

Report to the National Advisory Environmental Health Sciences Council

Director, NIEHS and NTP

June 7, 2022



Congressional Appropriations

	FY 2021 Enacted	FY2022 President's Request	2022 House Mark	FY2022 Senate Mark	FY2022 Enacted	Δ Between FY 2021 and FY 2022 Enacted	FY 2023 President's Request ^{d/}	Δ Between FY 2022 and FY 2023 President's Budget
NIEHS (L-HHS)	\$ 814,675,000	\$ 937,107,000	\$ 941,799,000	\$ 936,271,000	\$ 842,169,000	\$ 27,494,000	\$932,056,000	\$89,887,000
NIH ^{a/}	\$ 42,935,500,000	\$ 51,952,703,000	\$ 49,656,990,000	\$ 48,143,881,000	\$ 45,177,990,000	\$ 2,242,490,000	\$62,497,703,000	\$17,319,713,000
Common Fund ^{b/}	\$ 648,539,000	\$ 658,539,000	\$ 669,712,000	\$ 663,802,000	\$ 670,001,000	\$ 21,462,000	\$658,539,000	-\$11,462,000
Superfund	\$ 81,500,000	\$ 83,540,000	\$ 83,540,000	\$ 84,540,000	\$ 82,540,000	\$1,040,000	\$83,035,000	\$495,000
NIEHS/DOE Training ^{c/}	\$ 10,000,000		\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	-		

^{a/} Includes NIH Discretionary BA plus Mandatory Type 1 Diabetes Research and Superfund.

^{b/} Includes addition of \$12.6 million for the Gabriella Miller Kids First Act pediatric research initiative.

^{c/} Appropriations Committee report language supporting the transfer of funds from the U.S. Department of Energy's Defense Environmental Cleanup account to NIEHS for the NIEHS/DOE Nuclear Worker Training Program.

^{d/} Please note the FY23 President's Budget Request was based off FY22 CR Appropriations and not Enacted.

LEGISLATIVE REPORT:

117th CONGRESS (2021-2022):

FY22 APPROPRIATIONS:

Fourth CR and FY22 Omnibus passed into law

On March 9, 2022, the House passed the defense portion of the FY22 Omnibus and Ukraine Supplemental by a vote of 361-69 and the domestic agency funding of the FY22 Omnibus and Ukraine Supplemental by a vote of 260 to 171. The COVID supplemental was removed from the bill, revised, and reintroduced separately, as some Congressional members were concerned about the offsets in the bill would take away from State and local governments COVID relief aid. A revised COVID Supplemental will be voted on at a later date.

Also, the House on March 9, 2022, passed a short-term CR through March 15th by voice vote to ensure there was not a gap in funding if the Senate was not able to vote on the Omnibus before the current funding expired.

On March 10, 2022, the Senate passed the FY22 Omnibus and Ukraine supplemental by a vote of 68-31. They also passed a continuing resolution through March 15th in case the enrolled bill was not ready for the President's signature by midnight on March 11, 2022.

On March 11, 2022, the President signed the fourth Continuing Resolution through March 15th into law to give time for the 2700+ page Omnibus bill to enrolled and get to his desk.

On March 15, 2022, the President signed the FY22 Omnibus and Ukraine Supplemental into law, fully funding the federal government for FY22 after four CRs.

Quick Summary on NIEHS portions of FY22 Omnibus:

Labor-HHS:

- The Omnibus FY22 mark has NIEHS at \$842,169,000 (+\$27,494, 000 from FY21 or about 3.37%).

Interior-Environment:

- The Omnibus FY22 mark has NIEHS at \$82,540,000 (+1,040,000 from FY21 or 1.28%).

Details for our NIEHS portions of FY22 Appropriations:

FY22 Omnibus Language for NIEHS in L-HHS portion (pg. 993):

“NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

For carrying out section 301 and title IV of the PHS Act with respect to environmental health sciences, \$842,169,000.”

FY22 Omnibus Joint Explanatory Statement for L-HHS:

No specific report language for NIEHS.

FY22 Omnibus Language for NIEHS in I&E portion of Omnibus (pg. 876):

“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, \$82,540,000.

FY22 Joint Explanatory Statement for Interior and Environment (pg. 76):

“NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

The agreement provides \$82,540,000 for the National Institute of Environmental Health Sciences. The Committees continue the \$2,000,000 provided in fiscal year 2021 as base funds in fiscal year 2022 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.”

