

**Report to the National Advisory Environmental Health Sciences Council
Director, NIEHS and NTP
February 16-17, 2021**

Budget and Legislative Report

FISCAL YEAR 2021 APPROPRIATIONS UPDATE



Congressional Appropriations

	FY 2019 Enacted	FY 2020 Enacted	FY21 President's Budget Request	FY2021 House Bill	FY2021 Senate Bill	FY2021 Enacted	Δ Between FY2020 and FY 2021 Enacted
NIEHS	\$774,707,000	\$802,598,000	\$730,147,000	\$809,501,000	\$828,733,000	\$814,675,000	\$12,077,000 (+1.5%)
NIH (LHHS) ^{a/}	\$39,084,000,000	\$41,459,000,000	\$38,693,631,000	\$41,959,000,000	\$43,684,000,000	\$42,934,000,000	\$1,475,000,000 (+3.56%)
Common Fund ^{b/}	\$619,166,000	\$626,511,000	\$596,467,000	\$644,499,000	\$646,912,000	\$635,939,000	\$9,428,000 (+1.48%)
Superfund	\$79,000,000	\$81,000,000	\$73,688,000	\$83,000,000	\$81,500,000	\$81,500,000	\$500,000 (+.62%)
NIEHS/DOE Training ^{c/}	\$10,000,000	\$10,000,000		\$10,000,000	\$10,000,000	\$10,000,000	No Change
NIEHS COVID-19 Supplemental (5 year funds, 2020-2024)		\$10,000,000					

a/ Reduced by \$169,000 transfer to the NIH Office of AIDS Research.

b/ Excludes Mandatory Type 1 Diabetes Research and Superfund.

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.

On November 10, 2020, the Senate introduced their versions of the FY2021 Appropriations Bills. With the introduction of the Senate FY2021 Appropriations bills and report language, the Senate and House Appropriations Subcommittees were able to negotiate the final FY21 Appropriations bills, in addition to the COVID-19 supplemental stimulus package. 10 of the 12 House Appropriations bills were passed in the House in July.

Leading up to the final passage of the FY2021 Omnibus Appropriations and COVID-19 Supplemental, Congress passed 5 Continuing Resolutions (CRs) for FY21 that were enacted into law. Summary of the CRs is in the table below:

Continuing Resolution	Enacted into Law	Expiration Date	Days Covered
The Continuing Appropriations Act and Other Extensions Act of 2021 (H.R. 8337) Public Law 116-159	10/01/2020	12/11/2020	72 days
Further Continuing Appropriations Act, 2021, and Other Extensions Act (H.R. 8900) Public Law 116-215	12/11/2020	12/18/2020	7 days
Further Additional Continuing Appropriations Act, 2021 (H.J.Res. 107) Public Law 116-225	12/18/2020	12/20/2020	3 days
Extension of Continuing Appropriations Act, 2021 (H.J.Res. 110) Public Law 116-226	12/20/2020	12/21/2020	1 day
<i>Further Extension of Continuing Appropriations Act, 2021</i> (H.R. 1520) Public Law 116-246	12/21/2020	12/28/2020	7 days

The final 7-day Continuing Resolution was passed and signed into law on December 21, 2020, funding the government through December 28, 2020, to give time for both the House and Senate to pass the Omnibus and COVID-19 Supplemental bill, enroll the 5000+ page bill (to ensure that both chambers passed identical bills), print the bill, have the House and Senate leaders sign the bill, and get it to the President for his signature while still respecting the holidays.

On December 21, 2020, the House passed in two parts the Consolidated Appropriations Act, 2021 and COVID-19 Supplemental:

- Vote on first segment, which included funding for Defense, Commerce-Justice-Science, Homeland Security and Financial Services, was 327-85.
- Second part, which included rest of government spending (which includes I&E and Labor-HHS) and COVID-19 relief supplemental, passed 359-53.

On December 21, 2020, the Senate also approved the Consolidated Appropriations Act, 2021 and COVID-19 Supplemental with a vote of 92-6.

On December 27, 2020, the President signed into law the H.R. 133, Consolidated Appropriations Act, 2021 and COVID-19 Supplemental bill, or otherwise known as “COVID-19 Relief and FY2021 Omnibus” as Public Law 116-260 funding the government for the remainder of FY21.

