

SmartAge ITN: 15 Early-Stage Researcher (ESR) PhD positions for Marie Skłodowska-Curie fellowship

University Hospital Jena / Multiple locations within the EU

The **SmartAge** Innovative Training Network (ITN) "Gut-brain-axis: Targets for improvement of cognition in the elderly" is recruiting 15 highly motivated PhD students. The offered positions are available with a starting date in March 2021 for a maximum duration of 3 years. The fellowships are funded as part of the Marie Skłodowska-Curie Actions (MSCA) Innovative Training Networks under the European Commission's H2020 programme.

SmartAge is a European joint venture between academia and industry, providing multidisciplinary scientific expertise, complementary skills, and personal development of young researchers. The SmartAge consortium consists of 11 beneficiaries and 5 partner organisations involving hospitals, universities, research institutes and companies from 10 European Countries: Germany, Austria, France, Sweden, Hungary, Spain, the Netherlands, Ireland, Denmark and Switzerland. The consortium, coordinated by Prof. Dr. Otto W. Witte of the University Hospital Jena, Department of Neurology, Jena, Germany, will conduct cutting-edge research and training in the highly topical and emerging field of research on microbiome gut-brain-interaction with focus on aging.

Background

The age-related decline in cognitive functions represents a serious social and medical problem. The intestinal microbiome is a key effector in maintaining brain plasticity and therefore represents a promising target and sensor for interventions aimed at improving the cognitive abilities of older people. SmartAge, coordinated by Jena University Hospital, brings together an expert team of scientists from academia and industry such as clinicians, psychologists, nutritionists, neuroscientists, biotechnologists and bioinformaticians. SmartAge will apply a translational approach combining animal and human studies, nutrition and lifestyle interventions, cognitive testing, brain imaging, state-of-the-art OMICS and systems biology, and fecal transfers to identify key regulators of gut-brain communication with the overall aim of developing microbiome-based therapies that slow down cognitive decline in old age.

Information about ITN SmartAge and the ESR positions offered can also be found on our [homepage](#).

Benefits

- 3-year full time employment contract (salary depends on the country of the recruitment considering both the local and MSCA regulations for Early-Stage Researchers)
- Secondments at other labs within the SmartAge consortium
- Sophisticated and multi-/interdisciplinary training in a highly topical research area by involving academic research institutions and industry
- A structured training programme consisting of soft skill courses, targeted workshops, retreats, social events and networking
- Gaining experience abroad
- Opportunities for participation in national and international meetings

Your profile / Eligibility criteria

We welcome applications from Early-Stage Researches (ESR) fulfilling the following criteria:

- Having a master's degree or its equivalent
- Having not more than 4 years of equivalent research experience, i.e. working as a researcher after obtaining his/her master's degree
- Profound knowledge in the respective fields of the ESR position
- Having not been awarded a PhD title
- Having not resided or carried out her/his main activity in the country to be recruited in for more than 12 months in the last 3 years
- Willingness to move countries for ESR placement and temporary secondments
- High level of proficiency in written and spoken English
- Dedication and enthusiasm for experimental research, combined with scientific curiosity, reliability and the capacity to teamwork in an interdisciplinary environment.

PhD Positions

ESR1: Intestinal barrier function in age-dependent gut-brain interaction: dietary interventions with oat β -glucans; **Host:** University of Vienna, Austria

ESR2: Intestinal barrier function in age-dependent gut-brain interaction: pharmacological interventions with metformin; **Host:** University of Vienna, Austria

ESR3: Development of a microfluidic perfusion-station (gut-on-a-chip); **Host:** Cherry Biotech, France

ESR4: Age-dependent gut-brain interactions in mice: modulation by physical activity; **Host:** University Hospital Jena, Germany

ESR5: Age-dependent impact of physical activity on gut-brain axis in humans; **Host:** University Hospital Jena, Germany

ESR6: Role of the bacterial peptidoglycan-sensing molecule Pglyrp2 in cognitive aging; **Host:** Karolinska Institute, Sweden

ESR7: Microbiota-gut-brain axis: Inflammatory and immune markers during aging and following interventions; **Host:** CROmed Research Center, Hungary

ESR8: Impact of the gut microbiome on cognitive function in middle-aged subjects. Effects of weight loss; **Host:** Girona Biomedical Research Center, Spain

ESR9: Impact of the gut microbiome on cognitive function in middle-aged subjects. Effects of metformin; **Host:** Girona Biomedical Research Center, Spain

ESR10: Impact of late life nutritional interventions on microbiome / cognition; **Host:** Wageningen University, Netherlands

ESR11: Changes in individual *BrainAGE* score and brain plasticity induced by physical activity; **Host:** University Hospital Jena, Germany

ESR12: Elucidation of transcriptomic signatures in preserving cognition in old age; **Host:** Kiel University, Germany

ESR13: Impact of microbiome-host cross-talk on decline and preservation of cognition during aging; **Host:** National University of Ireland, Galway, Ireland

ESR14: Bioinformatics analysis of the gut-microbiome during aging and following late-life interventions with respect to cognitive functions; **Host:** Clinical Microbiomics, Denmark

ESR15: Impacts of nutrition communication strategies on eating behaviour – best practice models to enhance compliance and adherence to healthy nutrition in different target groups; **Host:** Zurich University of Applied Science, Switzerland

Application

Interested candidates please send a motivation letter, a CV including publications (if available), copies of university degrees and courses (including obtained grades), and the names and e-mail addresses of two scientists who can provide references (all summarized in one pdf) to smartage@med.uni-jena.de. Please indicate the ESR position you applying for.

Application deadline: 30 November 2020 - We reserve the right to invite applicants to interviews before the application deadline

Severely disabled persons are given preference if their aptitude, skills and professional performance are essentially the same. As an equal opportunity employer, the University Hospital Jena is committed to increasing the percentage of female scientists and therefore especially encourages them to apply.

For further information on the SmartAge ITN and the **application process**, please visit the [SmartAge website](#) or contact Dr. Sigrun Nagel (phone: +49 3641-9 396658; e-mail: smartage@med.uni-jena.de).