



Climate and Health Scholars Interest Statements from NIH Institutes, Centers, and Offices

Each scholar will have a host Institute, Center or Office (ICO) and will engage in NIH-wide activities and cross-ICO collaborations. Below are some identified examples of what a climate and health scholar could focus on with a host ICO that has expressed interest in a 2024 Scholar. This is not an exhaustive list of possibilities. If you do not see an example that fits your climate and health area of interest, please email CHScholars@nih.gov with a description of your interests and we will connect you with an appropriate contact at the NIH.

All of Us Research Program ([All of Us](#))

- Climate change and extreme weather events exacerbate the health impacts of environmental exposures, affecting healthcare access, cost, and quality. Further, climate change is expected to exacerbate health inequities in populations underrepresented in biomedical research. The *All of Us* Research Program (*All of Us*) is an innovative precision medicine research initiative building a robust data ecosystem from 1 million or more engaged participants. This rich resource integrates genomics, electronic health records, and many other data types to inform and build tools for thousands of studies on a variety of health conditions. *All of Us* is uniquely positioned to empower research in climate change and health for two reasons: First, *All of Us* recruits participants from across the entire United States, encompassing diverse urban, suburban, and rural areas. This geographic diversity will be crucial in evaluating the heterogeneous climate change pressures across the country. Second, over 75% of participants in the *All of Us* are from underrepresented groups to address the historical lack of diversity in biomedical research. We propose appointing a Climate Health Scholar to support *All of Us* and The National Institute on Environment and Health Sciences (NIEHS) in enabling climate change research in diverse populations and settings and to highlight the exceptional opportunity to study the people and communities that are most vulnerable to climate change.

The *All of Us* Division of Scientific and Medical Research (DMSR) works closely with collaborators to design interdisciplinary scientific programs that bring new data, tools, and other resources to *All of Us*, enhancing its ability to support novel research and its participants. The *All of Us* DMSR is currently working with NIEHS to identify opportunities to incorporate environmental and exposomic data to *All of Us*.

An NIH Climate and Health Scholar will apply their expertise to several opportunities: to identify high-priority data for integration with the *All of Us* dataset; work with participants and experts to determine how to responsibly provide environmental results or other exposure-related resources to participants; and/or build analytical tools and trainings for integration into the growing *All of Us* resources for future research. The Scholar would work closely with and be mentored by personnel from *All of Us*, NIEHS, and other NIH Institutes and Centers to design studies aimed at gathering valuable information about participants' exposome, epigenome, and environmental health histories. The Scholar would serve as a subject matter expert and key collaborator to conduct research, prepare publications, promote innovative research opportunities, facilitate new partnerships, and gather and interpret expert input. The exact



focus of the Scholar's work is flexible and will be subject to their interests, background, and expertise.

Fogarty International Center (FIC)

- The Fogarty International Center (FIC) is dedicated to advancing the NIH mission by supporting and facilitating global health research conducted by U.S. and international investigators, building international partnerships, and training the next generation of scientists to address global health needs. Two divisions within FIC are seeking scholars interested in climate and health issues in low-and middle-income countries (LMICs).

FIC's Division of International Epidemiology and Population Studies (DIEPS) conducts and leads policy relevant research and training in global health, with emphases on computational modeling and evolutionary studies of infectious diseases, and population scale effects of interventions and implementation of these to improve health in LMICs. DIEPS is interested in a scholar with advanced computational and analytical knowledge and skills related to climate change and infectious disease dynamics. Potential collaborative and educational work could include development of new projects addressing the impact of climate on directly transmitted or vector-borne infections, including scenario projections and forecasts or analyses of existing epidemiological data. The proposed work would lead to joint publications and presentations, and/or a workshop to advance the science of climate and infectious disease modeling.

FIC's Center for Global Health Studies (CGHS) identifies emerging research priorities, stimulates new scientific directions in global health, and supports multidisciplinary collaboration and short-term training to address pressing global health problems. CGHS is interested in a scholar to conduct a landscape analysis on climate change and health research and research capacity in LMICs that can help inform NIH future investments. This work would be conducted in collaboration with FIC's Division of International Research and Training. Potential aspects of the analysis could include desktop research, a literature review, consultations with US and low- and middle-income country scientists, a workshop or webinar for NIH staff, a scientific publication, and/or a research agenda that highlights gaps and opportunities in LMICs.

