

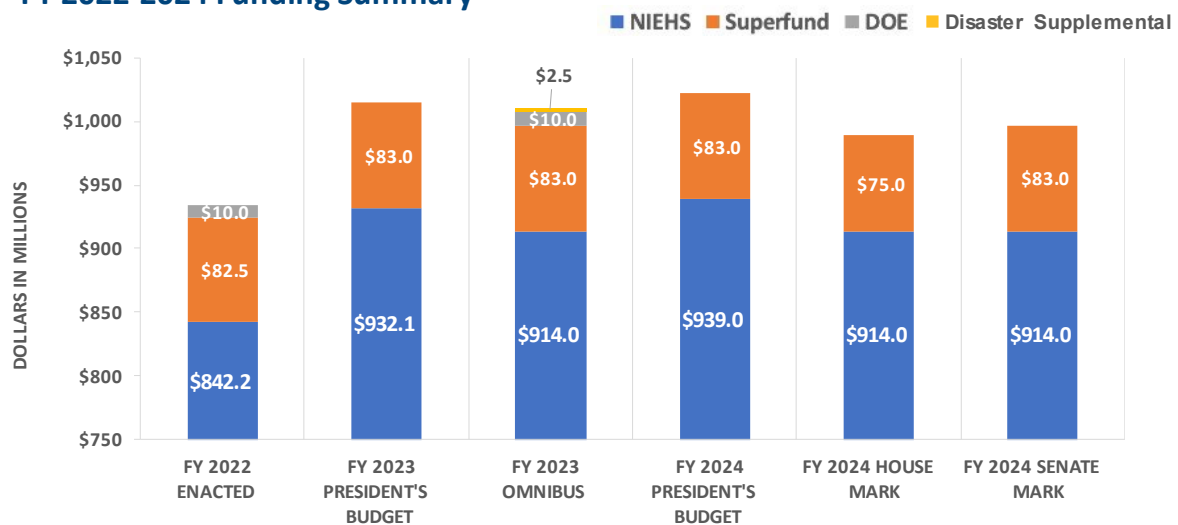
# Report to the National Advisory Environmental Health Sciences Council

Director, NIEHS and NTP  
September 12, 2023

## Appropriations Update



### FY 2022-2024 Funding Summary



National Institutes of Health  
U.S. Department of Health and Human Services

## Legislative Report

### 118<sup>th</sup> CONGRESS (2023-2024):

- **FY2024 Appropriations**

- **House**

- On July 13, 2023, the House Interior, Environment and related Agencies Subcommittee marked up the Interior and Environment FY24 bill. The NIEHS Superfund related programs received a cut of \$8M (or just under 10%), leaving their appropriation at \$75M (this brings it back to FY13 levels). This bill passed out of the full House Appropriations Committee on July 19, 2023, and now awaits votes on the House floor. The House report language did commend the WTP on their work and efforts.
    - On July 14, 2023, the House marked up in the Labor, Health and Human Services, Education and related agencies Subcommittee the Labor-HHS bill, which had NIEHS flat at \$913, 979,000. NIH overall had a decrease of \$3.8 billion from FY23 Enacted levels in the House bill. This bill is still awaiting a vote of the full House Appropriations Committee currently. (Note as of this writing: The report language has yet to be released for the Labor-HHS House

bill. It will be released just before the full committee markup, which is still to be announced).

- **House Labor-HHS Bill Language (pg. 66):**

“NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

For carrying out section 301 and title IV of the PHS Act with respect to environmental health sciences, \$913,979,000.”

- **House Interior and Environment Bill Language (pg. 119):**

“NATIONAL INSTITUTES OF HEALTH

NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

For necessary expenses for the National Institute of Environmental Health Sciences in carrying out activities set forth in section 311(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9660(a)) and section 126(g) of the Superfund Amendments and Reauthorization Act of 1986, \$75,000,000.”

**House Interior and Environment Report Language (pg. 92):**

“NATIONAL INSTITUTES OF HEALTH

NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

The National Institute of Environmental Health Sciences (NIEHS), an agency within the National Institutes of Health, was authorized in section 311(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and in section 126(g) of the Superfund Amendments and Reauthorization Act of 1986 to conduct certain research and worker training activities associated with the Nation’s Hazardous Substance Superfund program.

Appropriation enacted, 2023.....	\$83,035,000
Budget estimate, 2024.....	83,035,000
Recommended, 2024.....	75,000,000
Comparison: Appropriation, 2023.....	-8,035,000
Budget estimate, 2024.....	-8,035,000

The Committee recommends \$75,000,000 for the National Institute of Environmental Health Sciences. The Committee continues to support the Worker Training Program, which trains workers to safely work in hazardous environments and respond in emergency situations. NIEHS is encouraged to continue its work supporting communities’ capacity to respond to pandemics and disasters.”

- **Senate**

- On July 27th, the full Senate Appropriations Committee marked up and passed the FY24 Interior and Environment and Labor-HHS bills, along with the Defense and Homeland Security FY24 bills. For NIEHS, the Senate Appropriations Committee FY24 mark was flat at \$913, 979,000 for Labor-HHS and flat for Interior-Environment at \$83,035,000 for our Superfund related programs. NIH overall saw an increase of \$943M in discretionary funding in the Labor-HHS bill. The bills now await a vote on the Senate floor.

