

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

**9-10 February 2015**

**Legislative and Budget Report**

	<b>FY 2012 Appropriation</b>	<b>FY2013 Enacted Level<sup>a/</sup></b>	<b>FY 2014 Appropriation</b>	<b>FY 2015 Omnibus</b>	<b>FY 2016 President's Request</b>
<b>NIEHS</b>	\$ 685,570,818	\$ 649,788,725	\$ 665,439,000	\$ 667,333,000 <sup>b/</sup>	\$ 681,782,000
<b>NIH</b>	\$30,623,259,131	\$29,098,665,708	\$29,926,104,000	\$29,369,000,000	\$30,236,511,000
<b>Common Fund</b>	\$ 544,930,000	\$ 516,488,518	\$ 533,039,000	\$ 545,639,000 <sup>c/</sup>	\$ 565,639,000
<b>Superfund</b>	\$ 78,927,514	\$ 74,808,039	\$ 77,349,000	\$ 77,349,000	\$ 77,349,000
<b>NIEHS/DOE Training</b>	\$ 10,000,000	\$ 9,230,000	\$ 10,000,000	\$ 10,000,000	

a/ FY 2013 includes across-the-board rescission and sequestration reductions.

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

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

**Appropriations.** On 11 December 2014, the House passed the FY 2015 Consolidated and Further Continuing Appropriations Act (known as the CROmnibus) by a vote of 219-206; the Senate followed a few days later with a vote of 56-40.

The final agreement provides \$30.1 billion to NIH, a \$150 million increase in funding over FY 2014. While most of the ICs received an increase of .3 %, NIA received additional funding for its Alzheimer's disease research initiative; several other institutes received support for their

work with the Brain Research through Application of Innovative Neurotechnologies (BRAIN) initiative. Additional funds were also provided to NCI for cancer research. The Congress tagged \$12.6 million in the Common Fund for the *Gabriella Miller Kids First Research Act* (Kids First).

Representative Hal Rogers (R-KY), Chairman of the House Appropriations Committee, has named the following Subcommittee Chairmen: Labor, HHS – Tom Cole (R-OK); Interior & Environment – Ken Calvert (R-CA); and Energy & Water - Mike Simpson (R-ID). All three are competent legislators who can craft a compromise to get the job done. House Ranking Members for include: Labor HHS Rosa DeLauro (D-CT); Interior & Environment Betty McCollum (D-MN); and Energy & Water March Kaptur (D-OH).

Senator Barbara Mikulski (D-MD), Ranking Member of the Senate Appropriations Committee, has named the following Subcommittee Ranking Members: Labor, HHS – Patti Murray (D-WA); Interior & Environment – Tom Udall (D-NM); and Energy & Water – Dianne Feinstein (D-CA). Subcommittee Chairmen include; Labor HHS Roy Blunt (R-MO); Interior & Environment – Lisa Murkowski (R-AK); and Energy & Water – Lamar Alexancer (R-TN).

### ***Briefings.***

On 2 September 2014, Warren Casey (NIEHS/NTP) met with Adam Zipkin and Arohi Sharma, staff for Senator Cory Booker (D-NJ), and with Eric Deeble and Kathryn Stahlberg, staff for Senator Kirsten Gillibrand (D-NY), to talk about NTP research on alternative to animal testing and on the status of the Interagency Coordinating Committee for the Validation of Alternative Methods (ICCVAM). Both senators are concerned about the use of animals for chemical testing and support NIEHS research on and validation of methods to reduce, refine, or replace animals.

On 24 October 2014, Linda Birnbaum met a group of staff from Senator Markey's office, Chisina Kupungu and Jen Wagner, and House Energy & Commerce staff, Jackie Cohen, Ryan Schmit, and Caitlin Haberman, at the NIH Chemical Genomics Center for a briefing on Tox 21 and a tour of the laboratories and robot rooms. In addition Chis Austin, NCATS Director, talked about NCATS use of the robots in drug development.

On 10 November 2014, The Friends of NIEHS led by Nuala Moore, Associate Director for Government Relations at the American Thoracic Society sponsored a briefing on children's environmental health. Linda Birnbaum presented an overview of NIEHS research related to children. Heather Volk (USC) talked about air pollution and respiratory health and autism. Leo Trasande (NYU) talked about environmental chemicals, obesity, and economic costs. Fifty-three congressional and public interest staff attended. The right topic, date, lunch, and excellent speakers contributed to a very successful event.

