

# Postdoctoral Associate

Department of Epidemiology, Boston University School of Public Health

We invite applications for a postdoctoral fellowship in the Department of Epidemiology at Boston University School of Public Health (BUSPH) under the mentorship of Dr. Marcia Pescador Jimenez. The overall goal of our NIH-funded study is to examine how multiple environmental exposures (green space, air pollution, ambient temperature, noise, walkability, neighborhood amenities, access to transit, and neighborhood deprivation), as part of the external exposome, shape individual risk factors on Alzheimer's Disease and related dementias (ADRD). We aim to study associations between time-varying environmental metrics and ADRD risk factors in five cohorts: the Health and Retirement Study (HRS), the REasons for Geographic and Racial Differences in Stroke (REGARDS), the Kaiser Healthy Aging and Diverse Life Experiences (KHANDLE) cohort, the Study of Healthy Aging in African Americans (STAR), and the Multi-Ethnic Study of Atherosclerosis (MESA).

The position will entail collaborations with several investigators and trainees with expertise in epidemiology, causal inference, environmental health, geospatial analysis, dementia, aging, and biostatistics. This position offers a competitive compensation package (commensurate with experience). We seek bright, curious, and highly motivated individuals interested in applying their skills to tackle complex epidemiologic problems. Applicants should have a PhD or equivalent degree in epidemiology, environmental epidemiology, biostatistics, or related quantitative health field. Research experience in environmental determinants of health, cognitive aging, dementia, vascular health, neuropathology, or neuroimaging is desirable, but not required. Methodologic expertise in causal inference methods and longitudinal data analysis is also desirable. Applicants should have the ability to work independently and as part of a collaborative team.

BUSPH is committed to building and nurturing an inclusive professional community in which every person feels they have a rightful place, are welcome and respected, and are supported in their endeavors. The Department of Epidemiology at BUSPH provides a vibrant, interdisciplinary research environment along with a wealth of resources to build a career. Fellows can take advantage of training, education, and mentorship opportunities at BUSPH, in general, and engage in opportunities specifically facilitated by Dr. Pescador Jimenez. More information about Dr. Pescador Jiménez' group can be found [here](#).

## **Primary responsibilities of this position will be:**

(1) Analyzing data from existing epidemiologic studies, including:

- Data managing, cleaning, and analysis in R
- Developing and contributing to a system of standard analytical procedures and guidance for the team's projects
- Interpreting and presenting data in tabular or graphical form
- Engaging in code review
- Documenting complex procedures and processes

(2) Contributing to the dissemination of findings, including:

- Publishing first-authored manuscripts
- Collaborating as co-author on projects aligned with the research group
- Presenting results at scientific research conferences
- Presenting preliminary findings to works-in-progress/lab meetings

(3) Contributing to the logistics underlying the operations of these studies, including:

- Conducting literature reviews, related to the content area or methods used
- As appropriate, managing IRB protocols, coordinating and track data use agreements; and/or acting as liaison to data and specimen managers at collaborating sites

The Postdoctoral Associate will be expected to participate in career development activities and prepare grant applications to establish research independence. Fellows will also have opportunities to develop mentoring skills within their research groups.

#### **Required education and skills**

- PhD or equivalent degree in epidemiology, or a related field within the past 2 years. Note that degrees in data science or data analysis will not be considered without specific, in-depth training and/or experience in epidemiology.
- Excellent communication skills in both spoken and written English.
- Excellent critical thinking and problem-solving abilities.
- Strong computing and dataset analysis skills in R.
- Experience in the analysis of repeated measures longitudinal data (e.g., linear mixed models) and in causal methods in epidemiology (e.g., marginal structural models for mitigating selection bias).

#### **Examples of current projects in which the postdoctoral fellow may be involved:**

- 1) Use of novel street view-based metrics of built environment to quantify the contribution of visible street-level features (e.g., walkability, specific types of green space) to cognitive health in older adults.
- 2) Examining associations between interaction of multiple environmental exposures and vascular health.
- 3) Exploring the interplay of air pollution, green space, noise, ambient temperature and neighborhood socioeconomic status with dementia incidence.

**HOW TO APPLY:** Send a single PDF cover letter describing career goals, research interests, and reasons for applying, curriculum vitae, graduate school transcript, one first-author publication, and contact information for three references to Marco Chivardi [mchivard@bu.edu](mailto:mchivard@bu.edu) and Marcia Pescador Jimenez [jimenezm@bu.edu](mailto:jimenezm@bu.edu).