

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

When the program begins, each scholar will develop a workplan with their host Institute, Center, or Office (ICO) to detail what they plan to complete during their time as a scholar. A Climate and Health (CH) Scholar will have a host ICO but will also engage in NIH-wide activities and cross-ICO collaborations. Below are the interests that an ICO has in hosting a climate and health scholar, as well as some identified examples of what a climate and health scholar could focus on with a host ICO. This is not an exhaustive list of possibilities. In your application, please articulate how your area(s) of expertise could help build climate change and health capacity and knowledge at one or more participating NIH ICOs'.

Reach out to CHScholars@nih.gov with any questions.

Fogarty International Center (FIC)

Fogarty International Center Division of International Epidemiology and Population Studies (DIEPS) is interested in hosting a scholar with experience in primary data analysis, modeling, genomic analysis, conducting population-based experiments on efficacy/effectiveness, or implementation research focused primarily on LMIC population vulnerabilities in infectious diseases, air pollution and extreme heat. Particular topical interests include: 1) how climate affects infectious disease transmission and emergence; 2) how climate variables may affect traditional intervention strategies (e.g., vaccination, vector management); and 3) how and where climate health interventions, such as green space and green infrastructure to reduce heat and air pollution, are most effective, and when these may involve tradeoffs with infectious disease risks.

National Center for Complementary and Integrative Health (NCCIH)

The Epidemiology Program in the National Center for Complementary and Integrative Health (NCCIH) Division of Intramural Research is responsible for the design, implementation, and analyses of high-quality surveys and longitudinal studies that further understanding of complementary health approaches, chronic pain, overall resilience to disease, health restoration, predictors of well-being, and methods to evaluate whole person health with an emphasis on aging populations and the underserved. In this context, the Epidemiology Program is interested in the long-term impact of climate change and extreme weather events. A number of health conditions including asthma, cancers, and cardiovascular disease are disproportionately higher in underserved populations and older individuals. In many cases, climate change appears to produce higher burden in these underserved populations. What is unknown is whether and how climate change may be related both to the burden of many prevalent co-occurring chronic conditions (e.g., pain, anxiety, depression, sleep disturbances, obesity, substance abuse) and their management. For instance, urban-rural gradients in pain prevalence have been noted, and rural environments are often in the path of extreme weather events. Similarly, extreme weather events may increase risk for injuries resulting in chronic pain, especially in situations where the weather events potentiate disparities in best practice management of pain.

The CH Scholar would provide their expertise in how climate change impacts the co-occurring chronic conditions listed above, taking responsibility for at least one project and being intimately involved with

other projects underway or planned. For instance, the National Oceanic and Atmospheric Administration provides access to both county and zip-code level climate data that could be linked to NCHS data or “All of Us” data, both of which contain multiple measures of pain and pain management. The exact focus of the Scholar’s work is flexible and will be subject to their interests, background, and expertise.

National Cancer Institute (NCI)

NCI seeks to host an NIH Climate Change and Health Scholar within its Division of Cancer Control and Population Sciences. The scholar will apply their expertise to accelerate progress in one or two main areas: 1) understanding the interplay between cancer and climate-related human behavior to inform research on developing and testing interventions that mitigate climate change while reducing cancer risk and improving outcomes; and 2) assessing and ameliorating the impacts of climate change across the cancer control continuum. This may include studying the impacts of climate change-related exposures on cancer risk, the effects of climate change on cancer care delivery, and understanding the best strategies to anticipate and mitigate these impacts. The scholar will serve as a subject matter expert and collaborator on activities such as developing publications, convening experts, identifying research gaps and needs, promoting research, and facilitating global partnerships.

National Heart, Lung, and Blood Institute (NHLBI)

The National Heart, Lung, and Blood Institute (NHLBI) provides global leadership for a research, training, and education program to promote the prevention and treatment of heart, lung, blood and sleep (HLBS) diseases to enhance the health of all individuals so that they can live longer and more fulfilling lives. The Institute is soliciting Climate and Health Scholar candidates that are interested in: 1) exploring the impact of climate change on HLBS disorders; and/or 2) designing climate adaptation or mitigation strategies to address HLBS disorders in diverse settings. Depending on the interests of the Scholar and the NHLBI host, the Scholar may be housed within a specific Division or Office and may have broad input across the Institute.