FY22 Joint Explanatory Statement for Energy:

No direct report language in the Energy provision for WTP, but the first section states that the House Report 117-98 and Senate 117-36 explanatory statements carry the same weight as the joint explanatory statement. House Report 117-98 (pg. 166) and Senate Report 117-36 (pg. 123), which both contain the transfer language for the hazardous worker training program.

FY2023 PRESIDENT'S BUDGET:

On March 28, 2022, the President's FY23 Budget was released with funding based upon the **FY22 CR Levels, and not FY22 final Omnibus levels.**

Summary for NIEHS ([pg.443](#)) in the Appendix:

NIEHS's Labor-HHS Appropriation:

"NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

For carrying out section 301 and title IV of the PHS Act with respect to environmental health sciences, \$932,056,000."

This is \$117.4 million above FY22 CR level and \$89,887,000 above FY22 enacted through the Omnibus. (FY22 Enacted: \$842,169,000)

NIEHS's Superfund related programs:

"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."

This is \$1.5 million above FY22 CR level and \$495,000 above FY22 enacted through the Omnibus. (FY22 Enacted: \$82,540,000)

- **Link to NIH Congressional Justification:**
<https://officeofbudget.od.nih.gov/pdfs/FY23/br/Overview%20of%20FY%202023%20Presidents%20Budget.pdf> (Note: mentions of the Climate Change and Health Initiative on pgs. 16 and 62)
- **Link to NIEHS's two Congressional Justifications:**
<https://www.niehs.nih.gov/about/congress/justification/2023/index.cfm>

CONGRESSIONAL BRIEFINGS:

Global Child Thrive Act Implementation Briefing with Senator Blunt's and Senator Coons' staffs (w/ NIMH, NICHD, and CDC)

On February 16, 2022, Dr. Collman briefed staff from Senator Blunt and Senator Coons staffs with Dr. Leonardo Cubillos from NIMH, Dr. Vesna Kutlesic from NICHD, and Dr. Surbhi Modi from CDC on the implementation of the Global Child Thrive Act Implementation (was passed in the FY20 NDAA).

On the Zoom: NIEHS: Dr. Gwen Collman and April Bennett; NIMH: Dr. Leonardo Cubillos and Phyllis Ampofo; NICHD: Vesna Kutlesic, Natasha Williams, and Parisa Parsafar; CDC: Surbhi Modi, Randy Katsoyannis, Termika Smith, Emily Rosenfield and Theresa Asuquo; NIH OLPA: Morgan Brand, and Jenna Bauer; HHS ASL: Anne Tatem, Kris Bradsher, Garrick Groves; Staffers: Alexandra McPhee (Sen. Blunt) and Carter Thompson (Sen. Coons)

4 Corners Interior and Environment Subcommittees Briefing on NIEHS Superfund-related Programs

On May 3rd, 2022, Dr. Woychik accompanied by Dr. Archer, Dr. Suk and Ms. Beard briefed the 4 Corners of the House and Senate Appropriations Interior, Environment, and related Agencies

Subcommittees. Dr. Woychik presented an update on the NIEHS Superfund Research Program and Worker Training Program. The presentation covered SRP's work on Risk Reduction for Native Americans, Tools to Communicate Risk and Inform Decisions, and Climate Change and Extreme Weather Events. The presentation covered WTP's work on Climate Change-Related Events, Environmental Justice, and Health Emergencies; Environmental Career Worker Training Program (ECWTP); Training and Risk Reduction for Native Americans and Alaska Natives; and WTP Success Stories. The presentation was well received by the 4 Corners Staff. Questions from the Subcommittee staff related to WTP's wildfire training and SRP coordination with EPA and their Columbia River Program.

NIEHS attendees: Dr. Rick Woychik, Dr. Trevor Archer, Dr. Bill Suk, Sharon Beard, April Bennett; NIH OLPA attendees: Morgan Brand, Larry Lohmann; Senate Staff: Martha Roberts (Majority) and Lucas Agnew (Minority); House Staff: Janet Erickson (Majority) and Kristin Clarkson (Minority)

CONGRESSIONAL HEARINGS:

House Appropriations Labor-HHS Subcommittee Hearing on NIH FY23 Request:

On Wednesday, May 11, 2022, Dr. Tabak testified to the House Labor-HHS Subcommittee and was accompanied by Dr. Fauci (NIAID Director), Dr. Lowey (Acting NCI Director), Dr. Gibbons (NHLBI Director), Dr. Bianchi (NICHD Director), and Dr. Volkow (NIDA Director).

