

Report to the National Advisory Environmental Health Sciences Council Director, NIEHS and NTP

February 14-15, 2017

Budget and Legislative Report



Appropriations

	FY 2015 Omnibus Appropriation	FY 2016 President's Request	FY 2016 House Appr Committee	FY 2016 Senate Appr Committee	FY 2016 Omnibus Appropriation	FY 2017 President's Request
NIEHS	\$ 667,333,000 ^{a/}	\$ 681,782,000	\$ 675,783,000	\$ 695,900,000	\$ 693,533,000 ^{a/}	\$ 693,533,000
Ebola (via CDC)	\$ 10,000,000 ^{c/}					
NIH (LHHS)	\$30,084,000,000	\$31,084,000,000	\$31,184,000,000	\$32,084,000,000	\$32,084,000,000	\$32,909,000,000
Common Fund	\$ 545,639,000 ^{b/}	\$ 565,639,000 ^{b/}	\$ 688,239,000 ^{b/}	\$ 556,677,000 ^{b/}	\$ 675,639,000 ^{b/}	\$ 775,639,000 ^{b/}
Superfund	\$ 77,349,000	\$ 77,349,000	\$ 77,349,000	\$ 77,349,000	\$ 77,349,000	\$ 77,349,000
NIEHS/DOE Training	\$ 10,000,000		\$ 10,000,000		\$ 10,000,000	

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

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

c/ Transfer from CDC Ebola Emergency Response appropriation to NIEHS to remain available through fiscal year 2019.

On December 10, 2016, the President signed into law the *Further Continuing Appropriations Act*, PL 114-254, which is the second Continuing Resolution (CR) for Fiscal Year 2017. This second CR funds most of the federal government, including NIEHS, through April 28, 2017 at FY2016 levels reduced by 0.1901 percent. The reduction under the first CR, which governed from October 1-December 9, 2016, was 0.496 percent.

In addition to carrying forward these slightly adjusted FY2016 funding levels for NIEHS and other federal agencies for an additional five months, the second CR also appropriated the following sums of money:

- \$352 million as the first installment for the new “NIH Innovation Account” authorized by the *21st Century Cures Act* to be distributed as follows:

- \$300 million for Cancer Moonshot;
 - \$40 million for Precision Medicine Initiative (“All of Us Research Program”);
 - \$10 million for BRAIN Initiative; and
 - \$2 million for Regenerative Medicine.
- \$500 million to the HHS Secretary for grants to states for the opioid abuse crisis response as authorized by the *21st Century Cures Act*;
 - \$120 million to EPA for grants to states and municipalities to improve lead-contaminated drinking water infrastructure as authorized by the *Water and Waste Act of 2016*;
 - \$20 million to FDA for its Innovation Account as authorized by the *21st Century Cures Act*;
 - \$20 million to CDC NCEH/ATSDR for the new “lead registry” and lead advisory committee as authorized by the *Water and Waste Act of 2016*;
 - \$15 million to CDC for the Childhood Lead Poisoning Prevention Programs as authorized by the *Water and Waste Act of 2016*; and
 - \$15 million to HRSA for the Healthy Start Initiative as authorized by the *Water and Waste Act of 2016*.

Recently-enacted Laws

Before the 114th Congress adjourned sine die on December 30, 2016, Congress sent the following legislation to the President to become law:

21st Century Cures Act, PL 114-255, enacted on December 13, 2016.

The *21st Century Cures Act* includes the following funding provisions:

- Establishes an “NIH Innovation Account” in the U.S. Treasury;
- Creates a \$4.796 billion roadmap for new federal funds for key NIH initiatives over the next 10 years (i.e. through FY2026) to be distributed as follows:
 - \$1.8 billion for Cancer Moonshot;
 - \$1.511 billion for BRAIN Initiative;
 - \$1.455 billion for Precision Medicine Initiative (“All of Us Research Program”); and
 - \$30 million for Regenerative Medicine.

- The law requires the NIH Director to submit to Congress by June 12, 2017 a “work plan.” The plan should specify the research projects for which these new funds will be applied. Thereafter, submission of annual reports is required to detail actual expenditures.
- The funds are subject to appropriation each year but will be outside the budget caps. Once appropriated, the funds will be deposited into the NIH Innovation Account and will remain available until expended by NIH.

Additionally, the *21st Century Cures Act* includes a number of administrative provisions. Major provisions of interest include:

- **Paperwork Reduction Act (PRA) exemption (Sec. 2035):** Exempts NIH voluntary research questionnaires from the *Paperwork Reduction Act*. On December 21, 2016, the NIH Extramural Program Management Committee (EPMC) met and, among other action items, examined this provision in the *21st Century Cures Act*. The following day, December 22, 2016, Michael S. Lauer, MD, Deputy Director at NIH for Extramural Research, notified all IC Extramural Division Directors by e-mail that this provision is effective immediately and that “any research materials that [ICs] would have sent for PRA/OMB review [are] no longer subject to the requirement.” He further emphasized that “materials that are being considered solely for *administrative or operational* purposes may still be subject to PRA requirements” and that if ICs have any materials for which they are in doubt, that they should send them directly to him for decision. Dr. Lauer also indicated that more detailed guidance and FAQs about implementation of this particular provision are being prepared for circulation in the near future. He described the provision as “enhancing the ability of NIH to meet its mission while eliminating unneeded administrative burdens.”
- **Promotes Scientific Engagement (Sec. 3074):** Exempts scientific meetings from OMB approval requirements and other limitations.
- **Strengthens Privacy Protection (Sec. 2012):** Directs HHS to issue certificates of confidentiality for certain NIH-funded research.
- **Promotes Data Sharing (Sec. 2014):** Increases ability of NIH to require grantees to share research data.
- **Improves Loan Repayment Program (Sec. 2022):** Consolidates current Loan Repayment Programs and raises the cap from \$35,000 to \$50,000.
- **Requires NIH Strategic Plan (Sec. 2031):** Requires NIH to publish an NIH-wide strategic plan every six years. NIH is already in initial compliance with this provision due to its public release, on December 16, 2015, of its NIH-Wide Strategic Plan for FY2016-2020 entitled: “*Turning Discovery Into Health.*”
- **Places IC Directors in 5-year term positions (Sec. 2033):** Establishes 5-year renewable terms for all IC Directors except for the NCI Director which will remain a position subject to appointment by the President with the advice and consent of the Senate. All IC Directors currently occupying their positions commenced their 5-year terms effective with enactment of the Act. Their terms expire on December 13, 2021.

The NIH Policy Manual, maintained by the NIH Office of Management Assessment (OMA), sets forth instructions on the implementation at NIH of recently-enacted laws. Specifically, the Manual, in Chapter 1792, outlines a process “to coordinate and guide the development of a Legislative Implementation Action Plan (LIAP) for a thoughtful, comprehensive, and timely response to newly enacted, NIH-related Congressional legislation that best reflects Congressional mandates and intent.”

The first meeting of a Legislative Implementation Working Group for the *21st Century Cures Act* was held on January 10, 2017. The Working Group includes representatives from OLPA, OGC, OMA, OB, OSP, and OER. On January 4, 2017, Dr. Collins selected the following three IC Directors to serve as the IC representatives on this Working Group:

- Gary H. Gibbons, MD, Director of the National Heart, Lung, and Blood Institute (NHLBI);
- Josephine P. Briggs, MD, Director of the National Center for Complementary and Integrative Health (NCCIH); and
- Jon R. Lorsch, PhD, Director of the National Institute of General Medical Sciences (NIGMS).

The Legislative Implementation Working Group announced last month that the following provisions are among the first to be studied:

- Innovation Fund establishment;
- Paperwork Reduction Act Exemption;
- Other Transaction Authority (OTA) for PMI and Common Fund;
- Travel provision;
- Certificates of Confidentiality;
- Workshop on age groupings in clinical research;
- Task force on Research Specific to Pregnant and Lactating Women (HHS is responsible for this provision, must be established in 90 days); and
- Recommendations on enhancements to ClinicalTrials.gov (HHS is responsible for convening group, meeting must take place within 90 days).

Water and Waste Act of 2016, PL 114-322, enacted on December 16, 2016.

The President signed into law on December 16, 2016, a comprehensive water resources bill—the “*Water Infrastructure Improvements for the Nation Act*” (WIIN Act)—that authorizes a series of Army Corps projects across the United States, and that includes an additional title addressing infrastructure improvements to help utilities comply with the *Safe Drinking Water Act* and targeted provisions in support of HHS lead prevention activities. This title is known as the “*Water and Waste Act of 2016*.”

The bulk of the new money—\$120 million—is authorized for EPA’s existing drinking water infrastructure grants program—the State Revolving Fund—to help states and utilities make improvements in their drinking water systems in order to comply with the *Safe Drinking Water*

Act. Emphasis is given to Flint, Michigan, and other similarly-situated communities with drinking water systems contaminated by lead or other regulated contaminants.

