CALL FOR APPLICATIONS:
2023 NEURODEGENERATION COMPUTATIONAL FELLOWS PROGRAM

With the advent of large-scale genetics and genomics studies of neurodegenerative disorders, many of them focused on racially and ethnically diverse cohorts, there is a need for qualified computational scientists to spearhead modeling, data analysis, and interpretation efforts. To address this need, the Neurodegeneration Computational Fellows Program aims to bring individuals with computational expertise into experimental labs with advanced mathematical, data analysis, and bioinformatics needs as part of their research programs. This program is funded through the Neurodegeneration Challenge Network (NDCN) - organized by the Chan-Zuckerberg Initiative - which brings together researchers from all over the world to study brain disease.

Fellows are selected through a competitive process, and matched with a host lab for 2 years. Fellows will serve as key contributors and leads on computational, data analysis, and bioinformatics-themed projects within their host labs. They will attend an orientation/training program and annual retreats, as well as participate in monthly meetings with other Fellows to discuss challenges, opportunities, and career development.

The program is administered through Howard University, and is open to applicants from HBCUs and MSIs throughout the US. Fellows will begin in August 2023, with full salary and benefits funded for 2 years.

Applications can be submitted here: Application portal

Hosting Labs
Joanne Allard’s lab at Howard University College of Medicine
Inma Cobos’ lab at Stanford University School of Medicine
Elaine Hsiao’s lab at UCLA
Jenny Jiang’s lab at University of Pennsylvania
Celeste Karch’s lab at Washington University in St. Louis
Magdalena Misiak-Christian’s lab at Howard University College of Medicine
Prosper N’Gouemo’s lab at Howard University College of Medicine
Evaristus Nwulia’s lab at Howard University College of Medicine
Hemali Phatnani’s lab at Columbia University Medical Center and the New York Genome Center
William Tu’s lab at Howard University College of Medicine

Eligibility
Current/prior student at a Historically Black College or University (HBCU) or Minority Serving Institution (MSI) Either of the following:
- Bachelor’s or Master’s degree in computational biology, bioinformatics, statistics, biostatistics, computer science, applied mathematics, or other quantitative fields
- Bachelor’s or Master’s degree in Biology, Biochemistry, Neuroscience, or Biological Sciences-related with prior demonstrable research training in computational methods, bioinformatics, or data analysis
Programming experience in R, Python, or Matlab
Ability and willingness to learn new programming or statistical languages as necessary
Interest in neuroscience and neurological disease
Two-year program commitment
Must be a US citizen, Permanent Resident, or have unrestricted authorization to work in the US

Benefits
Additional experience and training in computational biology research
Opportunities to publish scientific research and contribute to team projects
Career mentorship from leaders in neurodegenerative disease researchers and computational experts
Interactions with the scientific community through weekly meetings, scientific and professional seminars, and large-scale in-person meetings and symposia
Competitive pay and benefits
Frequently Asked Questions

**Program Information**

**What is the program?**
The Neurodegeneration Computational Fellows Program, based out of Howard University, aims to establish cohorts of bioinformaticians, biostatisticians, and computational biologists recruited from Historically Black Colleges and Universities (HBCUs) and other Minority Serving Institutions (MSIs) to broaden the pool of researchers analyzing health disparity research data at the socioeconomic, genetic, and molecular level in neurodegenerative diseases.
In this two-year program, Fellows will be paired with experimentally focused labs to conduct research in computational biology, biostatistics, data analysis, machine learning, or bioinformatics related to neurodegenerative diseases.

**What are the Fellow benefits?**
- Gain additional experience and training in computational biology research
- Enhance oral and written scientific communication skills
- The opportunity to publish research
- Valuable career path mentorship
- Interact with the scientific research community through weekly meetings, scientific and professional seminars, and larger-scale in-person meetings

**How much are Fellows paid?**
- Fellows with Bachelor's Degrees will receive a base annual salary of $65,000 plus benefits
- Fellows with Master's Degrees will receive a base annual salary of $85,000 plus benefits
- Fellows living in high cost-of-living areas will receive an additional supplement.