National Cancer Institute (NCI)

- NCI's Division of Cancer Control and Population Sciences seeks to host an NIH Climate Change and Health Scholar interested in applying their expertise to accelerate progress in: (1) understanding cancer- and climate-related human behavior to inform research on the development and testing of interventions that alter behaviors in ways that mitigate climate change while reducing cancer risk and improving outcomes; and/or (2) assessing and ameliorating the impacts of climate change across the cancer control continuum, including understanding the impacts of climate change on cancer care delivery as well as understanding the best approaches to anticipate and mitigate impacts on cancer. The CH Scholar shall serve as a subject matter expert and collaborator on activities such as the developing publications, convening experts, identifying research gaps and needs, promoting research, and facilitating global partnerships.

National Institute on Aging (NIA)



- [NIA](#) leads a broad scientific effort to understand the nature and impacts of aging and [Alzheimer's Disease \(AD\) and AD-Related Dementias \(ADRD\)](#), and to extend the healthy, active years of life. The institute's program priorities include supporting research to investigate factors that impact the health of older adults and their preparedness, adaptation, resilience, and recovery to climate change and extreme weather conditions, including ways to reduce health disparities and inequities. NIA welcomes proposals from scholars engaged in work to understand the behavioral, biological, and socioecological processes related to climate change and extreme weather that affect older adult health and wellbeing, as examined in humans, animals, and/or systems serving this population (e.g., healthcare infrastructure and delivery; best practices for healthcare providers and caregivers, etc.). A scholar placed at NIA will help inform the institute's development of programmatic activities related to the impact of climate change and extreme weather on the health and wellbeing of mid- to late-life populations and those systems and individuals who care for them. The scholar may be positioned within one or more of [NIA's Research Divisions or Offices](#). They will work collaboratively with a dynamic multi-disciplinary team of NIA staff engaged in this effort that allows for a comprehensive understanding of the multi-faceted impacts of climate change on older adult health. Through this collaborative effort, NIA aims to foster a greater understanding of the challenges faced by older adults in the context of climate change, to enhance resilience, and to develop effective strategies for promoting their health and wellbeing.

National Institute of Allergy and Infectious Diseases ([NIAID](#))

- NIAID is interested in a Climate and Health Scholar with an interest in infectious diseases in general, and in water/food-borne, vector-borne and/or respiratory diseases in particular. The Scholar would provide her/his expertise in climate to identify how environmental changes in temperature affect these diseases. This could include analyzing epidemiological and climatological data sets, review of the literature, and other activities that will contribute to our understanding of the impact of environmental factors on the incidence of infectious diseases and their influence on human populations.

National Institute of Arthritis and Musculoskeletal and Skin Diseases ([NIAMS](#))

- The mission of NIAMS is to support research into the causes, treatment, and prevention of arthritis and musculoskeletal and skin diseases; the training of basic and clinical scientists to carry out this research; and the dissemination of information on research progress in these diseases. NIAMS also conducts and supports basic research on the normal structure and function of bones, joints, muscles, and skin. Basic research involves a wide variety of scientific disciplines, including immunology, genetics, molecular biology, structural biology, biochemistry, physiology, virology, and pharmacology. Clinical research areas include rheumatology, orthopedics, dermatology, metabolic bone diseases, heritable disorders of bone and cartilage, inherited and inflammatory muscle diseases, and sports and rehabilitation medicine.

Environmental health research highlights the potential role of the exposome, defined as the measure of all the exposures of an individual lifetime and how those exposures relate to an individual's health, on disease susceptibility onset and severity. Human diseases often result from complex interactions between patients' genetic susceptibilities and environmental



exposures (exposome). As such NIAMS remains highly engaged in recent efforts to understand the exposome, see: <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-23-112.html>.

NIAMS welcomes proposals from scholars engaged in work to understand the impact of climate change and extreme weather on its mission areas. Two examples of areas of interest include exposome and autoimmune diseases and extreme weather and exposures and skin disease.

A scholar placed at NIAMS will help inform the institutes development of programmatic activities and priorities related to the impact of climate change and extreme weather on the health and wellbeing of those with conditions within its mission areas.

