

The NICHD Connection

August 2016

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Tips for Successful Grantsmanship: Annual Workshop Recap

By Pushpanathan Muthairulan, PhD

The key element of a successful grant proposal is being able to sell novel ideas to reviewers. Remember, first impressions are hard to change. Grant writers need to capture the reviewer's attention, identify credible needs, and make ideas understandable to expert and non-expert reviewers. Understanding the creation process of a grant proposal and the review criteria are essential.

The NICHD Office of Education, in collaboration with four other institutes, organized a "Write Winning NIH Grant Proposals" seminar and workshop on July 14, 2016. Dr. John D. Robertson, associate member of the Grant Writers' Seminars & Workshops, LLC, has been successful in obtaining competitive extramural funding from both NIH and non-federal sources. In this workshop, he covered NIH grant application preparation, basic grant structure, and strategies for producing well-written research proposals.

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BASIC COMPONENTS OF AN NIH GRANT APPLICATION

The basic NIH grant application includes the following components:

1 SPECIFIC AIMS (1 PAGE)

The Specific Aims include the concise goals of the proposed research and a summary of the expected outcomes.

Structure Specific Aims into 4 paragraphs:

- 1st Paragraph – identify the "need"
- 2nd Paragraph – outline the idea for a solution
- 3rd Paragraph – spell out the approach
- 4th Paragraph – summarize expectations and impact.

It's highly critical by the end of the opening paragraph to convince every reviewer that there is a *bona fide* "problem" or "need" (that is relevant to the

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Letter from the Editor

Recently, I was chatting with a friend who was reviewing a colleague's research plan. The writing was so complicated that he couldn't understand the point of the proposal. For fun, he ran it through a language analysis program and found that some of the writing was at a 28.6 grade level. One sentence had 51 words (this entire paragraph is 62 words).

The success of your research depends on your ability to fund your projects. For now, scientists must submit proposals to granting organizations that decide which research is worthy of their money. You might have a brilliant idea, but if a reviewer gets lost in your grant application, you won't receive funding. Learning how to use concise language in a well-organized proposal is a critical skillset for your scientific career.

We've got you covered. NICHD fellow Dr. Pushpanathan Muthuirulan **recaps the annual grant-writing seminar** for our feature article this month. He outlines the critical components of an NIH grant proposal and highlights important points to keep in mind. It's a great article for your grantsmanship toolbox.

As you enjoy the final weeks of summer, don't forget to check out the **August announcements** and **events**. Plus, we give a warm hello to our **incoming group of NICHD clinical fellows**. They represent an amazing team of talent joining our institute. Welcome!

Your Editor in Chief,
Shana R. Spindler, PhD

Please send questions or comments to Shana.Spindler@gmail.com.

Tips for Successful Grantsmanship

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mission of the funding agency), or else everything that follows will be very difficult to “sell” to the reviewers! Ensure that proposed aims are interrelated, but not interdependent, and avoid indeterminate objectives.

2

RESEARCH STRATEGY (6-12 PAGES)

The research strategy contains the significance, innovation, and approach of your proposed project.

The **Significance** section establishes the scientific premise by including existing evidence (e.g., statistical evidence). The scientific premise for each aim should be accompanied by a literature review and preliminary results. It is highly important to explain why your contribution will have an NIH-relevant positive impact.

Note on new NIH guidelines: *If human subjects and/or vertebrate laboratory animals will be used in the proposed research, to properly inform the research design, preliminary data should be generated using both sexes, unless use of a single sex can be justified (NOT-OD-15-102)*

The **Innovation** section should emphasize a new and substantially different way of addressing an important, NIH-relevant problem that requires a departure from the status quo and could lead to new scientific horizons. It should follow the significance section and can be one-third to one-half page long.

The **Approach** is an essential review component in a grant application. The purpose of this section is to describe how the proposed research will be carried out. It's important to avoid the inclusion of mindless minutiae. Provide only meaningful details in a succinct manner. Include a timetable indicating important “milestones” that will underscore progress, which will be highly helpful for reviewers during the review process.

3

APPLICANT AND ENVIRONMENT

This section contains information about the applicant, in the form of a biographical sketch, and the applicant's research environment.

The information included in the **Biographical Sketch** should reflect that you have the required expertise necessary to successfully pursue the proposed project.

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Tips for Successful Grantsmanship (continued from page 3)

The biographical sketch should contain the following items:

- » Chronological listing of your education and training
- » Personal statement
- » Positions and honors
- » Contributions to science (half page) – list each contribution, including supporting material. Use up to four supporting publications
- » Research support – applicants are asked to list all of their funding sources within the last three years

The **Environment: Contribution to Success** description should reflect how the research environment would facilitate success of the project. This section should include truly distinguishing features of the research environment such as

- » Key collaborative arrangements
- » Extraordinary institutional commitments
- » Rich intellectual environment

For example, early-stage investigators can provide more information about their institutional environment related to space, equipment, start-up funds, protected time for research, salary, technical and administrative support, and organized research interest groups.

