universität innsbruck

Institute of Psychology

Postdoctoral position (min. 3 years) in Cognitive Neuroscience of Ageing at Innsbruck University

A **3-year full-time postdoctorate** research position with a possibility for extension will be available at the Chair of Developmental Psychology at the Institute of Psychology (www.hammerer-lab.com) of the University of Innsbruck, supervised by Prof. Dorothea Hämmerer from **1st of December 2022 or later**.

Research at the Chair of Developmental Psychology focuses on understanding why neuromodulatory systems are vulnerable in ageing and dementia. The neuromodulatory nuclei of the brainstem, and in particular the noradrenergic system, are among the epicenters of dementia pathologies in the brain. We use brain imaging methods that allow studying the earliest stages of changes in the noradrenergic system and investigate how their decline affects cognitive and physiological functions in ageing and early Alzheimer's. In exploring this, we use a variety of cognitive and physiological measures (cognitive tests, eyetracking, drug interventions, blood analyses, functional and structural MRI with a special focus on brainstem imaging).

The **candidate's job** will be to carry out research in the context of studies investigating changes in sleep function in ageing using concurrent EEG-MRI as well as links between physiological, MRI and blood markers of a decline in noradrenergic modulation in ageing. The candidate is expected to conduct independent research within the overall theme of this project. In this context, the candidate will be mostly occupied with acquiring and analysing MRI data. The candidate is expected to prepare and analyse data for publications and for presentation at international conferences as well as internal meetings at UIBK, and meetings with external collaborators. The lab has close ties with the German Research Centre for Neurodegenerative Diseases in Magdeburg, Germany and the Wellcome Trust Center for Human Neuroimaging at University College London. A participation in these collaborations is expected.

Part of the **candidate's job** is also to offer two courses per semester (4 SWS in total), which could be seminars or lectures on the topic of cognitive and or neuroscientific changes across the lifespan. Furthermore, the candidate is expected to supervise bachelors' and masters' theses and help with the supervision of PhDs. The candidate will be supported in the acquisition of his or her own funding for research projects.

The candidate will be immersed in a stimulating and growing international research field that

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investigates the relevance of changes in the noradrenergic system in old age and dementia. The candidate is made familiar with the most important current methods of examining the noradrenergic system in old age and integrated into the international research community on the subject. He/she leaves the postdoc with an arsenal of methods that represents a unique selling point in a rapidly growing area of aging research and with teaching experience that will be relevant for future applications in the academic field.

The ideal candidate will have a PhD in a relevant discipline such as Psychology, Biology, Neuroscience, Computer science, Medicine, Physics, or another relevant subject for neurocognitive aging research. Experience with acquiring and analysing brain imaging data and with the use of Matlab or Python and R or SPSS is essential. Very good knowledge of spoken and written English is essential. Experience with working with older volunteers or patient populations, concurrent EEG-MRI, or sleep research is desirable.

The **Institute of Psychology** at the UIBK offers a stimulating and friendly work environment. As part of its recent expansion, the institute now owns its own 3T research scanner which supports the growing emphasis on cognitive neuroscientific research at the institute. The University of Innsbruck and Medical University of Innsbruck offer a stimulating research environment for Cognitive Neuroscientific Ageing research with the new research center 'Health and prevention across the lifespan' (https://www.fz-gesundheit.at) as well as local research groups and institutes focusing on neurological, physiological and biochemical ageing.

We encourage **submission of applications** as soon as possible and **no later than the 1st of November 2022.** We welcome applications from all sections of the community irrespective of gender, race, ethnic or national origin, religion or belief, sexual orientation, disability or age. The successful applicant will be employed as a full-time postdoctorate and paid approximately 4.000€/ month (14 times per year, adjusted per year)).

The application must be in English and contain the following, combined in one pdf:

- cover letter referring specifically to the job profile (maximum 1 page)
- curriculum vitae, incl. work experience with brain imaging
- the publication that the applicant considers his/her best and a brief statement giving the reasons for the selected best publication
- list of peer-reviewed publications
- two letters of reference or two contacts for referees

Please send your application to: dorothea.haemmerer@uibk.ac.at

For further information, please contact: dorothea.haemmerer@uibk.ac.at or renate.strasser@uibk.ac.at.

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