

2019 Helmholtz – OCPC – Program for the involvement of postdocs in bilateral collaboration projects

PART A

Title of the project: Modern medicinal chemistry lead optimization for the treatment of diseases like cancer and diabetes

Helmholtz Centre and institute: Institute of Medicinal Chemistry

Project leader: Prof. Dr. Oliver Plettenburg

Web-address: <https://www.helmholtz-muenchen.de/en/imc/index.html>

Description of the project (max. 1 page):

The discovery of selective inhibitors of pathologically relevant enzymes is a prerequisite for invention of novel therapies. We are interested in the development of novel, highly selective inhibitors to treat diabetes and other diseases. We will consider activity, physicochemical and ADME properties as guiding parameters for optimization. We will also design chemical probes to allow target validation and demonstration of target engagement in relevant cellular and animal models.

The postdoc's main task will be to design and synthesize potent new inhibitors and, in close collaboration with biochemists, elaborate and interpret the resulting structure-activity relationship, as well as factors influencing cell and intestinal permeability, metabolic stability and others and use this insight to further improve the obtained lead structures. These efforts will generate potent, in-vivo active drug candidates to validate the therapeutic concept in vivo.

Description of existing or sought Chinese collaboration partner institute (max. half page):

Institute with high reputation in drug discovery, chemical biology or organic chemistry with applications in the area of drug discovery. Strong expertise in organic chemistry is required. Building a trustful collaboration with future exchange of personal and a continued and intense exchange is highly desirable.

Required qualification of the post-doc:

- PhD in organic chemistry or medicinal chemistry
- Experience in contemporary organic chemistry
- Good knowledge of analytical methods (HPLC-MS, NMR etc.)
- Basic knowledge in medicinal chemistry and drug discovery
- Interest in Chemical Biology

- Willingness to work in a dynamic young interdisciplinary team
- High degree of self-organization
- Excellent communication and presentation skills

PART B

Documents to be provided by the post-doc, necessary for an application to OCPC via a postdoc-station:

- Detailed description of the interest in joining the project (motivation letter)
- Curriculum vitae, copies of degrees
- List of publications
- 2 letters of recommendation
- Proof of command of English language

PART C

Additional requirements to be fulfilled by the post-doc:

- Max. age of 35 years
- PhD degree not older than 5 years
- Very good command of the English language
- Strong ability to work independently and in a team