Congress has mandated that CDC's NCEH/ATSDR create a new "lead exposure registry" to collect data on a voluntary basis about lead exposure in municipal drinking water systems across the United States. The actual budget for this registry requirement is \$17.5 million, while \$2.5 million is authorized for a new ATSDR 15-member advisory committee on lead contamination. With respect to this committee:

- The HHS Secretary will appoint its members, and there is no firm deadline set in law for the original appointments.
- At least 8 of the 15 members must be from the federal government.
- The law specifies that at least three members shall be (1) an epidemiologist, (2) a toxicologist, and (3) an environmental health expert.
- Members will serve for 3-year terms and can be reappointed.
- *Federal Advisory Committee Act* (FACA) requirements apply.
- The chair, who must be a federal member, will be designated by the HHS Secretary.
- Every five years the Advisory Committee must submit a report to the HHS Secretary and Congress detailing its work, including:
 - An evaluation of the effectiveness of federal programs and services available to individuals and communities exposed to lead;
 - An evaluation of additional lead poisoning research needs;
 - An assessment of effective screening methods or best practices used to prevent or screen for lead poisoning; and
 - Recommendations for improved access to services related to health care, education and nutrition for communities impacted by lead exposure.

CDC also received an authorization of \$15 million for its Childhood Lead Poisoning Prevention programs, and HRSA received an authorization of \$15 million for the Healthy Start Initiative.

Toxic Exposure Research Act of 2016, PL 114-315, enacted on December 16, 2016.

The *Toxic Exposure Research Act of 2016* was enacted as a part of an omnibus package of Veterans-related bills that encompass over 90 provisions and that is 57 pages in length. The *Toxic Exposure Research Act* is Subtitle C, Title VI, of this new law. The Act calls for the National Academy of Medicine (NAM), or an alternative NGO to be selected by the Secretary of Veterans Affairs, to commence, by June of this year, a 2-year "assessment of the feasibility to conduct scientific research relating to possible health effects on descendants of Veterans exposed to toxic substances." The law stipulates that the NAM/NGO report—with a conclusion about whether such research is feasible on an enduring basis and where such research responsibility, if feasible, might be housed—be sent to the Secretary of Veterans Affairs and Congress by June 2019. By December 2019, if the research is found to be feasible, the Secretary of Veterans

Affairs is required, in consultation with the NIEHS Director, to assemble a 13-member advisory board to guide such research efforts.

Earlier versions of the bill in the 114th Congress called for research efforts to commence immediately within the VA medical system (H.R. 1769; S. 901). The compromise version that became law adopted an outside review and recommendation first approach via the NAM. The compromise version also eliminated consultation with the HHS Secretary as a requirement for appointment by the Secretary of Veterans Affairs of advisory board members, but left intact the requirement for consultation with the NIEHS Director.

This legislation was supported by the Vietnam Veterans of America Agent Orange Committee and the Birth Defect Research for Children (BDRC). Reportedly, BDRC has been collecting data on birth defects and disabilities in the children of Vietnam and Gulf War veterans since 1990. Reportedly, their data show patterns of increases in disabilities in both groups. The law is designed to secure an independent scientific assessment of the effects of toxic exposure of Veterans on future generations (defined in the law as children and grandchildren).

SBIR/STTR Program Extensions, PL 114-328, enacted on December 23, 2016.

As part of the *National Defense Authorization Act for Fiscal Year 2017*, Congress reauthorized the Small Business Innovation Research (SBIR) and the Small Business Technology Transfer (STTR) programs through FY2022. Both programs were last reauthorized in 2011 and were scheduled to expire at the end of FY2017. SBIR was created in 1982; STTR in 1992. Currently, 11 federal agencies with extramural budgets in excess of \$100 million participate in SBIR while five of these 11 agencies with research budgets in excess of \$1 billion also participate in STTR. NIH participates in both SBIR and STTR. Various House and Senate bills introduced in the 114th Congress proposed increases for the annual SBIR and STTR set-aside percentages, which have historically been stair-stepped since inception of these programs. However, the final legislation signed into law freezes the current annual set-aside percentages through FY2022; these percentages are: (1) a minimum of 3.2% for SBIR, and (2) a minimum of 0.45% for STTR.

American Innovation and Competitiveness Act, PL 114-329, enacted on January 6, 2017.

The *American Innovation and Competitiveness Act* grants broad authority across the federal government for conducting crowdsourcing and citizen science projects. Section 402 of the Act expresses the sense of Congress that “crowdsourcing and citizen science projects have a number of additional unique benefits, including accelerating scientific research, increasing cost effectiveness to maximize the return on taxpayer dollars, addressing societal needs, providing hands-on learning in STEM, and connecting members of the public directly to Federal science agency missions and to each other.”

Apart from the explicit authority to conduct crowdsourcing and citizen science projects, the new law grants agencies the ability to:

- accept volunteer services;

- partner broadly with the private sector and other government entities;
- use appropriated funds and solicit outside funds and in-kind services; and
- perform other functions to carry out these projects.

Agencies are also encouraged to designate citizen science coordinators and share best practices with other federal agencies, including through participation in the “Federal Community of Practice for Crowdsourcing and Citizen Science.”

The new law directs the General Services Administration (GSA) to play a key role in enhancing the ability of agencies to carry out these projects. Additionally, the Office of Science and Technology Policy (OSTP) at The White House is mandated to provide a report every two years on the projects conducted under this authority.

Pending Legislation

H.R. 598, Airplane Impacts Mitigation Act of 2017 (AIM Act of 2017)

On January 20, 2017, Rep. Stephen Lynch (MA-08) introduced H.R. 598, the *Airplane Impacts Mitigation Act of 2017*, to require the Administrator of the Federal Aviation Administration (FAA) to commission a study of the health impacts of airplane flights on affected residents of certain metropolitan areas exposed to a range of noise and air pollution levels from such flights. The FAA Administrator would be required to enter into an agreement to conduct this two-year study with an institution of higher education that receives funding from NIEHS. H.R. 598 has 20 cosponsors, principally members of the “Quiet Skies Caucus,” and has been referred to the House Committee on Transportation and Infrastructure.

S. 197, Radiation Exposure Compensation Act Amendments of 2017

On January 24, 2017, Sen. Mike Crapo of Idaho reintroduced S. 197, a bill to amend the *Radiation Exposure Compensation Act* to improve compensation for workers involved in uranium mining, and for other purposes. The bill has four original cosponsors: Sens. Tom Udall (New Mexico); James Risch (Idaho); Martin Heinrich (New Mexico); and Michael Bennet (Colorado). Among other provisions, S. 197 would direct the Secretary of Health and Human Services, through NIEHS, to establish a program of grants to institutions of higher education to study the epidemiological impacts of uranium mining and milling among non-occupationally exposed individuals, including family members of uranium miners and millers. This bill had a House companion in the 114th Congress: H.R. 994 introduced by Rep. Ben Ray Lujan (NM-03) and 19 cosponsors. S. 197 has been referred to the Senate Committee on the Judiciary.

H.R. 816, Federal Accountability in Chemical Testing Act (FACT Act)

On February 2, 2017, Rep. Ken Calvert (CA-42) introduced H.R. 816, the *Federal Accountability in Chemical Testing Act*, to amend the *ICCVAM Authorization Act of 2000* (PL 106-545) to require that the Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM), a permanent committee of NIEHS, include in its biennial report “a description of the progress on the development, validation, acceptance, and utilization of alternative test

methods” and “animal use data by species, number and test type for toxicological testing conducted, supported or required by” ICCVAM-participating federal agencies. These agencies include: Department of Agriculture (USDA); Department of Defense (DOD); Department of Energy (DOE); Department of the Interior (DOI); Occupational Safety and Health Administration (OSHA) at the Department of Labor; Department of Transportation (DOT); Consumer Product Safety Commission (CPSC); Environmental Protection Agency (EPA); Agency for Toxic Substances and Disease Registry (ATSDR) and National Institute for Occupational Safety and Health (NIOSH) at Centers for Disease Control and Prevention (CDC), Food and Drug Administration (FDA), and NIEHS, NCI, and NLM at NIH under Department of Health and Human Services (HHS). H.R. 816 has been referred to the House Committee on Energy and Commerce.

Presidential Appointment

The President has nominated Rep. Tom Price of Georgia to be Secretary of Health and Human Services. On January 18, 2017, the Senate Committee on Health, Education, Labor and Pensions (HELP) held a hearing with the nominee, and on January 24, 2017, the Senate Committee on Finance, which has jurisdiction over the nomination, held its hearing. On February 1, 2017, the Senate Committee on Finance reported the nomination to the full Senate and on February 2, 2017, a motion to proceed to consideration of the nomination was agreed to in the Senate by a vote of 51-48.

