

# The NICHD Connection

**October 2012**

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## A Successful Start to a New Teaching Collaboration

By Shana R. Spindler, Ph.D.

*“I have come to believe that a great teacher is a great artist and that there are as few as there are any other great artists. Teaching might even be the greatest of the arts since the medium is the human mind and spirit.”*  
John Steinbeck



**Boots Quimby, Ph.D.**

Thanks to a new collaboration between the NICHD and the Honors College Integrated Life Sciences (ILS) Program at the University of Maryland, NICHD fellows have the opportunity to develop their teaching skills in preparation for guest lecturing in Honors College ILS courses.

Dr. Kevin Francis, the former NICHD IC Basic Science Representative, and Dr. Byrn “Boots” Quimby, associate director of the University of Maryland Honors College ILS program, struck up a conversation at the 2012 annual fellows retreat about teaching opportunities for NICHD fellows. Boots suggested a collaboration in which she would host a workshop at the NIH for NICHD fellows, and those fellows would then guest lecture in ILS courses. The University of Maryland ILS honors program consists of approximately 100 freshman and sophomore undergraduate students whose career goals include life sciences research.

### WORKSHOP OBJECTIVES

The workshop had two main objectives: First, Boots introduced NIH fellows to the current research in college teaching and learning. Second, she facilitated a guided teaching experience for NIH fellows through the

*(continued on page 3)*

## Letter from the Editor

Summer is officially over. While we say goodbye to long summer days, lounging at the pool with the latest *Nature* paper in hand, we say hello to crisp autumn air, family holidays, and cozying up to a warm fire with...the latest *Nature* paper in hand.

The end of summer also means that Halloween is just around the corner. Some children knock on neighbors' doors dressed in ghost, skeleton, or witch costumes. Many children, however, don the attire of professionals whom they admire: doctors, firemen, and superheroes, just to name a few. In my many years of opening the door to Spiderman, I have rarely been greeted by a child dressed as a scientist.

Scientists are the "behind-the-scenes" superheroes. We don't have much interaction with the general public in our day-to-day lives, but Halloween is a great time to make an impression on our children that scientists are professionals to admire as well. So, if you haven't yet purchased or made a Halloween costume quite yet, consider having your child go as a little scientist this year. What kid wouldn't look cute in a labcoat with a petri dish in hand?

Your Editor in Chief,  
Shana R. Spindler, Ph.D.

Please send questions, comments, or announcements to [Shana.Spindler@gmail.com](mailto:Shana.Spindler@gmail.com).

### OVERHEARD AT THE HALLOWEEN PARTY



## A Successful Start to a New Teaching Collaboration (continued from page 1)

development and implementation of educational learning modules for the Honors College ILS courses.

Boots aimed to develop the learning modules around each fellow's scientific expertise. She encouraged fellows to incorporate their actual research data, thus introducing undergraduate students to a broad range of scientific exploration. "I feel that it is valuable for our students to interact with young scientists and scientists outside of the university community," said Boots.

### BACKWARD DESIGN

Boots is passionate about improving teaching methods in higher education. She strives to ensure that future science educators are "aware of the research in science education and have the tools to implement that research into their teaching."

Boots began the workshop by introducing the utility of designing a course using the backward design method. Backward design is a style of curriculum creation that requires the instructor to establish educational aims before selecting how material will be taught and assessed. "It seems like a very straightforward concept, but in practice, it can be very difficult," said workshop participant, Kate Monzo.

### WORKSHOP OUTCOMES

For Kate, teaching was not something she was initially concerned about when joining the NICHD. After attending a few workshops organized by OITE and NICHD, however, she decided that teaching and mentoring opportunities are important regardless of career path. "To me, teaching

goes hand in hand with being a scientist," said Kate, "whether it is mentoring students in the lab or instructing in a classroom."

Using the new tools introduced during the workshops, Kate designed a hybrid cell biology course (a combination online and face-to-face course) with Boots as her mentor. While Kate's cell biology course idea is still in the works, she described the workshop series in one word: constructive.

Kate is not the only participant with a successful outcome from the new workshop series. According to Boots, one fellow will have the opportunity to teach two class periods for the Organismal Biology course later in the semester. Two fellows are working on modules for the Genes and Genomes course taught spring semester, and two other fellows are collaborating with Boots and Kate on developing the hybrid cell biology course, to be offered in the fall of 2013.