4

BUDGET

The budget is the monetary amount you will need for your proposed project. There are two budget types: modular and detailed.

You use a **modular budget** form if you meet the following criteria:

- » Your budget is less than \$250,000 per year
- » You are applying for a R01, R03, R15, R21, or R34
- » Your organization is based in the United States

If you do not meet each of these requirements, then you should use a detailed budget, also known as an **R&R budget form**. More information can be found at “[Develop Your Budget](#),” an NIH guide on creating a budget for your NIH grant application.

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Tips for Successful Grantsmanship

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5

TITLE

The title is the first thing a reviewer will see. A title should be highly informative and engender enthusiasm. It greatly contributes to the funding agency's (and reviewers') first impression of a grant proposal.

6

PROJECT SUMMARY

The project summary is one of the most important sections during the grant review process, because all reviewers will read it, not just those assigned to the application. The project summary should be a stand-alone section that includes the need or gap that drives the proposal, long-term objectives, specific aims, and research design. Do not use this section to summarize past accomplishments or to review background material. You must write the summary in plain English, which is easily interpretable by laypersons.

Note on New NIH guidelines: Grant writers are allowed to write 30 lines for the project summary for R- and K-series applications

7

PROJECT NARRATIVE

The project narrative is a two- to three-sentence description of the proposal's relevance to public health. It is highly recommended that writers include relevance to the mission of the institute or center here, rather than in the project summary.

Note: The NIH SF 424 Application Guide requires that the project narrative of the proposal be written in plain, lay language.

Grant writers should always keep in mind: *Why should reviewers read my proposal?* Answering this question will provide an effective path to successful grantsmanship. Creating a grant proposal that is "reviewer friendly," following NIH grant policies and guidelines, will help researchers sell innovative ideas in the crowded marketplace of grant applications.

PRAT-Specific Tips

The Postdoctoral Research Associate Program (PRAT) is a three-year Fi2 fellowship (*i* stands for intramural) available to NIH fellows in their first two years of postdoctoral studies. In addition to stipends and travel allowances, the program provides professional development activities and relevant skills training sessions.

The NICHD Office of Education held a PRAT-specific workshop on July 13, 2016, to help guide fellows through the detailed application process. If you missed this event, please contact Yvette Pittman (pittmanyv@mail.nih.gov) for helpful documents, including notes on preparing your Fi2 application and required documentation.

Don't miss out on this exciting grant opportunity. Here's what current PRAT-fellow Dr. Joo Yun Jun (Yanovski lab) says about her experience in the program:

“PRAT offered me not only a great opportunity to write a full proposal with ongoing research support for the next three years as a postdoc fellow but also offers a valuable chance to meet other PRAT fellows and guest speakers on different career paths, through monthly seminars. Being in the PRAT program for the past year was absolutely beneficial, as I participated in various professional development activities and learned about new scientific resources that improve my career planning and research experience in the lab.”

Dr. Jun studies childhood obesity. In particular, she focuses on the molecular mechanisms of melanocortin 3 receptor-associated obesity using humanized knock-in mouse models of the receptor.

A Warm Welcome to Our 2016 Incoming Clinical Fellows

The NICHD Connection would like to introduce our newest clinical fellows. Welcome to the family!

Inter-Institute Endocrinology Training Program



Marissa Lightbourne Kleinow, M.D.

Residency: Wayne State University, Detroit Medical Center



Hongxiu Luo, M.D.

Residency: Raritan Bay Medical Center, Perth Amboy, NJ

Pediatric Endocrinology Inter-Institute Training Program



Hilal Sekizkardes, M.D.

Residency: SUNY Downstate Medical Center, Brooklyn, NY



Ahmed Torky, M.D.

Residency: Icahn School of Medicine, Mount Sinai-Elmhurst, NY



Angeliki Makri, M.D.

Residency: Icahn School of Medicine, Mount Sinai-Elmhurst, NY

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A Warm Welcome to Our 2016 Incoming Clinical Fellows

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Reproductive Endocrinology and Infertility Training Program



Justin Pilgrim, D.O.
Residency: Tripler Army
Medical Center, Honolulu, HI



**Nicole Pfaeffle Doyle,
M.D., Ph.D.**
Residency: Medstar
Washington Hospital
Center/Georgetown
University Hospital,
Washington, D.C.



Toral Parikh, M.D.
Residency: Medstar
Washington Hospital
Center/Georgetown
University Hospital,
Washington, D.C.