Later in the afternoon, Dr. Birnbaum briefed Tara Rothschild, Republican staff for the House Energy & Commerce Subcommittee on Oversight & Investigations. Dr. Birnbaum provided an overview of the NIEHS mission, vision, and the importance of NIEHS research to public

health, then focused on research related to human disease and disorder. She included information on the NIEHS Superfund Programs, the NTP, and the impact of NIH on the economy. Ms. Rothschild asked for an organization chart, a budget table, and a link to the 13<sup>th</sup> Report on Carcinogens.

### ***Bills.***

**S. 1347.** The Conference Accountability Act of 2013 prohibits an agency from paying the travel expenses for more than 50 employees stationed in the United States to attend any international conference, unless the Secretary of State determines that attendance of such employees is in the national interest.

The bill requires each agency to post on its public website: (1) quarterly reports, in a searchable electronic format, on each conference for which the agency paid travel expenses during the preceding three months; and (2) detailed information on any presentation made by any agency employee at a conference. It limits agency travel expenses for FY2014-FY2018 to 80% of the aggregate amount of such expenses for FY2010. Requires the Director of the Office of Management and Budget (OMB), not later than September 1, 2013, to establish guidelines for determining what expenses constitute travel expenses for purposes of the ceiling imposed on such expenses. It limits to \$500,000 the amount that any agency may spend to support a single conference and prohibits an agency from funding more than one conference that is sponsored or organized by a particular organization during any fiscal year, unless the agency is the primary sponsor and organizer of the conference.

The bill was reported by the Senate Homeland Security and Government Affairs Committee in July 2014. HHS submitted strong objections to the bill to OMB on 11 September 2014.

**S 2520.** On December 9, 2014, the Senate passed, by unanimous consent S. 2520, the FOIA Improvement Act of 2014. The bill codifies the “presumption of disclosure” of information requested under FOIA, limits the application of an exemption to documents created less than 25 years ago, and clarifies that agencies cannot charge search or duplication fees unless the response will take longer than 20 working days and entails over 50,000 pages. The companion measure, H.R. 1211, passed the House on February 25, 2014, by a vote of 414-0. Expect these bills to be introduced in the current Congress.

**HR 5819.** On December 9, 2014, Representative Andy Harris (R-MD) introduced H.R. 5819, the Funding Scientists at the Peak Age of Discovery Act. The bill requires the NIH Director to ensure that the median age of first time researchers receiving grants in the R series is 40 years of age by January 2019, 39 years of age by January 2022, and 38 years of age by January 2025. The bill provides exceptions for SBIR, STTR and Clinical Trial planning grants and defines a first time researcher as a researcher who has not previously served as a principal investigator. H.R. 5819 was referred to the House Committee on Energy & Commerce.

**HR 5820.** On the same day, Representative Harris introduced H.R. 5820, the Yes to Cures Act. The bill: (1) requires the reservation of funds in the Common Fund for research carried out by one or more emerging scientists (defines emerging scientist as a principal investigator who has never been awarded or who has only been awarded one substantial competing grant by the NIH and is within 15 years of completing a terminal degree or a medical residency); (2) prohibits a tap on the NIH for evaluation activities currently required by the Public Health Service Act and requires the NIH to use those funds for awards to emerging scientists through the Common Fund; (3) requires that funds reserved in the Common Fund by the new provision supplement not supplant funds otherwise allocated by the NIH for young investigators; and (4) requires the NIH Director to submit a report to Congress on the trends in age of recipients of NIH funded major research grants, specifically explaining the trend over the previous 30 years. H.R. 5820 was referred to the House Committee on Energy & Commerce.

