

## POSTDOCTORAL POSITION OPENING

### LABORATORY OF PRECISION ENVIRONMENTAL HEALTH

Principal Investigator: Andrea Baccarelli

#### **Deep Sequencing in Environmental Epidemiology – Applications to Epigenetics and RNA Investigations.**

The Laboratory of Precision Environmental Health at the Columbia University Mailman School of Public Health invites highly motivated candidates to apply for a Postdoctoral Scientist position. Funding is guaranteed for 2 years. The Postdoctoral Scientist will lead environmental epidemiology projects emphasizing data analysis of deep sequencing data, as well as the development and application of novel epigenetics tools and methods to human environmental health studies. In particular, the Scientist will lead projects utilizing next generation sequencing methods to uncover genetic and epigenetic variations linked to environmental exposures.

Ideal candidates will have the following qualifications:

- Experience analyzing next-generation sequencing data, particularly of RNA sequencing data
- Expertise in environmental health/environmental epidemiology
- Understanding of population science/epidemiology approaches
- Experience designing sequencing projects

The laboratory currently investigates the molecular mechanisms and biomarkers that reflect reprogramming of health and disease trajectories in response to environmental exposures. The Fellow will lead projects related to the lab's NIH-funded research on the roles of Extracellular Vesicles (EVs)—i.e., tiny membrane-bound vesicles actively released by human cells into the bloodstream—and of their bioactive cargo of short and long non-coding RNAs as conveyors of environmental effects. The largest current projects include the investigation of circulating non-coding RNAs as part of the mechanisms linking air pollution and lead exposure to age-related lung function decline in older individuals. Other laboratory research activities include investigations of DNA methylation, environmental mitochndriomics and other environmentally-susceptible biomarkers.

The position requires excellent written and oral communication skills and a willingness to work as part of a collaborative team. The incumbent will be responsible for moving forward several projects within the lab, mentoring graduate students, and maintaining active collaborations with other labs and universities.

Team: The Postdoctoral Scientist will work closely with Dr. Baccarelli and will be part of an interdisciplinary team of environmental epidemiologists, environmental health scientists, and wet-lab epigeneticists/molecular biologists. The Postdoctoral Scientist will have access to the resources and infrastructure available at the Mailman School of Public Health, including the Laboratory of Precision Environmental Health, the NIEHS Center for Environmental Health in Northern Manhattan, and collaborations with the Department of Epidemiology and the Department of Biostatistics.

**Qualifications:** Applicants should possess a Ph.D. in Environmental Health, or alternatively, in other relevant disciplines with relevant previous work and interest in environmental epidemiology. Strong quantitative skills, practical experience working with epidemiology data, familiarity with the R statistical software packages and excellent oral communication and scientific writing are also necessary.

**Location**

Laboratory of Precision Environmental Health, Department of Environmental Health Sciences, Columbia University Mailman School of Public Health, 630 W 168<sup>th</sup> St, New York, NY

*Lab website:* <https://www.mailman.columbia.edu/research/laboratory-precision-environmental-biosciences>

**Application Info**

Apply for this position online at [this link](#). Specific questions may be addressed to Ms. [Lisa Hu](#), but all applications must go through the online application portal. **Applications received by email will not be considered.** The Columbia University Mailman School of Public Health is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.