Early Stage Researcher Project

**"Identification of new targets from screening using biochemical and cell based assays"**

In

Merck Healthcare KGAA (Merck), Germany

You want to participate in a training programme in and beyond the fields of physical chemistry of biological systems, theoretical and computational chemistry, biological chemistry, biochemistry, targeted drug delivery/discovery and medicinal chemistry?

14 Early Stage Researcher (ESR) positions are available within the EU-funded Marie Skłodowska Curie Innovative Training Network on **Allo**stery in **D**rug **D**iscovery (**ALLODD**) under Grant Agreement No. 956314.

The ALLODD project is a collaboration between 13 academic and industrial organizations with 14 ESR/PhD students in total. The aim of ALLODD is to train a new generation of scientists to exploit the concept of allostery in drug design, putting together a whole array of technologies to identify and characterize allosteric modulators of protein function that will be applied to therapeutically relevant systems.

## Project Description

**Host Organisation:** Merck Healthcare KGaA

**Scientist-in-Charge:** Dr. Lars Toleikis

At the Healthcare business of Merck, we design and develop medicines and intelligent devices that provide ongoing care for patients beyond their treatment. This includes new medications to treat conditions such as cancer or multiple sclerosis (MS), but also innovative technologies that make life easier for patients. For example, our injection device and disease monitoring software allow patients with MS to self-inject their medicine and monitor its administration. With cancer, our precise approach uses biomarkers that can match potential treatment to individual patients.

### Objectives:

1) Development of biochemical assays to detect allosteric inhibitors from screening.

2) Retrospect analysis of available in-house targets with known allosteric inhibition mechanism.

3) Expanded the methodology to new target classes with unknown allosteric mechanism in the

frame work of the consortium for medium to high throughput screening methods.

**Expected Results:**

1) New biochemical assay platform for the medium to high throughput detection of allosteric inhibitors.

2) Validation of known allosteric inhibitors from biochemical screening.

3) Transfer of methodology to new target classes.

**Planned Secondement(s):**

- **Host1**: UB, length 3 months, purpose: training in FRET,
- **Host2**: BRFAA, length 2 months, purpose: training in allosteric pathway identification.
- **Host3**: Unistra, length 2 months, purpose: training in neurotransmitter receptors modelling.

## Eligibility Criteria

There are **strict eligibility requirements** to apply for participation in a Marie Skłodowska Curie Innovative Training Network:

- Applicants for the ESR/PhD positions should be in the first 4 years (full-time equivalent) of their research careers and not yet have been awarded a doctorate.
- Applicants must not have resided or carried out their main activity (work, studies, etc.) in the host country for more than 12 months in the 3 years immediately before the recruitment date. In addition, local regulations of the host countries may apply.

**Specific Requirements/Qualifications:**

1) Master's degree in biochemistry, biotechnology, molecular biology, pharmacology or a related field.

2) Knowledge of protein chemistry.

3) Experience with biochemical assay systems.

4) Experience with cellular assay systems characterizing biological function.

5) Strong oral and written communication skills.

6) Knowledge of antibody biology is a plus.

## Benefits

**Enrollment in Doctoral degree(s):** tbd.

**We are offering** a competitive, interdisciplinary environment with a track record of intense mutual collaboration. In addition to the individual training-through-research, our program includes further elements such as workshops, summer schools, internships and secondments to the partners' laboratories.

The successful candidate:

- will be funded for 36 months with a competitive salary in accordance with the MSCA regulation for Early Stage Researchers, including living allowance, mobility allowance and a family allowance (if married).
- will have to perform the secondments defined in his/her personalized career development programme.

## To be a part of ALLODD:

**Apply to and contact for further information:** lars.toleikis@merckgroup.com

**Apply until:** 20 October 2021

**Starting date:** The earliest starting date will be **1 November 2021** The latest will be **1 September 2023**.