**HR 4012.** On 19 November 2014, the House passed H.R. 4012, the Secret Science Reform Act of 2014, which requires EPA to base its regulations on data that is public. According to House Science Committee Chairman Lamar Smith (R-TX), “The EPA’s regulatory process is both hidden and flawed. It hides the data and then handpicks scientists to review it. The American people foot the bill for the EPA’s billion dollar regulations and they have the right to see the underlying data. If the EPA has nothing to hide, and if their data really justifies [sic] their regulations, why not make the information public? Data sharing is becoming increasingly common across scientific disciplines. The legislation requires that EPA science be available for validation and replication. Americans impacted by EPA regulations have a right to see the data and determine for themselves if the agency’s actions are based on sound science or a partisan agenda. This bill ensures transparency and accountability.” The Secret Science Reform Act does not require any disclosure of confidential information. It would only prohibit EPA’s use of secret science. At a hearing on the bill in November 2013, EPA and Harvard’s refusal to give personal medical data from the Six Cities Studies to members and staff of the House Committees was once again an issue. [The White House has threatened to veto the bill should it pass the Senate.](#)

## Science Advances

One NIEHS (NIEHS authors’ groups in parens)

- ***The concordance between RNA-seq and microarray data depends on chemical treatment and transcript abundance.*** Wang C, B Gong, PR Bushel (DIR), J Thierry-Mieg, D Thierry-Mieg, J Xu, H Fang, H Hong, J Shen, Z Su, J Meehan, X Li, L Yang, H Li, PP Labaj, DP Kreil, D Megherbi, S Gaj, F Caiment, J van Delft, J Kleinjans, A Scherer, V Devanarayan, J Wang, Y Yang, HR Qian, LJ Lancashire, M Bessarabova, Y Nikolsky, C Furlanello, M Chierici, D Albanese, G Jurman, S Riccadonna, M Filosi, R Visintainer, KK Zhang, J Li (DIR), JH Hsieh (NTP), DL Svoboda, JC Fuscoe, Y Deng, L Shi, RS Paules (NTP), SSAuerbach (NTP) and W Tong. *Nat. Biotechnol.* (2014) [ePub] <http://dx.doi.org/10.1038/nbt.3001>

- **Depletion of ATR selectively sensitizes ATM-deficient human mammary epithelial cells to ionizing radiation and DNA-damaging agents.** Cui, Y (DERT), Pali, SS (DIR), Innes, CL (DIR) and Paules, RS (NTP). *Cell cycle* (2014) v. 13 (22): pp. 3541-3550  
<http://dx.doi.org/10.4161/15384101.2014.960729>
- **Diversity Outbred Mice Identify Population-Based Exposure Thresholds and Genetic Factors that Influence Benzene-Induced Genotoxicity.** French, JE (NTP), Gatti, DM, Morgan, DL (NTP), Kissling, GE (DIR), Shockley, KR (DIR), Knudsen, GA (OD), Shepard, KG, Price, HC, King, D (NTP), Witt, KL (NTP), Pedersen, LC (DIR), Munger, SC, Svenson, KL and Churchill, GA. *Environ. Health Perspect.* (2014)[ePub]  
<http://dx.doi.org/10.1289/ehp.1408202>
- **Genetic variation in HTR4 and lung function: GWAS follow-up in mouse.** House, JS (DIR), Li, H (DIR), DeGraff, LM (DIR), Flake, G (NTP), Zeldin, DC (DIR) and London, SJ (DIR). *FASEB J.* (2014) [ePub].  
<http://dx.doi.org/10.1096/fj.14-253898>

#### DNTP

- **Application of Sholl analysis to quantify changes in growth and development in rat mammary gland whole mounts.** Stanko JP, Easterling MR, Fenton SE. *Reproductive toxicology*. 2014. Epub 2014/11/15  
<http://www.ncbi.nlm.nih.gov/pubmed/25463529>

#### DIR

- **Association of Nrf2 polymorphism haplotypes with acute lung injury phenotypes in inbred strains of mice.** Cho, HY (DIR), Jedlicka, AE, Gladwell, W (DIR), Marzec, J (DIR), McCaw, ZR (DIR), Bienstock, R (DIR) and Kleeberger, SR (DIR). *Antioxid Redox Signal* (2014) [ePub]  
<http://dx.doi.org/10.1089/ars.2014.5942>
- **Uncovering the polymerase-induced cytotoxicity of an oxidized nucleotide.** Freudenthal, BD (DIR), Beard, WA (DIR), Perera, L (DIR), Shock, DD (DIR), Kim, T, Schlick, T and Wilson, SH (DIR). *Nature* (2014) [ePub]  
<http://dx.doi.org/10.1038/nature13886>
- **Epigenetic Modification of Histone 3 Lysine 27: Mediator Subunit MED25 is Required for the Dissociation of Polycomb Repressive Complex 2 from the Promoter**

