



1 joint PhD student position
is available at the
Medical University Innsbruck
Institute of Virology
and the
University of Innsbruck
Institute for Biomedical Aging Research



Technical Supervision: Emmanuel Heilmann MSc., Dr. rer. nat. Alexander Weiss, Dr. Hubert Gstach
Supervisors: Univ.-Prof. Dr.med. Dorothee von Laer, Univ.-Prof. Dr. Pidder Jansen-Dürr

Project: Molecular cloning, protein purification and preparation for x-ray crystallography and Cryo-EM, further development of SARS-CoV-2 protease inhibitor screening assays, compound screening, compound synthesis

The Institute of Virology developed innovative screening assays for protease inhibitors of the SARS-CoV-2 proteases. Together with the expertise of compound synthesis from the MoleculeCrafting.HuGs e.U. and of protein purification from the Institute for Biomedical Aging Research as well as the Department of Genetic Epidemiology at the Medical University of Innsbruck we aim to screen compounds and solve protease-inhibitor complex structures.

The aim of the PhD project will be to further develop screening assays, synthesize and screen compounds, to express SARS-CoV-2 proteins in human cells, to purify SARS-CoV-2 proteins, including protease and polyproteins using FPLC technology, and to establish models of protein-inhibitor complex structures derived from x-ray crystallography and Cryo-EM experiments. Our collaboration partner MoleculeCrafting.HuGs e.U will provide new inhibitor compounds to be screened, while we also aim to receive compound libraries from companies or research institutes. Our screening assays will involve the set-up of a pipetting robot, i.e. the PhD student would also learn how to program this robot and how to establish screening protocols.

Candidates must have a master/diploma degree in Life Sciences (e.g. in Molecular Medicine, Biology, Human Biology, Biochemistry, Pharmacy, etc.). Hands on experience in one or multiple of the following areas would be preferential:

- protein purification
- x-ray crystallography (or cryo-EM)
- compound screening
- molecular cloning and molecular biology in general
- cell culture

The candidate must also be willing to travel between Vienna and Innsbruck from time to time to assist in the compound synthesis laboratory of MoleculeCrafting.HuGs e.U.

At the moment the monthly minimum wage for the PhD-position is € 2.228,70 gross (14x yearly) according to the collective agreement of the MUI.

Please send your application to the following address until the 30st of August 2021:

Medical University Innsbruck
Institute of Virology
Emmanuel Heilmann
Peter-Mayr-Straße 4b, 6020 Innsbruck, Austria
E-Mail: Emmanuel.Heilmann@i-med.ac.at