PREDOCTORAL AND POSTDOCTORAL POSITIONS AVAILABLE

EMORY UNIVERSITY INSTITUTIONAL TRAINING GRANT (NIH/NIA T32)
AD Big Data to Biology training program (ADBDB-TP)
PIs – Todd Golde, MD, PhD, Professor Dept of Pharmacology & Neurology; David Weinshenker, PhD, Professor, Dept of Human Genetics

We are soliciting applications for 4 post-doctoral positions and 4 pre-doctoral positions to be funded by the NIA T32 Training Grant **Alzheimer's Disease Big Data to Biology Training Program (ADBDB-TP)**. Funding should be retroactive to Sept 1, 2024. *Note that for this inaugural cohort 2 pre and 2 postdoctoral positions will be for 1 year only, while 2 pre and 2 postdoctoral positions will be for 2 years*. This will enable us to have 2 pre and 2 postdoc positions available ever year. All trainees in subsequent years will be funded for 2 years. Overall, the T32 is designed to fund trainees for two years, but there can be some flexibility in this regard.

- All candidates must be citizens or permanent residents of the United States at the time of their appointment.
- Please see the attached list for eligible 'Training Faculty/Mentors'.
- The research plan should address "big data" science associated with AD and its related disorders (ADRD) with focused hypothesis-driven biological studies.

The training program seeks to recruit and rigorously train highly qualified and motivated postdoctoral fellows (MD, MD/PhD and PhD) and predoctoral candidates **in big data" science associated with ADRDs**. The training will bidirectionally provide i) big data-focused trainees with more biological insight into ADRDs and ii) more neurobiologically-focused trainees with the ability to access, understand and analyze, and use big data sets. Links to a pdf of this T32 grant application, this announcement and the list of mentors can be found here.

Applications are due by Tuesday October 1st, 2024 (5.00pm) and must include:

Postdoctoral candidates (≤ 3 years as a fellow)

1. Formal letter of application – limit 2 pages, that includes a) Name of Emory PI whose lab you will work in, b) stated interest in translational research in neurology, c) training goals for the next 1-2 years, and how the training grant will help achieve those goals, and d) long term career goals
2. Research plan that includes Aims and strategy - limit 2 pages (can be same as a previously submitted NRSA). *The aims should address some aspect of AD or ADRD within the mission of the NIA and ADRD initiatives and some component of training related to big data and ADRD biology.*
3. Record of previous fellowship grant applications with priority scores and outcomes; plan with timeline for future grants
4. *C*urriculum vitae and previous funding sources (during pre- and post-doctoral training)
5. Three letters of recommendation, including one from the applicant's Ph.D. advisor (or residency director) and two faculty familiar with the applicant during his/her doctoral or postdoctoral training. If a candidate is currently in a postdoctoral training position, a letter from his/her current supervisor must be included. The letters should be directly e-mailed to Dr Betarbet at the address given below.

Postdoctoral candidates must have completed a Ph.D., M.D., or equivalent degree from an accredited domestic or foreign institution. Trainees will be accepted only on a full-time basis.

Postdoctoral candidates will be judged on (i) project relation to Big Data and ADRD, (ii) research potential and productivity, (iii) the mentor(s) and his/her training record and productivity, and (iv) training plan. The mentoring team must include a member of the training grant-training faculty (please see attached list).

Predoctoral trainees (3rd year and up)

1. Formal letter of application – limit 2 pages, that includes a) Name of Emory PI whose lab you will work in, b) stated interest in translational research in neurology, c) training goals for the next 1-2 years, and how the training grant will help achieve those goals, and d) longer term career goals
2. Specific Aims - limit 1 page (from dissertation proposal). *The aims should address some aspect of AD or ADRD within the mission of the NIA and ADRD initiatives and some component of training related to big data and ADRD biology.*
3. Record of previous predoctoral fellowship grant applications with priority scores and outcomes; plan with timeline for future grants
4. Curriculum vitae and previous funding sources
5. Three letters of recommendation with one from current Training Faculty
6. Original Transcripts (from graduate school) and laboratory rotation evaluations

Predoctoral candidates will be judged on (i) successful completion of qualifying exams, (ii) overall academic performance in the first two years of his/her respective program, (iii) research potential, (iv) project relation to Big Data and ADRD, and (v) appropriateness of the advisor or mentoring team (must be/include a member of the training grant - please see attached list) and training plan.