The law provides a total of \$42.9 billion for NIH, an increase of \$1.4 billion above the FY2020 enacted level. Congress specified in the law several increases for specific NIH Priorities including:

- Alzheimer’s Disease had an increase of \$300 Million (no less than \$3.1 Billion total)
- All of Us stayed flat at \$500 Million
- BRAIN Initiative was increased by \$60 Million (total \$560 Million)
- Cures Acceleration Network stayed flat at \$60 Million
- Downs Syndrome received an increase of \$5 million (total no less than \$65 Million)
- Gene Vectors received \$10 Million (which goes to NCATS)
- iDEA received an increase of \$10 Million (total \$396.6 Million)
- Infectious Diseases received an increase of \$20 million (with no less than \$220 Million for universal influenza)
- Neonatal Research receives \$10 Million (which will go to NICHD)
- Opioids received \$540 M ((\$270M to NIDA and \$270M to NINDS for Opioids / HEAL) and the law also directs NIDA and NINDS to make stimulants an eligible use of funds)
- Research Centers Minority Institutions Program received an increase of \$5 Million (total \$80 Million)
- Tick-borne Disease Research received an increase of \$10 Million (total \$81 Million)

Additional NIH COVID-19 Supplemental funding: NIH secured \$1.15 Billion to provide research and clinical trials related to long-term studies of COVID-19 and another \$100 Million for the Rapid Acceleration of Diagnostics initiative.

Summary for NIEHS for the FY21 Omnibus and COVID-19 Supplemental bill:

- **Labor-HHS:** NIEHS is funded at \$814,675,000, which is a \$12, 077,000 or a 1.5% increase over FY20.
- **Interior and Environment:** NIEHS Superfund Activities are funded at \$81,500,000, which is \$500,000 or +.62% increase over FY20.

Report Language:

- **SRP and WTP FY21 Interior and Environment Report Language:** “The agreement provides \$81,500,000 for the National Institute of Environmental Health Sciences. The Committees continue the \$2,000,000 increase provided in fiscal year 2020 as base funds in fiscal year 2021 to further the Institute's work on PFAS and other contaminants of emerging concern. Further, of the funds provided, not less than \$1,750,000 shall be allocated to support risk reduction for Native Americans to hazardous metals mixtures from abandoned uranium mine waste.”
- **SRP and WTP FY21 Energy Report Language:**
 - **For WTP:** “The agreement provides \$6,426,000,000 for Defense Environmental Cleanup. Within available funds, the Department is directed to fund the hazardous waste worker training program at \$10,000,000.”
 - **For SRP:** “*Researching effects of Per- and polyfluoroalkyl substances [PFAS].* -The agreement recognizes the potential impacts of PFAS contamination in humans and that supercomputers are critical in this field of research. Therefore, the agreement urges the Department, in coordination with the Environmental Protection Agency and the National

Institute of Environmental Health Sciences Superfund Research Program, to use supercomputers to study the computational toxicology of PFAS.”

- **NIH Language in FY21 Labor, HHS report language of interest:**
 - Humane Research Alternatives: The agreement directs NIH to provide a report to the Committees no later than 180 days after enactment of this Act on: 1) progress the Interagency Coordinating Committee on the Validation of Alternative Methods has made on finding alternatives to non-animal research methods; and 2) the incentives, if any, NIH offers to encourage grantees to consider these alternatives. This directive also replaces the directive included under the heading "Office of the Director" entitled "Animal Use in Research" in House Report 116-450.

National Defense Authorization Act for FY 2021 passed into law by veto override on 1/1/2021.

H.R. 6395 The William M. (Mac) Thornberry National Defense Authorization Act for FY 2021's Conference Report of the bill, to reconcile and negotiate the differences between the House and the Senate passed bill language, was passed by the House on December 8, 2020 (335-78-1) and on by the Senate 84-13 on December 11, 2020. President Trump vetoed the bill due to 1.) He opposed a provision that would change the names of military bases that honor Confederate leaders, and 2.) he wanted added an unrelated provision to repeal liability protections for social media companies. The House voted to override President Trump's veto with a vote of 322-87 on December 28, 2020 and the Senate on with a vote of 81-13 on January 1, 2021 making the bill law.

Provisions in the NDAA of relevance to NIH and NIEHS/NTP:

- The bill designates the Director of the Office of Science and Technology Policy to establish or designate an Interagency Body on Research Related to Per-and-Polyfluoroalkyl Substances to coordinate Federal activities related to PFAS research and development. Membership will include NIH, NIEHS, NTP and other federal agencies. The Interagency Group is to develop and make publicly available a strategic plan for Federal support for PFAS research and development within 12 months of enactment of the bill (which is to be updated once every 3 years for 20 years).
- National Coordinating Entity for Sustainable Chemistry: The Director of the Office of Science and Technology Policy shall convene an interagency entity under the NSTC with the responsibility to coordinate Federal program and activities in support of sustainable chemistry. NIH with other federal agencies (EPA, NIST, NSF, DOE and others) would be a part of this interagency entity. The entity would develop a strategic plan to characterize and assess sustainable chemistry within 2 years of enactment and report to Congress.
- NIH participates in the Assistance to Improve Early Childhood Development Outcomes Globally Program to build upon the evidence and priorities outlined in "Advancing Protection and Care for Children in Adversity: A U.S. Government Strategy for International Assistance 2019-2023.
- **Additional PFAS/PFOA provisions summary:** The Defense Department would have to notify Congress within 48 hours of the use or release of fluorinated aqueous film-forming foam (AFFF) at any military base. The fiscal 2020 defense authorization (Public Law 116-92) required the