National Institute of Environmental Health Sciences ([NIEHS](#))

- NIEHS is interested in a scholar with climate and health sciences experience to investigate the causal relation between climate change and its detrimental effects on human health, particularly as aligned with programs within the Division of Translational Toxicology (DTT). At NIEHS/DTT, the CH scholar would serve as a subject matter expert in promoting and conducting research, and consulting on research recommendations and the identification of research opportunities to explore the combination of both environmental and climate-related factors that contribute to health impacts. The CH scholar will engage in various activities including creating publications, organizing expert gatherings, recognizing gaps and requirements in research, advocating for research initiatives, and fostering international collaborations.

National Institute on Minority Health and Health Disparities ([NIMHD](#))

- The mission of the NIMHD is to lead scientific research to improve minority health and reduce health disparities. NIMHD focuses on all aspects of health and health care for racial and ethnic minority populations in the U.S. and the full continuum of health disparity causes as well as the interrelation of these causes. NIMHD encourages research that uses approaches encompassing multiple domains of influence (e.g., biological, behavioral, sociocultural, environmental, physical environment, health system) and multiple levels of influence (e.g., individual, interpersonal, family, peer group, community, societal) to understand and address health disparities (see the NIMHD Research Framework, <https://www.nimhd.nih.gov/about/overview/research-framework.html>, for more information).

NIMHD's extramural Division of Scientific Programs is interested in hosting a Climate and Health Scholar to assist with developing programmatic activities related to investigating the impact of climate change on the health of populations whom NIH designates as experiencing health disparities in the United States, which include racial and ethnic minority groups (Black or African American, Hispanic or Latino, American Indian and Alaska Native, Asian American, Native Hawaiian, and Pacific Islander populations), people with less privileged socioeconomic status, sexual and gender minority persons, and rural populations. Potential activities may include conducting literature reviews on emerging or promising topics related to climate change and health disparities, assisting with developing a research initiative, planning workshops or webinars, and promoting awareness of climate change and health disparities research across NIMHD.



In addition, NIMHD's Division of Intramural Research is interested in receiving scientific advisement on incorporating climate change research and measures into NIMHD intramural research projects. Specific climate change expertise of interest and relevant to NIMHD may include a focus on: environmental justice and community-engaged research; climate change readiness, adaptation/resilience, and/or mitigation interventions for populations that experience health disparities; the impact of climate change on mental health; interactions between climate change and built environment/neighborhood factors; impact of climate change on health systems; using data science to expand climate change research; training a diverse biomedical workforce on climate change and health disparities; and tool and or/measure development for understanding the health impact of climate change on populations that experience health disparities.

National Institute of Nursing Research ([NINR](#))

- The NINR's mission is to optimize health and advance health equity into the future by leading nursing research to solve pressing health challenges and inform practice and policy. The Advanced Visualization Branch (AVB) of the NINR utilizes immersive virtual reality environments as a digital research platform to study human responses to complex community-like settings, specifically related to self-care management challenges of persons with chronic disease. The AVB is interested in engaging external expertise to integrate climate factors and health data resources into virtual reality environments for scientific examination, including how climate changes effect, and could be mitigated by the built environment. The AVB is also interested in intellectual exchanges such as lectures and thought pieces on climate-focused research methodologies and potential future directions utilizing virtual reality environments.

National Library of Medicine-The National Center for Biotechnology Information ([NLM-NCBI](#))

- NLM's 2017-2027 [Strategic Plan](#) outlines the Institute's vision for advancing the mission in library and information sciences: to create an innovative, sustainable digital ecosystem to keep pace with the data demands of the research enterprise, engage a wide range of audiences to ensure the right information gets delivered to them at the right time, and build a data-ready workforce for the future in biomedical informatics and data science. The NLM National Center for Biotechnology Information (NCBI) manages key molecular data and analysis resources including sequence and literature databases that set the foundation for biomedical and behavioral research. NCBI seeks to host an NIH Climate and Health Scholar interested in leveraging these and other open data resources to accelerate progress at the intersection of climate and health. The ideal candidate would apply their expertise to molecular data resources that are associated with high-quality metadata and data provenance as well as the scientific understanding that is captured in the biomedical literature or representations such as knowledge graphs and large language models (LLM), or to legal, social, and ethical implications of these topics. Research projects of interest include international law and global partnerships for capacity building, data sharing with privacy and security, and the application of molecular markers to measuring and modeling key parameters of human health in an evolving global data and physical ecosphere.