Chair Rosa DeLauro (D-CT) touted the bipartisan support for NIH in her opening statement: "The work you do saves lives and protects families, the world over and with the proper resources and leadership at NIH goals and continue to save lives. None of these transformational advances would have been possible without the annual sustained investments in basic biomedical research made by this committee in a bipartisan way in recent years. Which is why I am so proud that over the past seven years, Congress has increased NIH funding by nearly \$15 billion or 49 percent. And I repeat that this has been done in a bipartisan with a bipartisan effort. And in the 2022 omnibus recently passed, Congress provided a 2.25 billion increase over 2021."

Ranking Member Tom Cole (R-OK) also touted the bipartisan efforts of support for NIH in his opening statement: "As I say every year, a sustained commitment to increasing funding for the NIH is a vital step to preserving our status as the world's leader in biomedical research, and to finding cures for many diseases burdening our health care system. And we know the funding also goes -- does far more. Several studies have shown funding at the NIH has a multiplier effect contributing to overall US economic growth. Like the chairman, I'm with the chair. I'm proud of what this committee has done year after year on a bipartisan basis since 2015. The NIH budget has increased every year beyond inflation during that period regardless of who was President, regardless of which party was in control of the Congress. And it shows that there are certainly some important things that we can work together on, and I think will have positive results for the country."

Senate Appropriations Labor-HHS Subcommittee Hearing on NIH FY23 Request:

On Tuesday, May 17, 2022, Dr. Tabak testified to the Senate Labor-HHS Subcommittee and was accompanied by Dr. Fauci (NIAID Director), Dr. Gordan (NIMH Director), Dr. Gibbons (NHLBI Director), Dr. Hodes (NIA Director), and Dr. Volkow (NIDA Director).

Subcommittee Chair Murray (D-WA) started off the hearing by stating "I am pleased to say this budget request shows the administration understands the tremendous importance of supporting

our nation's biomedical research community and continuing our tradition of global leadership here. Especially as in the past few years have been such a stark reminder of how the investments, we make in research today pay off down the road. The rapid development of safe effective COVID vaccines was made possible by research into mRNA vaccines we fund -- we funded in response to Ebola and other viruses, and by a biomedical research enterprise that has been built over decades.”

Ranking Member Blunt (R-MO), who is retiring after this term, voiced his support for NIH in his opening statement, “And like all of you would remember when I became chairman nearly eight years ago, NIH funding was stagnant and had been for about a decade. But over the past seven years working together, we've increased that funding by nearly 50 percent. It was a period of time that looking back, NIH not only could count on sustained funding, but also having a substantial increase every year and hopeful and confident that Senator Murray's continued partnership. In that commitment will let us do that again this year. And I hope we're able to successfully work together and have a bill this year.”

LEGISLATION:

H.R. 4521 America COMPETES and the SUPERSAFE Consortium

On February 4, 2022, the House passed the America COMPETES bill (H.R. 4521) by a vote of 222-210. The House version of the COMPETES bill contained a passed amendment (passed as part on en bloc amendment one) relating to the SUPERSAFE Consortium, which aims to formalize at the federal level and build upon and expand current SUPERSAFE Consortium efforts relating to computational toxicology, and currently names HHS and NTP in this effort. NIEHS SMEs submitted Technical Assistance on this bill and unfortunately, this House passed amendment to the bill did not include the Technical Assistance we submitted.

On March 28, 2022, H.R. 4521, America COMPETES was considered, amended, and passed in the Senate by a vote of 68-28. The Senate amended the House passed bill (House version contained the SUPERSAFE Consortium language) by stripping the bill of the House language and substituting it with the language of their version of the Senate passed *Bioeconomy Research and Development Act of 2021*, which did not contain the SUPERSAFE language.

With the passage of the Senate amended bill, the bill now is in Conference negotiations between the two chambers to resolve differences between the two chambers' language in the bill.

During the Conference, Senator Padilla's staff indicated they would like to get the SUPERSAFE Consortium language in the final bill during conference negotiations.