- NIEHS received significant report language on Climate Change, Firefighters and Environmental Exposures/Cancer, E. Palestine Train Derailment and Indoor Air in the Labor-HHS bill with no specific set aside for those.
- For Interior and Environment bill, included \$2M for PFAS and \$1.75M for risk reduction for Native Americans to hazardous metals mixtures from abandoned uranium mine waste.
- **Senate Labor-HHS Bill Language (pg. 74):**  
 “NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES  
 For carrying out section 301 and title IV of the PHS Act with respect to environmental health sciences, \$913,979,000.”

**Senate Labor-HHS Report Language (pg. 106-107):**

“NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

Appropriations, 2023.....	\$913,979,000
Budget estimate, 2024.....	938,807,000
Committee recommendation.....	913,979,000

The Committee recommendation includes \$913,979,000 for the National Institute of Environmental Health Sciences [NIEHS].

Disaster Research Response Program. —The Committee urges NIEHS to support research and community engagement activities related to the health of individuals affected by the train derailment in East Palestine, Ohio, including first responders and local residents in both Ohio and Pennsylvania.

Environmental-related Health Conditions. —The Committee urges NIEHS to expand efforts to support and coordinate research on the rise in and exacerbation of a wide range of health conditions related to the environment, which may include infectious disease, injury and trauma, chronic conditions such as asthma, mental health, and health disparities. Such research may include evaluation of both preventative and intervention strategies for such conditions.

Environmental exposures and Cancer in Firefighters. —The Committee encourages NIH and CDC/NIOSH to continue their efforts to better understand the cancer risks firefighters may experience, including efforts to measure environmental exposures in firefighters and determine the mechanisms that lead to increased cancer incidence, morbidity, and mortality. The Committee also encourages NIH to continue to support research to improve health equity among firefighters to evaluate potential differences and exposure risk.

Indoor Air. —Health outcomes from the use of combustion indoors depend on individual health characteristics, the fuel used, and mitigations. The Committee encourages NIEHS to research and collaborate with appropriate partners to understand effects of indoor

emissions on health and the degree to which mitigation strategies reduce exposures and other impacts. Research should include the impacts of other indoor pollutants to fully understand the indoor air landscape. The Committee requests an update on these activities in the fiscal year 2025 CJ.”

**Senate Labor-HHS Report Language Specific “NIEHS” mentions:**

**Pg. 113:** *“Autism Spectrum Disorder [ASD].* —The Committee encourages NIH to support greater investment in research on autism, particularly in areas outlined in the Interagency Autism Coordinating Committee’s [IACC] Strategic Plan for ASD. The Committee urges NIMH to work in close partnership with the other Institutes that serve on the IACC to provide an update on the level of research investment for each of the priority areas outlined in the IACC Strategic Plan for ASD. While significant progress has been made in the understanding of autism, large gaps remain in the ability to improve outcomes and access to services for autistic individuals across their life span. Research has shown that autistic individuals have higher rates of some co-occurring physical and mental health conditions, impacting quality of life and increasing medical utilization and costs. Additionally, there are significant unaddressed racial, ethnic, and socioeconomic health equity challenges experienced by autistic individuals across their life span and by their families. As such, the Committee encourages NIMH to work collaboratively with NIMHD to support research on the socioeconomic, racial, and ethnic health disparities associated with ASD, and to work collaboratively with other institutes including NIA, NIEHS, and NINDS to support research on the impact of neurological, social, and environmental factors leading to co-occurring health conditions.”

**Pg. 134-135:** *“The HEALthy Brain and Child Development [HBCD] Study.* —The Committee recognizes and supports the NIH HBCD Study, which will establish a large cohort of pregnant individuals and follow them and their children up to age 10 to characterize the influence of a variety of factors on neurodevelopment and long-term outcomes. The study aims to enroll approximately 7,500 participants through 27 sites across the United States, including regions of the country significantly affected by the opioid crisis. The study cohort will comprise participants that reflect the U.S. population but will oversample for individuals that have used substances sometime during their pregnancy and a matching cohort with similar characteristics but no substance exposure during the pregnancy. Multimodal data collection will include neuroimaging, behavioral and cognitive assessments as well as collection of biospecimens and brain activity measurements [EEG]. Knowledge gained will be critical to help predict and prevent some of the known impacts of pre and postnatal exposure to drugs and environmental influences, including risks for future illicit substance use, mental disorders, and other behavioral and developmental problems, as well as identify factors that contribute to resilience and opportunities for intervention. The Committee recognizes that the HBCD Study is supported in part by the NIH HEAL Initiative, and NIH Institutes, Centers, and Offices [ICOs], including OBSSR, ORWH, NEI, NIMHD, NIBIB, NIEHS,

NICHD, NINDS, NIAAA, NIMH, and NIDA, and encourages additional NIH support for this important study.”

▪ **Senate Interior and Environment Bill Language (pg. 137):**

“NATIONAL INSTITUTES OF HEALTH

NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

For necessary expenses for the National Institute of Environmental Health Sciences in carrying out activities set forth in section 311(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9660(a)) and section 126(g) of the Superfund Amendments and Reauthorization Act of 1986, \$83,035,000.”

