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The NICHD Connection

August 2011

INSIDE THIS ISSUE

Former Fellow Follow-up with Melissa Cunningham	1
Letter from the Editor	2
Scientists Teaching Science 9-Week Course Review	3
Committee Corner Column: July Committee Meeting Minutes	4
Building A Bridge Using the Assistant Clinical Investigator Program	5
Networking Demystified	8
"Writing Your Grant Application" Workshop Recap	9
August Announcements	10
August Events	11
PhD Comics	11

EDITOR IN CHIEF
Shana R. Spindler, PhD
Shana.Spindler@gmail.com

LAYOUT & DESIGN
Nichole Jonas

CONTRIBUTORS
Angela Delaney, MD
Anuj Pradhan, PhD
Payal Ray, PhD
Shana R. Spindler, PhD
Valerie Virta, PhD
Erin Wolff, MD

PHOTOGRAPHY
Jeremy Swan (ACI photos)
Stock.XCHNG

Former Fellow Follow-up with Melissa Cunningham

Dr. Melissa Cunningham

This month, *The NICHD Connection* interviewed Dr. Melissa Cunningham, NICHD former postdoctoral fellow and one of the career table participants at the Seventh Annual NICHD Fellows Retreat. We asked her a few questions about her career as a science officer:

Q: What is your current title, and what do you do? What's your typical day like?

A: Science Officer. I manage scientific grants awarded to researchers by the Department of Defense [DoD] through the Congressionally Directed Medical Research Program [CDMRP]. On a typical day, I spend most of my time managing my grant portfolio, checking up on awards that are having technical difficulties, responding to requests from PIs who need extensions for their awards or maybe are in the process of moving to a new institution and want to take their DoD award with them. I also spend a lot of time reviewing requests that come through our contracting office, providing my scientific opinion on contractual matters for the awards. I am involved in a lot of meetings related to the scientific program that I manage grants for, including Peer Review sessions, and I attend meetings for groups that focus on other missions for the CDMRP organization, such as Technology Development, Small Business Research awards, and tasks related to program evaluation.

Q: How did you find out about this job?

A: I found out about the job through a personal contact at NIH, who was in contact with another individual at CDMRP who used to be a postdoctoral fellow at NIH before becoming a Science Officer. Positions for our organization are also posted publicly on the web through a few different websites.

Q: Please describe the application/hiring process. Did it take a long time?

A: The application process was quite simple and straightforward. I simply sent in my resume with a cover letter that clearly explained why I wanted to be

(continued on page 2)

Letter from the Editor

Grab a cold lemonade, stretch out on your favorite lawn chair, and get ready for a great read! We've packed this issue with interviews, fellow profiles, event recaps, a teaching course review, the committee meeting summary, and of course, August announcements and events. In fact, there's so much to read that I won't take anymore of your time here!

Your Editor in Chief,
Shana R. Spindler, PhD

Please email questions, comments, and ideas to Shana.Spindler@gmail.com.

Former Fellow Follow-up with Melissa Cunningham

(continued from page 1)

considered for the job, including some examples of why I would be an excellent fit for the job based on the job description. Once I was selected as a candidate, I went through an initial phone interview. The phone interview was followed by a face-to-face interview that asked some difficult, detailed questions. In general, they wanted to see if I could use my scientific skills and logic to come up with reasonable answers, indicating that I would be capable of making the right kinds of decisions to be successful at this type of job. The entire process moved very quickly. From the time I submitted my resume to when I had the job offer was about 3 months. It took another 3 months to go through the actual hiring process before I officially started my new job.

Q: Did you do anything in particular at the NICHD to prepare you for your career transition?

A: I was fortunate to have the opportunity to spend 6 months doing a detail (internship) in a Program Office at NICHD, working with Health Science Administrators (NIH's equivalent to Grants Managers) to learn some of the things they do in their job. This not only gave me some real-world experience outside of the lab that I could incorporate into my resume and cover letter when I applied for the job, but also helped me figure out that this job was a good fit for me. Once I had officially accepted the position, I did not do anything else specific to prepare me for the actual transition.