Committee Corner Column: NICHD Fellows' Advisory Committee Up and Running

By Yvette Pittman, PhD

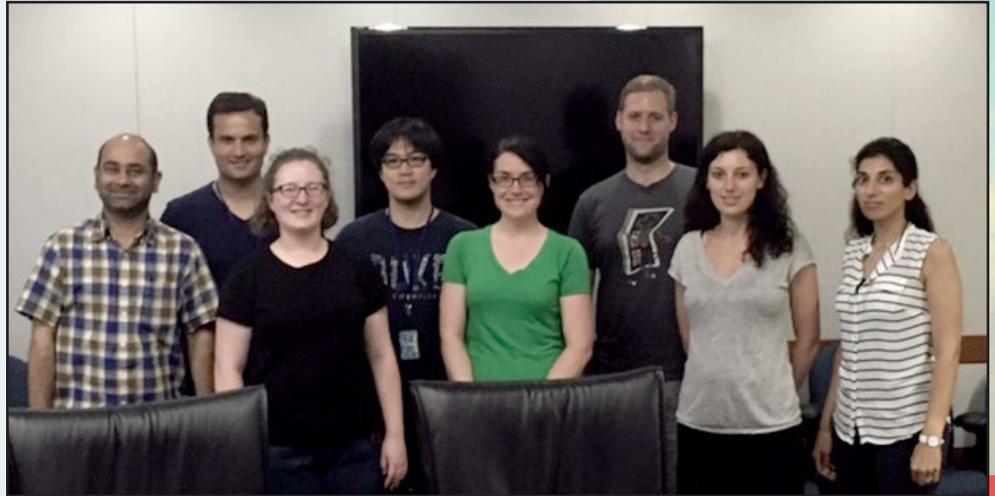
Our fellows' advisory committee re-launched this year, and the monthly meetings have been a great success!

We have a common goal in mind: to improve the overall training experience for NICHD intramural fellows. As a group, we have many plans for the future. To start, we've established a list of relevant topics, from organizing social events to offering sessions that expose fellows to various careers in science.

Since January, we have spent a fair amount of time brainstorming about professional development activities related to grant writing and communications strategies for difficult conversations, both in and outside the lab. One of our meetings even focused on ways to enhance our new annual progress report system for postdoctoral and clinical fellows. Since many fellows are interested in apply for external funding during their postdoctoral training, we are planning to create a website listing the many different competitive grant opportunities.

We are always looking for fellows within the institute who want to get involved. Both domestic and visiting fellows are encouraged to join; we welcome your input!

If you are interested in joining the advisory committee, please contact Yvette Pittman at yvette.pittman@nih.gov. We meet for one hour, the last Thursday of every month, at 3:30 pm in Building 31 on campus.



Left to right: Sourav Haldar, Saroj Regmi, Courtney Kurtyka, Shane Chen, Erin Gray, Jakob Gutzmann, Julia Rodiger, Neda Sadeghi

Members not pictured: Afrouz Anderson, Suna Gulay, Fady Hannah-Shmouni, Pushpanathan Muthurulan, Parmit Singh

August Announcements

SAVE THE DATE: NICHD POSTBAC ORIENTATION SESSION & PIZZA LUNCH

Wednesday, September 7, 12 – 1 PM
Building 31, room 2A48

Our institute has approximately 50 postbacs conducting both clinical and basic science research. We would like to bring you together to meet each other and share some volunteer and training opportunities such as ICU simulator rounds, the “Becoming an Effective Scientist” postbac course, shadowing at our Genetics Clinic, and volunteering at the Children's Inn.

With career development, outreach, and social activities, we want to enrich your NIH experience! If you would like to attend, please contact Yvette Pittman at pittmanyv@mail.nih.gov.

SAVE THE DATE: “BECOMING AN EFFECTIVE SCIENTIST”

Our annual postbac course launches on September 12 at 12 noon.

This unique course, an NICHD tradition, runs over lunchtime on Mondays, from 12 noon to 1:30 p.m., in the Clinical Center. The intent is to create a comfortable environment within a small group of peers to perfect your analytical skills while expanding your knowledge of experimental techniques.

This 11-week series will start with a practical focus, including designing experiments, keeping a good lab notebook, and oral presentation skills. In the subsequent weeks, we will shift to mini-lectures and paper analysis with a scientific focus. This year's curriculum will cover different areas of biomedical research, including neuroscience, endocrinology, cancer biology, genetics, and cellular and molecular biology.

We provide pizza every week, so you only need to bring a beverage. And for those of you who attend more than half of the sessions, we provide a certificate in recognition of your participation. We don't restrict participation to NICHD. If you know of a postbac friend in another institute who would be interested, please let me know. We'll keep the group to fewer than 25, which allows for great discussion.

If you would like to register, please contact Yvette Pittman at pittmanyv@mail.nih.gov.

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August Announcements

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THE 2017 FELLOWS RETREAT PLANNING: AN OPPORTUNITY AWAITS!