Congressional Meetings, Briefings and Responses

Congressional Oversight Request Related to IARC Monographs

On January 12, 2017, Rep. Jason Chaffetz (UT-03), the Chairman of the House Oversight and Government Reform Committee, wrote to Dr. Francis Collins, the NIH Director, requesting additional documents and information about NIH communications with the International Agency for Research on Cancer (IARC). Specifically, the Chairman requested copies of communications referring or relating to IARC’s policies and practices for responding to, or disclosing documents in response to, an open records request, FOIA request, lawsuit, or congressional inquiry. The Chairman first wrote to the NIH Director about NIH funding for, and communications with, IARC on September 26, 2016. On October 12, 2016, NIH officials briefed Committee staff in response to the September 26 letter. On December 2, 2016, NIH formally responded in writing to the original letter by providing the Committee with (1) information about funds expended by NIH for travel or work relating to IARC monographs for Fiscal Years 2014, 2015 and 2016, and (2) responsive documents relating to four IARC monographs:

- Vol. 102: Non-Ionizing Radiation, Part 2: Radiofrequency Electromagnetic Fields;
- Vol. 108: Some Drugs and Herbal Products;
- Vol. 112: Some Organophosphate Insecticides and Herbicides: Diazinon, Glyphosate, Malathion, Parathion, and Tetrachlorvinphos; and
- Vol. 114: Red Meat and Processed Meat.

Three NIEHS scientists participated in the working group for Vol. 108, and another NIEHS scientist participated in the working group for Vol. 112. Their e-mail communications

responsive to this congressional oversight request, which numbered approximately 1,300 pages, were incorporated into the comprehensive package that NIH provided to the Committee on December 2, 2016. No additional communications were identified as responsive to the January 12 request.

NIEHS 50th Anniversary Events on Capitol Hill

On November 16, 2016, the *Friends of NIEHS* sponsored a Congressional briefing on the Senate side of Capitol Hill and an evening reception on the House side commemorating the 50th Anniversary of the NIEHS. The briefing was entitled, “*NIEHS: 50 Years of Connecting Environmental Health Research to Community Needs,*” and was cosponsored by the American Thoracic Society, the American Academy of Pediatrics, and the Endocrine Society. The Office of Senator Richard Burr (NC) served as the honorary host. Panelists included: (1) NIEHS Director Dr. Linda Birnbaum, who moderated and provided an overview of NIEHS research; (2) Sarah Ervin, Director of Government Affairs for *The Honest Company*, who provided a private sector perspective on the value of NIEHS research; (3) Virginia Rauh from Columbia University, who spoke about research investigating neurodevelopmental impacts from prenatal exposure to pesticides; (4) Robert Wright from the Icahn School of Medicine at Mt. Sinai Hospital, who encapsulated research in metal toxicity; and (5) Joel Kaufman from the University of Washington who spoke about health effects of air pollution and association with cardiovascular and respiratory disease.

Rep. David Price (NC-04), Rep. G. K. Butterfield (NC-01), and former Rep. Renee Ellmers (NC-02) served as honorary hosts for the reception. Dr. Lawrence Tabak, NIH Principal Deputy Director, was the Master of Ceremonies. In addressing attendees, Dr. Tabak highlighted the contributions that NIEHS is making to key NIH initiatives, including with respect to the Environmental influences on Child Health Outcomes (ECHO) initiative and the Zika in Infants and Pregnancy (ZIP) Study. Dr. Birnbaum, as well as former NIEHS Director Dr. Kenneth Olden, highlighted the unique contributions that NIEHS makes for NIH research and acknowledged the congressional support that has been provided over the years for the advancement of environmental health research.

In addition to Rep. Price and Rep. Butterfield, other Members of Congress who addressed attendees included: Rep. Nita Lowey (NY-17), the Ranking Member of the House Appropriations Committee; Rep. Betty McCollum (MN-04), the Ranking Member of the House Appropriations Subcommittee on Interior and the Environment and Related Agencies; and former Rep. Lois Capps (CA-24). Rep. Walter Jones, Jr. (NC-03) and Rep. Charlie Dent (PA-15) also attended.

New Committee Assignments

The 115th Congress officially convened on January 3, 2017, and includes 55 new Representatives in the House and seven new Senators. Committee assignments were made in January, and reflect the following with respect to committees with jurisdiction over matters related to environmental health:

Committee on Appropriations, U.S. House of Representatives

Rodney P. Frelinghuysen, New Jersey, Chairman ²	Nita M. Lowey, New York
Harold Rogers, Kentucky	Marcy Kaptur, Ohio
Robert B. Aderholt, Alabama	Peter J. Visclosky, Indiana
Kay Granger, Texas	José E. Serrano, New York

Michael K. Simpson, Idaho	Rosa L. DeLauro, Connecticut
John Abney Culberson, Texas	David E. Price, North Carolina
John R. Carter, Texas	Lucille Roybal-Allard, California
Ken Calvert, California	Sanford D. Bishop, Jr., Georgia
Tom Cole, Oklahoma	Barbara Lee, California
Mario Diaz-Balart, Florida	Betty McCollum, Minnesota
Charles W. Dent, Pennsylvania	Tim Ryan, Ohio
Tom Graves, Georgia	C.A. Dutch Ruppersberger, Maryland
Kevin Yoder, Kansas	Debbie Wasserman Schultz, Florida
Steve Womack, Arkansas	Henry Cuellar, Texas
Jeff Fortenberry, Nebraska	Chellie Pingree, Maine
Thomas J. Rooney, Florida	Mike Quigley, Illinois
Charles J. Fleischmann, Tennessee	Derek Kilmer, Washington
Jaime Herrera Beutler, Washington	Matt Cartwright, Pennsylvania
David P. Joyce, Ohio	Grace Meng, New York ¹
David G. Valadao, California	Mark Pocan, Wisconsin ¹
Andy Harris, MD, Maryland	Katherine M. Clark, Massachusetts ¹
Martha Roby, Alabama	Pete Aguilar, California ¹
Mark E. Amodei, Nevada	
Chris Stewart, Utah	
David Young, Iowa	
Evan H. Jenkins, West Virginia	
Steven Palazzo, Mississippi	
Dan Newhouse, Washington ¹	
John R. Moolenaar, Michigan ¹	
Scott Taylor, Virginia ¹	

¹ Denotes new member of the Committee for the 115th Congress.

² Denotes new Chairman for the 115th Congress.

Subcommittee on Labor, Health, and Human Services, Education, and Related Agencies

Tom Cole, Oklahoma, Chairman	Rosa DeLauro, Connecticut, Ranking Member
Mike Simpson, Idaho	Lucille Roybal-Allard, California
Steve Womack, Arkansas	Barbara Lee, California
Chuck Fleischmann, Tennessee	Mark Pocan, Wisconsin ¹
Andy Harris, Maryland	Katherine Clark, Massachusetts ¹
Martha Roby, Alabama	
Jaime Herrera Beutler, Washington ¹	
John Moolenaar, Michigan ¹	

¹ Denotes new member of the Subcommittee for the 115th Congress.

Subcommittee on Interior, Environment, and Related Agencies

Ken Calvert, California, Chairman	Betty McCollum, Minnesota, Ranking Member
Mike Simpson, Idaho	Chellie Pingree, Maine
Tom Cole, Oklahoma	Derek Kilmer, Washington
David Joyce, Ohio	Marcy Kaptur, Ohio ¹
Chris Stewart, Utah	
Mark Amodei, Nevada	

¹ Denotes a new member of the Subcommittee for the 115th Congress as compared to the roster for the Subcommittee in the 114th Congress.

Committee on Energy and Commerce, U.S. House of Representatives

Greg Walden, Oregon, Chairman ²	Frank Pallone, New Jersey, Ranking Member
Joe Barton, Texas, Vice Chairman	Bobby Rush, Illinois
Fred Upton, Michigan	Anna Eshoo, California
John Shimkus, Illinois	Eliot Engel, New York
Tim Murphy, Pennsylvania	Gene Green, Texas
Michael Burgess, Texas	Diana DeGette, Colorado
Marsha Blackburn, Tennessee	Michael Doyle, Pennsylvania
Steve Scalise, Louisiana	Janice Schakowsky, Illinois
Robert Latta, Ohio	G.K. Butterfield, North Carolina
Cathy McMorris Rodgers, Washington	Doris Matsui, California
Gregg Harper, Mississippi	Kathy Castor, Florida
Leonard Lance, New Jersey	John Sarbanes, Maryland
Brett Guthrie, Kentucky	Jerry McNerney, California
Pete Olson, Texas	Peter Welch, Vermont
David McKinley, West Virginia	Ben Ray Lujan, New Mexico
Adam Kinzinger, Illinois	Paul Tonko, New York
Morgan Griffith, Virginia	Yvette Clarke, New York
Gus Bilirakis, Florida	David Loebsack, Iowa
Bill Johnson, Ohio	Kurt Schrader, Oregon
Billy Long, Missouri	Joseph Kennedy, Massachusetts
Larry Bucshon, Indiana	Tony Cárdenas, California
Bill Flores, Texas	Raul Ruiz, California ¹
Susan Brooks, Indiana	Scott Peters, California ¹
Markwayne Mullin, Oklahoma	Debbie Dingell, Michigan ¹
Richard Hudson, North Carolina	
Chris Collins, New York	
Kevin Cramer, North Dakota	
Tim Walberg, Michigan ¹	
Mimi Walters, California ¹	
Ryan Costello, Pennsylvania ¹	
Buddy Carter, Georgia ¹	

¹ Denotes new member of the Committee for the 115th Congress.

² Denotes new Chairman for the 115th Congress.