phasing out of the foam. DOD would be prohibited from procuring items, such as cooking utensils and furniture, containing perfluorooctanoic acid (PFOA) or perfluoro octane sulfonate (PFOS), beginning on April 1, 2023. DOD could carry out a competitive prize program through Oct.1, 2024 to promote the development of a non-PFAS fire-fighting agent to replace AFFF. DOD would be required to: 1.) Evaluate technologies, other than firefighting agent solutions, to determine whether they can be used to implement the phase-out of AFFF. 2.) Notify any agricultural operation within one mile of a location where PFAS has been detected and is suspected to have originated from a DOD military base or state-owned National Guard facility. The bill also requires the National Institute of Standards and Technology (NIST) to award grants to research and develop alternatives to AFFF. Additionally, the bill authorizes a total of \$20 million over five years for NIST to study and make grants to address the existence of PFAS in the personal protective equipment of firefighters.

THE START of the 117th CONGRESS (2021-2022):

- The 117th Congress convened on January 3, 2021 and consists of 59 newly elected Representatives and 9 new Senators. The Democrats are in the Majority in the House of Representatives, and the Democrats also have the Majority in the Senate with the tie breaking vote of Vice-President Kamala Harris.
- The Senate is currently a 50/50 split majority as of January 20th with Vice President Harris being the tie breaking vote. A 50/50 split Senate last happened for 6 months in 2001. Because of the 50/50 split in the Senate, a power sharing organizing resolution agreement (S. Res. 27) between the majority and minority was passed on February 3, 2021. Majority Leader Chuck Schumer and the Senate Republican leader, Mitch McConnell, based the organizing resolution agreement on the 2001 power-sharing agreement. The resolution provides for equal membership on committees, equal budgets for committee Republicans and Democrats, and the ability of both leaders to advance legislation out of committees that are deadlocked. The Senate Filibuster will remain in the rules of the Senate for this session as well.

Committee Leadership

The following table outlines the chairs and ranking members of the House and Senate committees and subcommittees in the 117th Congress with jurisdiction over NIEHS authorities and programs:

House Appropriations Committee	Senate Appropriations Committee
<i>Chairwoman:</i> Rosa L. DeLauro (D-CT) <i>Ranking Member:</i> Kay Granger (R-TX)	<i>Chairman:</i> Patrick J. Leahy (D-VT) <i>Vice Chairman:</i> Richard C. Shelby (R-AL)
House Labor, HHS, Education and Related Agencies Appropriations Subcommittee	Senate Labor, HHS, Education and Related Agencies Appropriations Subcommittee
<i>Chairwoman:</i> Rosa L. DeLauro (D-CT) <i>Ranking Member:</i> Tom Cole (R-OK)	<i>Chairwoman:</i> Patty Murray (D-WA) <i>Ranking Member:</i> Roy Blunt (R-MO)
House Interior, Environment and Related Agencies Appropriations Subcommittee	Senate Interior, Environment and Related Agencies Appropriations Subcommittee
<i>Chairwoman:</i> Chellie Pingree (D-ME) <i>Ranking Member:</i> David Joyce (R-OH)	<i>Chairman:</i> Jeff Merkley (D-OR) <i>Ranking Member:</i> Lisa Murkowski (R-AK)
House Energy and Commerce (E&C) Committee	Senate Health, Education, Labor and Pensions (HELP) Committee
<i>Chairman:</i> Frank Pallone, Jr. (D-NJ) <i>Ranking Member:</i> Cathie McMorris Rodgers (R-WA)	<i>Chairwoman:</i> Patty Murray (D-WA) <i>Ranking Member:</i> Richard Burr (R-NC)
House E&C Subcommittee on Health	Senate Environment and Public Works (EPW) Committee
<i>Chairwoman:</i> Anna G. Eshoo (CA) <i>Ranking Member:</i> Brett Guthrie (R-KY)	<i>Chairman:</i> Thomas R. Carper (D-DE) <i>Ranking Member:</i> Shelley Moore Capito (R-WV)
House E&C Subcommittee on Environment and Climate Change	Senate EPW Chemical Safety, Waste Management, Environmental Justice, and Regulatory Oversight Subcommittee
<i>Chairman:</i> Paul D. Tonko (D-NY) <i>Ranking Member:</i> David McKinley (R-WV)	<i>Chairman:</i> TBA <i>Ranking Member:</i> TBA

NIEHS-relevant legislation introduced thus far in the 117th Congress:

- ***The Federal Accountability in Chemical Testing Act (FACT Act).*** On January 5, 2021, Rep. Ken Calvert (R-CA) reintroduced this session H.R. 197, the Federal Accountability in Chemical Testing (FACT) Act, to amend the "ICCVAM Authorization Act of 2000" (P.L. 106-545) to require the biennial reports of ICCVAM—the permanent interagency committee chaired by the NTP Division of NIEHS—include a description of the progress being made by each of the 16 participating federal agencies on the development and use of alternative methods for toxicological testing. Notably, the bill prescribes that such descriptions include animal use data by species, number and test type. This bill was referred to the House Committee on Energy and Commerce. The bill was introduced in both the 116th and 115th Sessions of Congress with bi-partisan support

- ***The Triple-Negative Breast Cancer Research and Education Act of 2021.*** On January 4, 2021, Congresswoman Sheila Jackson Lee (D-TX) reintroduced the Triple-Negative Cancer Research and Education Act. This bill requires research and education activities related to triple-negative breast cancer (the cells of these breast cancers are negative for estrogen receptors, progesterone receptors, and excess HER2 protein). The bill instructs the National Institutes of Health (including NICHD, NIEHS, ORWH and NIMHD) to conduct and support research into the disease, and the Centers for Disease Control and Prevention and the Health Resources and Services Administration to develop and disseminate information about triple-negative breast cancer for the public and for health care providers, respectively. Among other topics, the information must cover the elevated risk for minority women and the availability of a range of treatment options for such cancers. The bill was previously introduced in the 116th and 115th Sessions of Congress.

CONGRESSIONAL BRIEFINGS

- **Labor-HHS 4 Corners Meeting:** Dr. Woychik met with the House and Senate Appropriations Labor, HHS, Education Subcommittee Majority and Minority staff on September 11th, 2020. Dr. Woychik presented an overview of NIEHS, and his vision and priorities for NIEHS and NTP. Staffers asked questions to Dr. Woychik on chemicals and environmental exposures impacts on health; harmful algal blooms; NIEHS main priorities and new directions under Dr. Woychik; how to best release NTP reports without getting the public riled up; data management and storage; and how NIEHS collaborates with other ICs (especially the newer ICs). The staffers enjoyed the briefing and found it helpful. One staffer asked a question on Harmful Algal Blooms that was followed-up with more information from us after the meeting. Additional NIH Staff: Larry Lohmann (OLPA), Michelle Mitchell (OLPA), Jed Bullock (NIEHS), April Bennett (NIEHS), and Shelia Newton (NIEHS). Congressional Staff: Laura Friedel (Senate Majority), Alex Keenan (Senate Minority), Jennifer Cama (House Majority) and Kathryn Salmon (House Minority)
- **Interior and Environment 4 Corners Meeting:** Dr. Woychik met with the House and Senate Appropriations Subcommittee on Interior, Environment and Related Agencies Majority and Minority staff on September 30th, 2020. Dr. Woychik gave updates on SRP and WTP programs, COVID research with both programs, and the SRP research updates on PFAS, in addition to sharing his interests with each of the programs. Staffers asked questions on the SRP Strategic Plan, SRP's COVID research, Dr. Woychik's priorities and vision as the new Director of NIEHS, and how NIEHS's overall budget works with increases and cuts. Additional NIH/HHS staff attended: Michelle Mitchell (OLPA), Larry Lohmann (OLPA), Camille Sealy (HHS), April Bennett (NIEHS), and Sheila Newton (NIEHS). Congressional Staffers: Kusai Merchant (House Majority Staff), Kristin Clark (House Minority Staff), Lucas Agnew (Senate Majority Staff) and Melissa Zimmerman (Senate Minority Staff).

PRESIDENTIAL APPOINTMENTS

The President has nominated Attorney General Xavier Becerra of California to be Secretary of Health and Human Services. The Senate Committee on Health, Education, Labor and Pensions (HELP) is expected to hold a hearing with the nominee in the upcoming weeks. The delay is due to the retirement of the now former Chair of the HELP Committee, Sen. Lamar Alexander, from last session; and the delay in the agreement of the organizing resolution not being passed in the Senate until the first week of February, which officially named Senator Patty Murray (D-WA) as Chairwoman. Other HHS nominees held up by the delay are: Dr. Rachel Levine, nominee for Assistant Secretary of Health; Dr. Vivek Murthy, former Surgeon General and nominee for Surgeon General in the Biden Administration; and Dr. Andrea Palm, nominee for Deputy Secretary of Human Health Services. President Biden has decided Dr. Francis Collins will stay as NIH Director, and Dr. Ned Sharpless will remain as interim NCI Director.

Advancing Environmental Health Sciences

Spotlight on NIEHS: Five Guiding Values

Since being named director of NIEHS, Dr. Rick Woychik has worked with groups across the institute to develop guiding values to help the institute reach the goals laid out in the its 2018-2023 Strategic Plan. The values are all equally important:

- Encourage leadership at all levels
- Promote innovation
- Nurture collaboration
- Enhance communication
- Strengthen workforce through diversity

To further the dialogue across the environmental health sciences community and to encourage research collaboration, the *Environmental Factor* has launched a regular column called the Director's Corner. The column will include interviews with thought leaders, explore bold ideas, share new research approaches, identify environmental health collaboration opportunities, and forge new partnerships. The topics will reflect the guiding values above in support of creating NIEHS as the definitive innovation center for the environmental health science community. To subscribe, visit factor.niehs.nih.gov.

