POSTDOCTORAL POSITION IN THE MODULATION OF FEMALE REPRODUCTION WITH NANOBODIES

Physiology of Reproduction and Behaviours Unit, Nouzilly, France.

Working environment: A 30 months postdoctoral position is available in the "Biology of Signalling Systems (BIOS)" group of the Physiology of Reproduction and Behaviours Unit (PRC – UMR INRAE, CNRS, University of Tours). The PRC is a multidisciplinary research Unit that provides a stimulating and collaborative working environment. Our group is interested in deciphering G protein-coupled receptors (GPCR)-induced signalling networks using pathway-selective ligands.

Mission: The project in which the post-doctoral fellow will be involved is based on the discovery, characterization and optimization of nanobodies capable of selectively modulating the activity of GPCRs controlling follicular development, steroidogenesis and ovulation.

Activities: The post-doctoral fellow will have to: i) assess the nanobodies' efficacies in animal models; ii) determine the nanobodies' pharmacological profiles – activation of G proteins, production of second messengers, recruitment of β-arrestin, intracellular trafficking - using cell lines expressing the different receptors and iii) contribute to nanobody screening, production and characterization. As part of his/her activity, he/she will have to design the experimental plan, implement the corresponding studies, analyse the results, put them back in the context of the literature and communicate them through oral and written presentations.

Qualifications: The post-doctoral fellow will have to perform: i) animal treatments and phenotyping; ii) histology/immunohistochemistry; iii) ELISA/HTRF assays, pharmacokinetics determination; iv) phage-display; v) nanobody design and production; vi)pharmacological profiling and trafficking measurements using HTRF and BRET methods; vii) flow cytometry. The successful candidate will have prior experience in several of these approaches. He/she must have worked and/or have solid knowledge in *in vivo* pharmacology, animal treatment and phenotyping, as well as basic knowledge in biochemistry and cell biology. Experience and/or knowledge in antibody development/engineering, GPCR pharmacology and/or reproductive biology will also be appreciated. We seek for a highly motivated candidate capable of working both independently and as part of a team; endowed of excellent problem solving, organizational and communication skills. Prior international experience will be considered as an asset.

Lab website: http://bios.tours.inra.fr/

How to apply: submit a cover letter, *curriculum vitae* and contact information of two referees to Eric Reiter (Eric.Reiter@inrae.fr).