

NIEHS celebrates achievements at annual Science Day

By Heather Franco

NIEHS celebrated the research programs conducted in its intramural and extramural divisions during the 11th annual NIEHS Science Day Nov. 7-8, as scientists gathered to present their research discoveries in poster and oral presentations. The event culminated with the presentation of awards for outstanding poster and oral presentations, and the prestigious Mentor of the Year and Fellow of the Year awards (see related [story](#)).

According to organizer Joel Abramowitz, Ph.D., special assistant to the scientific director, the event was a great success. "Everyone was overwhelmed by the science conducted by the trainees at NIEHS," he told the audience. "Congratulations to everyone!"

Oral presentations highlight diverse areas of research

Science Day opened with a talk by National Toxicology Program (NTP) molecular toxicologist [Scott Auerbach, Ph.D.](#), of the Biomolecular Screening Branch. He discussed how bioinformatics can be used to assess the changes that various chemicals have on an organ system and how identifying these changes can help in the identification of the mechanisms involved in the development of disorders, such as cancer.

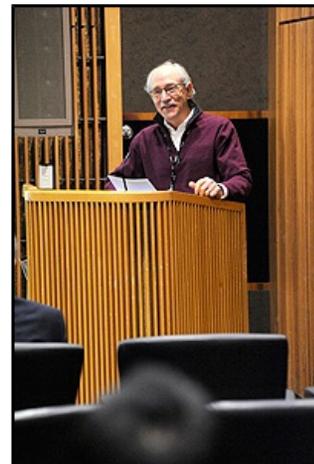
[Jack Taylor, M.D., Ph.D.](#), head of the Molecular and Genetic Epidemiology Group within the Division of Intramural Research (DIR), presented his work on the role of methylation in the development of breast cancer using the [NIEHS Sister Study](#) cohort. His group found that changes in methylation status were associated with age, suggesting that epigenetic changes that occur during the aging process may influence an individual's susceptibility to cancer.

[Kimberly McAllister, Ph.D.](#), from the Susceptibility and Population Health Branch of the Division of Extramural Research and Training (DERT), highlighted work from NIEHS grantees exploring gene-environment interactions and their impact on human health. The program focuses on developing methods to explore these interactions, as well as conducting workshops and lecture series to highlight the field.

Continuing the tradition that began at last year's Science Day, former NIEHS trainee [Mohamed Trebak, Ph.D.](#), (<http://www.sunycnse.com/AboutUs/FacultyStaff/Faculty/MohamedTrebak.aspx>) now at the SUNY College of Nanoscale Science and Engineering, concluded the oral presentations by describing his recent work examining the role that calcium signaling plays in endothelial cell function in the blood vessels. His group has found novel roles for the STIM1, Orai1, and TRPC channels in regulating endothelial cell permeability.

Awardees recognized for their outstanding research and mentoring

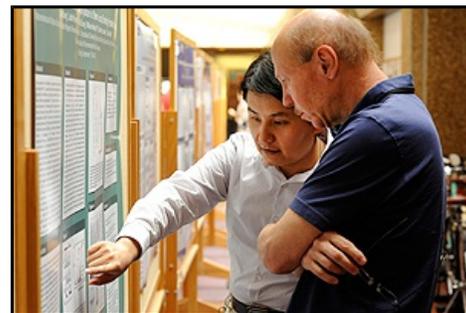
The NIEHS Trainees Assembly (NTA) presented two awards, highlighting the excellent research and training received by the trainees at NIEHS. Kymberly Gowdy, Ph.D., of the NTA, presented the Mentor of the Year Award to [Dale Sandler, Ph.D.](#), Epidemiology Branch chief and head of the Chronic Disease Epidemiology Group within DIR, for her "excellence and commitment to research, the epidemiology branch, and training." The 2nd Annual Fellow of the Year Award



NIEHS Deputy Director Richard Woychik, Ph.D., welcomed everyone to this year's Science Day. (Photo courtesy of Steve McCaw)