**Senate Interior and Environment Report Language (pg. 126):**

“NATIONAL INSTITUTES OF HEALTH

NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

The National Institute of Environmental Health Sciences [NIEHS], an agency within the National Institutes of Health, was authorized in section 311(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (Public Law 115–141), to conduct multidisciplinary research and training activities associated with the Nation’s Hazardous Substance Superfund program. Section 126(g) of the Superfund Amendments and Reauthorization Act of 1986 (Public Law 99–499) authorizes the National Institute of Environmental Health Sciences to conduct training and education of workers who are or may be engaged in activities related to hazardous waste removal or containment or emergency response.

Appropriations, 2023.....	\$83,035,000
Budget estimate, 2024.....	83,035,000
Committee recommendation.....	83,035,000

The bill provides \$83,035,000 for the operations of the National Institute of Environmental Health Sciences account, consistent with the enacted level and equal to the budget request. The Committee continues the \$2,000,000 provided in fiscal year 2023 as base funds in fiscal year 2024 to further the Institute’s work on PFAS and other contaminants of emerging concern. The Institute both leads and supports significant research on PFAS that will result in better remediation outcomes. Further, of the funds provided, not less than \$1,750,000 shall be to support risk reduction for Native Americans to hazardous metals mixtures from abandoned uranium mine waste. The Committee appreciates the contributions of the Worker Training Program [WTP] and encourages the Institute to prioritize resources and support for this program.”

• **LEGISLATION**

- **H.R. 2365 National Plan to End Parkinson’s Act:** On July 13, 2023, H.R. 2365, the National Plan to End Parkinson’s Act (introduced by Congressman Bilirakis (R-FL-12)) was passed out of the House Energy and Commerce Subcommittee on Health by a voice vote. The bill now awaits a vote of the full House Energy and Commerce Committee. The bill directs the Secretary of HHS to carry out a national project to prevent and cure Parkinson’s. Additionally, the bill establishes an Advisory Council on Parkinson’s Research Care, and Services, which would include the NIH Director, the NINDS Director, and the NIEHS Director along with other Federal and Non-Federal Members. It requires that there be an Advisory Council meeting on Parkinson’s research every 2 years. Furthermore, the bill requires a biannual report that includes all federal funded efforts in Parkinson’s research, prevention, diagnosis, treatment, clinical care, and institutional-, home-, and community-based programs and the outcomes of efforts.
  
- **H.R. 2670, House FY24 National Defense Authorization Act (NDAA):** On July 14, 2023, the House passed their version of the FY24 NDAA by a vote of 219-210. There are not any provisions in the House passed version that impact NIEHS, but there are some sections that are of interest on PFAS and one section on mental health mentioning NIH. There is one additional section, Sec. 1046, that is interesting in the bill that prohibits funds for DOD Advisory Committees related to environmental, social, and governance including on greenhouse gases, climate and environmental justice. The bill also included provisions prohibiting funding to Wuhan Institute of Virology, as well as EcoHealth Alliance, any subsidiary of EcoHealth Alliance, any organization directly controlled by EcoHealth Alliance, or any organization or individual that is a subgrantee or subcontractor of EcoHealth Alliance. The FY24 NDAA now will head to conference for negotiations between the House and Senate, and the compromised version would expect to be passed and signed into law before the end of 2023. The bill is expected to be taken up by the House in July. Here are the summaries of the sections on PFAS and mental health:

Section #	Title
331	Improvements Relating to Exposures to Perfluoroalkyl and Polyfluoroalkyl Substances
332	Prizes for Development of Technology for Thermal Destruction of Perfluoroalkyl and Polyfluoroalkyl Substances
333	Restriction on Department of Defense Acquisition of Covered Items Containing or Produced Using Certain Substances
725	Mandatory Training on Health Effects of Perfluoroalkyl and Polyfluoroalkyl Substances
729	Task Force of Department of Defense on Mental Health; DOD is asked to coordinate with NIH and other Agencies on the assessment and recommendations for the DOD report

	containing an assessment of, and recommendations for improving, the efficacy of mental health services provided to members of the Armed Forces by the Secretary of Defense.
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- **S. 2226, Senate FY24 National Defense Authorization Act (NDAA):** On July 27, 2023, the Senate passed its version of the NDAA by a vote of 86-11. The bill also prohibits funding to Wuhan Institute of Virology and EcoHealth Alliance, Inc. The FY24 NDAA now will head to conference for negotiations between the House and Senate, and the compromised version would expect to be passed and signed into law before the end of 2023. The bill included these PFAS provisions of interest:

Section #	Title
321	Treatment of certain materials contaminated with perfluoroalkyl substances or polyfluoroalkyl substances.
322	Increase of transfer authority for funding of study and assessment on health implications of per- and polyfluoroalkyl substances contamination in drinking water by Agency for Toxic Substances and Disease Registry.

**BRIEFING:**

- **Briefing to Senator Markey’s Staff on the NIH Disaster Research Response Program and NIH Climate Change and Health Initiative:** On August 22, 2023, NIEHS Subject Matter Experts met with Senator Markey’s Health and Environment staff to talk about NIH’s efforts with the NIH Climate Change and Health Initiative, worker health and safety training in disasters, and also the NIH Disaster Research Response Program.  
Attendees: Dr. Gwen Collman (NIEHS), Dr. Aubrey Miller (NIEHS), Dr. Josh Rosenthal (FIC), Ms. Sharon Beard (NIEHS), Ms. Jean Berube (NIH OLPA), and Ms. April Bennett (NIEHS), Markey Staff: Ms. Sanjana Rana and Dr. Carina Fish.