Please let us know if you are an underrepresented minority candidate (per NIH guidelines)**.**

Please submit all application materials electronically **by 5.00pm Oct 1st 2024** to

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Name	Degree(s)	Rank	Primary Department or Program	Research Interest
Alonso, Alvaro	MD, PhD	Prof.	Epidemiology	Cardiovascular determinants of cognitive decline and dementia
Andersen, Jimena	PhD	Asst. Prof.	Human Genetics	How do aberrations in cell-to-cell interactions contribute to diseases of the motor system such as ALS
Bassell, Gary	PhD	Prof.	Cell Biology	RNA dysregulation and synapse dysfunction in genetic neurodevelopmental, neurodegenerative and neuropsychiatric disorders
Birey, Fikri	PhD	Asst. Prof.	Human Genetics	Mechanisms of brain regional vulnerability in Alzheimer's disease
Calhoun, Vince	PhD	Prof.	Electrical & Computer Engineering (Georgia Tech)	Development of analysis methods for better understanding noisy and complex brain imaging data
Corces, Victor	PhD	Prof.	Human Genetics	Role of chromatin structure and nuclear organization in transcription; transgenerational inheritance of epiphenotypes
Epstein, Michael	PhD	Prof.	Human Genetics	Developing statistical techniques for improved gene mapping; mapping genes involved in Alzheimer's disease, epilepsy, and schizophrenia
Faundez, Victor	MD, PhD	Prof.	Cell Biology	Cellular and molecular mechanisms of neuropsychiatric disorders
Fu, Haian	PhD	Prof.	Pharmacology & Chemical Biology	Understanding cell growth regulation for therapeutic discovery and translational research
Galvan, Adriana	PhD	Assoc. Prof.	Neurology	Functional connections in the circuits established among the motor regions of the basal ganglia, the thalamus and the cerebral cortex
Glass, Jonathan	MD	Prof.	Neurology	Axonal degeneration relating to neurodegenerative disorders; cellular and animal models of motor neuron diseases and peripheral neuropathies
Golde, Todd E.	MD, PhD	Prof.	Pharmacology & Chemical Biology	Alzheimer's disease, amyloid hypothesis, amyloid and tau pathologies
Gutman, David	MD, PhD	Assoc. Prof.	Pathology & Laboratory Medicine	Mining digital pathology and radiology imaging and correlating imaging based features with genetic and clinical variables
Higginbotham, Lenora A.	MD	Asst. Prof.	Neurology	Biomarkers for enhanced diagnostic classification and disease monitoring in Lewy body dementias
Jiang, Jie	PhD	Asst. Prof.	Cell Biology	Pathogenic mechanisms and developing therapies for frontotemporal dementia and amyotrophic lateral sclerosis
Jin, Peng	PhD	Prof.	Human Genetics	Epigenetics and noncoding RNAs in neurodevelopmental and neurodegenerative disorders
Johnson, Erik	MD, PhD	Asst. Prof.	Neurology	Biofluid protein-based molecular biomarkers for neurodegenerative diseases
Kang, Seong	PhD	Asst. Prof.	Pathology & Laboratory Medicine	Pathological mechanisms in the progression of Parkinson's disease and Alzheimer's disease
Katz, David J.	PhD	Assoc. Prof.	Cell Biology	Function of LSD1 in the epigenetic maintenance of neuronal cell fates in Alzheimer's disease and frontotemporal dementia
Keilholz, Shella	PhD	Prof.	Biomedical Engineering	Network dynamics in the brain using a combination of MRI, electrophysiology, and optical imaging
Kukar, Thomas	PhD	Assoc. Prof.	Pharmacology & Chemical Biology	Pathogenesis of neurodegenerative diseases to guide development of novel therapeutics
Lah, James J.	MD, PhD	Assoc. Prof.	Neurology	Biomarker discovery and trials of innovative therapeutic interventions in ADRD