Abramowitz helps organize Science Day events each year. (Photo courtesy of Steve McCaw)



Jun Zhang, Ph.D., a visiting fellow in the NIEHS Laboratory of Structural Biology (LSB), explained his latest work to LSB staff scientist William Beard, Ph.D. (Photo courtesy of Steve McCaw)

was presented to [Steven Roberts, Ph.D.](#), from the Chromosome Stability Group, who was acknowledged by senior associate scientist Dmitry Gordenin, Ph.D., as being in the "top tier of postdocs that I have mentored."

This year, the number of Outstanding Poster Presentation Awards was increased to nine, with winners representing multiple labs within DIR and the NIEHS Office of Clinical Research (see text box). The Outstanding Oral Presentation Award was presented to [Sabrina Robertson, Ph.D.](#), from the Developmental Neurobiology Group in DIR. Her presentation, "Developmental Origins of Central Norepinephrine Neuron Diversity," described the identification and manipulation of different subtypes of norepinephrine neurons, which may have implications for the response of these neurons in diseases and to environmental stimuli.

(Heather Franco, Ph.D., is an Intramural Research Training Award (IRTA) postdoctoral fellow in the NIEHS Reproductive Developmental Biology Group of the Laboratory of Reproductive and Developmental Toxicology.)



NIEHS Laboratory of Respiratory Biology research fellow Hideki Nakano, Ph.D., left, described the techniques he used to study pulmonary dendritic cells to Biostatistics Branch staff scientist Weichun Huang, Ph.D. (Photo courtesy of Steve McCaw)



Last year's Outstanding Oral Presentation Award winner George Fromm, Ph.D., and his mentor, Karen Adelman, Ph.D., listened intently to this year's oral presentations. (Photo courtesy of Steve McCaw)



Kin Chan, Ph.D., is an IRTA fellow in the NIEHS Laboratory of Molecular Genetics, and was part of the group of presenters speaking on the second day of the event. (Photo courtesy of Steve McCaw)



Auerbach represented NTP during his presentation at this year's Science Day festivities. (Photo courtesy of Steve McCaw)



James Putney, Ph.D., from the NIEHS Laboratory of Signal Transduction, was delighted to hear about the recent work from his former trainee Trebak. (Photo courtesy of Steve McCaw)

2013 Outstanding Poster Presentation Awardees

1. Matthew Young, Ph.D., Laboratory of Molecular Genetics, "The complexity of heterozygous POLG2 mutations associated with human mitochondrial disease."
2. Steven Roberts, Ph.D., Laboratory of Molecular Genetics, "Hyper-mutation of single stranded DNA across yeast and cancer genomes."
3. Benjamin Scruggs, Ph.D., Laboratory of Molecular Carcinogenesis, "Pausing of RNA polymerase II at enhancers."
4. Salik Hussain, Ph.D., Office of Clinical Research, "Human bronchial epithelia exposure to multi-walled carbon nanotubes induces inflammasome-dependent pyroptosis and a profibrotic response."
5. Brad Lackford, Laboratory of Molecular Carcinogenesis, "Fip1 regulates mRNA alternative polyadenylation to promote stem cell self-renewal."
6. Shannon Farris, Ph.D., Laboratory of Neurobiology, "Spatial exploration induces immediate early gene expression in rat hippocampal area."
7. Monica Frazier, Ph.D., Laboratory of Molecular Genetics, "Mutational consequences of dgt overexpression."
8. Sylvia Hewitt, Laboratory of Reproductive and Developmental Toxicology, "Mouse models to evaluate estrogen receptor- α DNA binding dependent signaling mechanisms: ERE binding deficient vs. DNA binding deficient."
9. YuanYuan Li, Ph.D., Biostatistics Branch, "T-KDE: a method for genome-wide identification of constitutive protein binding sites from multiple ChIP-seq data sets."

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