More to come as the two chambers go into Conference on the bill and potential updated SUPERSAFE Consortium language. After the Conference negotiations, both chambers will need to pass the identical text of the final bill and then it will need to be signed by the President to become law.

H.R. 7289, the Federal PFAS Research Evaluation Act

On May 17, 2022, the House Science, Space and Technology Committee marked up [H.R. 7289, the Federal PFAS Research Evaluation Act](#), and passed it with amendments out of Committee. The bill requires the Environmental Protection Agency, in consultation with the National Institutes of Health, the National Science Foundation, Defense Department, and other relevant Federal agencies, to work

with the National Academies to identify research and development needs in order to identify, categorize evaluate, and address PFAS exposure and toxicity. The bill now proceeds to the House floor to be considered.

H.R. 5585 Advanced Research Project Agency – Health Act

On May 18, 2022, the House Energy and Commerce Committee passed out of Committee [H.R. 5585 Advanced Research Project Agency – Health Act](#), which Authorizes the establishment of ARPA-H within the Department of Health and Human Services; outlines ARPA-H's goals, which include fostering the development of new breakthroughs to accelerate innovations in health and medicine, promote high-risk, high-reward innovation, and revolution diagnosis, mitigation, prevention, and treatment of disease through transformative health technologies; and requires the Director of ARPA-H to be appointed by the President and report to the Secretary. The bill now heads to the House floor for consideration.

Acting DERT Director

Dr. David Balshaw has been named the Acting Director of DERT. Dr. Balshaw assumed this role officially on Sunday, May 9 as the start of the new pay period. He has served in DERT for nearly 2 decades with the last nine years as Chief of the Exposure, Response and Technology Branch. Therefore, he deeply understands the needs across the division, has embraced DEIA, and has expressed a true interest in making sure that all voices across the division are heard. Dr. Balshaw has indicated to me a genuine interest in meeting and listening to the needs of all staff across the DERT and is excited about providing the kind of interim leadership that will maintain the momentum of the division's programs until a permanent Director can be identified.

The NIEHS Office of Scientific Coordination, Planning, and Evaluation (SCOPE)

NIEHS is pleased to announce the new Office of Scientific Coordination, Planning, and Evaluation (SCOPE) within the Office of the Director. Dr. Gwen Collman will serve as the new Director for SCOPE and will remain a member of the Senior Leadership Committee. The current staff and functions in the Office of Program Planning and Evaluation (OPPE), led by Dr. Shelia Newton, and the Office of Director Bethesda (ODB), led by Dr. Aubrey Miller, will be integrated into the Office of SCOPE. In their new roles, Dr. Newton will serve as the Deputy Director for Scientific Planning and Evaluation and Dr. Miller will serve as the Deputy for Scientific Coordination, both of whom will report to Dr. Collman. Combining these groups will bring them under central leadership, which will optimize the efficiencies and effectiveness of scientific planning, policy, and evaluation processes by providing proactive coordination of these functions to achieve scientific objectives.

Additionally, the SCOPE office will take on new responsibilities associated with coordinating functions for the implementation, coordination and evaluation of high-priority and complex initiatives and programs that involve multiple NIEHS divisions, NIH institutes, other federal agencies, and/or non-federal organizations. SCOPE will work closely with the NIEHS Division Directors to coordinate programs across the NIEHS.

NIEHS Areas of Research Focus

Five areas of research focus have been identified which align with the NIEHS Strategic Plan. These focus areas include Precision Environmental Health, Climate Change and Health, Mechanistic and Translational

Toxicology, Environmental Justice and Health Disparities, and Computational and Data Science. These focus areas will be explored further during upcoming Council meetings.

1. **Climate Change and Health** is a high priority for the federal government, which can be seen by the President's Budget request for fiscal year 2023 including \$100M to NIEHS for climate change and health research. The concept clearance for this NIH Climate Change and Health initiative was presented at a special session of the NAEHSC on November 29, 2021. More details on the Climate Change and Health Initiative can be found in the February 2022 Director's Report. The Strategic Framework presented at the February 2022 NAEHS Council meeting articulates four major areas of science, which represents research from across the spectrum, ranging from basic mechanistic research to data integration to behavioral and social sciences research.
2. **Precision Environmental Health (PEH)** is all about moving beyond the population-level to better understand how exposures affect individual health and disease susceptibility. A precision environmental health approach requires:
 - a. Analyzing genome and epigenome profiles
 - b. Measuring exposures across the lifespan, collectively called the exposome
 - c. Incorporating powerful data science tools

Like precision medicine – which can be summarized as getting the right drug to the right patient to treat disease most effectively – the goal of PEH is to understand individual risk and prevent, rather than treat, disease.