Q: Do you have any advice for fellows who are thinking about entering this career field?

A: Always look for ways to get additional experience in the types of skills that will be most helpful to employers who would be considering you for these types of jobs. Check out job postings online that look like what you would be interested in applying for, and see what types of requirements they are looking for, then try to build your resume in those areas.

Q: What are some of the future career options for someone in your position?

A: There are not necessarily a lot of "vertical" movement / promotion options in my organization. Some Science Officers transition to become Program Managers, which while not necessarily a promotion, is a much more demanding position with more responsibility and thus considered the closest thing to a promotion. Otherwise, many Science Officers that are looking for the next step in their careers will typically pursue additional options outside of CDMRP, such as NIH. A few past Science Officers at CDMRP have moved on to become Program Directors for NIH's Extramural Programs.

Scientists Teaching Science 9-Week Course Review

By Anuj Pradhan, PhD

Too often, scientists who choose an academic route receive minimal training in the art and science of teaching. While a few may have assisted, lectured, or managed independent courses during doctoral training, this practice is not the norm. A lack of teaching experience is all the more unfortunate given that a popular career trajectory for a doctoral researcher is to join the ranks of academia. There is an expectation to conduct high quality research at the same time as teach classrooms full of undergraduates and graduate students.

To address this issue, OITE offers a 9-week Scientists Teaching Science (STS) course. The goal of this course is to provide postdocs with in-depth training in science education and pedagogy. All of the learning materials are supplemented by peer-reviewed papers, real-life examples and anecdotes, and statistics from the education science community.

The instructor, Ms. Barbara Houtz, is a highly acclaimed and decorated science educator who infuses the course with her substantial experience, vitality, and enthusiasm. She is a key reason why the course is in such high demand. This year, Barbara taught two sections on campus and three sections remotely at Rocky Mountain Labs, Frederick, and Baltimore.

Barbara teaches the course with a dynamic approach and encourages both individual participation as well as team learning in an environment that actively prepares the attendee for a career in academia. Participants are exposed to the popular distance-learning format and electronic collaboration via mainstream on-line Learning Management Systems (LMS) such as Canvas by Instructure.

The course offers an in-depth examination of the fundamental and theoretical framework of teaching with an emphasis on preparation for and exposure to real world classroom scenarios. Each participant is expected to create, in collaboration with an assigned group, an educational philosophy statement. As the weeks progress, this statement is then tweaked with the inclusion of new material and active feedback from the instructor and other group members.

A select set of critical lessons are covered during the course, including inquiry-based science, teaching methods and aids, learning domains and styles, and Bloom's Taxonomy for learning objectives. Using this information, participants explore how to establish course objectives, generate a syllabus, and create student assessments.

Barbara also addresses the importance of cultural awareness and diversity in the classroom, providing alternative lecturing techniques for various situations. The course strives to emphasize cultural diversity and helps adjust expectations about classroom scenarios and the role of the teacher as an educator and mentor.

As an international visiting fellow with little experience in lecturing—let alone creating a course from scratch—the STS course was an eye opener for me. The fundamentals of pedagogy, learning theory, and teaching techniques are undoubtedly informative and helpful, but the most unique benefits that I have extracted from this course are the insights into the educational culture in US higher education and the help with educational philosophy and curriculum development, all in a nurturing and immersive environment. This course effectively helps a postdoc kick-start an academic career with a strong science education foundation and calibrated expectations.

Editor's note: *Fellows must take the 2-hour Scientists Teaching Science workshop in the same academic year as a perquisite for the Scientists Teaching Science 9-week course. For more information, please visit* ***https://www.training.nih.gov/sts_main_page****. Note, as well, that for the past six years NICHD has offered Becoming an Effective Scientist, an 11-week course directed and taught by fellows in our institute, to NICHD and NIH postbacs—a great teaching experience. We also hold one in-depth teaching workshop each year, watch for announcements.*

Committee Corner Column: July Committee Meeting Minutes

By the NIHCD Fellows Committee

The NICHD Fellows Committee met on July 12, 2011 to discuss future activities and opportunities for the NICHD fellow community. The agenda included workshop proposals, new article ideas for *The NICHD Connection*, suggestions for NICHD fellow socials, and 2012 NICHD Fellows Retreat planning.