Science Advances

One NIEHS

- Boyles AL, Beverly BE, Fenton SE, Jackson CL, Jukic AMZ, Sutherland VL, Baird DD, Collman GW, Dixon D, Ferguson KK, Hall JE, Martin EM, Schug TT, White AJ, Chandler KJ. Environmental Factors Involved in Maternal Morbidity and Mortality. *J Womens Health (Larchmt)*. 2020 Nov 18. doi: 10.1089/jwh.2020.8855. Epub ahead of print. PMID: 33211615.

DIR

- Bisogno LS, Yang J, Bennett BD, Ward JM, Mackey LC, Annab LA, Bushel PR, Singhal S, Schurman SH, Byun JS, Nápoles AM, Pérez-Stable EJ, Fargo DC, Gardner K, Archer TK. Ancestry-dependent gene expression correlates with reprogramming to pluripotency and multiple dynamic biological processes. *Sci Adv.* 2020 Nov 20;6(47):eabc3851. doi: 10.1126/sciadv.abc3851. PMID: 33219026; PMCID: PMC7679169.

DNTP

- Hsieh JH, Sedykh A, Mutlu E, Germolec DR, Auerbach SS, Rider CV. Harnessing In Silico, In Vitro, and In Vivo Data to Understand the Toxicity Landscape of Polycyclic Aromatic Compounds (PACs). *Chem Res Toxicol.* 2020 Oct 16. doi: 10.1021/acs.chemrestox.0c00213. Epub ahead of print. PMID: 33063992.

DERT

- Gardner CM, Hoffman K, Stapleton HM, Gunsch CK. Exposures to Semivolatile Organic Compounds in Indoor Environments and Associations with the Gut Microbiomes of Children. *Environ. Sci. Technol. Lett.* 2021, 8, 1, 73–79. doi: 10.1021/acs.estlett.0c00776

Promoting Translation – Data to Knowledge to Action

NIH Public Health Emergency and Disaster Research and Response (DR2) Program

In April 2020, NIEHS was asked to host the NIH COVID-19 Survey Instruments in DR2, due to researchers' need to access rapidly evolving survey items, the need to maximize comparisons across datasets and studies, and to facilitate data integration and collaborations. As part of a One NIEHS effort, a trans-institute working group was formed to leverage environmental health expertise and resources. The COVID-19 response includes the Community Interventions to Address the Consequences of the COVID-19 Pandemic among Health Disparity and Vulnerable Populations funding announcement ([PAR-20-37](#)). To maximize comparisons across datasets or studies, and facilitate data integration and collaboration, researchers funded through this FOA are strongly encouraged to use the following resources:

- Data Harmonization for Social Determinants of Health via the PhenX Toolkit: Investigators involved in human-subject studies are strongly encouraged to employ a common set of tools and resources that will promote the collection of comparable data on social determinants of health (SDOH) across studies. In particular, human-subject studies should incorporate SDOH measures from the Core and Specialty collections that are available in the Social Determinants of Health Collection of the PhenX Toolkit (www.phenxtoolkit.org).
- A trans-NIH working group is making existing COVID-19 survey items and investigator contact information publicly available through two NIH-supported platforms: the NIH Public Health Emergency and Disaster Research Response (DR2) [<https://dr2.nlm.nih.gov/>] and the PhenX Toolkit [<https://www.phenxtoolkit.org/index.php>]. Researchers addressing COVID-19 questions, whether population-based or for clinical research, are strongly encouraged to consider these COVID-19 specific survey item repositories and select existing survey items or

protocol modules currently being fielded, if consensus based measures (e.g., <https://www.phenxtoolkit.org/collections/view/1>) are not available.

Additionally, researchers with funding through this FOA will be strongly encouraged to share their survey items to make them public for other researchers to consider by submitting their surveys to NIHCOVID19Measures@nih.gov.

There are currently over 97 COVID-related tools and questionnaires in the DR2 Toolkit. The DR2 Team began outreach to compile COVID vaccine questionnaires and instruments in November 2020. The team is also coordinating with other NIH efforts to develop common data elements for researchers. Additional tools developed by grantees will be added to the DR2 toolkit for broad sharing.