Boots started a Facebook page to help workshop participants stay in contact. There, fellows can post about their experiences as they begin to teach.

"It's been marvelous thus far," said Kevin Francis, co-creator of the workshop series. "My hope is this will become a long-standing collaboration benefiting both NICHD fellows and the ILS program faculty and students."

For more information about Dr. Quimby's Teaching Initiative workshop series at the NICHD, please contact Brenda Hanning at [hanningb@mail.nih.gov](mailto:hanningb@mail.nih.gov).

## Meet Dr. Stephanie Cologna, our new NICHD IC Representative



*Stephanie Cologna, Ph.D.*

After a very successful tenure by Dr. Kevin Francis, Dr. Stephanie Cologna will take the reins as our new NICHD IC (Institutes and Centers) Basic Science Representative.

### A FEW INTRODUCTORY WORDS FROM DR. COLOGNA:

I am originally from Phoenix, Arizona. I did my undergraduate studies at the University of Arizona in Tucson, AZ, where

I was first introduced to research in Professor Katrina Miranda's laboratory. In 2005, I began my graduate studies at Texas A&M University in College Station, TX under the direction of Professor David H. Russell. My Ph.D. (Chemistry) research focused on the use of isoelectric trapping as a pre-fractionation and separation tool for mass spectrometry-based proteomics.

In fall 2010, I joined the laboratory of Dr. Forbes Porter, Program on Developmental Endocrinology and Genetics, NICHD. My work in Dr. Porter's lab is focused on using mass spectrometry-based proteomics for biomarker discovery in two genetic disorders; Niemann-Pick Disease, type C1 and Smith-Lemli-Optiz syndrome. I am also involved in various collaborations within NICHD utilizing mass spectrometry to help solve an array of biological problems.

In the near future, I hope to direct my own lab that utilizes mass spectrometry and other analytical platforms to understand neurodegenerative disorders. Mentorship is an important aspect of science education to me and I look forward to being able to mentor young scientists in the future.

In my spare time, I enjoy spending time outdoors and I'm an avid animal lover!

An IC representative is a postdoctoral-level fellow who serves on the NICHD Fellows Committee on behalf of the institute's fellow population. In general, most institutes have one basic science representative and one clinical representative. Representative appointments last for 12 months and can be renewed for an additional year. The rep also serves on the NIH-wide FelCom on our behalf.

Responsibilities of the IC representative include attending all scheduled FelCom meetings, participating on a subcommittee, disseminating information to the fellows in the IC, communicating concerns to the Committee from the IC's fellows, and coordinating the distribution of information via subcommittees. In NICHD our representatives also work closely with the Director of the Office of Education to plan events specific to our trainees.

If you would like more information about serving on the NIH Fellows Committee, please contact Brenda Hanning at [hanningb@mail.nih.gov](mailto:hanningb@mail.nih.gov).



## Recap: Writing a Teaching-Based Professorship Application

By Tek Lamichhane, Ph.D.

On Aug 6, 2012, Dr. Sydella Blatch, a former postdoctoral fellow in NICHD and currently an assistant professor of biology at Stevenson University, gave a very useful seminar about the teaching-based professorship application. Dr. Blatch shared her experiences not only with job applications but also with unique student-oriented responsibilities in teaching-based colleges. The workshop was organized through the NICHD Office of Education.

While application documents are similar between research-based and teaching-based schools, the application submissions should include a different focus and content. Dr. Blatch primarily discussed applications to schools with undergraduate and master's degree programs in which faculty divide their time into 60-80% instructional activity, 15-35% research/scholarly activity, and 5-25% service activity. During the workshop, we focused on how to write effective teaching and research statements.

Before applying for the job, you should be ready to address what the institution is looking for. Dr. Blatch suggests that we gather additional information about the school, return to and dissect the ad, and develop a list of sought-after attributes so that we can fit the specificities of the

position and institution.

In the teaching statement, we should speak to institute-specific needs as much as possible by addressing the student body, typical student needs, and the particular mission and philosophy of the school. Overrepresentation of research in the statement without mentioning teaching technique and classroom style can jeopardize your application.

The research statement should be less technical and more student-oriented. You should understand that your main focus is student learning, not advancing your particular scientific field of interest. Importantly, the research statements must fit the goals and *facilities* of the school. Without elaborating too much about past research accomplishments, future projects should be focused with the students—who might have very little experience and knowledge about the science—in mind.