The postbac course offered in the fall is signing up teachers now. Given the importance of providing instruction about effective teaching to postdocs who are considering academic careers, a teaching workshop is being planned for the coming months. This training will help ensure success of the postbac course as well as enhance postdoc career development. The course director for 2011 is Dr. Yvette Pittman, from the laboratory of Dr. Thomas Dever.

After some discussion, the committee agreed that walking to downtown Bethesda for lunch gatherings or happy hour may be a bit limiting for fellows who are on a tight schedule during the day. Therefore, a series of brown bag lunch sessions will be planned over the coming months instead. The committee would also like to plan a bowling get-together for fellows.

Megan Sampley (**sampleyml@mail.nih.gov**) needs suggestions for patent law professionals who can speak to interested fellows about careers in intellectual property and patent law—for the (attempted) revival of the Intellectual Property and Patent Law Interest Group.

On a final note, Kevin Francis (**franciskr@mail.nih.gov**), our NICHD basic sciences representative for NICHD and to FelCom, is looking for committee members to help plan the 2012 NICHD Fellows Retreat. Please contact him if you are interested.

The next NICHD Fellows committee meeting will be **Tuesday, October 11, 2 p.m**. Remember, the second Tuesday at 2! Location to be determined.

Building a Bridge using the Assistant Clinical Investigator Program

By Shana R. Spindler, PhD

The path from graduate student to tenured faculty is pretty straightforward: a doctoral degree leads to postdoctoral research and finally to an assistant professor position. If all goes well, you enter a tenured career. Grants such as the K-99 provide the means for a graceful growth into an independent scientist. But what if this is not your course? What if you have completed a medical degree, have spent three years in residency, and have finished a successful subspecialty fellowship?

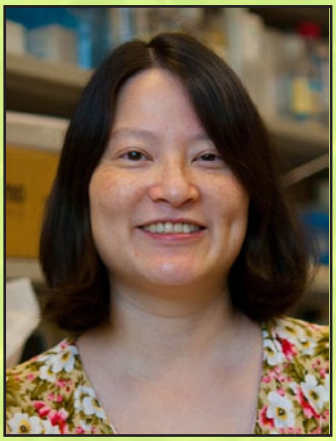
Since 2009, the NICHD has supported the Assistant Clinical Investigator (ACI) program, a unique opportunity to help clinical fellows etch a path toward independent clinical research. Open to both NIH and non-NIH clinical fellows, the ACI program is a highly desired, competitive program that provides resources and funding for budding clinical scientists.

To date, two clinical fellows, Drs. Joan Han and Maya Lodish, have participated in the program for nearly two years. Two more fellows, Drs. Erin Wolff and Angela Delaney, are new to the group as of this July.

Ask either Joan or Maya about their thoughts on being an ACI, and you will quickly learn that they view this program as critical to their success as clinical researchers. "The ACI program is filling a need to provide a bridge between fellowship years and being an independent investigator," says Maya, "It's giving me protected research time and funding to be able to focus on developing into a physician scientist."

Not only does this program bridge the gap in training, ACIs directly link the laboratory research to the clinic in a multidisciplinary setting. Maya, for example, has been in collaboration with the National Cancer Institute working on using tyrosine-kinase inhibitors in thyroid cancer therapeutics.

Having this program at the NIH provides benefits that cannot be found elsewhere. "The NIH Clinical Research Center is ideal for conducting clinical research, particularly for an early-career researcher who has minimal independent funding, since the cost of patient visits and testing is covered (for the most part) by the intramural research programs," says Joan.



