



Post-doctoral Research Fellow in Brain Imaging Genomics of Alzheimer's Disease

**IU Center for Neuroimaging and the Indiana Alzheimer Disease Center
Indiana University School of Medicine, Indianapolis, IN USA**

Description

The Brain Imaging Genomics Laboratory of the Indiana University School of Medicine Center for Neuroimaging (CfN; neuroimaging.medicine.iu.edu/) and the Neuroimaging Core of the NIH-designated Indiana Alzheimer Disease Center (IADC; iadc.medicine.iu.edu/), directed by Dr. Andrew Saykin, have openings for outstanding, highly motivated post-doctoral research associates with special interest in the areas of human brain imaging, cognitive neuroscience, and genomics/computational systems biology, to play a major role in state-of-the-science integrative studies of early stage Alzheimer's disease and related disorders. Other collaborative research using similar approaches, within the center and beyond, focuses on cognitive and neural effects of breast cancer and cancer treatment, mild traumatic brain injury and sports concussion, and psychosis.

Special opportunities afforded by this fellowship include experience working directly with the Genetics Core of the NIA Alzheimer's Disease Neuroimaging Initiative (ADNI; adni.loni.usc.edu/about/centers-cores/genetics/), the Neuroimaging Core (and other Cores) of the IADC, as well as with the IU Network Science Institute (IUNI; iuni.iu.edu/), which is conducting pioneering integrative studies of the human connectome, social networks and systems biology of AD. Research-dedicated facilities in the IUSM Neuroscience Center include Siemens PRISMA 3T MRI, PET/CT, PET/MR, Radiochemistry Core and Neurovisualization Lab. A new preclinical Bruker BioSpec 9.4T/30 MRI with PET insert was also recently added for studies of model systems.

The CfN and IADC are highly collaborative transdisciplinary environments with PhD and MD/PhD students in Medical Neuroscience, Medical and Molecular Genetics, Computer Science and Bioinformatics. Along with Dr. Saykin (multi-modal imaging, genetics, biomarkers and cognition), primary co-mentors on several NIH-funded projects include Dr. Kwangsik Nho (bioinformatics, genomic and metabolomic analysis) and Dr. Shannon Risacher (MRI and PET imaging; sensory changes in AD). Other closely affiliated IU faculty include Drs. Yu-Chien Wu (MR physics), Taeho Jo (deep learning), Jingwen Yan (bioinformatics and machine learning), Liana Apostolova (behavioral neurology, early onset AD), Brenna McDonald (functional imaging and pediatric neuropsychology), and at IU Bloomington, Drs. Olaf Sporns (network neuroscience, connectomics), Santo Fortunato (network science, science of science, modularity), Franco Pestilli (computational neuroscience, neuroinformatics) and Brea Perry (medical sociology and network science).

The overarching goals of this research program are 1) to achieve a better understanding of the complex causes and mechanisms leading to AD, 2) to improve early detection and longitudinal monitoring by combining genomics, fluid biomarkers and advanced neuroimaging and 3) to identify novel targets for diagnostic use and therapeutic intervention.

The fellow will have designated responsibility for specific projects and will contribute to leading-edge team science initiatives. Fellows will be expected to take the lead on preparing manuscripts for publication and appropriate grant proposals while collaborating on other team efforts.

Requirements

Successful applicants will have strong academic preparation (PhD, MD or MD/PhD in a relevant discipline), high motivation and enthusiasm for research, excellent written and oral communication skills including evidence of successful manuscript writing and publication productivity, strong intellectual curiosity, creativity, flexibility, a commitment to the scientific goals of the program and desire to make a contribution, and ability to work independently and as part of a collaborative transdisciplinary team including mentoring graduate and undergraduate students. Preference will be given to candidates with experience in one or more of the following areas: multimodal MRI and PET neuroimaging, medical and molecular genetics, computational systems biology and network analysis. Applicants who have recently completed their terminal degree and plan to develop an independent research career are especially encouraged to apply.

Application Instructions

Applicants must be currently in the U.S. and/or eligible to begin work in the U.S.. Review of applicants will continue until the positions are filled. Please email a cover letter with a brief description of research experience, interests and goals, full CV, and three reference letters to Brad Glazier, Program Administrator (bsglazie@iu.edu).

Indiana University

Indiana University is a multi-campus public research institution, and a world leader in professional, medical, and technological education with an annual operating budget of \$2.1 billion. The Indiana University School of Medicine is annually ranked among the top medical schools in the nation by U.S. News & World Report. IU School of Medicine is the largest medical school in the United States and offers high-quality medical education, access to leading medical research and rich campus life in nine different Indiana cities, including rural and urban locations consistently recognized for livability.

The IUSM received over \$350 million in grants during 2018, the majority of which came from the NIH. Additionally, IUSM provides an interdisciplinary, collaborative and interactive scientific environment with many multidisciplinary centers and state-of-the-art core facilities. IUSM's clinical partner, IU Health, operates an organized system of care across 18 hospitals that offers unmatched potential for clinical, educational, and research collaborations.