- of Cytochrome P450 2C9.** Englert, NA (DIR), Luo, G (DIR), Goldstein, JA (DIR) and Surapureddi, S (DIR). *J. Biol. Chem.* (2014) [ePub]  
<http://dx.doi.org/10.1074/jbc.M114.579474>
- **Ambient Air Pollution Exposure and Incident Adult Asthma in a Nationwide Cohort of U.S. Women.** Young, MT, Sandler, DP (DIR), DeRoo, LA (DIR), Vedal, S, Kaufman, JD and London, SJ (DIR). *Am. J. Respir. Crit. Care Med.* (2014)  
<http://dx.doi.org/10.1164/rccm.201403-0525OC>
  - **MMS Exposure Promotes Increased MtDNA Mutagenesis in the Presence of Replication-Defective Disease-Associated DNA Polymerase gamma Variants.** Stumpf, JD (DIR) and Copeland, WC (DIR). *PLoS Genet* (2014) v. 10 (10): pp. e1004748  
<http://dx.doi.org/10.1371/journal.pgen.1004748>
  - **Risk-benefit profiles of women using tamoxifen for chemoprevention.** Nichols HB, LA DeRoo, DR Scharf and DP Sandler (DIR). *Journal of the National Cancer Institute* (2015) v. 107 (1): pp. 1-8  
<http://dx.doi.org/10.1093/jnci/dju354>

DERT

- **The commonly used antimicrobial additive triclosan is a liver tumor promoter.** Yueh M-F, Taniguchi K, Chen S, Evans RM, Hammock BD, Karin M, and Tukey RH. 2014. *Proc Natl Acad Sci U S A* 111(48): 17200-17205.  
<http://www.ncbi.nlm.nih.gov/pubmed/25404284>
- **Dissecting neural differentiation regulatory networks through epigenetic footprinting.** Ziller MJ, Edri R, Yaffe Y, Donaghey J, Pop R, Mallard W, Issner R, Gifford CA, Goren A, Xing J, Gu H, Cacchiarelli D, Tsankov AM, Epstein C, Rinn JL, Mikkelsen TS, Kohlbacher O, Gnirke A, Bernstein BE, Elkabetz Y, Meissner A. *Nature*. 2014 Dec 24. doi: 10.1038/nature13990.  
<http://www.ncbi.nlm.nih.gov/pubmed/25533951>
- **Bayesian kernel machine regression for estimating the health effects of multi-pollutant mixtures.** Bobb JF, Valeri L, Claus Henn B, Christiani DC, Wright RO, Mazumdar M, Godleski JJ, Coull BA. *Biostatistics*. 2014 Dec 22. pii: kxu058. [Epub ahead of print]  
<http://www.ncbi.nlm.nih.gov/pubmed/25532525>
- **Prenatal Arsenic Exposure and the Epigenome: Identifying Sites of 5-methylcytosine Alterations that Predict Functional Changes in Gene Expression in Newborn Cord Blood and Subsequent Birth Outcomes.** Rojas D, Rager JE, Smeester L, Bailey KA, Drobná Z, Rubio-Andrade M, Stýblo M, García-Vargas G, Fry RC. *Toxicol*

Sci. 2015 Jan;143(1):97-106.

<http://www.ncbi.nlm.nih.gov/pubmed/25304211>

- ***The Resilience Activation Framework: a Conceptual Model of How Access to Social Resources Promotes Adaptation and Rapid Recovery in Post-disaster Settings.*** Abramson DM, Grattan LM, Mayer B, Colten CE, Arosemena FA, Bedimo-Rung A, Lichtveld M. *J Behav Health Serv Res.* 2015 Jan;42(1):42-57. doi: 10.1007/s11414-014-9410-2.  
<http://www.ncbi.nlm.nih.gov/pubmed/24870399>
- ***Bisphenol A exposure during early development induces sex-specific changes in adult zebrafish social interactions.*** Weber DN, Hoffmann RG, Hoke ES, Tanguay RL. *J Toxicol Environ Health A.* 2015;78(1):50-66. doi: 10.1080/15287394.2015.958419.  
<http://www.ncbi.nlm.nih.gov/pubmed/25424546>

## NIEHS News and Highlights

### ***Global Environmental Health***

With support from NIEHS, the World Health Organization held its first **Chemical Risk Assessment Network** meeting Oct. 8-10 in Paris, to explore and address the public health risks posed by toxic chemicals. The meeting was hosted by the French Agency for Food, Environmental, and Occupational Health and Safety, and attendees represented more than 55 chemical risk assessment institutions from 29 countries. Working groups developed collaborative plans to address research in biomonitoring, identify high priority research and method development needs, increase and coordinate training efforts for risk assessors, and establish communication between participants.