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 Climate and Health Scholar candidates with interest and expertise in the impact of climate events on allergic diseases such as asthma, chronic rhinosinusitis, atopic dermatitis, and food allergy, as well as water/food-borne, vector-borne and/or respiratory infectious diseases. The Scholar would provide their expertise to identify how environmental changes may affect these diseases. Proposed activities could include analyzing concurrent epidemiological and climatological data sets, review of the relevant literature, workshop planning, or other projects that will further our understanding of the impact of changing climatologic conditions on the prevalence and severity of allergic and/or infectious diseases in 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 environmental (or external) 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 institute’s 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 hosting a scholar in the Oceans and Human Health Program. NIEHS is interested in a scholar to evaluate the influence of climate change on human health in the context of harmful algal blooms, and related ecological events, that impact coastal and inland communities. This scholar shall serve as a climate subject matter expert and collaborator on activities such as reviewing the state of the field, developing publications, and convening experts for panels. This individual may participate in presenting to interagency groups on related subjects and may help facilitate new partnerships. The scholar's specific expertise will contribute to furthering the understanding of the magnitude of effect that climate change has on human health through marine or lacustrine exposures by highlighting

successes and opportunities, or by uncovering significant research needs or gaps that may inform future directions for the field.

National Institute of Mental Health (NIMH)

At the NIMH, the Division of Translational Research (DTR), Center for Global Mental Health Research (CGMHR), and Office for Disparities Research and Workforce Diversity (ODWD) are seeking scholars interested in climate change and mental health. The DTR directs, plans, and supports extramural programs of research and research training that translate knowledge from basic science to discover the etiology, pathophysiology, and trajectory of mental disorders and develops effective interventions for children and adults. The CGMHR coordinates the NIMH's efforts to generate knowledge that will improve the lives of people living with or placed at risk for mental illnesses in low- and middle-income countries. The ODWD supports and advances practices that encourage equity in mental health research and address the needs of individuals and communities that are underrepresented and underserved in both research and the workforce.

Potential NIMH target areas include how to accurately measure the mental health burden of climate change and extreme weather events, including in longitudinal designs; unique issues related to eco-anxiety (and eco-distress and climate grief) and young people; how to treat climate change-related mental health sequelae; assessment of mental health risks and strategies to boost mental health resilience among population; mental health risks and ways to boost mental health resilience among populations most affected by climate change (i.e. environmental justice communities in the US and globally, and other underserved populations); climate change-related impacts on persons with serious mental illness; mobile populations; suicide, and the design and implementation of mitigation and adaptation strategies to strengthen the resilience of communities and health systems.

Potential scholar activities are varied and could include serving as a subject matter expert for the institute, developing extramural programmatic activities, and assisting in the development of NIMH priorities by leading a workshop to advance the science of climate change and mental health.

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](#)).

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, Middle Eastern and North African, Native Hawaiian, and Pacific Islander populations), people with less privileged socioeconomic status, sexual and gender minority persons, people living with disabilities, and rural populations. Potential activities that applicants

might propose include conducting portfolio analyses on climate change and health disparities research, drafting a white paper on emerging or promising topics related to climate change and health disparities, assisting with developing research initiatives, 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 and health disparities areas of interest to NIMHD include: climate change impacts on various populations experiencing health disparities including American Indian and Alaska Native or Native Hawaiian and Pacific Islander populations; impacts of climate-related policy changes on health disparities; 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 Neurological Disorders and Stroke (NINDS)

The National Institute of Neurological Disorders and Stroke (NINDS) supports and performs basic, translational, and clinical neuroscience research. The NINDS mission space includes many common debilitating neurological diseases such as epilepsy, Parkinson's disease, spinal cord injury, traumatic brain injury, Alzheimer's disease and related dementias, Stroke, and amyotrophic lateral sclerosis. The NINDS Office of the Neural Exposome and Toxicology (ONETOX) supports research on those exposures that have an impact on neurological disease and disorders, and overall nervous system health. The exposures described in the exposome include those that are a result of climate change. A better understanding of the exposomic factors caused by climate change will lead to identifying more precise and effective intervention strategies. The NINDS hopes to gain a better understanding of the potential risk factors caused by climate change from a CH Scholar so that NINDS can develop research funding opportunities for the public. One example of climate and health related activities we could engage is a project to study if and how outdoor workers are more likely to develop neurological diseases.

Office of Aids Research (OAR)

The global regions most susceptible to climate change are disproportionately affected by HIV. Initial research showed that increased migration and population displacement, food insecurity, economic stress, conflict, communicable diseases, and the erosion of health infrastructure can increase the rates of HIV infection and worsen the health and wellbeing of people with HIV. Impacts on HIV programs and people with HIV can manifest as reduced access to prevention, testing, and treatment services, poor adherence to treatment, poor nutrition and reduced immunity. Other effects could see increases in HIV risk (e.g., more transactional sex as a result of food insecurity) and increased discrimination of populations most affected by HIV. These effects are amplified by pre-existing vulnerabilities that affect people with HIV. However, this is a critical gap in our current research portfolio on the impact of climate change in HIV care continuum. The CH scholar hosted by OAR would help delineate the research priorities related to the impact of climate change.