**Public Health Research and Surveillance Priorities from the East Palestine, Ohio Train Derailment: A Virtual Workshop**

NIEHS, with support from the National Cancer Institute, the National Institute on Aging, Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institute of Mental Health, National Institute of Neurological Disorders and Stroke, and the CDC, awarded a contract on August 7<sup>th</sup>, 2023 to the National Academy of Science, Engineering and Medicine (National Academies) to hold a workshop focused on the evaluating the human health impacts stemming from the Norfolk Southern Train Derailment in East Palestine, Ohio. The National Academies will convene scientific experts, field investigators, policymakers, preparedness and response professionals, and community members to

inform our understanding of the exposures, health risks, and opportunities for additional health investigations that could further the well-being of those impacted by this situation and similar disasters going forward. This workshop is being planned for Fall of 2023. Dates and more details to follow.

## **Sister Study 20<sup>th</sup> Anniversary**

October is breast cancer awareness month and during the entire month we will be celebrating the 20th Anniversary of the NIEHS Sister Study and its many accomplishments. The Sister Study was started in 2003 by former NIEHS Director, Dr. Ken Olden, to discover environmental and genetic factors that increased risk for breast cancer. The study has been led for 20 years by Dr. Dale Sandler, Chief, NIEHS Epidemiology Branch.

Sister Study researchers have been able to publish more than 300 scientific papers, some of which are highlighted in a 10-minute commemorative video and in other products displayed on the sister study website. The study has conducted research into air pollution, trauma and psychosocial stress, dietary factors, permanent hair dye and chemical hair straighteners, some personal care products, and obesity. The study has also investigated how changes to DNA may influence biological aging and breast cancer risk. A full listing of the research publications can be found on the Sister Study website at <https://sisterstudy.niehs.nih.gov/English>. We are extremely grateful to more than 50,000 women who've participated in the study. There would be no Sister Study without them.

## **NIH Environmental Justice Strategic Actions**

HHS Secretary Xavier Becerra recently requested that all Operating Divisions within HHS identify a senior leader point of contact for Environmental Justice (EJ) activities and identify three strategic and transformative EJ actions. These EJ actions must be implemented within the next 18 months; may include new staffing, funding, policies, regulations, guidance document, initiatives, or other activities; and may include improving accountability and compliance with any statute the agency administers that affects the health and environment of communities with EJ concerns.

Dr. Trevor Archer, Deputy Director of NIEHS, will serve in this capacity for the NIH at the request of Dr. Tabak, Acting NIH Director, and Dr. Schwetz, Acting Principal Deputy Director of the NIH, given his leadership in the NIH UNITE efforts, as well as his engagement with the Environmental Health Disparities and Environmental Justice Faculty at the National Institute of Environmental Health Sciences (NIEHS). Additional coordination efforts are being led by Sharon Beard, Liam O' Fallon, Dr. Lindsey Martin, Dr. Melissa Smarr, and Cyrena Silvera.

Dr. Archer has assembled a cross-NIH working group of health disparities and environmental justice subject matter experts to identify and prioritize three transformative actions. Based on the results of that meeting, the NIH will move forward with the following three actions:



**1) Develop and release a Centers of Excellence in Environmental Health Disparities and Environmental Justice grant program**

Since 2015, the NIH has supported a [Centers of Excellence in Environmental Health Disparities program](#) that focuses on understanding and reducing or eliminating environmental health disparities. The centers include multidisciplinary research capacity building and community engagement. This program will be renewed and become the Centers of Excellence in Environmental Health Disparities and Environmental Justice and has received broad support as a transformative, high priority for the NIH.

**2) Develop and implement an Environmental Justice Scholars program**

In 2022, as part of the Climate Change and Health Initiative, NIH established a [Climate Change Scholars program](#) for established scientists with expertise in climate and health to work in partnership with the NIH on climate change and health issues. The climate scholars work with staff across NIH to share knowledge and help build capacity for conducting climate-related and health research. The cross-NIH Environmental Justice working group will establish a similar program that will bring to NIH scholars with diverse expertise in, and knowledge of, environmental justice including community leaders, academics, healthcare and government workers. Scholars will work with NIH staff to address a range of environmental justice issues such as environmental and occupational health disparities, racial equity, and climate-related research.

**3) Establish a new Environmental Justice Training Program for communities, workers, researchers, health care and public health professionals, and policy makers**

Building the capacities of community residents and community-based organizations is critical to advancing environmental justice. Furthermore, it is important to train researchers to work in partnership with communities to address environmental justice issues. Finally, training for healthcare professionals, public health professionals, and policy makers to build their understanding of environmental justice and the connection it has to health and well-being of individuals and communities is essential.

The cross-NIH environmental justice working group identified other actions and activities that it will also pursue over the coming months, including a comprehensive inventory and analysis of current environmental justice efforts and sustainable cross-NIH working group structure. The NIEHS has already committed new funds for logistical support of the cross-NIH environmental justice working group as it fleshes out these actions and implements them over the next 18 months.