This workshop was very helpful for building a solid teaching-based application as I would not have known this crucial information if I had not attended. I highly recommend that anyone who is interested in the teaching-based academic field attend these types of workshops in the future.

## Former Fellow Follow-up with Dr. Raul Rojas

Dr. Raul Rojas is a staff scientist at the NIDCR in the Section of Biological Chemistry. During his time at the NICHD, Dr. Rojas conducted research as a postdoctoral fellow in two laboratories. First, he worked in the lab of Dr. Juan Bonifacio, where he studied the molecular mechanisms and machinery of intracellular protein trafficking. Second, he spent one year in the lab of Dr. Ajay Chitnis examining the same protein trafficking pathways in the developing Zebrafish. *The NICHD Connection* caught up with Dr. Rojas to learn more about his transition from postdoctoral researcher to staff scientist:



### ***What does a staff scientist do? What's your typical day like?***

Most staff scientists I believe have at least three main responsibilities. These responsibilities include: planning and running his/her experiments, supervising the work of more junior scientists, and aiding the lab's principal investigator with multiple administrative chores.

I normally spend 10 hours per day at the lab. I start my day by meeting briefly with the postbac fellow who I am currently working with. We go over the experiments that will be done that day, and we review data from previous experiments. Then I focus my attention on my own experiments, and I get them going!

I normally use incubation times to do my reading and to complete the administrative duties I have to finish that day or week. Examples of these duties include purchasing lab reagents and lab equipment (microscopes for example), maintaining equipment, participating in institutional committees, and reading and reviewing manuscripts in preparation for the lab.

### ***What motivated you to enter this career field?***

The two main reasons I pursued a staff scientist position after completing my postdoctoral work included my family's desire to stay in the D.C. area and the fact that I really, really like to work at the NIH. The NIH is a place where one can pretty much pursue and test any hypothesis in the field. The NIH also has a vast and rich scientific community always willing to share ideas and collaborate to advance one's projects.

### ***Beginning with your time at NICHD, what sequence of opportunities led to your current position?***

I transitioned directly from my postdoctoral position at NICHD to the position I currently hold (Staff Scientist, Section of Biological Chemistry, NIDCR).

### ***Please describe the application/hiring process to become a staff scientist. Did it take a long time?***

Staff scientist positions are listed in multiple places, including [usajobs.gov](http://usajobs.gov), the Intramural

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## Former Fellow Follow-up with Dr. Raul Rojas (continued from page 6)

Science Group Members listserv (a listserv run by the Office of Intramural Training and Education, OITE), and various NIH institutes' websites. I found my position while reviewing the NIDDK site.

The job announcement required me to send a current CV and a short description of the research I would do once I joined the lab. After a couple of weeks, Dr. Larry Tabak, my current supervisor, invited me for an interview. A few weeks later, I was invited to a second interview. At that point, I was asked to give a seminar and to meet with some lab members and some NIDCR faculty.

It probably took a month from the time I first applied to my position to the time when my supervisor offered me the job. It took a while (three months) though for the administrative folks to process and finish the paper work. In total, it took four months from the time I applied to the day I started.

### ***What aspects of graduate and/or postdoctoral work will translate well into this career field?***

All! The ability to assemble a research proposal and execute the proposed experiments is important. I also rely on my previously learned communication skills to share my research in seminars, lab meetings, and in writing. As a postdoc, I also had the opportunity to supervise summer students and postbacs. That experience, I believe, helps me interact with and supervise some of the more junior members of the lab.

Importantly, as a postdoc I had the opportunity to collaborate with various

groups from the intramural program as well as groups from outside the NIH. That is something that I continue to do in my job now.

### ***Are there any particular resources that might help those interested in becoming a staff scientist?***

Staff Scientist positions are hard to come by since many times a senior postdoc in the lab is promoted to a staff scientist position. Sometimes, however, a lab may want to introduce a new technique or line of research into the group. I believe staff scientists have the knowledge and experience to implement those tasks.

People should monitor as many websites as possible. Again, good places to search are [usajobs.gov](http://usajobs.gov), job postings placed on the different NIH institutes' sites, and even the FDA site. I would also recommend that people join the forums and listserv put together by the OITE.

### ***Do you have any additional advice for fellows (either graduate or postgraduate level) who are thinking about entering this career field?***

I would advise people to be very proactive in looking for these positions in as many places as possible. Most likely, no one is going to seek you out to offer you a position!