RADx-rad

The NIH launched the Rapid Acceleration of Diagnostics (RADx) initiative to encourage innovation in the development, commercialization, and implementation of technologies for COVID-19 testing. RADx-rad supports new, non-traditional approaches to address current gaps in COVID-19 testing. Oswaldo Lozoya, Ph.D., a fellow in the Environmental Epigenomics and Disease Group, applied to receive funding through the RADx-rad initiative and was the only in-house research proposal to receive RADx funding. Lozoya's proposal uses hyperplexed sample barcoded screening for SARS-CoV-2 by next generation sequencing to perform over 50,000 tests per run for less than \$6000 in additional costs, and uses the same reagents as PCR testing to diagnose SAR-CoV-2 infection and forecast COVID-19 onset at the same time. This research will help address the unmet need of determining who is at risk for COVID-19.

Enhancing EHS Through Stewardship and Support

Workplace Diversity

It is important to promote diversity, equity, and inclusion in biomedical research. The events of the past year have brought the reality of inequities in biomedical research to the forefront. Given this, an NIH-wide effort is underway to address these inequities. Scientists and trainees from diverse backgrounds are important to the scientific enterprise. To that end, a trans-NIH initiative, the **Faculty Institutional Recruitment for Sustainable Transformation (FIRST)**, was created with the goal of creating cultures of inclusive excellence. The program objectives include:

- Faculty cohort model for hiring, multi-level mentoring, professional development
- Integrated, institution-wide systems to address bias, faculty equity, mentoring, and work/life issues
- Coordination and Evaluation Center (CEC): Independent program evaluation - faculty and institutional level

NIEHS Scholars Connect Program

The NIEHS Scholars Connect Program (NSCP), launched fall of 2012, is an academic-year (3 semester) paid internship designed to provide mentored environmental health sciences research training and

professional development opportunities for undergraduate (junior/senior) STEM majors from HBCUs and surrounding institutions.

The program runs from June to April. Participants are full-time (40 hours/week) in the summer and part-time (15 hours/week) in the fall and spring. Participants attend orientation, science boot camp, and the *Scholar Seminar Series*, engage in career and professional development activities, and present their work at the end of each Connection (Poster/Summer Connection, 3-Minute Elevator Pitch/Fall Connection, Annual Symposium/Spring Connection).

There have been 60 Scholars admitted to the program since its inception -- 40% have been African American/Black, 38% white, 19% Asian/Pacific Islander, and 3% Hispanic/Latino. The majority of participants (92%) have completed the program, and 47% of participants are pursuing or have obtained advanced degrees.

Due to COVID-19, NSCP was forced to pivot in order to adhere to NIH guidance and restrictions while still allowing Scholars to gain important research experience. The 2020-2021 cohort of Scholars participate in a 100% virtual platform, engaging online with host labs and online program activities.

Staff Updates

Gary Ellison

Dr. Gary Ellison joins NIEHS as the acting Director of the Division of Extramural Research and Training. Dr. Ellison is joining us on detail from the National Cancer Institute where he served as the chief of the Environmental Epidemiology Branch in the Epidemiology and Genomics Research Program (EGRP), Division of Cancer Control and Population Sciences (DCCPS). His doctoral training was in cancer epidemiology with an emphasis on racial disparities in prostate cancer risk. He completed his postdoctoral training at Howard University's National Human Genome Center in Washington, D.C., and at NCI as a Cancer Prevention Fellow. Dr. Ellison is an ex-officio member of the National Advisory Environmental Health Sciences Council. He began his role as the acting director of DERT on January 25, 2021.

L. Michelle Bennett

Dr. L. Michelle Bennett is serving as the acting Chief Innovation Officer (CInO) at NIEHS. As part of a 50% detail to NIEHS, Dr. Bennett will be engaged in convening experts from within and outside of NIEHS to facilitate innovation and new opportunities; working with national and international collaborations, Agencies/Departments across the federal government, Industry, and with non-profit research organizations; developing a framework for an NIEHS-NCI sustainable partnership that leverages and builds upon the existing interests in the environment at the interface of cancer; and engaging the NTP in a strategic planning exercise and will be working to catalyze and develop approaches to team science and collaborative research. The detail will last up to one year.

Chip Hughes

Joseph "Chip" Hughes has directed the NIEHS Worker Training Program (WTP) for over 20 years with 30 years of service to NIEHS. During this time, he has shepherded the program through significant

expansion, especially protecting and improving the health and safety needs of workers involved in response, recovery, and remediation efforts during natural and man-made disasters/events. Hughes has worked closely with other Federal agencies in order to increase their commitment to the health and safety of workers in both the public and private sectors. Under Hughes's leadership, NIEHS grant support of \$40 million is annually committed for the development and administration of model health and safety training programs for workers and their supervisors who are engaged in activities related to hazardous materials and emergency response. His active engagement during national response events has been a hallmark of his career, as he was among the first to be on the scene after the attack on the World Trade Center and after the devastation along the Gulf Coast by hurricanes Katrina and Rita and the Deepwater Horizon Oil Spill. Additionally, he has most recently prioritized the Opioid Epidemic and biosafety under the Ebola and COVID-19 response, promoting the safety and well-being of workers, responders, and communities.