A new framework, called **One Bioregion/One Health**, provides an approach to transboundary regional planning that considers relationships between people and nature in the quest for healthier living spaces. The framework, funded in part by NIEHS and developed by researchers at the University of California-San Diego Superfund Research Center, merges regional planning and ecosystem management as a way to improve public and environmental health. A bioregion is a territory that is socially and culturally defined by its people rather than borders on a map. Bioregions are shaped by global trends, including climate change, food and water issues, economic crisis, large-scale natural disasters, and widespread increases in preventable diseases. The One Health concept acknowledges that human health is interconnected and dependent on the health of animals and the environment. One Health is viewed by organizations such as the U.S. Centers for Disease Control and the World Bank as a way to respond to a range of emerging and existing disease threats, such as drug-resistant tuberculosis. Combining these concepts, One Bioregion/One Health is a modern approach to enable integrative, civically engaged research to create solutions to problems

NIEHS has signed a **Memorandum of Understanding** with one of the largest universities in China, [Nanjing Medical University](#). Established in 1934, the university has 17 schools and one independent school, 23 affiliated hospitals, and more than 50 teaching hospitals. The agreement will permit up to three early-stage university scientists to do research for two to three years at NIEHS, and allow NIEHS senior scientists to lecture at seminars, workshops, school courses, and meetings at the university.

On January 15, representatives from **Singapore's Agency for Science Technology and Research (A\*STAR)** visited NIEHS and met with Director Linda Birnbaum and NTP staff regarding Singapore's intention to develop a program around 21st century toxicology and to discuss potential areas of collaboration. A\*STAR aims to foster scientific research and talent for a knowledge-based Singapore. As a statutory board under the Ministry of Trade and Industry, A\*STAR also supports Singapore's key economic clusters by providing intellectual, human and industrial capital to its partners in industry. Representatives include: Dr Kenneth Lee, Director, Food Nutrition and Consumer Care cluster, Biomedical Research Council, Agency for Science Technology & Research; Dr Frank Eisenhaber, Executive Director, Bioinformatics Institute, Agency for Science Technology & Research; Dr Ng Pei Sze, Head, Food Nutrition and Consumer Care cluster, Biomedical Research Council, Agency for Science Technology & Research; Ms Ong Siok Ming, Assistant Head, Food Nutrition and Consumer Care cluster, Biomedical Research Council, Agency for Science Technology & Research.

### ***Data and Technology***

As part of wide-ranging grants announced Oct. 10 by NIH, NIEHS is helping develop new strategies to analyze and make good use of the explosion in complex biomedical data sets, often referred to as Big Data. NIEHS is managing the career development portion of this nearly \$32 million **NIH Big Data to Knowledge** investment.

On September 15-16, NIEHS co-sponsored with EPA, NC State University, and others, a **Workshop for the Development of a Framework for Environmental Health Science Language**, in Raleigh, NC to help establish ways to glean crucial insights from the vast amounts of information generated in biomedical research. The workshop explored a framework for creating standard languages to ensure that descriptions and content of data sets can be understood by the broader research community. Consistency in language and terminology is a crucial step toward enhancing reproducibility, data reuse, and data integration.

In September, NIEHS staff joined more than 200 representatives from industry, academia, regulatory agencies, and nongovernmental organizations at the US EPA's Chemical Safety Research: **Second ToxCast Data Summit**. The summit provided an opportunity for researchers to share ideas about translating massive amounts of new chemical data generated by EPA's Toxicity Forecaster (ToxCast) program into knowledge that can inform policy and regulatory decisions. ToxCast uses high-speed, automated screening technologies, or assays, to identify chemicals that trigger biological activity that may lead to

adverse health effects. To date, more than 2,000 chemicals have been evaluated in 700 assays. The data from these tests were made publicly available, and the data summit was the first opportunity for researchers to present the results of research projects using this data.

