
UMR 703 PAnTher-Animal Pathophysiology and BioTherapy for muscle and nervous system diseases, recruits an engineer in photonic microscopy for applications in biology. Contract for one year, recruitment as soon as possible.

Job title : Microscopy Engineer/Microscopist (M/F)

Description of the mission

The engineer will support APEX by maintaining different state of the art wide-field, confocal, multispectral, multiphoton and super-resolution (STORM/PALM/AiryScan/TIRF) microscopes; will contribute to user training at microscopes and image analysis; and will participate in the R&D activities in tissue phenotyping and cell tracking.. Further information regarding the platform including the detailed list of equipment can be found at https://www6.inrae.fr/anatomie_pathologique_sante_animale.

Working Environment and scientific context

APEX (Anatomical Pathology Expertise for research) is a platform dedicated to **veterinary pathology** and **fluorescence bio-imaging** and focused on animal model characterization. Located at the Veterinary School of Nantes (Oniris) and set up in 2006 by the joint research unit 703 PAnTher, member of NeurATRIS, APEX carried out by the National Institute of Agronomic Research (INRA) and by Oniris is labelled IBiSA and BioGenouest, and certified ISO 9001.

APEX is focused on the investigation of healthy and diseased animal tissues. To address scientific challenges, APEX is structured around experts with complementary skills offers integrated **veterinary histopathology** and **fluorescence bio-imaging** to scientific community, private or academic. Thanks to an original synergy between the knowledge of normal and pathologic animal tissue and skills in bio-imaging, APEX initiates new developments with a constant concern to strengthen the technological and methodological offer in the field of tissue and cell phenotype (level of detection, tracking, quantification, specific multi-labelling, quantitative histopathology).

APEX originally proposes an integrated offer in animal tissue phenotype and synergizes the skills of veterinary pathologists, certified by the European board committee and of engineers R&D specialized in fluorescence bio-imaging.

APEX facility core can set-up pathology and bio-imaging services in:

- **all types of tissues and organs** with an additional long-term recognized experience in neuropathology and muscle pathology;
- a very **large range of species** (from animal models, with a solid track record in large ones, to livestock target species and wild sentinel species) as veterinary pathologists are specially trained to comparative pathology;
- studies compliant with **drug regulatory agencies** (EMA, FDA...);
- studies requiring **leading-edge bio-imaging technology** (biphotonic, super-resolution microscopy PALM/STORM, spectral imaging, slide scanner...).

Major tasks

- Choose and customize imaging systems to deal with scientific purposes
- Develop new methodologies in bio-imaging and sample preparation
- Analyse and interpret microscopic images and clearly present results.
- Train and ensure technology transfer to platform users
- Advise and train users for sample preparation and analytical methods
- Develop solutions for image analyses
- Write technical notes and tutorials
- Scientific and technical monitoring in fluorescence bio-imaging
- Design and implement trainings

Skills

- Knowledge and experience in confocal microscopy, high resolution, multiphoton.
- Skills in optic will be appreciated
- Know how to use informatic tools and softwares dedicated to image acquisition and image analyses (FIJI, NIS, Huygens, Amira)
- Skills in informatic will be appreciated
- Plan activities of the platform in accordance with external constraints and deadlines
- Communicate and manage relationships with collaborators

Personal capacities

- Enthusiastic person with a technical or research background
- University degree in life sciences or physics (master, Engineer or PhD)
- Practical experience in at least two or more of the following fields: Optics, light microscopy techniques (widefield and/or confocal), image processing.
- Rigorous, reliable, well organized
- Autonomy in the management of the requested missions
- Initiatives and organization skills
- Education abilities, sense of contact, courtesy

Required degree

- University degree in life sciences or physics (master, Engineer or PhD)

Langage

French language skills

Skills in English greatly appreciated

Workplace

Nantes-Atlantic National College of Veterinary Medicine, Food Science and engineering (Oniris)

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