Subcommittee on Environment²

John Shimkus, Illinois, Chairman	Paul Tonko, New York, Ranking Member
David McKinley, West Virginia, Vice Chairman	Raul Ruiz, California ¹
Joe Barton, Texas ¹	Scott Peters, California ¹
Tim Murphy, Pennsylvania	Gene Green, Texas
Marsha Blackburn, Tennessee ¹	Diana DeGette, Colorado
Gregg Harper, Mississippi	Jerry McNerney, California
Pete Olson, Texas ¹	Tony Cárdenas, California
Bill Johnson, Ohio	Debbie Dingell, Michigan ¹
Bill Flores, Texas	Doris Matsui, California ¹
Richard Hudson, North Carolina	
Kevin Cramer, North Dakota	
Tim Walberg, Michigan ¹	
Buddy Carter, Georgia ¹	

¹ Denotes new member of the Subcommittee for the 115th Congress as compared to the roster for the Subcommittee in the 114th Congress

² Note: The Subcommittee was known as the “Subcommittee on Environment and the Economy” in the 114th Congress.

Subcommittee on Health

Michael C. Burgess, Texas, Chairman ²	Gene Green, Texas, Ranking Member
Brett Guthrie, Kentucky, Vice Chairman	Elliot Engel, New York
Joe Barton, Texas ¹	Janice Schakowsky, Illinois
Fred Upton, Michigan	G. K. Butterfield, North Carolina
John Shimkus, Illinois	Doris Matsui, California
Tim Murphy, Pennsylvania	Kathy Castor, Florida
Marsha Blackburn, Tennessee	John Sarbanes, Maryland
Cathy McMorris Rodgers, Washington	Ben Ray Lujan, New Mexico
Leonard Lance, New Jersey	Kurt Schrader, Oregon
Morgan Griffith, Virginia	Joseph P. Kennedy III, Massachusetts
Gus Bilirakis, Florida	Tony Cárdenas, California
Billy Long, Missouri	Anna Eshoo, California ¹
Larry Bucshon, Indiana	Diana DeGette, Colorado ¹
Susan Brooks, Indiana	
Markwayne Mullin, Oklahoma ¹	
Richard Hudson, North Carolina ¹	
Chris Collins, New York	
Buddy Carter, Georgia ¹	

¹ Denotes new member of the Subcommittee for the 115th Congress as compared to the roster for the Subcommittee in the 114th Congress.

² Denotes new Chairman for the 115th Congress.

Committee on Appropriations, U.S. Senate

Thad Cochran, Mississippi, Chairman	Patrick J. Leahy, Vermont, Ranking Member ²
Mitch McConnell, Kentucky	Patty Murray, Washington
Richard C. Shelby, Alabama	Dianne Feinstein, California
Lamar Alexander, Tennessee	Richard J. Durbin, Illinois
Susan M. Collins, Maine	Jack Reed, Rhode Island
Lisa Murkowski, Alaska	Jon Tester, Montana
Lindsey Graham, South Carolina	Tom Udall, New Mexico
Roy Blunt, Missouri	Jeanne Shaheen, New Hampshire
Jerry Moran, Kansas	Jeff Merkley, Oregon
John Hoeven, North Dakota	Christopher A. Coons, Delaware
John Boozman, Arkansas	Brian Schatz, Hawaii
Shelley Moore Capito, West Virginia	Tammy Baldwin, Wisconsin
James Lankford, Oklahoma	Christopher S. Murphy, Connecticut
Steve Daines, Montana	Joe Manchin, West Virginia ¹
John Kennedy, Louisiana ¹	Chris Van Hollen, Maryland ¹
Marco Rubio, Florida ¹	

¹ Denotes new member of the Committee for the 115th Congress.

² Denotes new Ranking Member for the 115th Congress.

Subcommittee on Labor, Health and Human Services, and Education, and Related Agencies

Roy Blunt, Missouri, Chairman	Patty Murray, Washington, Ranking Member
Thad Cochran, Mississippi	Richard Durbin, Illinois
Richard Shelby, Alabama	Jack Reed, Rhode Island
Lamar Alexander, Tennessee	Jeanne Shaheen, New Hampshire
Lindsey Graham, South Carolina	Jeff Merkley, Oregon
Jerry Moran, Kansas ¹	Brian Schatz, Hawaii
Shelley Moore Capito, West Virginia	Tammy Baldwin, Wisconsin
James Lankford, Oklahoma	Christopher S. Murphy, Connecticut ¹
John Kennedy, Louisiana ¹	Joe Manchin, West Virginia ¹
Marco Rubio, Florida ¹	

¹ Denotes new member of the Subcommittee for the 115th Congress.

Subcommittee on Interior, Environment, and Related Agencies

Lisa Murkowski, Alaska, Chairman	Tom Udall, New Mexico, Ranking Member
Thad Cochran, Mississippi	Dianne Feinstein, California
Lamar Alexander, Tennessee	Patrick Leahy, Vermont
Roy Blunt, Missouri	Jack Reed, Rhode Island
John Hoeven, North Dakota	Jon Tester, Montana
Mitch McConnell, Kentucky	Jeff Merkley, Oregon
Steve Daines, Montana	Chris Van Hollen, Maryland ¹
Shelley Moore Capito, West Virginia ¹	

¹ Denotes new member of the Subcommittee for the 115th Congress.

Committee on Health, Education, Labor and Pensions, U.S. Senate

Lamar Alexander, Tennessee, Chairman	Patty Murray, Washington, Ranking Member
Michael B. Enzi, Wyoming	Bernard Sanders, Vermont
Richard Burr, North Carolina	Robert P. Casey, Jr., Pennsylvania
Johnny Isakson, Georgia	Al Franken, Minnesota
Rand Paul, Kentucky	Michael F. Bennet, Colorado
Susan Collins, Maine	Sheldon Whitehouse, Rhode Island
Bill Cassidy, Louisiana	Tammy Baldwin, Wisconsin
Todd Young, Indiana ¹	Christopher S. Murphy, Connecticut
Orrin Hatch, Utah	Elizabeth Warren, Massachusetts
Pat Roberts, Kansas	Tim Kaine, Virginia ¹
Lisa Murkowski, Alaska	Maggie Hassan, New Hampshire ¹
Tim Scott, South Carolina ¹	

¹ Denotes new member of the Committee for the 115th Congress.

Committee on Environment and Public Works, U.S. Senate

John Barrasso, Wyoming, Chairman ²	Thomas Carper, Delaware, Ranking Member ²
James M. Inhofe, Oklahoma	Benjamin Cardin, Maryland
Shelley Moore Capito, West Virginia	Bernard Sanders, Vermont
John Boozman, Arkansas	Sheldon Whitehouse, Rhode Island
Roger F. Wicker, Mississippi	Jeff Merkley, Oregon
Deb Fischer, Nebraska	Kirsten Gillibrand, New York
Jeff Sessions, Alabama	Cory A. Booker, New Jersey
Jerry Moran, Kansas ¹	Edward Markey, Massachusetts
Mike Rounds, South Dakota	Tammy Duckworth, Illinois ¹
Jodi Ernst, Iowa ¹	Kamala Harris, California ¹
Dan Sullivan, Alaska	

¹ Denotes new member of the Committee for the 115th Congress.

² Denotes new Chairman and Ranking Member for the 115th Congress.

Subcommittee on Superfund, Waste Management, And Regulatory Oversight

TBD	TBD
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Science Advances

One NIEHS (NIEHS authors' groups in parens)

- ***Molecular effects of 1-naphthyl-methylcarbamate and solar radiation exposures on human melanocytes.*** Ferruccio B, M Tiago, RD Fannin (DIR), L Liu (DIR), K Gerrish (DIR), SS Maria-Engler, RS Paules (NTP) and SB de Moraes Barros. *Toxicol In Vitro* (2016).
<http://dx.doi.org/10.1016/j.tiv.2016.11.005>
 SP Goal 1, 4, 5
- ***Differences in the Rate of in Situ Mammary Gland Development and Other Developmental***

Endpoints in Three Strains of Female Rat Commonly Used in Mammary Carcinogenesis Studies: Implications for Timing of Carcinogen Exposure. Stanko JP (NTP), GE Kissling (DIR), VA Chappell (NTP) and SE Fenton (NTP). *Toxicol. Pathol.* (2016) v. 44 (7): pp. 1021-33.

<http://dx.doi.org/10.1177/0192623316655222>

SP Goal 1, 2

- **The Association of Arsenic Exposure and Metabolism with Type 1 and Type 2 Diabetes in Youth: The SEARCH Case-Control Study.** Grau-Perez M, CC Kuo, M Spratlen, KA Thayer (NTP), MA Mendez, RF Hamman, D Dabelea, JL Adgate, WC Knowler, RA Bell, FW Miller (DIR), AD Liese, C Zhang, C Douillet, Z Drobna, EJ Mayer-Davis, M Styblo and A Navas-Acien. *Diabetes Care* (2016).

<http://dx.doi.org/10.2337/dc16-0810>

SP Goal 2, 3, 6

DNTP

- **Comparative Toxicity of Organophosphate Flame Retardants and Polybrominated Diphenyl Ethers to *Caenorhabditis elegans*.** Behl M (DNTP), JR Rice (DNTP), MV Smith, CA Co, MF Bridge, J-H Hsieh (DNTP), JH Freedman and WA Boyd (DNTP). *Toxicol Sci.* 2016 Dec;154(2):241-252.