### ***National Toxicology Program***

On Oct. 2, U.S. Department of Health and Human Services Secretary Sylvia M. Burwell released the **13th Report on Carcinogens**. Ortho-toluidine, used to make rubber chemicals, pesticides, and dyes, has been reevaluated and is now listed as a known human carcinogen. Three substances have been added as reasonably anticipated to be human carcinogens. These include 1-bromopropane, used as a cleaning solvent and spray adhesive; cumene, used to make phenol and acetone, and also found in fuel products and tobacco smoke; and the wood preservative mixture pentachlorophenol.

Interagency Coordinating Committee on the Validation of Alternative Methods (**ICCVAM**), and the National Toxicology Program (NTP) Interagency Center for the Evaluation of Alternative Methods received approval from the Scientific Advisory Committee on Alternative Toxicological Methods for its **new vision and strategic direction plan** for the 15-member U.S. committee. The coordinating committee has adopted an approach to validation of alternative test methods known as a fit-for-purpose approach. The method focuses on the needs of individual agencies and industries that are best positioned to quickly adopt a specific alternative test method.

National Toxicology Program (NTP) and U.S. Environmental Protection Agency (EPA) scientists presented a high-throughput approach for screening and prioritizing chemicals in EPA's **Endocrine Disruptor Screening Program** to the Federal Insecticide, Fungicide, and Rodenticide Act Scientific Advisory Panel on Dec. 2-5. The proposed approach has the potential to be more efficient and robust than current practices. The Endocrine Disruptor Screening Program was established to identify substances found in pesticides and other chemical products that could interfere with the normal function of hormones and potentially cause health problems in humans and wildlife.

The NTP Office of Health Assessment and Translation (OHAT) develops literature-based evaluations to reach conclusions about potential human health hazards and to examine the state of the science. In 2012, OHAT began exploring and developing an approach for implementation of systematic review methodology to carry out these evaluations. OHAT has developed and released a "**Handbook for Conducting a Literature-Based Health Assessment Using OHAT Approach for Systematic Review and Evidence Integration**" that provides standard operating procedures for the implementation of systematic review in OHAT evaluations. The handbook is a living document and will be updated as methodological practices are refined and evaluated and strategies are identified that improve the reliability, ease, and efficiency of conducting systematic reviews.

## Past Meetings and Events

The University of Arizona Superfund Research Program (UA SRP) together with the Dean Carter Binational Center for Environmental Health Sciences and the Universidad Autónoma de San Luis Potosí organized the **Latin American Conference on Compatible Mining: Protecting Vulnerable Populations and the Surrounding Environment**. The event was held in San Luis Potosí, México on September 8-10, 2014. The conference is envisioned as the first in a series of three meetings in Latin America to establish, organize and sustain a Latin-American working group for compatible mining. The proposed conference outcome is a long-term vision for a permanent regional hub supporting sustainable mining.

More than 120 researchers, community partners, and health care professionals, as well as federal, state, and tribal representatives, came together at NIEHS Sept. 22-24 as part of the **annual meeting of the NIEHS Partnerships for Environmental Public Health (PEPH)**, to advance the field of environmental health literacy. Dozens more joined remotely via watch parties in California, Georgia, Kentucky, Michigan, Minnesota, Montana, Oregon, and Washington.

The **NIEHS Worker Training Program** held a workshop Oct. 7–8 focused on the health risks workers face as consequences of **climate change** become more prominent. Workshop participants explored lessons learned and best practices to prepare workers for climate change effects. Participants also discussed curricula that can be developed to build a more resilient and sustainable workforce and community. The framework for the workshop was the program's draft Climate Change Vulnerability Assessment Report, which reviews the available literature on worker health and climate change, and assesses available training and resources.

**Environmental Stressors in Disease and Implications for Human Health**, was the theme of the fourth International Summit of Prenatal Programming and Developmental Toxicity (**PPTOX**). The summit, held Oct. 26-29, discussed the effects of environmental exposures during early life and later-onset disease consequences. The meeting was co-sponsored by NIEHS and The Endocrine Society. The conference statement will be published in the peer-reviewed journal *Endocrinology*. The next PPTOX meeting will be held Nov. 13-16, 2016 in Kitakyushu, Japan.