3. **Environmental Justice and Health Disparities** will be a main topic during the June 2022 NAEHSC meeting. NIEHS has a long history of supporting research on EJ/HD and recognizes there is more work to be done to address these issues. NIEHS has established a working group that is dedicated to fulfilling NIEHS priorities related to environmental racism, environmental health disparities, and environmental justice. The group aims to:
 - Bring together researchers from many disciplines to study environmental racism, EHDs, and EJ.
 - Understand the role of social determinants of health in health and exposure disparities
 - Promote translational opportunities for EHD-EJ prevention/intervention.
 - Raise the profile of EHD and EJ research across NIEHS and NIH.
4. **Computational Biology and Data Science** are increasingly foundational to environmental health and biomedical research, joining traditional, experimental, and theoretical methods as essential to scientific discovery. These methods include the development of innovative data science and data-driven approaches, including artificial intelligence and machine learning methods and approaches, integration of increasingly large and complex data types from diverse platforms, and advanced analytics. The broad use of big data frameworks and Findable, Accessible, Interoperable, Reusable, and Computable (FAIR+) principles will continue to facilitate these developments. Continued coordination with expert partners and engagement with Computational and Data Science communities will help environmental health sciences capitalize on new discoveries and approaches.
5. **Mechanistic and Translational Toxicology** is the primary focus of the new vision for the DNTP. This includes studying the molecular mechanisms that underly agent toxicity, data generation that can be translated to human biology, utilizing innovative new approaches to study environmental exposures, and moving toxicology to a predictive science. The 'Translational Toxicology Pipeline' is circular, which reflects a singular focus on people in all their complexity and variations as the ultimate focus and benefactor of their studies. It also reflects the iterative learning that comes from purposefully applying that pipeline such that we're continuously advancing our understanding of how xenobiotics interact with and cause

harm to the people. The capabilities of the Translational Toxicology Pipeline are also opportunities for, and the focus of, innovation as we seek to progress toxicology to be a more predictive science.

Innovations of interest include increasing the efficiency with which we leverage existing data and knowledge using AI/ML-based approaches, building biological depth into our current high-throughput screening approaches, building biologically-relevant complexity into computational models, better reflecting human biology and susceptibility into our modeling systems, increasing the efficiency and deriving novel insights from routine histopathological assessments with AI/ML-based approaches, broadening the routine biomonitoring done in animal studies and deriving more insights from human observations and samples.

Awards and Recognition

Former NIEHS and NTP Director, **Linda Birnbaum, Ph.D., D.A.B.T.**, was awarded the **C.-E.A. Winslow Medal**, Yale School of Public Health's highest honor. This award is being given to Dr. Birnbaum in recognition of her achievements in health hazards of persistent organic pollutants; mechanisms of action of toxic environmental contaminants; and linking real world exposures to human health problems. The Winslow Medal is given in honor of the founder of the school. It is awarded to an individual who has had a distinguished career in public health, as exemplified by outstanding achievement in public health leadership, scholarship, and contribution to society.

Michael Nodzenski, an NIEHS Intramural Research Training Award predoctoral fellow, has won the 2021 **Larry Kupper Award** for his work using an algorithm to detect genetic causes of young-onset diseases. The award recognizes the best published paper related to dissertation research in the biostatistics department at the University of North Carolina at Chapel Hill (UNC). It is named after a biostatistician and distinguished UNC professor known for pioneering statistical methodologies.

North Carolina State University (NCSU) SRP Center researcher **Morton Barlaz, Ph.D.**, was elected as a **Fellow of the American Association for the Advancement of Science**, the world's largest scientific society and publisher of the journal *Science*. He was recognized for his contributions to the field of environmental engineering, particularly for advancing understanding of solid waste engineering and related fundamental biological and chemical processes. Barlaz co-leads an NCSU SRP Center project to develop carbon-based sorbents for PFAS removal.

Dondrae Coble, D.V.M., D.A.C.L.A.M., Chief of the Comparative Medicine Branch was selected by the NIH Distinguished Scholars Program (DSP, which was recently expanded to include Senior Investigators and Senior Scientists/Clinicians).