## **Climate Change and Health Initiative Updates**

In June, Dr. Woychik presented to the NIH Advisory Committee to the Director on behalf of the Climate Change and Health Initiative (CCHI) Executive Committee. The topics discussed included the CCHI goals and framework, NIH-funded climate change and human health research, and NIH CCHI programmatic accomplishments.

## **Alliance for Community Engagement – Climate and Health (ACE-CH)**

The goal of the ACE-CH is to coordinate and build community engagement research opportunities to support community-engaged research and outreach focused on climate change and to promote inclusion of underserved, racial/ethnic minority, and rural populations with the greatest disadvantage to the impacts of climate change. In early August 2023, Admiral Rachel Levine, Assistant Secretary for Health for HHS, visited the Alaska ACE-CH Hub to consult with Tribal Health Organizations and learn more about the unique public health challenges of the state. The hubs are described below:

- **Alaska Alliance for Community Engagement – Climate and Health (AK ACE-CH)**
  - Led by Dr. Stacy Rasmus from the University of Alaska Fairbanks, the Alaska Alliance for Community Engagement Hub will focus on Indigenous Alaska Natives located in rural and remote Alaska.
  - The climate impacts the hub will focus on include food systems, infectious disease, and mental health.
  - Working with multiple community partner groups, the hub will:
    - Develop and pilot test strategies to assess multi-level risk and resilience factors in rural AN communities in two highly impacted regions of Alaska
    - Disseminate and implement Indigenous-led strategies to build adaptive capacity in rural AN communities disproportionately affected by social determinants of health, health disparities and CC
    - Center Indigenous knowledge, attitudes and beliefs about climate change and its impacts on health and well-being in Alaska
- **Mountain West ACE-CH Hub: Climate Change Engagement Platform to Support Resilient Rural and Urban Communities**
  - Led by Dr. Katherine Dickinson from the University of Colorado School of Public health, the Mountain West ACE-CH Hub will focus on economically disadvantaged, communities of color, immigrant groups, and vulnerable occupational groups in both urban and rural communities near Denver.
  - The climate impacts the hub will focus on include air quality, drought, wildfires, and extreme heat.
  - Working with multiple community partner groups in the health and policy spheres, the hub will:
    - Develop community-engaged, solutions-oriented, and scientifically rigorous survey to measure CC and air quality concerns, beliefs, behaviors, information sources, assets, and desires regarding climate change and justice
    - Produce health impact assessment of local and regional assets available to prevent and deal with the evolving health dimensions of CC stressors across multiple sectors of the population
    - Develop and disseminate final reports for each community with clear and specific recommendations for interventions, practice, and policy change across multiple sectors and at local, state, and federal levels.

- **Community-driven approaches to EJ and Health in the Face of the Climate Crisis in Southern CA**
  - Led by **NIEHS-grantee** Dr. Jill Johnston from the University of Southern California, this Hub will focus on marginalized, poor families, immigrant groups, people of color, unhoused and elderly communities in LA and the City of Carson.
  - The climate impacts the hub will focus on include environmental justice, extreme heat, air pollution, and wildfires.
  - Working with multiple community partner groups in the health, housing, and policy spheres, the hub will:
    - Use spatial approaches to assess neighborhood-scale vulnerability; Expand community air monitoring network in climate justice neighborhoods,
    - Evaluate community-engaged workshops to mobilize residents take public health protective actions,
    - Advance community education, organizing and research capacity through engaged research; Assess daily risk perception, protective behaviors, health, and stressors.
- **Climate Health Adaptation and Resilience Mobilizing (CHARM) Lake County Project**
  - Led by Dr. Paul English of Public Health Institute, the CHARM Hub will focus on American Indian tribal, immigrant populations, rural and agricultural workers in Lake County, California.
  - The climate impacts of focus include extreme heat and harmful algal blooms.
  - Working with multiple community partners, the hubs will:
    - Establish continuous community engagement structures with local Tribes and community-based organizations; Evaluate and disseminate project results and sustain partnerships with Tribes, emergency response agencies and community stakeholders,
    - Identify and understand health impacts of HABs and heat events on vulnerable populations,
    - Synthesize and apply findings to improve communication and collaboration in HABs and heat preparedness and response.

### **CCHI NIH-NSF Collaborations**

Promoting climate-related disaster research response capacity for time-critical health research to further preparedness, response, and recovery of our communities.

- Strategic Value: Partnership with NSF is critical to bring climate science and related disciplines into the NIH CCH Community of Practice (COP)
  - Leverages existing NSF infrastructure & technologies furthering efficiencies and providing expanded logistical and scientific opportunities,
  - Broadens NIH CCH COP
    - Strengthens scientific pool of researchers, including NSF grantees,
    - Brings in NSF science & networks (e.g., imaging, socio-behavioral data)
  - Fosters complementary co-investments (active discussion around NIH P20s)
  - Promotes pre-positioning of research plans & integrated data collection

- Scientific Value: new opportunities through integration of research communities
  - Catalyzes transdisciplinary collaborations to produce stronger science by linking health researchers with NSF-funded researchers,
  - Combining tools & platforms (e.g., drones, mobile units) to include samplers for health data collections (e.g., personal monitors, archival study samples)
  - Augments NIH CCH data integration & predictive modeling efforts (e.g., PCORTF effort informed by real-time local data collection)
  - Data availability and sharing helps decision-makers & spurs new research,
  - Fosters downstream funding & deeper scientific proposals supported by data/findings from rapid health research.