<http://www.ncbi.nlm.nih.gov/pubmed/27566445>

SP Goal 1

- **Integrated decision strategies for skin sensitization hazard.** Strickland J, Zang Q, Kleinstreuer N (DNTP), Paris M, Lehmann DM, Choksi N, Matheson J, Jacobs A, Lowit A, Allen D, Casey W (DNTP). *J Appl Toxicol* 36(9):1150–1162.

<https://www.ncbi.nlm.nih.gov/pubmed/26851134>

SP Goal 1, 7

- **Development and Validation of a Computational Model for Androgen Receptor Activity.** Kleinstreuer NC (DNTP), Ceger P, Watt ED, Martin M, Houck K, Browne P, Thomas RS, Casey WM (DNTP), Dix DJ, Allen D, Sakamuru S, Xia M, Huang R, Judson R. *Chem Res Toxicol.* 2016 Dec 9.

<https://www.ncbi.nlm.nih.gov/pubmed/27933809>

SP Goal 1, 7

DIR

- **A Gata2-Dependent Transcription Network Regulates Uterine Progesterone Responsiveness and Endometrial Function.** Rubel CA, SP Wu (DIR), L Lin, T Wang (DIR), RB Lanz, X Li, R Kommagani, HL Franco, SA Camper, Q Tong, JW Jeong, JP Lydon and FJ DeMayo (DIR). *Cell reports* (2016) v. 17 (5): pp. 1414-1425.

<http://dx.doi.org/10.1016/j.celrep.2016.09.093>

SP Goal 1

- **Nop9 is a PUF-like protein that prevents premature cleavage to correctly process pre-18S rRNA.** Zhang J (DIR), McCann KL (DIR), Qiu C (DIR), Gonzalez LE (DIR), Baserga SJ, Hall TM (DIR). *Nat Commun* 2016 7:13085.

<https://www.ncbi.nlm.nih.gov/pubmed/27725644>

SP Goal 1

- ***INO80 is required for oncogenic transcription and tumor growth in non-small cell lung cancer.*** Zhang S, Zhou B (DIR), Wang L (DIR), Li P (DIR), Bennett BD (DIR), Snyder R (DIR), Garantziotis S (DIR), Fargo DC (DIR), Cox AD, Chen L, Hu G (DIR). *Oncogene* 2016 Sep 19. <https://www.ncbi.nlm.nih.gov/pubmed/27641337>
SP Goal 1
- ***MicroRNA-33 regulates the innate immune response via ATP binding cassette transporter-mediated remodeling of membrane microdomains.*** Lai L (DIR), Azzam KM (DIR), Lin WC (DIR), Rai P (DIR), Lowe JM (DIR), Gabor KA (DIR), Madenspacher JH (DIR), Aloor JJ (DIR), Parks JS, Naar AM, Fessler MB (DIR). *J Biol Chem* 2016. 291(37):19651–19660. <https://www.ncbi.nlm.nih.gov/pubmed/27471270>
SP Goal 1
- ***Mapping lineage progression of somatic progenitor cells in the mouse fetal testis.*** Liu C (DIR), Rodriguez K (DIR), Yao HH (DIR). *Development* 2016 Oct 15;143(20):3700-3710. <https://www.ncbi.nlm.nih.gov/pubmed/27621062>
SP Goal 1
- ***Relationship between obesity and anti-Müllerian hormone in reproductive-aged African American women.*** Bernardi LA, Carnethon MR, de Chavez PJ, Ikhen DE, Neff LM, Baird DD (DIR), Marsh EE. *Obesity (Silver Spring)*. 2017 Jan;25(1):229-235. <https://www.ncbi.nlm.nih.gov/pubmed/27925445>
SP Goal 2, 6
- ***Tobacco use and cancer risk in the Agricultural Health Study.*** Andreotti G, Freedman ND, Silverman DT, Lerro CC, Koutros S, Hartge P, Alavanja MC, Sandler DP (DIR), Beane Freeman L. *Cancer Epidemiol Biomarkers Prev*. 2016 Dec 29. <https://www.ncbi.nlm.nih.gov/pubmed/28035020>
SP Goal 4

DEPT

- ***Pre-conception and prenatal alcohol exposure from mothers and fathers drinking and head circumference: results from the Norwegian Mother-Child Study (MoBa).*** Zuccolo L, DeRoo LA, Wills AK, Davey Smith G, Suren P, Roth C, Stoltenberg C, Magnus P. *Sci Rep*. 2016 Dec 23;7:39535. <https://www.ncbi.nlm.nih.gov/pubmed/28008975>
SP Goal 2, 3
- ***The genomic landscape of rapid repeated evolutionary adaptation to toxic pollution in wild fish.*** Reid NM, Proestou DA, Clark BW, Warren WC, Colbourne JK, Shaw JR, Karchner SI, Hahn ME, Nacci D, Oleksiak MF, Crawford DL, Whitehead A. *Science* Dec 9 2016; 354(6317):1305–1308. <https://www.ncbi.nlm.nih.gov/pubmed/27940876>
SP Goal 1, 2

- **Dental Pulp Stem Cells Model Early Life and Imprinted DNA Methylation Patterns.** Dunaway K, Goorha S, Matelski L, Urraca N, Lein PJ, Korf I, Reiter LT, LaSalle JM. *Stem Cells*. 2016 Dec 29. <https://www.ncbi.nlm.nih.gov/pubmed/28032673>
SP Goal 1, 3
- **Oxidative guanine base damage regulates human telomerase activity.** Fouquerel E, Lormand J, Bose A, Lee HT, Kim GS, Li J, Sobol RW, Freudenthal BD, Myong S, Opresko PL. *Nat Struct Mol Biol* 2016 Dec; 23(12):1092–1100. <https://www.ncbi.nlm.nih.gov/pubmed/27820808>
SP Goal 1
- **The association of lead exposure during pregnancy and childhood anthropometry in the Mexican PROGRESS cohort.** Renzetti S, Just AC, Burris HH, Oken E, Amarasiriwardena C, Svensson K, Mercado-Garcia A, Cantoral A, Schnaas L, Baccarelli AA, Wright RO, Tellez-Rojo MM. 2017. *Environ Res* 2017 Jan; 152:226–232. <https://www.ncbi.nlm.nih.gov/pubmed/27810680>
SP Goal 2, 3, 6
- **Air pollution affects lung cancer survival.** Eckel SP, Cockburn M, Shu YH, Deng H, Lurmann FW, Liu L, Gilliland FD. *Thorax* 2016 Oct; 71(10):891–898. <https://www.ncbi.nlm.nih.gov/pubmed/27491839>
SP Goal 2, 3, 4
- **Bisphenol A and its analogues disrupt centrosome cycle and microtubule dynamics in prostate cancer.** Ho SM, Rao RC, To S, Schoch E, Tarapore P. *Endocr Relat Cancer*. 2016 Dec 20. <https://www.ncbi.nlm.nih.gov/pubmed/27998958>
SP Goal 1, 3
- **An inducible long noncoding RNA amplifies DNA damage signaling.** Schmitt AM, Garcia JT, Hung T, Flynn RA, Shen Y, Qu K, Payumo AY, Peres-da-Silva A, Broz DK, Baum R, Guo S, Chen JK, Attardi LD, Chang HY. *Nat Genet*. 2016 Nov;48(11):1370-1376. doi: 10.1038/ng.3673. <https://www.ncbi.nlm.nih.gov/pubmed/27668660>
SP Goal 1
- **Cumulative Impact of Polychlorinated Biphenyl and Large Chromosomal Duplications on DNA Methylation, Chromatin, and Expression of Autism Candidate Genes.** Dunaway KW, Islam MS, Coulson RL, Lopez SJ, Vogel Ciernia A, Chu RG, Yasui DH, Pessah IN, Lott P, Mordaunt C, Meguro-Horike M, Horike SI, Korf I, LaSalle JM. *Cell Rep*. 2016 Dec 13;17(11):3035-3048. <https://www.ncbi.nlm.nih.gov/pubmed/27974215>
SP Goal 1, 2, 3, 4

NIEHS Highlights

NTP Updates

- **Report on Carcinogens:** In November, the U.S. Department of Health and Human Services released the 14th *Report on Carcinogens* including seven newly reviewed

substances, bringing the cumulative total to 248 listings. The listings included the chemical trichloroethylene (TCE), and the metallic element cobalt and cobalt compounds that release cobalt ions in vivo, as well as five viruses that have been linked to cancer in humans. The five viruses include human immunodeficiency virus type 1, human T-cell lymphotropic virus type 1, Epstein-Barr virus, Kaposi sarcoma-associated herpesvirus, and Merkel cell polyomavirus.