Levey, Allan I.	MD, PhD	Prof.	Neurology	Discovery, validation, and translation of novel therapeutic targets and biomarkers for ADRD
Levites, Yona	PhD	Assoc. Prof.	Pharmacology & Chemical Biology	Role of amyloid associated proteins in the pathology of Alzheimer's disease
Liang, Bo	PhD	Assoc. Prof.	Biochemistry	Understanding the functional impacts of Aβ variants in Alzheimer's disease with human brain organoids
Liang, Steven H.	PhD	Assoc. Prof.	Radiology	Siscovery of radioactive drugs including positron emission tomography (PET) and theranostic agents
Lynn, David	PhD	Prof.	Chemistry	Rhizosphere/human brain comparisons, symbiotic interactions and neuroscience, intelligent materials and the living/non-living continuum, origins of complex molecular functions
Madabhushi, Anant	PhD	Prof.	Biomedical Engineering	Artificial intelligence, radiomics, pathomics, digital pathology, cancer imaging, machine learning, precision medicine
Mitchell, Cassie	PhD	Asst. Prof.	Biomedical Engineering	Predictive medicine, health informatics, personalized medicine, big data, modeling, machine learning, text mining, cancer, neuropathology, neuroengineering
Qin, Zhaohui	PhD	Prof.	Biostatistics & Bioinformatics	Statistical model-based methods applied to genomics, epigenomics, and statistical genetics
Qiu, Deqiang	PhD	Assoc. Prof.	Radiology	Development and application of advanced MRI techniques and image analysis tools to improve clinical diagnosis and management of Alzheimer's disease
Roberts, Blaine R.	PhD	Assoc. Prof.	Biochemistry	Role of proteins and metals in neurodegenerative diseases and their application in the development of biomarkers and therapies
Rowan, Matt	PhD	Asst. Prof.	Cell Biology	Neuronal physiology, with an emphasis on dendrite and axon signaling in basic and disease-related mouse models in vivo
Sampson, Timothy	PhD	Asst. Prof.	Cell Biology	Microbiome-host interactions in neurodegenerative disease and effects of enteric physiology on neurological function
Seyfried, Nicholas	PhD	Prof.	Biochemistry	Integrative proteomics approaches related to the pathogenesis of AD and other neurodegenerative disorders
Singer, Annabelle	PhD	Assoc. Prof.	Biomedical Engineering	Neural Coding & Decoding, Computational Neuroscience, Learning & Memory, Neural Stimulation, Optogenetics, Neuroengineering, Virtual Reality, Animal Models of Disease, Alzheimer's Disease
Sloan, Steven	MD, PhD	Asst. Prof.	Human Genetics	Mechanisms of human glial development, and how aberrations in this process could drive neurodevelopmental disorders
Smith, Yoland	PhD	Prof.	Neurology	Synaptic plasticity, pathophysiology and therapeutics of Parkinson's disease and related movement disorders
Traynelis, Stephen	PhD	Prof.	Pharmacology & Chemical Biology	Mechanisms of activation & modulation of synaptic glutamate receptors, development of novel subunit selective glutamate receptor modulators
Varvel, Nicholas H.	PhD	Asst. Prof.	Pharmacology & Chemical Biology	Innate immune activation in acute and chronic brain injury with a focus on Alzheimer's disease and epilepsy
Weinshenker, David	PhD	Prof.	Human Genetics	Norepinephrine signaling in genetically-engineered mice and rats with a focus on drug addiction and Alzheimer's disease
Wen, Zhexing	PhD	Asst. Prof.	Psychiatry & Behavioral Sciences	Modeling neurological and psychiatric disorders with patient-specific induced pluripotent stem cells (iPSCs)
Wichmann, Thomas	MD	Prof.	Neurology	Primate research on the physiology of the basal ganglia; pathophysiology of movement disorders, such as Parkinson's disease