#### Expansion of the NSF Natural Hazards Center Quick Response Award Program

We propose expanding the NSF Natural Hazards Center Quick Response Award Program to collect perishable health data focused on high-risk groups and time sensitive situations. This will include the transfer of funds from NIH CCH to NSF to their grantees at the Natural Hazards Center at the University of Colorado at Boulder to facilitate the infusion of behavioral and social efforts into geophysical research post natural disaster. Awards ranging from \$5000-50,000 could be awarded in matter of weeks. The existing structure for rapid review of applications and funding within 2 weeks involves NSF and other agency contributions up to \$1M annually. Socio-behavioral awards are typically less than \$5000, but supplemental funding efforts with awards up to \$50,000 have been supported, working with CDC, FEMA, NOAA.

#### New Technology and Resources for Health Research Through the NSF Rapid Response Research (RAPID) program

The University of Washington Natural Hazards Engineering Research Infrastructure (NHERI) Natural Hazards Reconnaissance (RAPID) Facility provides access to health focused sensors, instrumentation, support services for data and processing, and training for collection of post climate-disaster exposure data to researchers at very reduced costs. The program was initiated in 2016 and has been operational since 2018. We proposed making this resource broadly available to NIH grantees. The projects must be led by US-based researchers, but international partnerships are allowed. Currently over 300 instruments, including imaging equipment, surveying equipment, laser scanning equipment, and drones are available.

#### **CCHI Call for Proposals**

The NIH CCHI is asking for proposals on case studies to advance research on climate change adaptation strategies and their impact on public health with a goal to identify and understand current or historical climate adaptation strategies that address deteriorating health outcomes due to climate-led stressors, especially amongst under-resourced and marginalized populations. A case study approach is particularly useful when there is a need to explore in-depth information of a topic or event, identify gaps in current literature, and lessons learnt in multiple settings. This collection is intended to shed light on current knowledge and the potential for research to increase our understanding of climate change adaptation and its impact on health. For instance, research is needed to:

- Increase our knowledge of evidence-based adaptation strategies that impact health;
- Support the use of innovative research approaches which incorporate quantitative and/or qualitative assessments to better understand the impact of climate adaptation strategies on health outcomes;
- Increase our understanding of the impacts of climate change adaptation on health among populations disproportionately impacted by climate change, including those in low- and middle-income countries (LMICs) and under-resourced and marginalized populations globally;
- Encourage use of implementation science methodologies to translate adaptation strategies promote the uptake, scale-up, and spread across different contexts; and
- Increase opportunities to strengthen climate and health research capacity and support scholars from LMICs to study climate adaptation and health and publish their results.

The specific aims of this collection of cases are to:

- Center the importance of examining the health as a critical outcome in the larger climate adaptation research and implementation agenda.
- Encourage scholars and funders to conduct and support more high-quality adaptation research as it relates to climate and health, especially in LMICs that are disproportionately impacted by climate change.
- Review current adaptation strategies to improve our understanding of adaptive capacity of populations most at risk of climate change impacts.
- Identify how and when the impact of climate-led adaptation responses on public health outcomes has been or can be assessed through research.

Limited support is available for costs associated with compilation of data, analysis, and preparation of the initial manuscript. Use of funds are subject to NIH approval and cannot be used for primary data collection or human subjects research. Eligible costs include part-time salary support for a research assistant (e.g., an intern, student, or analyst) and/or limited travel for interviews with relevant stakeholders. We anticipate that these costs will vary and that not every case study will require support. Maximum costs that can be requested per case study are \$15,000, inclusive of indirect costs. All publication costs, including open access fees, will be separately covered by NIH.

Researchers, practitioners, and implementers from any country, especially low- and middle-income countries, are encouraged to submit case study proposals by October 16, 2023.

### **Sam Wilson Memorial Lecture**

The inaugural Sam Wilson Memorial Lecture was held on August 15, 2023. The lectureship was created to honor the memory for former deputy director, acting director, and career scientist Sam Wilson Jr., M.D., who passed away in 2021. The first lecture was presented by Wilson's decades-long colleague and research collaborator, Bennett Van Houten, Ph.D., co-leader of the Molecular and Cell Biology Program

at the Hillman Cancer Center at the University of Pittsburgh. Following the lecture, attendees visited the memorial bench placed in Wilson's honor in the NIEHS Memorial Garden.

## Recruitments and Staff Updates

**DTT Scientific Director:** The NIEHS OD conducted interviews with the top 3 candidates. Each candidate provided an institute-wide seminar and met with staff and leadership during on-site visits to the NIEHS campus. In the coming months, a candidate will be selected and approved by NIH. The announcement date and approval process timeline are currently unknown.