- **Concepts approved by NTP Board:** Several concepts were recently presented and approved by the NTP Board of Scientific Counselors
 - Systematic review of the published literature mountaintop removal mining, with a focus on evaluating its impact on the health of people nearby
 - Assessment of the potential developmental effects of fluoride exposure on neurobehavioral outcomes
- **OHAT Monograph on PFOA/PFOS:** The final NTP Monograph on Immunotoxicity Associated with Exposure to Perfluorooctanoic Acid (PFOA) or Perfluorooctane Sulfonate (PFOS) is now available on the [NTP website](#). The NTP conducted a systematic review to evaluate the evidence on exposure to PFOA or PFOS and immune-related health effects to determine whether exposure to either chemical is associated with immunotoxicity for humans. The NTP concludes that both PFOA and PFOS are *presumed to be an immune hazard to humans* based on a high level of evidence from animal studies that PFOA and PFOS suppressed the antibody response and a moderate level of evidence from studies in humans. The evidence that these chemicals affect multiple aspects of the immune system supports the overall conclusion that both PFOA and PFOS alter immune functions in humans.

Reports and Websites

- **Children's Environmental Health:** The President's Task Force on Environmental Health Risks and Safety Risks to Children website launched in October 2016. [\[LINK\]](#) This website showcases the activities of the federal interagency Task Force and provides resources and information on focus areas including asthma disparities, chemical exposures, lead, healthy housing, and climate change. NIEHS created and is hosting the website on behalf of HHS, which co-chairs the Task Force.
- **Federal Lead Activity Update:** The President's Task Force on Environmental Health Risks and Safety Risks to Children released a new report in November 2016, *Key Federal Programs to Reduce Childhood Lead Exposures and Eliminate Associated Health Impacts*. [\[LINK\]](#) The report compiles descriptions of current and ongoing federal research and outreach activities to eliminate children's exposures to this harmful neurotoxin. NIEHS staff played a key role in development of the report.
- **Climate Change and Human Health Literature Portal:** This new online resource is a knowledge management tool for locating the most relevant scientific literature on the health implications of climate change. It provides access to a database of studies from around the world, published between 2007 and 2014. Efforts are currently underway to integrate references through 2016. The NIEHS developed the database as a technical input to the U.S. Global Change Research Program's (www.globalchange.gov) Sustained Assessment process. The portal is an effort to make this database more accessible to a

wider global audience, and to provide updates on a regular basis to further the study of climate impacts on human health. [\[LINK\]](#)

Staff Updates

- **Chandra L. Jackson, Ph.D.**, A former Research Associate at the Harvard Catalyst Clinical and Translational Science Center and Harvard T.H. Chan School of Public Health, Jackson has joined NIEHS as an Earl Stadtman tenure-track investigator in the Epidemiology Branch.
- **Anne Marie Jukic, Ph.D.**, Assistant Professor of Epidemiology at School of Public Health, Yale University, has accepted a position as tenure-track investigator. Her primary appointment will be in the Epidemiology Branch with a secondary appointment in the Reproductive and Developmental Biology Laboratory. She is scheduled to start in the Spring/Summer 2017.
- **Yufeng Li, Ph.D.**, Formerly a full professor in the Division of Preventive Medicine, Department of Medicine, and Director of Biostatistics and Bioinformatics Core for the Breast Specialized Program of Research Excellence (SPORE) of the Comprehensive Cancer Center at the University of Alabama at Birmingham, Li has accepted a position as a Staff Scientist in the Biostatistics and Computational Biology Branch to replace Dr. Grace Kissling upon her retirement. Dr. Li is scheduled to start in Winter 2017.
- **Brandy Beverly, Ph.D.** has joined the NTP Office of Health Assessment and Translation. Before joining OHAT, Brandy worked in several of EPA's Labs and Offices. She has experience from National Health and Environmental Effects Research Laboratory (NHEERL), National Exposure Research Laboratory (NERL), National Center for Environmental Assessment (NCEA), and most recently in the IRIS Program where she used her reproductive and developmental toxicology expertise in draft development for IRIS Assessments.
- **Amy Wang, Ph.D.**, has joined the NTP Office of the Report on Carcinogens. Prior to coming to NIEHS, she worked as a toxicologist at Syngenta. Wang completed her post-doctorate fellowships at EPA National Center for Environmental Assessment (NCEA) and National Center for Computational Toxicology (NCCT) where she worked on nanomaterial risk assessment and high-throughput screening of nanomaterial bioactivities/toxicities.
- **Suril Mehta, M.P.H.**, has joined the NTP Office of the Report on Carcinogens. Mehta is an epidemiologist currently working on his Dr.P.H. in Environmental Health and Epidemiology. Prior to joining NTP, Mehta served in the EPA Office of Children's Health Protection, most recently working to develop a federal strategy on reducing childhood lead exposure.

Past Meetings and Events

- **NIEHS 50th Anniversary.** On November 1, 2016, NIEHS celebrated 50 years of environmental health research at NIH. The **NIEHS 50th Anniversary** was commemorated through a series of events held throughout 2016.

- During the **25th Anniversary of NIEHS Endocrine Disruptor Research Workshop** in Bethesda, Maryland on September 18-20, scientists, consumer advocates, government officials, and industry representatives gathered to reflect on 25 years of research on chemicals in the environment that may interfere with hormones in the body, known as endocrine disruptors. The conference featured research about health effects from endocrine disruptors and the complex mechanisms that are involved. Attendees also discussed the influence of scientific evidence on the development of new consumer products and safer chemicals. The event was organized by NIEHS as part of its 50th Anniversary celebration. **SP Goals 1, 5**
- On September 21-22, 2016, NIEHS grantees studying how environmental factors may influence obesity, including endocrine disrupting chemicals met in Bethesda, Maryland for the **NIEHS Obesity Grantee meeting**. Jerrold Heindel, Ph.D., and Bonnie Joubert, Ph.D., both of the NIEHS Population Health Branch, co-organized the meeting. The main goals of the meeting were to connect grantees from separate programs who all study obesity, diabetes, and fatty liver disease. Attendees also discussed how the potential contributions of obesogens fit into the broader public health discussion about obesity. **SP Goals 2, 4, 9**
- On November 1, dignitaries, invited guests, retirees, former directors, staff, and others gathered on the NIEHS campus for a long-awaited event. Before an overflow crowd, prominent public figures celebrated the institute's **50th Anniversary Celebration** and highlighted the positive impact NIEHS has had on the world over the past 50 years. The centerpiece of the celebration was the presentation of 12 Champion of Environmental Science Research awards by Carol Folt, Ph.D., Chancellor of the University of North Carolina at Chapel Hill. Speakers included former North Carolina Governor, Jim Hunt; host of "Science Friday," Ira Flatow; Joe and Terry Graedon of "The People's Pharmacy;" and congressman David Price. The festivities also included a video salute from actress Jessica Alba and Christopher Gavigan, founders of The Honest Company. **SP Goals 8, 9, 11**
- The **14th annual NIEHS Science Days** celebrated scientific research across the institute, organized around a mini-symposium on nuclear hormone receptors. In the spirit of One NIEHS, speakers included researchers and trainees from the Division of Intramural Research (DIR) and the Division of the National Toxicology Program (DNTP), as well as a grantee and a former trainee who now directs her own lab. For the first time, grant experts from the Division of Extramural Research and Training (DERT) hosted a session dedicated to the grants process. Scientists throughout the institute presented nearly 100 posters during the Nov. 3-4 festival. Organizers gave awards for best trainee talk and poster, and mentor and trainee of the year. **SP Goals 1, 2, 8, 9**

- The **NIEHS Partners**, representatives of nonprofits and health advocates, held its annual in-person meeting November 17 on the NIEHS campus. The member organizations share the institute's research with the communities they serve. In turn, they share with NIEHS the environment and health concerns of their respective communities, helping to inform NIEHS research priorities. The group's annual meetings feature an in-depth session, described by some as unique, with NIEHS and National Toxicology Program (NTP) Director Linda Birnbaum, Ph.D. The event included meeting face-to-face with scientists who have participated in recent years in monthly conference calls on environmental health topics suggested by the members. Together, the calls and meetings strengthen communication between NIEHS and its stakeholders. **SP Goals 11**
- More than 1,200 people from across the nation joined in the first-ever **Environmental Health Science (EHS) FEST** Dec. 4-8, at the Durham Convention Center in downtown Durham, North Carolina. The NIEHS Division of Extramural Research and Training (DERT) planned the FEST in recognition of the NIEHS 50th Anniversary. The meeting brought together grantees, partners, trainees, researchers, and community member to discuss the breadth of science supported by NIEHS. It was a time to celebrate accomplishments as well as discussing cross-cutting themes and the future. **SP Goals 1 - 11**
- Global health efforts in the Raleigh-Durham-Chapel Hill, or Triangle, area of North Carolina have a new partner in NIEHS, as the institute works to raise awareness of global environmental health concerns and ongoing efforts to address them. As the first federal member, NIEHS participated in the September 30 **Triangle Global Health Consortium (TGHC) Annual Conference** held in Chapel Hill, North Carolina. TGHC members want more connection to environmental health, citing worldwide concerns about pollution and non-communicable diseases like cancer. Many consortium members were previously unaware of NIEHS global environmental health work, and collaborations should emerge to benefit environmental health. **SP Goals 5, 11**
- The **Water and Health Conference** was held in Chapel Hill, North Carolina on October 10-14. The focus of the conference was contamination from man-made organic chemicals as an emerging concern for drinking water supplies worldwide. In recorded remarks for a session of the 2016 Water and Health Conference, Dr. Linda Birnbaum said that one of the top public health concerns for NIEHS is the threat to water quality from toxic chemicals. Michelle Heacock, Ph.D., of the NIEHS Superfund Research Program, addressed a conference session about informal recycling of electronic waste in developing countries. She described the potential for PCBs, brominated flame retardants, dioxins, and other chemicals to be released into water supplies when electronics are burned to reclaim copper and other valuable materials. **SP Goals 4, 5**