NIEHS and the National Institute of Neurological Disorders and Stroke (NINDS) co-sponsored a meeting Nov. 3-4 at NIEHS to develop prioritized recommendations for advancing basic, epidemiological, and clinical research on environmental contributors to Parkinson's disease (PD). **Parkinson's Disease: Understanding the Environment and Gene Connection** was designed to bring together experts from across the spectrum of PD science to evaluate the most recent research findings on the impact of environmental factors on PD etiology and to discuss the challenges of translating those findings into public health practice and policy.

On Nov 3-4, the NIEHS-sponsored **NRC Committee on Emerging Science for Environmental Decisions** brought together environmental health researchers, climate change modelers, and public health experts and practitioners to explore new approaches to **modeling the human health risks of future climate change**. Speakers discussed the state-of-development of health risk models and approaches to incorporate future scenarios of exposure-response and human system vulnerabilities.

**Exposure Science in the 21st Century: Role of Citizens and Communities** was the theme of the 7<sup>th</sup> Environmental Health Summit organized by the Research Triangle Environmental Health Collaborative with support from NIEHS, area universities, and other groups concerned with environmental health. The summit, held November 4-5 in Research Triangle Park, NC, highlighted three specific areas during its extended workgroup discussions — technology, data integration, and risk communication, and involved many NIEHS staff including a plenary talk by Deputy Director Rick Woychik.

The IOM Roundtable on Environmental Health Research, Science & Medicine workshop, **Bringing Public Health into Urban Revitalization**, was held November 10-11, in Washington, DC. The meeting brought together a range of science and policy stakeholders to discuss how major American cities, faced with the opportunity for major revitalization, have brought considerations of public health into rebuilding and re-imagining the urban environment.

The **annual meeting of the NIEHS Superfund Research Program (SRP)** was held Nov. 12-14 in San Jose, California, and hosted by SRP grantees at the University of California, Berkeley (UCB). The meeting provided a forum for presentations and discussion in areas critical to the program's multidisciplinary research mission, to address human and environmental health challenges related to Superfund and other hazardous waste sites.

NIEHS staff and grantees were prominent among the more than 12,500 public health professionals who attended this year's annual conference of the **American Public Health Association** in New Orleans on Nov. 14-19. Staff from across the institute presented new findings and initiatives, and led sessions and discussions on topics ranging from climate change to the Sister Study to disaster preparedness research to the mouse epigenome.

### **Upcoming Meetings and Events**

- IOM Roundtable on Environmental Health, Science and Medicine: Interplay between Environmental Exposures and Obesity, NIEHS, March 2-3
- Population-based Rodent Resources for Environmental Health Sciences, NIEHS, March 18-19
- Society of Toxicology Annual Meeting, San Diego, March 21-26
- SOT Communicating Science Workshop, San Diego, March 26
- NIEHS Centers Annual Meeting and Public Forum, Tuscon, AZ, April 12-16
- CLARITY-BPA Grantee Meeting, April 20-21
- NIEHS Nano Consortium, RTP, May 6-7

- Brooklyn Community Forum, NYC, May 22

## **Awards and Recognition**

### ***NIEHS Awardees***

- Barbara Nicol, PhD, in the Reproductive Developmental Biology Group won a Fellows Award for Research Excellence (FARE), and was recognized with an NIH Women Scientist Advisors Committee Scholar Award for her abstract “Sox9/beta-catenin Double Knockout Mice Uncover a New Paradigm in Testis Differentiation” as one of the three top studies, out of 113 young women scientist 2015 FARE winners.
- NIEHS and National Toxicology Program (NTP) Director Emeritus Kenneth Olden, Ph.D., was awarded the 2015 Raymond and Beverly Sackler Award for Sustained National Leadership, a Research!America Advocacy Award.
- National Toxicology Program (NTP) pathologist David Malarkey, D.V.M., Ph.D., was elected 2015 president-elect of the American College of Veterinary Pathologists (ACVP).
- National Toxicology Program (NTP) toxicologist (retired) Barbara Shane, Ph.D., who was executive secretary for the NTP Board of Scientific Counselors 2003-2009, was awarded the 2014 Environmental Mutagenesis and Genomics Society (EMGS) Service Award in recognition of her longstanding dedication and service to the society.
- Every three years, the NIEHS animal care and use program must undergo a rigorous re-evaluation by the Association for the Assessment and Accreditation of Laboratory Animal Care. In November, NIEHS achieved “exemplary” status from the organization.
- NIH Director’s Awards:
  - 2013 Feds Feed Families Team, in recognition of exemplary efforts in promoting the Feds Feed Families Campaign at the NIH and throughout the United States — Monya Brace, NIEHS Office of Management
  - Administrative Support Group for significant, outstanding administrative support of the 2010-2013 Stadtman Investigator searches — Deborah Wilson, NIEHS Office of the Scientific Director
  - The Technical Evaluation Team for the RTP Campus for selfless participation and technical excellence in technical evaluations resulting in contract awards that serve as the basis for future construction on the RTP camps — Alison Hawkins, William Hawkins, Donald Jackowski, James Stancil, and Daniel Burk, NIH Office of Research Facilities personnel stationed at NIEHS.
  - NIEHS Scientific Director Darryl Zeldin, M.D., Partnership Award from the Eunice Kennedy Shriver National Institute of Child Health and Human Development
- Quaker Harmon, M.D., Ph.D., IRTA Fellow in the Epidemiology Branch, was named NIEHS Fellow of the Year and Samuel Wilson, M.D., senior lead researcher in the