Dr. Joan Han

Beyond the clinic, ACIs are exposed to valuable mentorship opportunities and unique education enhancements. Apart from primary mentors, mentorship committees provide feedback to ACIs during biannual meetings, and ACIs serve as mentors themselves to clinical fellows and summer students. As an added bonus, Maya has taken advantage of getting a Duke/NIH masters degree in clinical research as part of her ACI training, allowing her to apply what she learns from the Duke curriculum to her clinical work.

Dr. Maya Lodish

The NICHD is a place where bench meets bedside and clinical research has been elevated to a new level. The ACI program helps clinical fellows become the independent clinical investigators that make it all happen. "The ACI program, for me, has been a tool to help me reach my career goals. My hope is to gain enough experience in this 3-5 year ACI program to be able to launch a career in translational research either here at the NIH or at an extramural academic institution," says Joan.

Simply put, Maya describes this opportunity as "a really phenomenal program that's filling a need."

(continued on page 6)

Assistant Clinical Investigator Program

(continued from page 5)

Without Further Ado, the new Assistant Clinical Investigators

The NICHD Connection is pleased to introduce Dr. Erin Wolff and Dr. Angela Delaney as the new Assistant Clinical Investigators.

ERIN WOLFF, MD

Unit on Reproductive and Regenerative Medicine
Program in Reproductive and Adult Endocrinology, NICHD
Molecular and Clinical Hematology Branch, NHLBI

Mentor: John Tisdale, MD

Research

The Unit on Reproductive and Regenerative Medicine conducts translational research on disorders impacting reproduction. Particular areas of interest are endometrial stem cells and conditions affecting the endometrium, which can result in a wide variety of gynecologic problems such as scarring of the uterine cavity (Asherman's syndrome), abnormal uterine bleeding, endometriosis, infertility due to implantation failures, and recurrent pregnancy loss.

Research Statement

My research unit studies the endometrium and endometrial related conditions such as Asherman's syndrome, abnormal uterine bleeding, recurrent miscarriages, infertility due to implantation failures, and endometriosis. Areas of focus include characterization of endometrial stem cell function, possible therapeutic applications of endometrial stem cells, sources of endometrial stem cells, and cellular therapies to correct endometrial-related conditions. Model systems used for study include: 1) patients at the NIH who have undergone peripheral blood stem cell transplantation (PBSCT) for non-malignant hematologic conditions (e.g., sickle cell disease), as well as 2) autologous *Rhesus macaque* PBSCT model created by the Tisdale Lab (Molecular and Clinical Hematology Branch, NHLBI). We are using these models to study endometrial engraftment from bone marrow derived cells and the endometrial effects of bone marrow derived cells residing in the uterus.

In addition, we are studying a rare familial syndrome with reproductive phenotype due to a germline mutation in the gene *HRPT2*. Patients with this disorder suffer from life-threatening heavy menstrual bleeding (often requiring hysterectomy at young ages), recurrent pregnancy loss, and benign and malignant uterine tumors (frequently mesodermal lineages). We are using endometrial cells from patients with this condition to generate reproductive disease-specific, induced pluripotent stem cells with which to study reproductive disorders.

(continued on page 7)

Assistant Clinical Investigator Program

(continued from page 6)

ANGELA DELANEY, MD
Unit on Genetics of Puberty and Reproduction
Program on Developmental Endocrinology and Genetics, NICHD

Mentor: Constantine Stratakis, MD, D(med)Sci

Research

The Unit on Genetics of Puberty and Reproduction focuses on the genetic and neuroendocrine factors underlying the onset of pubertal development and regulation of reproductive capability.

