

Postdoctoral Scholar in Environmental Epidemiology

Want to conduct impactful research to inform policies and interventions on climate change and health?

Position description. Professors Erika Garcia and Sandy Eckel of the Department of Population and Public Health Sciences at the Keck School of Medicine (KSOM) of USC are seeking a motivated postdoctoral scholar in environmental epidemiology to join a multidisciplinary team of researchers investigating the effects of climate change-related environmental exposure on a broad range of human health outcomes. Examples of ongoing and planned research projects include: environmental health co-benefits of electric vehicle adoption as a climate change mitigation strategy; health impacts of temperature and air pollution co-exposure; wildfire-influenced air pollution effects; factors contributing to differential heat/pollution effects across population with varying characteristics vulnerabilities; and use of causal inference methods to estimate health effects of hypothetical interventions.

Drs. Garcia and Eckel and their research group have published in *JAMA*, *PNAS*, *American Journal of Respiratory and Critical Care Medicine*, and other high-impact peer-reviewed journals. Their research has been highlighted in *TIME Magazine*, *Scientific American*, international media, public radio, and other media outlets. See:

- <https://time.com/6201615/heat-pollution-health-risk/>
- <https://www.scientificamerican.com/article/when-heat-waves-meet-air-pollution-death-risks-rise-substantially1/>
- <https://www.theguardian.com/environment/article/2024/jul/26/childhood-air-pollution-adult-lung-health-bronchitic-symptoms-study>
- <https://www.ijpr.org/show/the-jefferson-exchange/2023-02-14/wed-9-am-more-evs-less-air-pollution-usc-study-shows-real-promise>
- <https://www.kjzz.org/2022-07-14/content-1795160-phoenix-summer-heat-dangerous-air-pollution-making-it-worse>

The postdoctoral scholar will participate in scientific activities including all aspects of study design, analysis, manuscript preparation, and development of research proposals. Key responsibilities include:

1. Conduct statistical analyses independently for studies of air pollution, temperature, and other environmental exposures in various study design settings, including cohort, case-control, case-crossover, and time-series
2. Write manuscripts for publications in scientific journals
3. Present scientific results at meetings, seminars, and conferences
4. Collaborate with multidisciplinary research teams and subject-specific working groups
5. Contribute to the development of research proposals

Training opportunities. Successful candidates will receive research training in environmental epidemiology, including use of advanced research methodologies with specific emphasis on causal inference approaches. In addition to individual mentorship in their research areas, postdoctoral scholars have the opportunity for advanced multidisciplinary training through coursework in any USC department, including epidemiology and biostatistics. They will also have numerous opportunities for career development training through meetings, seminars, and workshops hosted by KSOM. The enriched career development program will help early investigators develop essential skills for an independent research career, including grant and manuscript writing, scientific presentation, and collaboration with multidisciplinary teams. Postdoctoral scholars will also have opportunities to form new collaborations and to gain experience in guiding pre-doctoral trainees and medical and undergraduate students.

Training environment. The growing USC Health Sciences Campus is home to several world-class environmental health centers including the Southern California Environmental Health Sciences Center (SCEHSC), the Maternal And Developmental Risks from Environmental and Social Stressors (MADRES) Center, and the Center for Translational Research on Environmental Health (R-TEN). The Department of Population and Public Health Sciences at KSOM has one of the nation's leading research programs in epidemiology and biostatistics with strengths in environmental health, cancer and chronic disease, genetics, and the development of novel statistical

methods. The Department has a strong track record of supporting postdoctoral scholars in developing successful NIH K Awards and preparing them to be competitive candidates for faculty positions at leading universities as well as for positions in government and industry.

Position qualifications. Postdoctoral scholars must have a doctoral degree in a relevant field (environmental health sciences, epidemiology, biostatistics, or related field), and have demonstrated interest in environmental health, preferably with experience in climate change or air pollution research. Intermediate to advanced skills with at least one statistical and/or programming software (e.g., R or Python) and with regression modeling methodologies are required. Experience working with large administrative data, such as hospitalization data or electronic medical records is a plus. Collegiality, resourcefulness, and motivation are essential for success.

Application instructions. Submit a statement of research interests, curriculum vitae, copies of one or two recent publications, if applicable, and contact information for three references who are familiar with your academic accomplishments. Address applications to Prof. Erika Garcia and submit at <https://usccareers.usc.edu/job/los-angeles/postdoctoral-scholar-research-associate/1209/71748244448> (REQ20155892).