- The annual meeting of the **North Carolina Chapter of the Society of Toxicology (NCSOT)** explored how innovations in the stem cell and epigenetics fields could be applied to toxicological research. The October 25 meeting, hosted by NCSOT at NIEHS, featured a career-panel for trainees, four plenary speakers, a networking lunch, and posters and presentations by trainees. Talks focused on stem cells and epigenetics, models for testing developmental toxicity, and maternal lead exposure and epigenetic markers in children. About 135 people were in attendance. NCSOT currently enjoys strong leadership from NIEHS and National Toxicology Program (NTP) scientists, as well as scientists from other North Carolina research organizations. **SP Goals 1, 8, 9**
- A small but enthusiastic group from NIEHS attended the **American Public Health Association (APHA) annual meeting** October 29 – November 2 in Denver. The conference emphasized the public health milestones of recent decades, and paths for advancing science and creating a healthy nation. NIEHS staff supported the themes of ensuring the right to health and reducing health disparities, with presentations on training workers in communities facing environmental health emergencies, mobilizing research resources after disasters, and protecting health in the face of climate change. **SP Goals 5, 6, 9, 11**
- NIEHS scientists played key roles as officials, speakers, and poster presenters at the **Genetics and Environmental Mutagenesis Society (GEMS) Annual Fall Meeting**. The focus of the meeting was mitochondrial DNA mutagenesis and human health impacts. Current GEMS President Stephanie Smith-Roe, Ph.D., genetic toxicologist in the National Toxicology Program (NTP), kicked off the event. Held at the North Carolina Biotechnology Center in Research Triangle Park, North Carolina, the meeting combined the exchange of cutting-edge science with local outreach and mentoring of early career scientists. **SP Goals 1, 2, 9**
- The **NAS Committee on Emerging Science for Environmental Health Decisions** workshop, **Implications of Individual Environmental Exposure Measurements for Risk Communication** in Washington, DC on November 16-17 explored the nuanced implications of citizen access to individual-level environmental exposure data. The workshop brought together environmental health researchers, social scientists, business and consumer representatives, science policy experts, and other professionals at the forefront of emerging technologies, ethics, science communication, and public engagement. Workshop participants provided an overview of the trends, tests, technologies, and other emerging capabilities that enable access to individual-level environmental exposure data, and discuss their implications for risk communication, public engagement, decision making, among other key considerations for both scientists and citizens. **SP Goals 3, 5**

- The **Research Triangle Environmental Health Collaborative 2016 Summit on Citizen Science and Community-Engaged Research** was held in Research Triangle Park on December 8-9. The workshop acknowledged the successful projects and approaches, reflected upon past recommendations, identified new opportunities, and considered the application of citizen science in the context of environmental health disparities and additional dimensions. Goals included increasing awareness of the different community engaged research and citizen science approaches used in environmental health science research, informing ongoing discussions among federal partners about citizen science, and outlining next steps to meet the needs of our communities. **SP Goals 6, 7, 11**
- The **17th National Conference and Global Forum for Science, Policy, and the Environment: Integrating Environment and Health** was held in Washington DC on January 24-26, 2017. The conference brought together diverse groups of individuals and experts – including researchers, educators, students, policy-makers, and entrepreneurs – to explore the relationships between the on health of the people, the planet, and all living beings. Attendees discussed specific issues and developed recommendations on actionable items. **SP Goals 5, 9, 11**
- **Triangle Global Health Career Day**, was held in Research Triangle Park on January 27, 2017. The Triangle Global Health Career Day provided an opportunity for students and those interested in a career in global health to learn more about the field, make connections with influential individuals and institutions, and sharpen and develop their marketable skills. At the same time, local organizations gained access to highly-qualified and passionate individuals interested in global health and had an opportunity to share their mission and impact. The day's activities also included skill-building sessions, time for networking with local leaders in global health, and information and advice on entering the field. **SP Goal 8, 9**

Upcoming Meetings and Events

- **Toxic Metals - From Exposures and Model Systems to Human Populations: Center for Human Health and the Environment Science Symposium**, North Carolina State University, Raleigh, February 16
- **Triangle Consortium for Reproductive Biology**, NIEHS, February 25
- **NAS Committee on Emerging Science for Environmental Health Decisions workshop on Enabling Inference-based Decision-making: Predicting vs. Observing**, Washington, DC, March 6-7, 2017
- **2017 National Environmental Justice Conference and Training Program**, Washington DC, March 8-10
- **SOT 56th Annual Meeting and ToxExpo**, Baltimore, March 12-16
- **Environmental Risks for Psychiatric Disorders**, NIEHS, March 21-22

- **Superfund Worker Training Grantee Meeting & Community Forum**, Puerto Rico, March 27-31
- **Children’s Environmental Health Translational Research Conference**, Arlington VA, April 5-7
- **Women’s Health Awareness Day 2017**, Durham NC, April 8
- **American Occupational Health Conference**, Denver, April 23-26
- **NIEHS Genomics Day**, NIEHS, May 11
- **Epigenetics and Stem Cell Biology Symposium**, NIEHS, May 31-June 2
- **Climate Change and the Elderly**, EPA headquarters, Washington, DC, June 13-14

Awards and Recognition

NIEHS

- **Lisa Rider, MD**, deputy unit chief of the NIEHS Environmental Autoimmunity Group, received the 2016 Research and Hope Award for Excellence in Government Research from the Pharmaceutical Research and Manufacturers of America (PhRMA), which represents biopharmaceutical research companies in the United States
- NIEHS Visiting Fellow **Shuang Tang, MD, PhD**, is being doubly honored this year for her groundbreaking study of embryonic stem cell differentiation and the critical role played by a certain group of enzymes involved in amino acid conversion. In September, she also joined an even more select group, as one of the two FARE winners to be chosen as a Women Scientist Advisors (WSA) Scholar from among the 90 women who won FARE awards.
- **Lee Langer, PhD**, NIEHS Intramural Research Training Award fellow, has received a Postdoctoral Research Associate (PRAT) Program fellowship from the National Institute of General Medical Sciences. The fellowship began Sept. 1.
- **Raymond Tice, PhD**, former NICEATM Deputy Director and NTP Biomolecular Screening Branch chief, received the William and Eleanor Cave Award from the Alternatives Research and Development Foundation (ARDF). The William and Eleanor Cave Award is given to recognize contributions to advancing alternatives to the use of animals in testing, research, or education. The award was presented September 29 in a ceremony at the annual meeting of the American Society for Cellular and Computational Toxicology (ASCCT).
- **Janet E. Hall, MD, MSc** received the **Sidney H. Ingbar Distinguished Service Award**. This award recognizes distinguished service to the Endocrine Society and in the field of endocrinology.
- **John Balbus, MD**, NIEHS senior advisor for public health, received the first Carol Stroebel Health Policy Award from the Children’s Environmental Health Network (CEHN) at an Oct. 13 ceremony in Washington, D.C. CEHN is a national organization that works across disciplines to protect the developing child from environmental health hazards and to promote a healthier environment.

- **NIEHS Science Days Awards**
 - **Fellow of the Year Award** – **Katie O’Brien, PhD**, IRTA Fellow in the Biostatistics and Computational Biology Branch
 - **Mentor of the Year Award** – **Humphrey Yao, PhD**, lead researcher in the Reproductive and Developmental Biology Laboratory
 - **Best Oral Presentation** – **Mahita Kadmiel, PhD**, IRTA Fellow in the Signal Transduction Laboratory
- **NIEHS Science Days Poster Winners:**
 - **First place** — **Matthew Quinn, PhD**, STL, for “Loss of Ovarian Function Results in Metabolic Syndrome and Steatosis via a Glucocorticoid Receptor Dependent Mechanism.”
 - **Second Place** — **Matthew Schellenberg, PhD**, Genome Integrity and Structural Biology Laboratory, for “ZATT SUMA Ligase Licenses Direct Reversal of Topoisomerase 2 DNA-protein Crosslinks by Tdp2.”
 - **Third Place** — **Ashutosh Kumar, PhD**, Immunity, Inflammation and Disease Laboratory (IIDL), for “Cytochrome C as a Peroxidase Plays a Role in Alpha-synuclein in Alterations of Biological Pathways and Neuronal Death in Maneb- and Paraquat-induced Model of Parkinson’s Disease.”
 - **Fourth Place** — **Shannon Farris, PhD**, Neurobiology Laboratory, for “Transcriptome Profiling in Hippocampal Dendrites Reveals a Role for Mitochondria in CA2 Physiology and Function.”
 - **Tie for Fifth Place** — **Fei Zhao, PhD**, RDBL, for “Wolffian Duct Regression in the Female Embryo Is the Result of COUP-TFII Action, Not a Lack of Androgen Action;” and **Douglas Ganini da Silva, PhD**, IIDL, for “Fluorescent Proteins Such as eGFP Catalytically Generate Superoxide Anion Free Radical and H₂O₂ in the Presence of NAD(P)H.”
 - **Seventh Place** — **Christopher Duncan, PhD**, Epigenetic and Stem Cell Biology Laboratory (ESCBL), for “DNA Methylation Landscape of the X Chromosome in Mouse Liver.”
 - **Eighth Place** — **Pishun Li, PhD**, ESCBL, for “Rif1-dependent Repressive Chromatin Modifications Are Required for Endogenous Retrotransposons Silencing in Embryonic Stem Cell.”
 - **Ninth Place** — **Kathryn McClelland, PhD**, RDBL, for “Loss of COUP TFII (NR2F2) in Different Interstitial Cell Populations Has Varying Effects on Fetal Testicular Development.”
- **Michael Fessler, MD**, is the recipient of the first NIEHS Scientific Director’s Award for Outstanding Intramural Research. The honor comes with a one-time \$100,000 increase in laboratory resources and a framed certificate of achievement.