Research Statement

My research group, the Unit on Genetics of Puberty and Reproduction, is interested in identifying the key initiating factors for pubertal onset in children. In infancy, gonadotropin-releasing hormone (GnRH) is secreted from neurons in the hypothalamus, which become quiescent during childhood and are reactivated at the time of puberty to complete sexual maturation. Investigation of patients with the rare genetic disorder of isolated congenital GnRH deficiency, or idiopathic hypogonadotropic hypogonadism (IHH), has led to important insights into the higher neural regulation of GnRH secretion. In collaboration with the Reproductive Endocrine Unit at the Massachusetts General Hospital, we are conducting translational research on the neuroendocrine and genetic control of GnRH secretion, and its regulation of gonadotropin secretion and gonadal physiology. Our focus is on genetic defects and phenotypic characteristics in patients with IHH and their families. We use molecular, cellular, and biochemical techniques to identify and characterize biological pathways that may contribute to the reactivation of GnRH secretion at puberty and to explore diagnostic techniques and treatment of disorders of puberty and reproduction.

Full profiles for all ACIs and more information about the NICHD Assistant Clinical Investigator program can be found at ***http://aci.nichd.nih.gov****.*

Networking Demystified

By Payal Ray, PhD

Networking is "the practice of making meaningful contact and exchanging information with other people, groups or institutions."[1]

Interaction is an important part of most careers in science, but what if you are the type of person who avoids meeting new people or fears building connections through networking. To help people who dislike networking, OITE recently organized a seminar titled "Networking for People Who Hate Networking" presented by Devora Zack, author of the recent bestseller with the same title. The presentation consisted of fun activities for the participants followed by practical and helpful tips for overcoming the fear of networking.

According to Devora, most people hate networking because they approach making contacts as a chore. Others with a shy personality simply do not want to talk to new people. Without trying to convince attendees why they should network, Devora, a self-proclaimed introvert, approached the reluctance to networking by giving helpful tips on how to make interaction easy.

Here are the primary rules for how to alleviate the fear of networking:

- Choose one to two networking events in a year and do not try to talk to everyone in the room. The key is to make a meaningful connection, even if it is only with one person.
- Remember, you have something to offer to everyone. So to strike up a conversation, get creative. Having trouble remembering names? Ask for the spelling and then repeat it.
- When networking, start with general questions. Often, in an attempt to make a connection quickly, people ask personal questions which may offend someone. Instead, ask a few general questions, and then let the other person lead the way in the conversation. If your audience has an extroverted personality, then anything will get them going. If the other person is an introvert or a centrovert (yes, it is a real word), then it is a good idea to read up on a few general topics of interest before going to any event.
- Do not talk to the same person throughout the entire evening, but do not try to work the whole room either.
- Follow up within 48 hours of the event with an email or a thank you note. Make your note/email unique by asking about something the speaker mentioned or attaching an article of interest. To make a big impression, consider sending a handwritten note. Think creatively.
- Find alternatives to serious networking events. Attend an event at a music or movie fan club or volunteer at an event (this will give you ample opportunities to talk to others).

You can find these and other networking tips in Devora's book "Networking for People Who Hate Networking: A Field Guide for Introverts, the Overwhelmed, and the Underconnected." A copy of the book is available in the OITE library.

Remember, life is a networking event where you are constantly making connections without actually trying to connect.

[1] www.yourdictionary.com

"Writing Your Grant Application" Workshop Recap

By Valerie Virta, PhD

On July 22, 2011, postdoctoral fellows from NICHD, NIDCR, and NHGRI attended an engaging workshop entitled "Writing Your NIH Grant Application." Dr. David Morrison, a faculty member and former chair at the University of Missouri, led the event. Dr. Morrison and a colleague developed the workshop material in response to new faculty hires lacking grant-writing skills, but the information conveyed during the session was useful for anyone writing a research proposal.

Writing a grant is not for the faint of heart, and it should certainly never be done alone! Always remember to make use of every resource possible, such as your PI and the Office of Education. And, while it may seem like common sense, carefully reading and following instructions is the most important lesson from the workshop!

When beginning the proposal, the applicant must meticulously construct the specific aims portion of the grant application. One can then recruit peers and mentors to give feedback on the logic of the aims. Once the specific aims are fully polished, the rest of the application can be written much more easily.

Next, the proposed study must be placed in a larger context. This includes verifying that the proposed studies haven't already been done—that's a sure fire way not to get funded! A thorough literature review is important in this step.