**What are some of the things a Fellow would be doing?**
Fellows will serve as computational experts within their host labs. The roles and responsibilities of the Fellows will differ from lab to lab, but will likely include coordinating with experimental experts on project planning and design, leading computational analysis and computational workflow development, and mentoring lab personnel in aspects of computational analysis or computational biology.

**What are the expectations for the Fellows?**
- Attending a program orientation and bootcamp designed to provide a level starting point for Fellows with respect to computational biology and neurology
- Participating in scheduled computational biology training events
- Attending career exploration and mentorship sessions
- Attending and presenting at an annual Computational Fellows Symposium

**Where are the host labs located?**
Host labs are located across the United States. For a complete list of host universities participating in this year's program, and corresponding lab descriptions, see above.

**What are the start and end dates of the program?**
The 2023 cohort of the Program will begin in August 2023 and will end in August of 2025.

**Are health benefits included?**
Yes, health benefits will be provided to all Fellows.

**Will a relocation subsidy be provided?**
Yes, as a lump sum to those Fellows who will be moving to be on-site with their labs.

**Can the Fellowship be extended?**
This is a fixed-term Fellowship of two years. Upon completion of the Fellowship program, Fellows will be able to join an alumni network, but will not be permitted to apply for an additional Fellowship position. Some host labs have indicated the need for a permanent computational staff member, so there may be possibilities for Fellows to be hired on as permanent staff within their labs, at the discretion of the host PI.

**How will Fellow-lab pairings be determined? Will Fellows have a say?**
Fellows will indicate on their application which lab(s) they are interested in working with. Applicants who pass the initial selection process will have the option to meet virtually with host lab PIs to gauge mutual interest and fit. If a host lab agrees to a particular applicant and vice versa, they will be matched.
Eligibility
Who should apply? What are the requirements?
If you meet the following criteria, and are enthusiastic about making a difference in neurodegenerative research you should apply.

• Either of the following:
  o Bachelor’s or Master’s degree in computational biology, statistics, biostatistics, computer science, applied mathematics, or other quantitative fields
  o Bachelor’s or Master’s degree in Biology, Biochemistry, Neuroscience, or Biological Sciences-related with prior demonstrable research training in computational methods
• Programming experience in R, Python, or Matlab
• The ability and willingness to learn new programming or statistical languages as necessary
• Interest in neuroscience and neurological disease
• Ability to make a two-year commitment to work with a host lab

Can I apply if I am not a citizen or permanent resident of the United States?
Currently, we are only accepting applicants who are citizens, permanent residents, or individuals with unrestricted authorization to work in the US. To determine eligibility for special immigration statuses (e.g. Deferred Action for Childhood Arrivals), please contact us.

Can I apply if I have a Ph.D.?
Currently, we are only accepting applicants with Bachelor’s or Master’s degrees in the fields mentioned above. Applicants with PhDs in any of the relevant fields are not eligible to apply.

Application and selection information
How do I apply?
Follow the link (or scan the QR code) on the summary page above.

When is the application deadline?
Applications will be accepted until 5pm Pacific Standard Time on March 24, 2023.

What are the next steps after the initial application?
The selection committee will review applications during the final week of March, and contact applicants who have made it to the next round. At that point, applicants will have virtual meetings with the PIs of labs they have expressed an interest in.

Are recommendation letters needed?
Letters of recommendation are not required, but the applicant will need to provide contact information for two individuals who can attest to their computational skills and initiative as a researcher.

How are applications reviewed?
Applications will be reviewed by a committee of Computational Biology experts. Fellowships will be awarded based on merit, as determined by the eligibility criteria above as well as overall fit with host lab interests and working style.

How will I be notified if I am selected?
Applicants selected will be notified via the email address submitted during the application process.