Harvard Medical School and Brigham & Women's Hospital

Postdoctoral Position: Applying Statistics to Develop A Personalized Medicine for Parkinson's Disease

A Postdoctoral Position in Neurogenomics is available at The Neurogenomics Laboratory of Brigham & Women's Hospital and Harvard Medical School (Principal Investigator: Dr. Clemens Scherzer). This fully funded position is available for a one-year appointment with the possibility of extension. The postdoctoral fellow will also participate in training activities associated with a T32 training grant from NINDS (PI: Dr. Rebecca Betensky): "Training in Neurostatistics and Neuroepidemiology," including regular seminars, opportunities to present work in progress, and a journal club.

Your tasks: We are looking for an enthusiastic, highly motivated, science-driven and experienced postdoctoral fellow to join our team to perform large-scale analysis of longitudinal clinical, gene expression, metabolite, and genetic data sets in order to identify markers that predict prognosis, track progression, and help with diagnosis. Cross-sectional and longitudinal analyses of univariate and multivariate markers will be performed. The candidate will be co-mentored by Dr. Scherzer and Dr. Betensky of the Department of Biostatistics at Harvard S chool of Public Health.

Your qualifications: Applicants are expected to have Ph. D. or equivalent doctoral degree with strong statistical background and SAS knowledge. Strong quantitative skills are advantageous. Excellent English oral and written communication skills are required. Interest in an independent academic research career is encouraged. Candidates must have a publication record.

Please submit your application, including a statement of research interests, a biosketch, and three references to Kris Vernon at kvernon@partners.org.

Salary will be commensurate with experience.

Application deadline: January 31, 2014

A Personalized Approach to Parkinson's disease

Today there are many treatments available for Parkinson's to improve motor manifestations, tremor and slow movements. However, significant work is still needed to find therapies that stop or delay the underlying disease processes that injure brain neurons in patients. Currently no tests are available to predict prognosis, no laboratory tests exist to track response to treatment, and the cause of Parkinson's remains elusive. In the inter-disciplinary Neurogenomics Lab, genomicists, statisticians, computational and clinical scientists use Big Data to find the answers to these big questions. We are at the forefront of understanding the complex combination of effects that lead to Parkinson's, and the factors that influence the disease course once it has started. The mission behind our research and all that drives it is clear: cure Parkinson's.

Treating the Individual Patient, with the Right Medicine, at the Right Time

The Neurogenomics Laboratory envisions and is building a future precision medicine for Parkinson's, Huntington's, and other neurologic diseases, where genome-wide DNA, RNA, and biome information is used for much earlier diagnosis, personalized prognosis, tailored treatments, and response tracking. The Parkinson Personalized Medicine initiative has the transformative goal of shifting care from a "one-size fits all" approach towards precision medicine tailored to the molecular disease affecting an individual patient. We are at the forefront of building future personalized healthcare for people with Parkinson's disease, where a patient's DNA, RNA, and Metabolome (all of the body's metabolites) information are used to rationally treat the right patient, with the right medicine, at the right time.

Pioneering Biomarkers: Harnessing the Power of Collaboration

Imagine bright scientists around the nation sharing infrastructure, data, and working together to solve a critical problem on the road to a cure for Parkinson's. BWH researchers are helping to lead this pioneering collaborative research approach with the goal of developing biological markers of the disease, also called biomarkers. Biomarkers, found in blood or cerebrospinal fluid, are crucial to:

- More precisely tracking the disease progression and response to therapies
- Developing tailored treatments and new diagnostics
- Determining risk and prognosis
- Providing insight that could help scientists reverse the loss of disability, and possibly prevent the onset of disease in future generations

Thanks to partnerships with institutions around the nation, 2,000+ individuals are currently participating in the multiyear, prospective, Harvard Biomarker Study. This study, which includes Parkinson's patients, people with memory decline, and healthy individuals, will yield important insights that will be the cornerstone for future study and innovation.

The Laboratory is located in the Cambridge Biotech Hub near MIT, the Broad, and the Whitehead Institute with 15 min shuttle connections to the Harvard Medical School, Brigham & Women's Hospital, Massachusetts General Hospital.