Office of Behavioral and Social Sciences Research (OBSSR)

The Office of Behavioral and Social Sciences Research (OBSSR) is responsible for coordinating the health-relevant behavioral and social sciences and identifying challenges and opportunities to advance these sciences at the National Institutes of Health (NIH). The mission OBSSR is to (1) enhance the impact of health-related behavioral and social sciences research; (2) coordinate behavioral and social sciences research conducted or supported by the NIH and integrate these sciences within the larger NIH research enterprise, and (3) communicate health-related behavioral and social sciences research findings to various stakeholders within and outside the federal government.

OBSSR seeks to host an NIH Climate and Health Scholar with expertise in the behavioral and social science factors underlying climate change adaptation, mitigation, or communication. The scholar may be health-focused or may be a behavioral or social scientist with expertise in climate change more broadly. Scholars with expertise in multi-level influences and methods, social determinants of health, and behavioral economics are encouraged to apply. Topics of particular interest include: strategies for climate-relevant behavior change and maintenance at the individual, household, institutional, community, policy, or other levels; behavioral interventions with health and planetary co-benefits; the interplay of social and cultural comparisons and norms with climate-relevant behaviors; and behavioral and social sciences factors underlying disaster preparedness and/or recovery efforts, and displacement/migration related to climate change. The CH scholar shall serve as a subject matter expert and collaborator on activities such as identifying research gaps and needs, developing publications, organizing expert gatherings, and fostering collaborations with other NIH entities. Through this collaborative effort, OBSSR aims to identify the most impactful behavioral and social sciences research gaps and needs in the context of climate change and human health.

Office of Disease Prevention (ODP)

The Office of Disease Prevention (ODP) is the lead office at the National Institutes of Health responsible for assessing, facilitating, and stimulating research in disease prevention, and disseminating the results of this research to improve public health. The mission of ODP is to improve public health by increasing the scope, quality, dissemination, and impact of prevention research supported by NIH. ODP fulfills this mission by providing leadership for the development, coordination, and implementation of prevention research in collaboration with NIH Institutes, Centers, and Offices (ICOs) and other partners.

ODP seeks to host a NIH Climate and Health Scholar who would apply their expertise to support the Office's activities pertaining to climate disasters, prevention research, and health. It is well established that climate disasters disproportionately impact populations that are historically undeserved and experience health disparities. The scholar's expertise will be leveraged to advance understanding of how climate disasters interact with social and structural determinants of health (e.g., housing, food insecurity, access to healthcare and services) in local and global contexts and strategies and interventions for community preparedness and resilience. The Office is particularly interested in leveraging the scholar's expertise to advance efforts around climate disasters and the intersection with housing and nutrition insecurity. The scholar will provide consultation and support for activities that align with ODP's 2024-2028 Strategic Plan cross-cutting themes:- social determinants of health; development and testing of interventions; dissemination and implementation research; and workforce development and research capacity building. The CH Scholar will serve as a subject matter expert and collaborate on potential activities such as a scoping review, a portfolio analysis of NIH funded projects, and a landscape analysis of NIH programs and activities on climate disasters, prevention research, and

health. Follow-on activities may include collaboration on developing publications, convening experts in the field, engaging internal and external partners, identifying research gaps, developing abstracts for submission to scientific conferences, and organizing sessions/panels on climate disaster and prevention research. The goal is that the scholar would work with ODP staff to accelerate equity-focused climate disaster and prevention research to improve health for all.

Office of Dietary Supplements (ODS)

The Office of Dietary Supplements (ODS) is interested in hosting a Climate and Health Scholar with expertise in the intersection of climate, nutrition, and equity. Rising carbon dioxide levels and global temperatures are predicted to put millions of additional people at risk of certain nutrient deficiencies. As climate change jeopardizes our food systems and exacerbates health disparities, ODS seeks a Climate and Health Scholar to provide a multidisciplinary lens into how dietary supplements might be leveraged to promote health and resilience across diverse populations, throughout the lifespan, in a changing climate. For example, a Climate and Health Scholar may be interested in addressing the following questions: 1) how do dietary supplements impact health conditions exacerbated by climate change, at a cellular, whole-body, and community level; 2) how is climate change influencing nutritional status across diverse populations, and what dietary interventions might these changes necessitate; and 3) how can the production and acquisition of dietary supplement ingredients impact the intersection of human and environmental health? Potential activities for a Climate and Health Scholar include working with the robust expertise housed at ODS, including but not limited to epidemiologists, registered dietitians/nutritionists, and chemists, to coordinate initiatives across NIH and other federal partners that include dietary supplements at the intersection of climate, nutrition, and equity.