Kamiya Bridges, a Diversity IRTA postbaccalaureate fellow in the Yao group received the **Undergraduate Research Excellence Award** at the first annual conference for Black Excellence in Science, Technology, Engineering, Mathematics and Medicine/Health (BE-STEMM) organized by the Canadian Black Scientists Network.

Tanae Lewis, an NCSCP Student in the Stanley group received a **Goldwater Scholarship**. The Goldwater Foundation is a federally endowed agency established by Public Law 99-661 on November 14, 1986. The

Scholarship Program honoring Senator Barry Goldwater was designed to foster and encourage outstanding students to pursue research careers in the fields of the natural sciences, engineering, and mathematics. The Goldwater Scholarship is the preeminent under-graduate award of its type in these fields.

Cassandra Hayne, Ph.D., an IRTA postdoctoral fellow in the Stanley group has been selected as a Duke Next Generation Leader. Duke Next Generation Leaders is a new initiative at Duke aimed at bringing together cohorts of talented postdoctoral scientists and mentoring them on academic faculty careers. This fellow program will bring together a cohort of promising new faculty committed to diversity in the biomedical sciences and provide enhanced opportunities for diversity in faculty hiring in this area at Duke, striving to overcome multiple barriers related to racism and bias in faculty hiring and will accelerate the development of a more inclusive faculty community.

NIEHS Green Researcher Awards

The Green Researcher Self-assessment is a voluntary survey that takes about 20 minutes to complete. The assessment covers a range of sustainability topics applicable to research at NIEHS including chemical use and waste management practices, recycling, sharing resources, cold storage, energy conservation, water conservation, procurement, and outreach and communication. The following NIEHS researchers received **2022 NIEHS Green Researchers Awards**:

- **GOLD**

- Dondrae Coble, D.V.M., Veterinary Medicine Group, DIR
- Sue Fenton, Ph.D., Reproductive Endocrinology Group, DNTP
- Artiom Gruzdev, Ph.D., Knockout Mouse Core Facility Group, DIR
- Anirban Kar, Ph.D., Mutagenesis & DNA Repair Regulation Group, DIR
- Harriet Kinyamu, Ph.D., Chromatin & Gene Expression Group, DIR
- Negin Martin, Ph.D., Viral Vector Core, DIR
- Amy Papaneri, M.S., Neurobiology Group, DIR
- Jonathan Weeks, Quality Assurance Laboratory, DIR

- **SILVER**

- Terry Blankenship-Paris, D.V.M., M.S., Veterinary Medicine Group, DIR
- Angela Dickerson, Veterinary Medicine Group, DIR
- Kevin Gerrish, Ph.D., Molecular Genomics Core Facility, DIR
- Michael Johnston, M.S., Quality Assurance Laboratory, DIR
- David Kurtz, D.V.M., Ph.D., Quality Assurance Lab, DIR
- Ginger Muse, Chromatin & Gene Expression Group, DIR
- Cristina Nadalutti, Ph.D., Mechanistic Toxicology Branch, DNTP
- Mack Sobhany, Nucleolar Integrity Group, DIR
- Tanya Whiteside, Quality Assurance Lab, DIR

- **BRONZE**

- Lisa Padilla-Banks, Placental Cell Biology Group, DIR
- Jackson Hoffman, Ph.D., Chromatin & Gene Expression Group, DIR
- Justin Kosak, M.S., Systems Biology Group, DIR
- Karina Rodriguez, Ph.D., Reproductive Developmental Biology Group, DIR
- Carmen Williams, M.D., Ph.D., Reproductive Medicine Group, DIR

2021 HHS Green Champions

NIH Resilient-Renewable (R2) National Institutes of Environmental Health Sciences

The NIH National Institute of Environmental Health Sciences (NIEHS) Resilient-Renewable (R2) NIEHS initiative is a holistic approach to making NIEHS more energy efficient and resilient while lowering its carbon emissions. The first step in the initiative was achieving net-zero energy-renewable energy certificate status, powering facility operations with the equivalent of 100% renewable resources, approximately 25% that were carbon pollution-free.

Under R2 NIEHS, the next steps in FY 2022, include initiating a utility energy savings contract and a carbon neutrality assessment, laying a solid foundation for the implementation of Executive Order 14057 and ultimately carbon neutrality.

