The Department of Preclinical Imaging and Radiopharmacy (Director: Prof. Bernd Pichler) of the University Hospital Tübingen, an internationally renowned group at the forefront of preclinical imaging research, is currently looking for a PhD student in Chemistry/Biochemistry/Biology.

The fellowship is awarded via a H2020-MSCA-ITN-ETN project and is available from 1st of January 2019 or as soon as possible thereafter for a 3-year period. The ITN project aims to develop a positron emission tomography (PET) tracer to non-invasively assess α-synuclein aggregation in the brain of patients with Parkinson’s disease (PD). In contrast to the situation in Alzheimer’s disease, biomarkers to detect α-synuclein oligomers or aggregates in PD are still missing.

The PhD fellowship is part of a training programme PET-AlphaSy consisting in total 15 PhD students located in 5 European countries (Denmark, Sweden, Netherlands, Germany, Belgium). The fellows will attend common training sessions, e.g. within radiopharmaceutical chemistry or imaging and have secondments at the corresponding partner universities and companies.

**Project description:** Three main proteins are known to contribute to the pathology of neurodegenerative diseases: Aβ, tau and alpha-synuclein. Precise diagnosis of disease would enormously benefit from a selective quantification of these protein aggregates. Since the structures of protein aggregates are largely unknown, development of radiotracers requires powerful assays to quantify the affinity and selectivity of small molecules to individual types of aggregates. In this project we will develop binding assays using brain homogenates and brain tissue slices with confirmed α-synuclein, Aβ and tau pathology. This assay will be used for tritiated compounds to benchmark a broad range of potential radiotracers. Promising PET tracer candidates will be validated in vivo using small animal PET imaging. For this purpose we aim to develop an in vivo animal model after inoculation of preformed fibrils into the rodent brain. Furthermore, metabolite analysis and pharmacokinetic modeling will be used in these experiments to quantify the radiotracer distribution in pathological areas of the brain.
Planned secondments:
VU Amsterdam
Lundbeck (Copenhagen)

Principal Investigator: Dr. Kristina Herfert

We are looking for highly motivated individuals with a strong background/experience in biochemistry, pharmacy or molecular biology/medicine.

At the time of commencement, it is required that the candidates have not been awarded a PhD degree and are within the first 4 years (full-time equivalent) of their research careers. Furthermore the candidates must not have resided or carried out their main activity (work, studies, etc.) in Germany for more than 12 month in the 3 years immediately prior to their recruitment.

The application must be submitted electronically and must include:
• Cover letter: stating the interest in and qualifications for the project (max. one page)
• Full CV
• Diploma and transcripts of records: Master’s degree diploma (including grade transcripts for bachelor’s and master’s degrees
• Possible references and recommendations

The position is financed by the EU via a H2020-MSCA-ITN-ETN project. Severely handicapped persons with equal qualifications are given preferential consideration. The University of Tübingen is anxious to increase its quota of female scientific staff, and therefore emphatically requests women to apply for this position. The Administration of the University Hospital is responsible for all employment matters. Personnel appointments will be made pursuant to the fundamental stipulations of the legal statutes for universities in Germany. Interview expenses are not covered.

For further information and in case of questions please contact Dr. Kristina Herfert
Phone: 0049 7071 29-87680

Application deadline is 30.11.2018

Please submit your application by E-Mail only (attached PDF) indicating the reference number 9089 to:

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Radiologische Klinik: Präklinische Bildgebung und Radiopharmazie
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