

August 12th, 2015

Multiple post-doctoral fellow positions in Biomedical Data Sciences are immediately available in the lab of Dr. Yana Bromberg. Appointments are joint between the Human Genome Institute of New Jersey (HGINJ), the Department of Biochemistry and Microbiology, Rutgers University, New Brunswick, and the Institute of Advanced Studies, Technical University of Munich.

We are seeking motivated *data scientists* to uncover disease patterns in human genome variation. The successful candidates will develop novel methods for the analysis of complex biomedical data; e.g. predict functional effects of individual genomic variants via machine learning and/or compare exome sequences of healthy and disease-affected individuals to reveal statistically significant genetic associations and identify pathogenesis pathways. The *expected outcome* of this effort is a novel computational pipeline for generating hypotheses of variome to disease correlation. Although we expect our methods to generalize to a range of disorders, we are particularly interested in the study of Crohn's disease, Chronic Obstructive Pulmonary Disease (COPD), and Tourette Syndrome.

The Bromberg lab develops and maintains computational tools for the analysis of genome-to-function relationships. We are part of the NIMH Center at Rutgers University and collaborate closely with the Tischfield lab in the Department of Genetics, which provides excellent molecular biology and genetics expertise, as well as full access to the scientific resources of the Rutgers Cell and DNA Repository (RUCDR). The Bromberg lab has unrestricted access to the computational resources of the Informatics Discovery Institute at Rutgers (RDI2). As part of a fellowship agreement with the Institute of Advanced Studies in Technical University of Munich (TUM-IAS), the Bromberg lab members can also be hosted in the TUM department of Bioinformatics and Computational Biology for extended periods of project time. The project is funded for five years and will be undertaken in close collaboration with the labs of Dr. Laura Elnitski (NHGRI) and Dr. Derek Gordon (Department of Genetics, Rutgers)

Salary is competitive, in the range of \$45K-\$65K, and commensurate with experience.

Qualifications

Candidates should have a PhD in Computational Biology, Bioinformatics, Computer Science (w/biology background) or Genetics (w/computational background). We *strongly encourage recent PhD graduates* to apply. Programming skills are essential, as well as some familiarity with the major bioinformatics tools/databases. Experience with high performance computing, machine learning, and whole genome data analysis is desired, but not required. Computationally oriented candidates from labs studying the genetics of psychiatric or auto-immune disorders will be given preference. Applicants should be fluent in spoken and written English and should be able to communicate ideas and results to colleagues. The ability to integrate into a team is as essential as that to complete a project without constant supervision.

Application Procedure

Please visit <http://bromberglab.org> for more information. Interested persons should e-mail a cover letter and C.V. to Dr. Yana Bromberg at yana@bromberglab.org