For the Opioid Epidemic, Hughes saw early on how the impact of addiction could impact workers and especially the exposure of first responders to the hazards of opioid exposure on the job. As a result, he directed the program to develop tools for prevention and intervention to help reverse the tide of opioid misuse, addiction, and death among workers. This program addressed the impact of work-related injuries on addiction and advocated for workplace mental resiliency and recovery programs to support workers in a full and meaningful return to work.

He was named the recipient of the Alice Hamilton Award from the American Public Health Association Occupational Health and Safety Section in October 2020. This award recognizes the life-long contributions of individuals who have distinguished themselves through a career of hard work and dedication to improve the lives of workers. This award is named for Dr. Alice Hamilton (1869 -1970), considered the founder of occupational health in the United States, was a tireless activist and physician who dedicated her life to improving the health and safety of workers. She was committed to science, service, and compassion. Most members of the OHS Section have received the benefit of Chip Hughes' relentless efforts to expand worker health and safety training and education.

He has advanced work promoting the development of strong and substantial programs to address occupational and environmental justice (EJ) and to advance participatory models of worker health and safety training. This includes ensuring the voices of vulnerable workers were included in meetings, presentations, committees, and disaster response and supporting language justice as a public health and worker safety issue. Most recently, he is chairing the Federal EJ Interagency Working Group and Natural Disasters Subcommittee to engage key stakeholders via focus groups and townhall meetings to identify time sensitive solutions to address the impact of vulnerable communities and issues impacting resilient natural disaster preparedness, response, and recovery. The Subcommittee is currently preparing for three virtual town hall meetings focused on three different regions (i.e., Southeast and Caribbean Basin on January 27, 2021; Gulf Coast on February 24, 2021; and West Coast on March 31, 2021).

The last 10 months of Hughes's time at NIEHS was focused on the COVID-19 response. His vast experience in responding to national events helped to mobilize WTP in creating numerous training materials for workers, employers, and training organizations and efficiently funding grantees with Congressionally appropriated dollars to support COVID-19 training programs across the country. This included moving a program that was historically based on classroom and hands-on course work to predominantly online or virtual training, all while supporting WTP grantees in continuing to use adult-education methods, learner engagement, and a worker-trainer model.

Under his leadership, WTP has trained over 4 million workers and has supported multiple areas of the national health and safety movement. Hughes has consistently brought his skill, knowledge, commitment, and humor to many causes over the past 50 years. His approach emphasizes a multi-disciplinary style to worker education; and he has had a profound effect on multiple generations of occupational, health and safety advocates, workers, and the public community.

In addition to the 2020 Alice Hamilton Award, Hughes has received the DHHS Secretary's Award for Exceptional Service in November 2001 for his role in responding to the World Trade Center attacks. After the NIEHS response to the Katrina disaster, Mr. Hughes was given the DHHS Secretary's Award for Distinguished Service in June 2006 and the NIH Director's Award in 2011 for responding to the Deepwater Horizon Oil Spill. In November 2011, Mr. Hughes was given the Tony Mazzocchi Award for lifetime achievement by the National Council for Occupational Safety and Health (NCOSH).

After over 30 year of service to NIEHS, Hughes has left NIEHS and is now the Deputy Assistant Secretary for Pandemic and Emergency Response at OSHA under the new administration. Following his departure, Sharon Beard began her role as the acting chief of the Worker Education and Training Branch on February 1, 2021. Beard has been at NIEHS for over 25 years, first as an industrial hygienist. Beard has been honored for developing safety and health training programs for low-income workers, particularly those in highly hazardous occupations in 2013 with the American Public Health Association (APHA) Occupational Health and Safety Section Lorin Kerr Award from the for her leadership of the highly regarded Minority Worker Training Program, now the ECWTP. Beard holds a Master of Science in Environmental Science and Management from Tufts University, Medford, MA where she received the prestigious Environmental Science and Management Fellowship from the National Urban Fellows, Inc. She also holds a Bachelor of Science degree in Biology with minor in Business from Western Carolina University, NC.

Awards and Recognition

Masahiko Negishi, Ph.D., Senior Investigator, Reproductive & Developmental Biology Laboratory, was unanimously approved by the Board of Scientific Directors as an **NIH Emeritus Investigator**, he assumed the position after his retirement in December 31, 2020.

Kelly Ferguson, Ph.D., M.P.H., Investigator, Epidemiology Branch, received the inaugural **Lou Guillette Jr. Outstanding Young Investigator Award** from the HEEDS organization. The Healthy Environment and Endocrine Disruptor Strategies (HEEDS) is a nonprofit that integrates and promotes scientific developments in the study of chemicals that disturb the endocrine system, or EDCs.

Francesco DeMayo, Ph.D., Chief, Reproductive & Developmental Biology Laboratory, was elected **President of Society for the Study of Reproduction (SSR)**.

