

## ONES marks eighth year of excellence

By Eddy Bal

With its first awardee meeting in 2006, NIEHS program directors knew they had a winner with the Outstanding New Environmental Scientist (ONES) program. Eight years and 42 awards later at the 2014 ONES awardee symposium July 1-2 at NIEHS, there was even more reason to celebrate the success of this innovative effort to provide an unprecedented level of support for extraordinary early stage investigators with exciting ideas in the field of environmental health sciences (see [text box](#)).

The ONES program is well on its way to being heralded as a best practice for NIH institutes and centers (ICs), as the program looks forward to making new awards this year. In her opening remarks, NIEHS and NTP Director Linda Birnbaum, Ph.D., pointed to the sincerest form of flattery by a sister IC, the National Institute of Mental Health, which in 2009 modeled its own very successful Biobehavioral Research Awards for Innovative New Scientists ([BRAINS](#))

(<http://www.nimh.nih.gov/about/director/2014/brains-a-new-research-generation.shtml>) program directly after the ONES.

Birnbaum also acknowledged the accomplishments of the awardees in terms of promotions, hundreds of publications, and an impressive number of other grants, including some 38 NIEHS grants over and above their ONES support.

### Meeting featured 24 talks by ONES awardees

During the day and a half of [science talks](#)

(<http://www.niehs.nih.gov/news/newsletter/2014/8/spotlight-ones/file723537.pdf>)

(458KB) by ONES awardees, Birnbaum lived up to her promise to attend as much of the meeting as possible. "I get to learn about some of the latest discoveries and new ideas for research from you, who are really the future of our environmental health sciences community," she said.

The two dozen talks ranged across the NIEHS Division of Extramural Research and Training (DERT) grants portfolio, with speakers from each of the annual award groups. Topics ranged from basic mechanistic research, epidemiological studies, and clinical and translational research, to advances in understanding nanomaterials, stem cells, and biomarkers for predictive toxicology.

As a result of their leading-edge research, just over half of the ONES awardees have received tenure or promotion to associate professor, and one, [Gokhan Mutlu, M.D.](#),

([http://med-www02.bsd.uchicago.edu/339/FacultyPro/faculty\\_profile.aspx?empl\\_id=14714](http://med-www02.bsd.uchicago.edu/339/FacultyPro/faculty_profile.aspx?empl_id=14714))

has advanced to full professor of medicine and director of the Section of Pulmonary and Critical Care Medicine at the University of Chicago. Several have gained appointments as journal editors, and nearly all can boast of professional awards and honors, including 2006 awardee [Sven-Eric Jordt, Ph.D.](#), (<https://scholars.duke.edu/display/per3215402>)

who in 2007 became the first NIEHS grantee to win a prestigious Presidential Early Career Award for Scientists and Engineers (see [story](#)).

### Insights into academic careers

In addition to an invitation to attend the scientific talks, NIEHS trainees were invited to a special session that concluded the meeting, highlighting "Career Insights From ONES and Discussions With NIEHS Program Directors (and NIEHS Postdocs)," moderated by DERT Director Gwen Collman, Ph.D.

As the first speaker in the career segment, University of Pittsburgh geneticist Patricia Opresko, Ph.D., presented a list of "Lessons Learned" that helped structure the discussion of positive things awardees have done to advance their careers and, equally important, the things they wish they had done. The speakers each had suggestions about collaborations, mentor relationships, risk-taking, and negotiating with department heads and colleagues, but they also offered almost as many caveats.

"There's not a formula," cautioned Duke University mitochondrial DNA specialist Joel Meyer, Ph.D. "If there were, we'd all follow it."

As the conversation turned to funding, Collman offered awardees and postdocs a number of suggestions for keeping abreast of new developments - and potential new funding opportunities - at NIEHS and NIH. They included watching webcasts of the [National Advisory Environmental Health Sciences Council](#) meetings at NIEHS, reading the weekly [NIH Guide for Grants and Contracts](#),

(<http://grants.nih.gov/GRANTS/guide/>)

and following the "Rock Talk"

(<http://nexus.od.nih.gov/all/category/blog/>)

blog created by NIH Deputy Director for Extramural Research Sally Rockey, Ph.D.

Communicating with ONES program officer Carol Shreffler, Ph.D., and other NIEHS program officers is also extremely helpful, Collman added. After all, she said, "Your success is our success."