**Chief Diversity Officer (CDO):** NIEHS is recruiting a Chief Diversity Officer for the new Office of Environmental Health Sciences Workforce Diversity (OEHSWD). The national competitive recruitment opened in March 2023. The search committee is chaired by Robby Robinson, the NIEHS Deputy Associate Director for Management/Deputy Executive Officer. The final candidate will provide an NIEHS-wide seminar in September 2023 and meet with staff and leadership during their on-site visit.

**Chief, Center for Climate Change and Health Research (CCCHR):** The CCCHR is a new cross-NIH center focused on addressing the impacts of climate change on human health. The goal of the CCCHR is to build a cadre of scientists in the NIH Intramural Research Program interested in Climate Change and Health research and foster cross-cutting and convergent research partnerships. The Chief of the CCCHR in the Division of Intramural Research will lead a high-level independent research program in the specific area of their interest and have the responsibility to lead and develop a strategic vision for the CCCHR. Visit <https://www.niehs.nih.gov/careers/jobs/> for more information.

**Chandra Jackson, Ph.D., M.S.,** NIEHS Epidemiology Branch, awarded tenure by unanimous vote of the NIH Central Tenure Committee.

## Awards and Recognition

**Steve Novak** received the HHS Secretary's Commendation for exceptional service and leadership during the Public Health Emergency phase of the COVID-19 pandemic. The NIEHS Health and Safety Branch is a team of environmental, health, and safety professionals that has done a terrific job of reducing the risks of COVID-19 illness on campus.

**Paul Doetsch, Ph.D.,** was elected as a Fellow of the Royal Society of Chemistry.

**Anant Parekh, D. Phil.,** was awarded the Annual Review Prize from the Physiological Society.

### K.C. Donnelly Externship

The Superfund Research Program (SRP) established an honorary award in memory of K.C. Donnelly, Ph.D., a longtime SRP grant recipient who worked tirelessly to improve our understanding of

environmental exposure and genotoxicity of complex chemical mixtures. The three-month-long externship provides current SRP-funded graduate students and postdoctoral researchers the opportunity to learn new methods and techniques, while working in other SRP-funded centers and government labs.

- **Eric Brown**, of the University of North Carolina at Chapel Hill SRP Center, will travel to the Harvard University SRP Center to learn advanced statistical approaches for handling complex chemical mixtures.
- **Asta Habtemichael**, of the University of Rhode Island SRP Center, will learn advanced molecular modeling techniques at the University of Pittsburgh to understand how differences in the structures of per- and polyfluoroalkyl substances (PFAS) affect the chemicals' ability to accumulate in aquatic food webs.
- **Nobel Hernández-Otero**, of the University of Puerto Rico and a trainee with the Northeastern University SRP Center, will travel to East Carolina University to study under the direction of the North Carolina State University SRP Center and learn about PFAS exposure and potential health effects. He also will learn how to appropriately communicate about PFAS with affected communities.
- **Maria Victoria Klaus**, of the University of Kentucky SRP Center, will determine which materials she designed to remove PFAS from water are safe and effective for also removing them from the body. Her externship will be at the Texas A&M University SRP Center.
- **Wil Lieberman-Cribbin**, of the Columbia University SRP Center, will travel to the Yale University SRP Center to learn new exposure assessment techniques that combine proximity to hazardous sites with contaminants measured in water and urine.
- **Irene Martinez-Morata**, of the Columbia University SRP Center, will apply advanced analytical approaches to pinpoint how zinc supplements may protect health among Native American communities exposed to high levels of arsenic and uranium. While completing her externship at the University of New Mexico SRP Center, she also will directly engage with communities to translate study results.
- **Sara Thomas, Ph.D.**, from the Connecticut Agricultural Experimental Station and an SRP trainee with Yale University, will travel to Princeton University to study the ability of microbes to safely degrade PFAS in plants used to decontaminate soil.

#### **2023 Summer Internship Program Poster Winners:**

- **Undergraduate Winners:**
  - **1<sup>st</sup> Place: Justin Wang – DIR: ESCBL**  
“How to Build an Epigenetic Biomarker: Are Peripheral Blood DNA Methylation Changes Reflective of Liver DNA Methylation Changes in Response to a High Fat Diet?”  
Justin Wang and Elizabeth Martin
  - **2<sup>nd</sup> Place: Kieran Aguirre- DIR: EB**  
“Association of neighborhood disadvantage and prevalent hypertension in the GuLF Study”  
Kieran Aguirre, Kaitlyn Lawrence, Emily Werder, and Dale Sandler
  - **3<sup>rd</sup> Place (tie): Miran Bhima- DTT: PTB**

“Structure-Based Docking and Cheminformatics Analysis of Tox21 and ToxCast Chemicals on VEGFR 1”

Miran Bhima, Shagun Krishna, and Nicole Kleinstreuer

○ **3<sup>rd</sup> Place (tie): Rahul Niranjana- DTT: MTB**

“The Effects of Bisphenol AF (BPAF) on Fibrosis in Phases 1 and 2 Human Uterine Fibroid 3D Spheroid Cultures”

Rahul Niranjana, Lysandra Castro, and Darlene Dixon

○ **3<sup>rd</sup> Place (tie): Keshav Srivenkatesh- DTT: MTB**

“Proliferation effects of legacy and novel per- and polyfluoroalkyl substance mixtures on human placental choriocarcinoma cells”

Keshav Srivenkatesh, Vesna A. Chappell, and Suzanne Fenton

● **Graduate Winners:**

○ **1<sup>st</sup> Place: Sambit Panda- DIR: NL**

“Elucidating Relationships within Neurological Screening Batteries via Random Forest-Based Hypothesis Testing”

Sambit Panda, Leslie R. Wilson, Jariatu Stallone, Korey Stevanovic, and Jesse D. Cushman

○ **2<sup>nd</sup> Place: Rebecca Noga- DIR: BCBB**

“The Genetics of Exposure: Are Genetic Variations Associated with Behavior-Based Exposures in the PEGS Cohort?”