Genome Integrity and Structural Biology Laboratory, was named NIEHS Mentor of the Year.

- Stephanie London, M.D., Dr.P.H. in the Epidemiology Branch, gave the Harvard SPH James L. Whittenberger lecture. The annual event honors the memory of James L. Whittenberger, M.D., who was the founder and director of the Harvard NIEHS Center for Environmental Health, and chair of the Department of Physiology at the Harvard School of Public Health for 32 years. The symposium and lecture were named in his honor in 1983. London's lecture, "Smoking and the Epigenome Across the Lifecourse," summarized one aspect of her group's [research](#), which revealed epigenetic processes that may underlie a connection between maternal smoking and several adverse health effects among children of smoking mothers.

### ***Grantees/Others***

- NIH High Risk-High Reward award winners:
  - Donna Spiegelman, Sc.D. of the Harvard School of Public Health – Pioneer Award for Comprehensive Translational Science Analytics Tools for the Global Health Agenda
  - Oliver Rando, M.D., Ph.D. of the University of Massachusetts Medical School – Pioneer Award for tRNA [Transfer Ribonucleic Acid] Fragments as Transgenerational Information Carriers
  - Manish Arora, Ph.D. of the Icahn School of Medicine at Mount Sinai – Young Innovator Award for Reconstructing Fetal Toxicant Exposure and Homeostatic Disruptions
  - Perry Hystad, Ph.D. , of Oregon State University – Early Independence Award for PURE-AIR: A Global Assessment of Air Pollution and Cardiopulmonary Disease
- Jack Griffith, Ph.D., and Gokhan Tolun, Ph.D, of the University of North Carolina at Chapel Hill Lineberger Comprehensive Cancer Center and the Department of Microbiology and Immunology, were awarded the FASEB BioArt Award, a contest to find captivating images from cutting edge research. The winning image was based on the first 3-D reconstruction of a DNA-protein complex formed by a protein called infected cell protein 8 (ICP8), which is encoded by herpes simplex virus 1.
- Somenath Mitra, Ph.D., NIEHS-funded researcher and distinguished professor at the New Jersey Institute of Technology (NJIT), received an Excellence in Research Prize and Medal from the New Jersey Institute of Technology Board of Overseers for his work on understanding potential health implications of carbon nanotubes used in diverse applications.
- Bradley Newsome, Ph.D., University of Kentucky (UK) SRP Center, Karen Wetterhahn Memorial Award, awarded by the NIEHS Superfund Research Program (SRP). The

award, which recognizes outstanding SRP graduates and postdoctoral researchers, was given to Newsome for his work that adds weight to the current center research paradigm that nutrition can positively affect the negative human health effects related to chemical exposures near Superfund sites.

- Martyn Smith, Ph.D., University of California, Berkeley, was awarded the 2014 Environmental Mutagenesis and Genomics Society Alexander Hollaender Award for his high-profile perspective on environmental health study design which argues that a more complete and objective picture is needed in order to help scientists discover the major causes of chronic diseases by better accounting for an individual's total environmental exposure, or exposome.
- Vishal Vaidya, Ph.D., Harvard, 2015 Achievement Award from the Society of Toxicology (SOT) for his early career work in using cellular systems, mouse models, and human biospecimens, and applying methodologies at the interface of cell and molecular biology, systems pharmacology, and translational science in understanding kidney disease.