

# Postdoctoral Research Position in Computational Biology and Environmental Health

## Position

Title	Postdoctoral Research Position in Computational Biology and Environmental Health
School	Harvard T.H. Chan School of Public Health
Department/Area	MIPS/Environmental Health
Position Description	<p>The Haber lab is a new research group in the Department of Environmental Health at HSPH. The group investigates the effect of environmental exposures on the airways of mammalian lungs, with particular focus on the role of the airway epithelium in the pathogenesis of asthma. In particular, work in the lab focuses on development and application of computational approaches for analysis and interpretation of next-generation sequencing data, particularly single-cell RNA-sequencing and related approaches.</p> <p>We analyze clinical samples and mouse models of airway injury, inflammation and regeneration, collaborating closely with clinical pulmonologists and immunologists to study regulatory mechanisms underlying both tissue homeostasis and disease pathogenesis.</p> <p>Environmental triggers of asthma stimulate pathogenic networks of inflammatory signaling involving diverse interactions amongst epithelial, immune, neuronal and stromal compartments. The lab works on developing the algorithms and analysis tools to realize the potential of new technologies to map these tissue-wide networks underlying allergic and non-allergic inflammation in asthma.</p> <p>In addition to identifying the biological mechanisms through which known environmental exposures affect respiratory health, the group is also interested in mapping of asthma burden using geospatial analysis of epidemiologic data. This line of research in the lab seeks to isolate factors, such as poor housing conditions, in the social physical, and built environment that contribute to racial and socioeconomic disparities in rates of asthma.</p> <p>Fellows will be encouraged to take advantage of the rich and varied training and career development opportunities offered at HSPH. If interested please contact Dr. Haber (<a href="mailto:ahaber@broadinstitute.org">ahaber@broadinstitute.org</a> )</p>
Basic Qualifications	PhD or equivalent in computational biology, computer science, statistics, mathematics or other quantitative field. Candidates holding a degree in biological/medical science are also welcome to apply if they have extensive background in computational or statistical work.
Additional Qualifications	<p>Applicants must have substantial experience with statistical or epidemiologic data analysis. Preference will be given to candidates with demonstrated research interests in areas currently under investigation (e.g. asthma, COPD, lung biology, mucosal immunology) in the research group.</p> <p>Strong quantitative analysis skills and experience developing algorithms and/or conducting statistical analyses with large datasets, particularly genome-wide assays such as RNA-seq</p> <p>Experience and/or training in geospatial analysis, Bayesian disease mapping and other methods, spatial epidemiology</p> <p>Knowledge of lung biology, mucosal immunology, biology of allergy, impact of environmental conditions, particularly poor-quality housing on respiratory health</p> <p>Strong writing and verbal communication skills</p> <p>Track record of, or strong potential for, independent funding</p>
Special Instructions	Please send curriculum vitae, a brief statement of goals, and the names of three references to: <a href="mailto:ahaber@broadinstitute.org">ahaber@broadinstitute.org</a>
Contact Information	Patrice Ayers, Faculty Assistant Harvard TH Chan School of Public Health Molecular & Integrative Physiological Sciences 665 Huntington Avenue Boston, MA 02115
Contact Email	<a href="mailto:ahaber@broadinstitute.org">ahaber@broadinstitute.org</a>
Equal Opportunity Employer	We are an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, gender identity, sexual orientation, pregnancy and pregnancy-related conditions or any other characteristic protected by law.
Minimum Number of References Required	3
Maximum Number of References Allowed	3

## Supplemental Questions

Required fields are indicated with an asterisk (\*).

## Applicant Documents

Required Documents
1. Curriculum Vitae
2. Statement of Research
Optional Documents
1. Cover Letter