Following the literature review, the applicant must explain how the specific aims will be accomplished. The most common pitfall is including too much detail, or making experimental plans that are unrealistically expansive.

Once the entire proposal is written, it is best to get more feedback. To ensure that colleagues will have time to review the proposal, ask them a couple of months ahead of time rather than waiting until the proposal is finished, when a tight deadline may be looming and calendars may already be full.

Finally, although a cover letter may seem optional, it is something you should carefully write and include. The purpose of the cover letter is to ensure that the grant proposal is sent to the appropriate study section for review. Thoroughly examine the study section website to construct the explanation for why the proposal should go to the chosen section. While specific people cannot be requested as reviewers, the cover letter is the place to request that specific people NOT be shown the proposal.

The workshop contained many more helpful details about grant writing than can be mentioned here (all the more reason to attend next time). Much of the information presented is included in the coveted "Grant Application Writer's Workbook," a 195-page, up-to-date reference, given to workshop participants.

WHAT FELLOWS HAVE SAID ABOUT DR. MORRISON'S WORKSHOP

"By far, this was the best grant-writing workshop/seminar that I have ever attended."

"David was a great presenter and I found the seminar very useful."

"I think it was a great workshop and I gained a lot of information from Dr. Morrison's talk. Thanks a lot!!!"

August Announcements

A MESSAGE FROM THE LAB CHALLENGE WORKING GROUP

The National Institutes of Health (NIH) is pleased to announce the Lessons About Bioscience Challenge, 2011–2012, which began June 8, 2011. We're asking individuals, groups, and organizations to submit procedures for the best health and life science related experiments for grades K–12 classrooms. Entries must relate to the NIH mission and use inexpensive, easily accessible materials. The submission deadline is December 1, 2011.

Winning submitters will receive an exclusive NIH LAB Challenge electronic badge and be featured online and in print in our NIH Best Experiments publication.

Please help us bring cool experiments into the classroom so everyone can enjoy doing science! Your organization could get involved in the following ways:

- Visit the LAB Challenge Web sites at **http://LAB.challenge.gov** or **http://science.education.nih.gov/NIHLABChallenge.nsf** for details.
- Distribute information about the challenge to others by sharing the Challenge link, **http://LAB.challenge.gov**.
- Download and distribute the challenge flyer from **http://science.education.nih.gov/NIHLABChallenge.nsf**.
- Organize a group to participate! Entry instructions are at **http://LAB.challenge.gov**.
- Highlight the challenge on your Web site.
- Tweet about it through your Twitter account.
- Announce the K–12 Lessons About Bioscience Challenge on your Facebook page.
- Follow challenge tweets under **#labchallenge** **@NIHSciEd**.

Join the challenge and submit today! For more details – and to give us your feedback, please contact Carla Easter at **easterc@mail.NIH.gov** or Cindy Allen at **allency@od.nih.gov**.

SAVE THE DATE!

Friday, September 2, 9-11, Speaking about Science Workshop with Scott Morgan. Sign up with Brenda Hanning at **hanningb@mail.nih.gov**

Monday, September 26th, 11-1, Job Interviewing workshop—perfect preparation for individuals who will be looking for employment in the coming year. Gain a competitive advantage by learning how to present yourself well!

CALL FOR RETREAT STEERING COMMITTEE PARTICIPANTS

Would you like to gain administrative skills or event planning experience? If you answered yes, you may want to consider serving on the Steering Committee for the NICHD annual retreat, to take place May 2012. Please contact Brenda Hanning at **hanningb@mail.nih.gov** for more information.