Anne Marie Jukic, Ph.D., head of the NIEHS Fertility and Reproductive Health Group, won a highly competitive **Bench-to-Bedside grant** from the National Institutes of Health (NIH). This two-year, \$300,000 grant will fund a clinical study of how vitamin D supplements may improve women's reproductive health.

2020 Science Day Award winners:

- Mentor of the Year
 - **Douglas Bell, Ph.D., Senior Investigator, Environmental Epigenomics & Disease Group, Immunity, Inflammation & Disease Laboratory**
- Fellow of the Year
 - **Oswaldo Lozoya, Ph.D., IRTA Postdoc, Environmental Epigenomics & Disease Group, Immunity, Inflammation & Disease Laboratory**
- Best Oral Presentation:
 - **Ciro Amato III, Ph.D., IRTA Postdoc, Reproductive Developmental Biology Group, Reproductive & Developmental Biology Laboratory – “Our Differences Make Us Complete: The Identification of Novel Cell Populations in Penis Development and Hypospadias”**
- Best Elevator Pitch Presentations:
 - **Alicia Chi, Ph.D., IRTA Postdoc, Pregnancy & Female Reproduction Group, Reproductive & Developmental Biology Laboratory – “Inside the Uterus: How Phosphosignaling Impacts Pregnancy Outcome”**
 - **Mandy Goldberg, Ph.D., IRTA Postdoc, Chronic Disease Epidemiology Group, Epidemiology Branch – “Pubertal Timing and Breast Cancer Risk in the Sister Study Cohort”**
 - **Victoria Placentra, IRTA Postbac, Mutagenesis & DNA Repair Regulation Group, Genome Integrity & Structural Biology Laboratory – “Redox Stress Inside and Out: Studying the Relevance of Exogenous Exposures to Understanding Endogenous Redox Stress”**

A special issue of the journal *DNA Repair* highlights the scientific contributions of **Sam Wilson, M.D.**, lead researcher for the NIEHS DNA Repair and Nucleic Acid Enzymology Group. The issue was titled “Tribute to Samuel H. Wilson: Shining Light on Base Excision DNA Repair.”

Lisa Rider, M.D., a physician and clinical scientist at the NIEHS, received the **2020 James T. Cassidy Award** from the American Academy of Pediatrics (AAP) on Nov. 6. The award recognizes members of AAP’s Rheumatology Section for their outstanding achievement in pediatric rheumatology.

Jennifer Kay, Ph.D., former MIT scientist, now at Silence Spring Institute, was named the 23rd winner of the **Karen Wetterhahn Memorial Award** during the NIEHS Superfund Research Program (SRP) Annual Meeting. Kay studies how genetic factors affect susceptibility to mutations and cancer following exposure to N-nitrosodimethylamine (NDMA). That compound is one contaminant found at the Olin Chemical Superfund Site in Wilmington, Massachusetts.

Yasemin Sancak, Ph.D., an assistant professor in the pharmacology department at the University of Washington was awarded funding as part of the **National Institutes of Health (NIH) Director's New Innovator Award**, which is part of the High-Risk, High-Reward Research program. Dr. Sancak will serve as the principal investigator for research project overseen by NIEHS, which could shed light on the important interplay between mitochondria and other organelles, and how errors can pave the way for ill health.

2B Technologies (Chief Scientist Dr. John Birks) is among 38 companies selected and announced by the Small Business Administration (SBA) for the **2020 Tibbetts awards**. Named for Roland Tibbetts, who was instrumental in developing the SBIR program, the SBA recognizes companies, organizations and

individuals who exemplify the spirit and intent of the SBIR/STTR programs. These awards not only recognize the successes but help document the economic, technical, and societal benefits from SBIR/STTR funding. Winners are selected based on the economic or societal impact of their technological innovation, and the extent to which that innovation served federal R&D needs, encouraged diverse participation, and increased the commercialization of federal research.

SOT Awards

- **Achievement Award:** Andrew Patterson, Ph.D., Pennsylvania State University
- **Distinguished Toxicology Scholar Award:** Deborah Cory-Slechta, Ph.D., University of Rochester Medical Center
- **Education Award:** Wei Zheng, Ph.D., A.T.S., Purdue University
- **Founders Award (for Outstanding Leadership in Toxicology):** Michael Gallo, Ph.D., A.T.S. D.A.B.T., Rutgers Robert Wood Johnson Medical School
- **Leading Edge in Basic Science Award:** Dana C. Dolinoy, Ph.D., University of Michigan School of Public Health
- **Public Communications Award:** Johnnye Lewis, Ph.D., University of New Mexico, Albuquerque
- **Translational Impact Award:** Rebecca Fry, Ph.D., University of North Carolina Chapel Hill
- **Best Postdoctoral Publication Award:** Suzanne N. Martos, Ph.D., NIEHS