Staff scientist is a position that offers a lot of intellectual freedom, but at the same time, one has to work on a project that is related to the main research line (or direction) of the lab. If you are OK with being part of such a setting, then a staff scientist position is the right job for you!

## Fellows Review the New eRA Commons *LikeThis* Search Tool

The *LikeThis* tool is a new thesaurus-based search tool linked to eRA commons. Users can enter a scientific abstract and click the *LikeThis* link in their eRA Commons account to retrieve a comprehensive list of related publications and/or similar grants that have already received funding. The *LikeThis* tool also provides important information, such as which Study Groups would likely review a proposal and which institutes or organizations currently have related research projects.

*The NICHD Connection* recently asked three NICHD fellows who have submitted K99 grant proposals to review the *LikeThis* tool and let us know what they think!

### DR. KEVIN FRANCIS SAYS:

I had not used the *LikeThis* tool through Commons prior to submission of my K99. I did use the NIH RePORT\* funded grant applications to identify other grants studying a similar disease or using similar methods, as well as seeing which institutes were providing the funding for each project. Both systems give similar information, though the *LikeThis* tool requires much less input and the search process is more intuitive. Another nice feature is the system ranks a project's "similarity" to your work. I told the system to search for funded projects similar to my submitted K99. It identified up to 500 other projects, each ranked on similarity to my submitted grant. A number of projects I did not identify using the RePORT database popped up (though fortunately none should be overly competitive with my own application). Now that my grant is submitted, this system could also be useful in identifying organizations with funded work similar, yet not identical to my own. This might help me identify some organizations I may not have considered when looking for faculty positions in the future.

*\*Editor's note: NIH RePORT (Research Portfolio Online Reporting Tools) is an online database that provides access to scientific reports and data from NIH-funded research proposals. You can now vote for NIH RePORT in the People's Choice Award from HHSinnovates!*

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## Fellows Review the *LikeThis* Search Tool

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### DR. JUSTYNA MCINTYRE SAYS:

Searching through grants that have already been funded is one of the “must do” things when writing your own application, especially if you are a new investigator. While I was preparing my K99/R00 grant, I intensively probed the NIH RePORT database with different key words to find out if similar research has been funded and which institute is more likely to fund this type of project. It took some time, but I found it very helpful. I wish I had access to *LikeThis* tool, as it would have saved me time and made my search easier. The *LikeThis* tool cross-examines the NIH funded grant database, as well as publications, based precisely on the project title or scientific description with a limit of 15000 characters. It definitely gives a broader view of projects funded in the area of interest and scores them based on the similarity to yours. One can also rearrange the output into different categories (study section, year of funding, investigator, etc.). The additional benefit is a quick identification of institutions where funded grants come from, as it might become useful in the future when looking for a faculty position. A broader scope of the project also stimulated the idea of new collaborations.

### DR. YVETTE PITTMAN SAYS:

When logging into eRA Commons to check out the new *LikeThis* search tool, there were two questions at the forefront of my mind: is it user friendly and does it allow me to find useful information while writing a grant? The answer to these questions is “Yes.”

Under the “My Scientific Text” tab, I used my proposed project title as the first search criterion, and *LikeThis* provided me with a list of funded NIH grants and publications related to my interest. This was good information, knowing what type of research ideas in the field received funding in the past. In hindsight of my recent K99/R00 submission, *LikeThis* would have been valuable as I determined if my specific aims had already been pursued. In addition, each search results had a *LikeThis* Score, providing quick reference as to how closely it matched the terms in my submitted text. When I clicked the “My Applications” tab, I retrieved a list of my NIH grant applications, and next to them was a *LikeThis* link. This allowed the terms in my application itself to be a basis for the search. What I liked the most was that the funded projects on my search results list were formatted, where one click would allow me to obtain additional information, linking me to the NIH Research Portfolio Online Reporting Tool. This website provided me with more details about the research project, such as the PIs and what organization they are affiliated with, the abstract, total funding, and the assigned study section. Moreover, using these sources wisely could have given me some insight into which study section my grant would have probably been assigned to.

I highly recommend that you use the *LikeThis* search tool during your grant writing process; what a valuable resource!\*\*

\*\*Editor’s Note: Most grants are only open to US Citizens. Please contact Brenda Hanning at [hanningb@mail.nih.gov](mailto:hanningb@mail.nih.gov) if you have any eligibility questions.

If you would like to use the *LikeThis* tool but do not have an eRA Commons account, please contact Brenda Hanning at [hanningb@mail.nih.gov](mailto:hanningb@mail.nih.gov) for more information.

