

## POSTDOCTORAL POSITION IN THE MODULATION OF GPCR PHARMACOLOGY 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) delineate the pharmacological profiles of the nanobodies – activation of G proteins, production of second messengers, recruitment of  $\beta$ -arrestin, intracellular trafficking - using cell lines expressing the different receptors; ii) contribute to nanobody screening, production and characterization; iii) participate to assessment of efficacy in animal models. 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) pharmacological profiling and trafficking measurements using HTRF and BRET methods; ii) phage-display; iii) production, purification and characterization of recombinant proteins; iv) kinetic-rate constants determination; v) flow cytometry; vi) ELISA/HTRF assays; vi) histology/immunohistochemistry. The successful candidate will have prior experience in several of these approaches. He/she must have worked and/or have solid knowledge in biochemistry, cell biology, molecular pharmacology. Experience/knowledge in reproductive biology, antibody development/engineering, GPCR pharmacology and/or in vivo testing/phenotyping 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).