

Exploring the pharmaceutical potential of GPCR heterodimers for therapeutic intervention in CNS disorders

Our consortium on G protein-coupled receptor dimerization has several **openings for researchers** aspiring to carry out research **towards a PhD degree**.

Background

The main focus of our consortium is the study of G protein-coupled receptors (GPCRs) and the molecular and cellular basis of GPCR heterodimerization to set the stage for therapeutic intervention. GPCRs represent the single largest family of cell surface receptors engaged in signal transduction. In humans, it is estimated that several hundreds of distinct members of the GPCR superfamily directly respond to a wide variety of chemical transmitters, such as biogenic amines, amino acids, peptides, lipids, nucleosides and polypeptides. Therefore, GPCRs play key roles in the regulation of several (patho)physiological processes including neurotransmission, metabolism, cell growth, immune or inflammatory responses, olfaction and vision. It is thus no surprise that GPCRs are among the most heavily studied drug targets in the pharmaceutical industry. In recent years increased knowledge about this kind of receptor has facilitated the screening and development of many new therapeutically active molecules. Despite these breakthroughs, our ability to fully exploit the therapeutic potential of GPCRs is still limited. This is largely due to our incomplete understanding of how signaling efficacy and selectivity are regulated in GPCRs at the molecular level.

Recent research efforts by members of our consortium have provided insights into the interaction potential of GPCRs to form functional heterodimers. However, this line of research is still in its infancy. A better understanding of such heterodimeric GPCR assemblies at the molecular and cellular level will be of paramount importance for further developments in the field and will open new opportunities for drug development.

Position description:

- Interdisciplinary research towards a PhD degree.
- A rewarding research position in a dynamic international team.
- Possibilities to travel abroad to learn new techniques.
- Present your work at international scientific meetings.
- Publish in peer-reviewed international journals.

Profile :

- Master degree (or equivalent) in Biochemistry and Biotechnology, Master in Bioengineering Sciences, Master in Biomedicine or related disciplines.
- The candidate should be **eligible for receiving a doctoral grant** and should have the intention to finish a PhD.
- Experience in biochemistry, molecular biology, pharmacology and/or physiology related to G protein-coupled receptors is a plus.

Available positions:

3 PhD students (2 at Ghent University, Belgium and 1 at the University of Barcelona, Spain) for the biochemical/cell biological approach to study GPCR-GPCR interactions *in vitro*.

For more information and/or applications: Please send a full CV together with a statement of purpose, and academic transcripts to :

Prof. Dr. Kathleen Van Craenenbroeck, LEGEST, Proeftuinstraat 86, B-9000 Gent, Belgium.

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1 PhD student (at Ghent University, Belgium) for the *computational, biochemical and biophysical approaches* (recombinant protein production and purification, biochemical and biophysical characterization methods MALLS, SPR,, EM) to study GPCR-GPCR interactions and ligand-GPCR interactions.

For more information and/or application: Please send a full CV together with a statement of purpose, and academic transcripts in a single PDF by email to:

Prof. Dr. Savvas Savvides,

savvas.savvides@ugent.be

Send your application **before 30 October 2014**.

Review of the applications will start on 31 October 2014 and continue until the positions are filled, interviews of short-listed candidates will be held in early November.

Start of the project: 1 January 2015