## NICHD Fellows Intramural Grants Supplement (FIGS) Reminder

The objective of the NICHD FIGS program is to encourage fellows in the Division of Intramural Research to apply for competitive funding from intramural NIH or outside organizations and agencies, in order to develop their skills in grantsmanship, and in support of their career development. Award recipients are also contributing to the DIR by bringing in additional funding and resources, and as such merit recognition from the Institute.

### ELIGIBILITY:

Postdoctoral, visiting, and clinical fellows

### TERMS:

- » The grant for which the fellow applies must be for a competitive award of \$30,000 or more
- » The fellow must be the primary applicant on the grant application; or, in exceptional cases, the co-investigator

### AWARDS:

For *submissions*, they must be made through the Office of the Scientific Director (OSD) and signed off on by the Scientific Director prior to going forward (see NICHD Grants Administration Policy). The fellow must provide confirmation of receipt of the application by the awarding agency to the Office of Education/OSD/DIR/NICHD.

A \$250 stipend increase (limited to 2 applications maximum per year).

For applications that result in an *award*,

the fellow receives a \$1,000 stipend increase.

All stipend increases will be funded centrally through the OSD, typically at the time of the fellow's renewal. The increase carries forward for the duration of the fellow's appointment. In the case of a trainee on an FTE, a one-time award of \$500 will be made, in lieu of the stipend increase, and subject to approval of the award justification by the Office of Human Resources, NIH.

**Note:** In the case of the Pharmacology Research Associate Program (PRAT) offered through NIGMS, FIGS applies *only* if the application results in an award; no supplement will be given for applications.

### RESOURCES:

Fellows are encouraged to consult the OITE web site for a list of potential funding sources. In addition, Science Career's [www.grantsnet.org](http://www.grantsnet.org) lists many grant opportunities. Note that a fellow in the intramural program of NIH may not be eligible for all awards, and the fellow should consult with the funding agency to determine his or her eligibility in advance of submitting an application. Certain funders may be ineligible as well, because of their intellectual property clauses (IP) or because of potential conflicts of interest. Fellows may also consult the NICHD Office of Education for guidance.

## October Announcements

### CONGRATULATIONS TO STEPHANIE COLOGNA FOR RECEIVING TWO AWARDS!

Dr. Stephanie Cologna, postdoctoral fellow in the lab of Dr. Forbes Porter, will certainly appreciate the new FIGS incentive ([see page 10](#))! Stephanie recently received the National Niemann-Pick Disease Foundation Peter Pentchev Research Fellowship and the Smith Lemli Opitz Syndrome Research Grant. Not to mention, she is our new IC (Institutes and Centers) basic science representative. Congratulations Stephanie!

### NETWORK FOR FRENCH SPEAKING SCIENTISTS

If you are French or a French speaker, you can join FR@NIH, the informal network of French scientists at NIH.

FR@NIH :

- » helps fellows on all sorts of issues (housing, various information, etc...)
- » provides information about research and funding opportunities back in France
- » maintains relations with the Science and Technology Mission of the French Embassy
- » connects the French community with some fun and social gatherings, lunches, happy hours and others...

If you are interested in being part of FR@NIH, then sign up for the mailing list:

<https://list.nih.gov/cgi-bin/wa.exe?A0=franih>

## October Events

### THURSDAY, OCTOBER 18, 6 PM

D.C. Art Science Evening Rendezvous  
Keck Center, 500 Fifth St NW, Washington D.C.  
Doors open at 5:30 p.m.  
<http://www.cpnas.org/events/daser-101812.html>  
*Registration required*

### TUESDAY, OCTOBER 23, 10 AM-12 PM

Interview Skills Workshop, for senior fellows  
For those of you actively looking for jobs this fall, this seminar is designed to help scientists make a strong impression during a job interview. The seminar focuses on identifying singular examples to help answer questions, and expected questions, themes, dilemmas and comportment will be analyzed through interactive exercises and peer review. Note there are 12 spots available for this workshop, if you would like to attend, please sign up by sending an email to Yvette Pittman at [Yvette.Pittman@nih.gov](mailto:Yvette.Pittman@nih.gov).

### THURSDAY, OCTOBER 25, 3 PM

NIH Science Education Conversation Series  
Basic Cognition for Numbers: Potential Impacts in the Science Classroom  
Building 50, Room 1328/1334