



EU Marie-Curie Initial Training Network



BIOPOL

A European Research Training Network at the interface of
Cell/Molecular Biology and Membrane Physics

Topic: Biochemical and mechanochemical mechanisms in polarized cells

Call: H2020 - H2020-MSCA-ITN-2014

Proposal Number: 641639 - BIOPOL - MSCA-ITN-ETN

Project title: Synthesis of glycosphingolipid analogs as probes for the study of clathrin-independent endocytosis and coherent cell migration

Type of position: Early Stage Researcher (ESR) / PhD position

Reference Code: BIOPOL-Johannes

Eligibility: To this position applies a mobility rule. The respective candidate must not have worked for more than 12 months in France within the last three years. Furthermore, the candidate needs to be in his/her first four years of his/her research career. The four years are counted from the date a degree was obtained which formally entitles to embark on a doctorate.

Starting date: Before December 2015

Duration: 36 months

Salary: According to the Marie Curie-ITN rules: around 36,000 Euros/year plus monthly mobility allowance of 500 Euros/month

Short description: PhD work at the interface between synthetic organic chemistry and cell biology within the *Chemical Biology of Membranes and Therapeutic Delivery Unit* at *Institut Curie* in Paris, France. Glycosphingolipids (GSL) are important constituents of cell membranes. Together with lectins, they are key actors in clathrin-independent endocytosis. We have recently discovered a previously unrecognized link between these endocytic processes and cell polarity in relation to coherent cell migration. The main aim of this PhD project is the synthesis of glycosphingolipids and analogs for structure-function studies on biological materials from cells in culture to model organisms. The project also aims at unraveling function(s) of GSLs in the process of tumorigenesis, and at exploiting GSL overexpression on human tumors for therapeutic delivery purposes.

Requirements: Expertise in organic chemistry. The candidate would ideally have experience in carbohydrate chemistry (preferably GSLs) and

NMR structural determination. Furthermore, chemistry candidates that have additional experience (or at least a strong interest) in cell biology will be strongly favored.

- Host Institute:** *Institut Curie*
Chemical Biology of Membranes and Therapeutic Delivery
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France
- Supervisors:** Drs Ludger Johannes and Frédéric Schmidt
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- How to apply:** Send the following documents via e-mail to the above-mentioned supervisors:
- Clearly indicate the project you are applying for by referring to the Reference code of this job offer
 - Letter of motivation (research interests, reasons for applying to this program and project, respectively)
 - A complete CV
 - Certified copies of University Diploma or Master certificates
 - Proof of proficiency in English language
 - Two letters of recommendation
- Deadline for application:** **Applications can be submitted at any time, but must be finalized before December 2015**
- For further information:** Please contact the supervisors of this project.