August Events

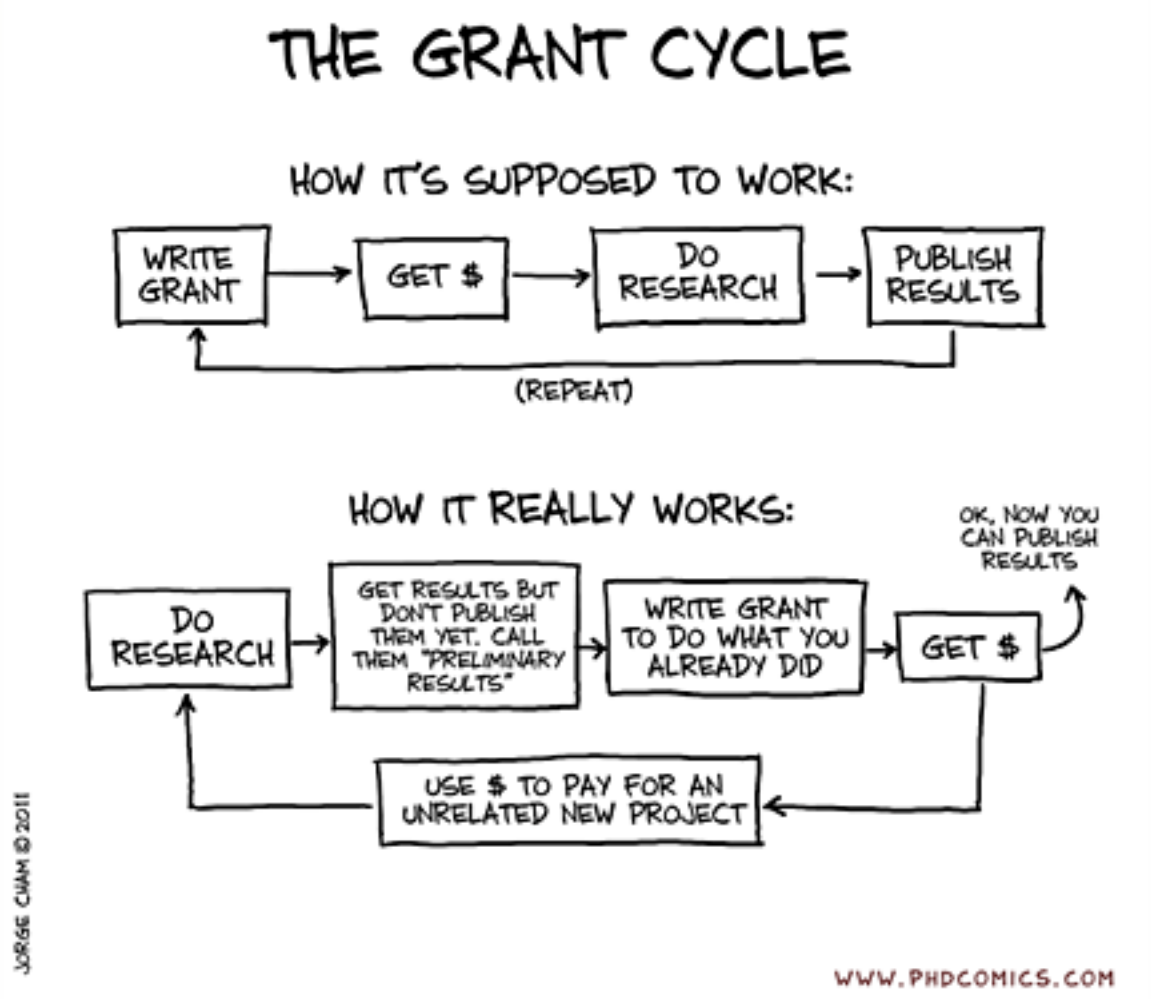
MONDAY, AUGUST 8, 6:30-8:30 PM

DC Science Café
Beyond Genes: Your Other DNA
Stephen C.J. Parker of the Genome Technology Branch within the National Human Genome Research Institute
Busboys and Poets, 5th and K St., NW Washington DC
The first two cafe events were standing room only, so come early!

THURSDAY, AUGUST 11, 8-5 PM & FRIDAY, AUGUST 12, 8-5 PM

Management Boot Camp
Building 50, Room 1227
Pre-registration and selection required

PhD Comics



http://www.phdcomics.com/comics.php?f=1431