Rebecca N. Noga, Farida S. Akhtari, Annie DeFrank, Adam Burkholder, David C. Fargo, Charles P. Schmitt, Janet Hall, John S. House, Alison A. Motsinger-Reif

○ **3<sup>rd</sup> Place: Brittney Gedeon- DIR: EB**

“Association Between Noise Pollution Exposure and Incident Breast Cancer in the Sister Study”

Brittney Gedeon, Che-Jung Chang, Dale P. Sandler, and Alexandra J. White

**2022 Summer Internship Program Communication Challenge Winners:**

- **1<sup>st</sup> Place: Isabella Patterson- DIR: ESCBL (Archer, Hoffman)**
- **2<sup>nd</sup> Place: Sarah Feng- DIR: EB (Sandler, Goldberg)**
- **3<sup>rd</sup> Place (tie): Izamora Zamara- DIR: IIDL (Jetten, Pradhan)**
- **3<sup>rd</sup> Place (tie): Amelia Wilder- DIR: ESCBL (Archer, Hoffman)**

**NSCP Poster Presentation Awards**

- Summer Connection: Best Presenter  
**Neha Palle**, Mentored by Dr. David Scoville and Anton Jetten
- Summer Connection: Honorable Mention Presenter (Tied)  
**Gia Nelson**, Mentored by Dr. Jean Harry  
**Janell Odom**, Mentored by Drs. Virginia Savvy, Lenka Radonova, and Carmen Williams  
**Precious Onwuteaka**, Mentored by Dr. Joan Pakenham



## FARE Awards

This year, NIEHS received 11 FARE awards and ranked 5th across all of NIH in the total number of FARE awards (behind only NCI, NIAID, NIA and NIDDK). For more information about FARE awards, please see <https://www.training.nih.gov/FelCom/FARE>.

- **Yu-Ying Chen, Ph.D.**  
*Somatic cell fate specification and separation in the fetal ovary*  
Mentor: Dr. Humphrey Yao  
Study Section: Reproductive Biology
- **Dazhe Chen, Ph.D.**  
*Ingested nitrate and nitrite and end-stage renal disease risk among licensed pesticide applicators and spouses in the Agricultural Health Study*  
Mentor: Dr. Dale P Sandler  
Study Section: Epidemiology/Biostatistics - Etiology
- **Kathryn Dalton, Ph.D., V.M.D., M.P.H.**  
*Occupational Farm Exposures Associated with Indoor Home Microbiota*  
Mentor: Dr. Stephanie London  
Study Section: Epidemiology/Biostatistics - Prevention and Risk
- **Jennifer L. Ish, Ph.D.**  
*Residential proximity to carcinogenic industrial air emissions and breast cancer incidence in a United States-wide prospective cohort*  
Mentor: Dr. Alexandra J White  
Study Section: Oncology - Epidemiology and Surveillance
- **Laura Kammel, Ph.D.**  
*Circadian disruption induces breast cancer-permissive estrogen receptor transcriptional program in hormone sensitive mammary epithelium*  
Mentor: Dr. Joseph Rodriguez  
Study Section: Oncology - Development and Metastasis
- **Suneet Kaur, Ph.D.**  
*Unraveling the AKAP79-Orai1 Interaction: Implications for Immune Response Regulation*  
Mentor: Dr. Anant Parekh  
Study Section: Cell Biology - Intracellular Trafficking and Cell Signaling
- **Ryan M. Marquardt, Ph.D.**  
*The Serum Response Factor-Myocardin Pathway is Essential for Female Reproductive Function*  
Mentor: Dr. Francesco DeMayo  
Study Section: Reproductive Biology
- **Sookjin Moon, Ph.D.**  
*Flotillin-2 ablation in T cells enhances antigen sensitivity and functionality*  
Mentor: Dr. Michael B Fessler  
Study Section: Immunology - Lymphocyte Development and Activation
- **Sukanya Saha, Ph.D.**

*Bioenergetic stress triggers Amyotrophic Lateral Sclerosis-like symptoms in mice*

Mentor: Dr. Guohong Cui

Study Section: Neuroscience - General

- **Ziyue Wang, Ph.D.**

*Shotgun metagenomics sequencing reveals novel insights of indoor dust microbiota compared with 16S rRNA technology*

Mentor: Dr. Alison Motsinger-Reif

Study Section: Bioinformatics - algorithms, packages and tools

- **Pelin Yasar, Ph.D.**

*Establishing Estrogen Receptor  $\alpha$  Enriched Mouse Mammary Organoids to Investigate Transcriptional Dynamics and Heterogeneity*

Mentor: Dr. Joseph Rodriguez

Study Section: Gene Expression - Transcriptional Regulation