- **Nicole Kleinstreuer, PhD**, deputy director of the NTP Interagency Center for the Evaluation of Alternative Toxicological Methods won the Lush Cosmetics Young Researcher – Americas Prize, one of the annual Lush Prizes honoring such progress, was presented during a Nov. 2 ceremony in Vancouver, British Columbia. Kleinstreuer, was recognized for developing computational models of toxicity to predict outcomes that include developmental toxicity, endocrine disruption, and skin sensitization.
- The American College of Rheumatology (ACR) selected NIEHS clinical researcher **Fred Miller, MD, PhD**, for one of the group’s highest honors — Master of the American College of Rheumatology. Miller, deputy chief of the NIEHS Clinical Research Branch and head of the Environmental Autoimmunity Group, received the honor Nov. 12 during the ACR annual meeting in Washington, D.C.
- **Jack Bishop, PhD**, retired from the National Toxicology Program in 2012; **John French, PhD**, special volunteer in NTP; **Rose Anne McGee, MS**, scientific review officer in the Division of Extramural Research and Training (DERT); and **Kristine Witt, MS**, head of the Genetic Toxicology Group in the Biomolecular Screening Branch of NTP were awarded with the Genetics and Environmental Mutagenesis Society Lifetime Achievement Award. The award honors Society members for their outstanding scientific contributions and for their dedication to the Genetics and Environmental Mutagenesis Society.
- **Linda Birnbaum, PhD**, Director of NIEHS and the National Toxicology Program, received the Distinguished Toxicology Scholar Award granted by the Society of Toxicology. This award is presented to a member who has made substantial and seminal contributions to the understanding of toxicology.
- **David Allen, PhD** has been named recipient of the Society of Toxicology (SOT) 2017 Enhancement of Animal Welfare Award. Allen, of Integrated Laboratory Systems, Inc., is principal investigator on the NICEATM support contract. He is also past president of SOT’s In Vitro and Alternative Methods specialty section and current president of the American Society for Cellular and Computational Toxicology.
- **2016 Champion of Environmental Health Research Award**. The award recognizes outstanding researchers, leaders, and communicators who have contributed to the NIEHS mission to promote healthier lives by discovering how the environment affects people.

NIEHS

- **Thomas Kunkel, PhD**, head of the Genome Integrity and Structural Biology Laboratory
- **Allen Wilcox, MD, PhD**, senior investigator in the Epidemiology Branch
- **Linda Birnbaum, PhD**, Director of NIEHS and NTP
- **Kenneth Olden**, former director of NIEHS and NTP
- **David Schwartz, MD**, former director of NIEHS and NTP
- **Samuel Wilson, MD**, head of the DNA Repair and Nucleic Acid Enzymology Group

Others

- **Charles Blumberg**, architect of the Rall Building
- **Jeffrey Gordon, MD**, Director, Center for Genome Sciences and Systems Biology at Washington University in St. Louis
- **Philip Landrigan, MD**, dean for global health, professor of environmental medicine and public health, and professor of pediatrics at the Icahn School of Medicine at Mount Sinai, New York City
- **John Peterson Myers, PhD**, founder, CEO, publisher, and chief scientist of Environmental Health Sciences
- **Jeanne Rizzo, RN**, president and CEO of the Breast Cancer Fund
- **Kurt Straif, MD, PhD**, World Health Organization International Agency for Research on Cancer

Grantees and Other NIEHS-Affiliated

- The Superfund Research Program (SRP) has established an honorary award in memory of Dr. KC Donnelly, a longtime SRP grantee who worked tirelessly to improve our understanding of environmental exposure and genotoxicity of complex chemical mixtures. The following students are the 2016 winners of the KC Donnelly Externship Award:
 - **Sara Flanagan** is a doctoral student at the City University of New York and a research associate of the Columbia University SRP Community Engagement Core. For her externship, she will collaborate with the New Jersey Department of Environmental Protection and the New Jersey Department of Health on community engagement and intervention strategies to increase the testing for arsenic in well water and motivate well owners to reduce their risk of exposure.
 - **Angela Gutierrez** is a doctoral student at the University of Kentucky SRP Center. Gutierrez will spend her externship at the U.S. Environmental Protection Agency Engineering Technical Support Center, focusing on quality assurance and laboratory procedures for evaluating new cleanup technologies.
 - **Jessica Laine** is a doctoral student in epidemiology at the University of North Carolina. For her externship at the Columbia University SRP Center, she will expand on her current research to investigate the impact of folate supplements on the metabolism of arsenic in pregnant women and on birthweight.
 - **Ralph Pietrofesa**, a graduate student at the University of Pennsylvania SRP Center, will conduct his externship at Brown University. He will expand his research to explore the influence of synthetic flaxseed derivatives on the toxicity of copper-based nanoparticles, as well as gain valuable experience in toxicological research and analytical techniques.
 - **Aditi Sengupta**, Ph.D., is a postdoctoral research associate at the University of Arizona SRP Center. Sengupta will conduct an externship at Lawrence Berkeley

National Laboratory in Berkeley, California, where she will learn advanced modeling skills, including development of predictive models of the microbial community, as well as environmental processes and functions related to soil stability.

- **Renee Wurth**, a doctoral student at the Northeastern University Puerto Rico Testsite for Exploring Contamination Threats SRP Center, will spend her externship at the University of California, Berkeley SRP Center. This externship will allow Wurth to learn new skills in water quality analysis, model and tool development, and dissemination of information.
- **Joann B. Sweasy, PhD** received the Environmental Mutagenesis and Genomics Society Award for recognition of outstanding research contribution in the area of environmental mutagenesis.
- **Stephen D. Dertinger, PhD** received the Alexander Hollaender Award from the Environmental Mutagenesis and Genomics Society in recognition of outstanding contribution in the application of the principles and techniques of environmental mutagenesis and genomics to the protection of human health.
- Grantees **Patricia L. Opresko, PhD**, University of Pittsburgh, and **Joel N. Meyer, PhD**, Duke University, were elected councilors of the Environmental Mutagenesis and Genomics Society
- **Elizabeth Martin**, doctoral student in environmental sciences and engineering at UNC Gillings School of Global Public Health and trainee in the UNC Superfund Research Program (SRP), has been named recipient of the National Institute of Environmental Health Sciences' Karen Wetterhahn Memorial Award.
- **Society of Toxicology Awards**
 - **Jason R. Richardson, PhD**, Northeast Ohio Medical University, was awarded the Achievement Award
 - **Debra Laskin, PhD**, Rutgers University received the Education Award
 - **Meryl Karol, PhD**, University of Pittsburgh, received the Founders Award
 - **Bernard Goldstein, MD**, University of Pittsburgh, was awarded the Public Communications Award
- **2016 ISEE Awards**
 - **Philippe Grandjean, MD, PhD**, received the John Goldsmith Award for Outstanding Contributions to Environmental Epidemiology. This award recognizes environmental epidemiologists who, like Goldsmith, serve as models of excellence in research, unwavering promotion of environmental health, and integrity.
 - **Marc Weisskopf, PhD, ScD** was awarded the Tony McMichael Mid-Term Career Award. This annual award was created to honor Tony McMichael, who passed away in 2014. McMichael was a world-renowned epidemiologist, known not only for his

original scientific work, but also for his compassionate mentoring of junior colleagues.

- University of Pennsylvania SRP Center researcher **Ted Emmett, MD** and the members of the **Penn SRP Community Advisory Group (CAG)** were awarded the 2016 National Notable Achievement Award for Citizen Excellence in Community Involvement at the BoRit Asbestos Superfund site CAG meeting. Emmett and his team are working with the CAG to inform the community about asbestos exposure and to inform their research based on community concerns.
- **Manish Arora, PhD** of Icahn School of Medicine at Mount Sinai and **Catherine Karr, PhD, MD** of the University of Washington were awarded the Presidential Early Career Awards for Scientists and Engineers (PECASE), the highest honor bestowed by the United States Government on science and engineering professionals in the early stages of their independent research careers.