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Birnbaum clearly enjoyed hearing the many examples of collegial spirit the program nurtures. "There is so much that we can learn from one another and the many collaborative ventures that come out of this program," she said in her opening remarks. (Photo courtesy of Steve McCaw)



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The talks opened with a discussion by University of Utah epidemiologist [Christina Porucznik, Ph.D.](http://medicine.utah.edu/faculty/mddetail.php?facultyID=u0477980) (<http://medicine.utah.edu/faculty/mddetail.php?facultyID=u0477980>)

of her ongoing prospective study of periconceptual exposures that may influence fertility. Of the hair, urine, and saliva samples collected, she said, "We want these specimens to be used, so we're really looking for collaborators." (Photo courtesy of Steve McCaw)



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Harvard University systems toxicologist [Vishal Vaidya, Ph.D.](http://www.vaidyalab.org/), (<http://www.vaidyalab.org/>)

gestured enthusiastically as he explained his project, "Modernizing Toxicology: Biomarkers and Cell-based Approaches to the Rescue." In recognition of his work, Vaidya received a 2013 Burroughs Wellcome Fund Innovation in Regulatory Science Award. (Photo courtesy of Steve McCaw)



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For several of the awardees trained with NIEHS funding, such as University of Chicago cancer biologist and former NIEHS postdoc [Yu-Ying He, Ph.D.](https://biomedsciences.uchicago.edu/page/yu-ying-he-phd), (<https://biomedsciences.uchicago.edu/page/yu-ying-he-phd>)

the ONES meetings are a sort of family reunion, as well as a chance to hear about exciting new scientific discoveries. (Photo courtesy of Steve McCaw)



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Michigan State University environmental toxicologist [James Luyendyk, Ph.D.](http://cvm.msu.edu/research/research-labs/luyendyk/the-luyendyk-lab-team), described surprising findings about the counterintuitive protective role of fibrinogen in some kinds of liver injury. "We were completely wrong in our [initial hypothesis]," he said. (Photo courtesy of Steve McCaw)



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University of Nebraska Director of Allergy Services [Jill Poole, M.D.](http://www.unmc.edu/intmed/pulm/bio.cfm?MyID=1606), reported on the results of studies about lung and systemic effects among agricultural workers exposed to organic dust in concentrated animal feeding operations. Poole was selected to present a prestigious memorial lecture on her findings at the 2014 annual meeting of the American Academy of Allergy, Asthma, and Immunology. (Photo courtesy of Steve McCaw)



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After moderating the final session of scientific talks on neurotoxic mechanisms, program officer [Jonathan Hollander, Ph.D.](#), joined his DERT colleagues for the careers discussion. (Photo courtesy of Steve McCaw)



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[Collman](#), right, joined [Mutlu](#), as he discussed his experience with a grant application to fund risky science. "Wildly innovative grants are received differently at different stages of your career," she told the audience. (Photo courtesy of Steve McCaw)



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*Jordt was one of several speakers who discussed departmental politics at academic institutions. After nine years at Yale, Jordt moved to Duke this summer, largely because of diminishing support for environmental research at Yale. "I never really got sufficient space [for my lab there]," he said. "[Plus], Duke is closer to NIEHS." (Photo courtesy of Steve McCaw)*



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*Shreffler, who organizes the annual ONES meetings and administers early career support and training grants, is also a driving force in maintaining a high profile for the ONES program. "Let us know of your career accomplishments," she urged the awardees. "This is the sort of information we need to keep the program going." (Photo courtesy of Steve McCaw)*

### ONES - helping to build career infrastructure

By Shannon Whirlledge, Ph.D.

The ONES program (2014 Funding Opportunity Announcement [RFA-ES-13-014](http://grants.nih.gov/grants/guide/rfa-files/RFA-ES-13-014.html))

(<http://grants.nih.gov/grants/guide/rfa-files/RFA-ES-13-014.html>)

is designed to support the career promotion of the next generation of outstanding scientists. This highly competitive program will add five new awardees to its ranks in fiscal year 2015. The key to success is an innovative project and the potential for an applicant to advance the field, according to Shreffler, who is program officer for the Training and Career Development Program at NIEHS. In order to be considered as a promising early-stage investigator, applicants must be within 10 years of their professional degrees in tenure-track positions with at least 80 percent of protected time for research.

The elite scientists granted ONES funding enjoy benefits not shared by awardees of the standard R01 research project grant. In addition to research funding, the ONES program supports career advancement by providing an allotment for lab resources and equipment, travel to conferences, and travel to visit other labs. As Shreffler explained, "The ONES program provides an infrastructure for a career."

The ONES program is intended to continue in fiscal year 2016 and beyond, but program length will be based on availability of funds.

(Shannon Whirlledge, Ph.D., is an Intramural Research Training Award fellow in the NIEHS Laboratory of Signal Transduction.)

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