs to verify their applicability in disease localization and staging or therapy control gave me the opportunity to better understand the role of these biological tools for tumor receptor imaging and targeted radionuclide therapy.

Within the myology platform, a preclinical laboratory for the study of muscles and their pathologies, I was able to see how to perform an electromyography and a complete gait analysis for quantitative assessment of footfalls and locomotion in mice.

In addition, I had the occasion to get acquainted with the process of embryos transfer by surgical procedures to mice; its risks, precautions and success rate.

The functional exploration platform dedicated to the study of the mechanism of cardiac dysfunctions through invasive and non-invasive assays assessing cardiovascular parameters in anesthetized or conscious free-moving animals helped me to refine my knowledge in transthoracic echocardiography (systolic and diastolic function), cardiac hemodynamic and electro-cardiograms.

In the end, I would like to express my deep gratitude to the European Regional Committee of the International Council for Laboratory Animal Science for having granted my training fellowship, Prof. Serban Zaharia MOROSAN for hosting me, as well as his amazing team for warm welcome and great science share.



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