NIH NIEHS Printer/Paper Team

Rich Cabrera, Rhonda Carroll, Kerri Hartung, Lavern James, Paul Johnson, Steve Novak, Nicole Popovich, Carranza Smith, Bill Steinmetz, Arrash Yazdani

In FY 2021, the NIH National Institute of Environmental Health Sciences (NIEHS) Printer/Paper Team renewed the existing campus printer policy to enhance reduction efforts. This policy is a unique effort as the NIEHS is the only NIH facility with a strategy focused on printer and copier paper reduction. Since the policy's inception in FY 2015, paper usage declined from more than 5 million sheets per year to just over 2 million sheets in FY 2019. This decline was driven by paper-saving efforts such as paperless work processes, business meetings, and conferences along with educational reminders encouraging staff to print double-sided, reduce font and margins, and proof documents before printing. The further decline in printing triggered by maximum telework during the pandemic can be retained as the new policy thanks in part to the foundation laid by the printer policy.

NIEHS Green Researcher Self-assessment

Kerri Hartung, Diane D'Agostin, Rachel Faison, Paul Johnson, Justin Kosak, Amy Papaneri, Julie Rice, Bill Steinmetz

The NIH National Institute of Environmental Health Sciences (NIEHS) Green Researcher Self-Assessment (GRSA) presented researchers at the Institute with an engaging 20-minute online survey-style assessment to determine the sustainability of their individual research practices. As part of the assessment, participants had the opportunity to share sustainability related success stories from their work and provide feedback on how to improve the assessment for the following year.

All participants received an individual analysis of their responses and tips for additional improvement. Twenty researchers participated in the inaugural year. Three researchers achieved silver level status and seven researchers achieved bronze level status. Overall, participants rated the GRSA 4.5 out of 5 stars.

2022 NIH Postbac Poster Days Awards

Postbac Poster Days are an opportunity for all NIH postbaccalaureate fellows to share the research they have been conducting at the NIH and at the same time develop your communication and networking skills. This year, NIEHS had six winners:

- **Abra Granger**
Title: Employing MD for Characterization of dGTPase Enzyme Function in E. coli with a Cysteine to Serine Mutation in the Active Site
School: University of Richmond (Virginia)
Preceptors: Dr. Lalith Perera, Dr. Roel Schaaper
Genome Integrity and Structural Biology Laboratory
- **Isha Wilson**
Title: Functional Analysis of SARS-CoV-2 Nsp15 Endoribonuclease Variants
School: University of North Carolina at Charlotte (North Carolina)

Preceptor: Dr. Robin Stanley
Signal Transduction Laboratory

- **Kamiya Bridges**

Title: Loss of Runx1 Expression Leads to Ovarian Defects and Increased Risk of Ovarian Tumors
School: Winston-Salem State University (North Carolina)
Preceptors: Dr. Barbara Nicol, Dr. Humphrey Yao
Reproductive and Developmental Biology Laboratory

- **Lauren Gullett**

Title: Occupational Characteristics and Serious Psychological Distress in the United States
School: University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Chandra Jackson, Dr. Dana Alhasan
Epidemiology Branch

- **Shalyn Brown**

Title: Erastin Rapidly Inhibits P-glycoprotein Transport Activity at the Blood-Brain Barrier
School: University of Cincinnati (Ohio)
Preceptor: Dr. Ronald Cannon
Mechanistic Toxicology Branch

- **Sydney Fry**

Title: Genetic Deletion of Mineralocorticoid Receptors in CA2 Impairs the Precision of Behavioral Circadian Rhythmicity in a Sex-dependent Manner
American University (District of Columbia)
Preceptor: Dr. Jesse Cushman
Neurobiology Laboratory

The 8th Annual Women's Health Awareness virtual conference was held on April 9, 2022. The conference is designed to reach under-represented minorities in North Carolina. The event included 23 health sessions with over 1000 registrants representing 39 states and 40 NC counties. Viewing access was provided to rural NC communities with limited Wi-Fi access. There were two in-person satellite locations piloted, located in Granville and Haywood counties. U.S. Department of Housing and Urban Development (HUD) Secretary Marcia L. Fudge delivered remarks on housing discrimination and health. The keynote session featured maternal morbidity and mortality in women across US and NC. NC State Senator Natalie Murdock and Dr. Janine Clayton, Director of the National Institutes Health Office of Research on Women's Health, presented.