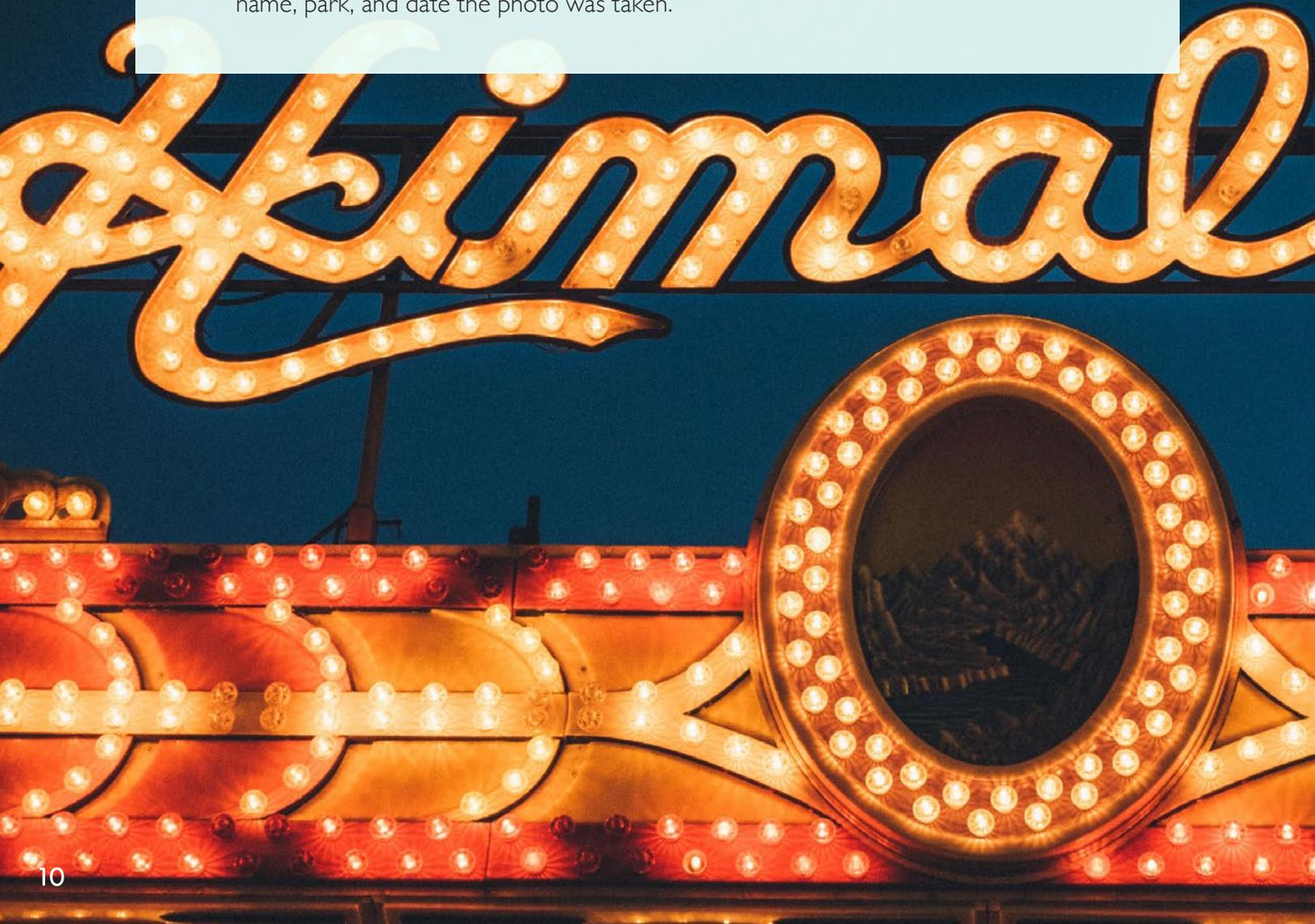
You are invited to serve on the Steering Committee for planning the 13th Annual Meeting for postdoctoral, clinical, and visiting fellows and graduate students. Please send a note to Yvette Pittman (pittmanyv@mail.nih.gov), NICHD Office of Education, to express your interest.

The group builds the program for the meeting, invites speakers, reviews abstracts, selects fellow/student presenters, and moderates sessions, among other responsibilities. It's a great opportunity to sharpen your soft skills while working in a team to plan this annual spring event!

We hope to start our monthly, one-hour meetings in September.

FINAL CALL: SEEKING NATIONAL PARK PICS FOR LIFE OUTSIDE LAB COLUMN

Have you been to a national park recently? We are seeking pictures of NICHD fellows at national parks (international photos welcome!) for an upcoming issue of the newsletter. Please send your submissions to Shana.Spindler@gmail.com, including your name, park, and date the photo was taken.



August Events

MONDAY, AUGUST 8, 10 – 12 PM

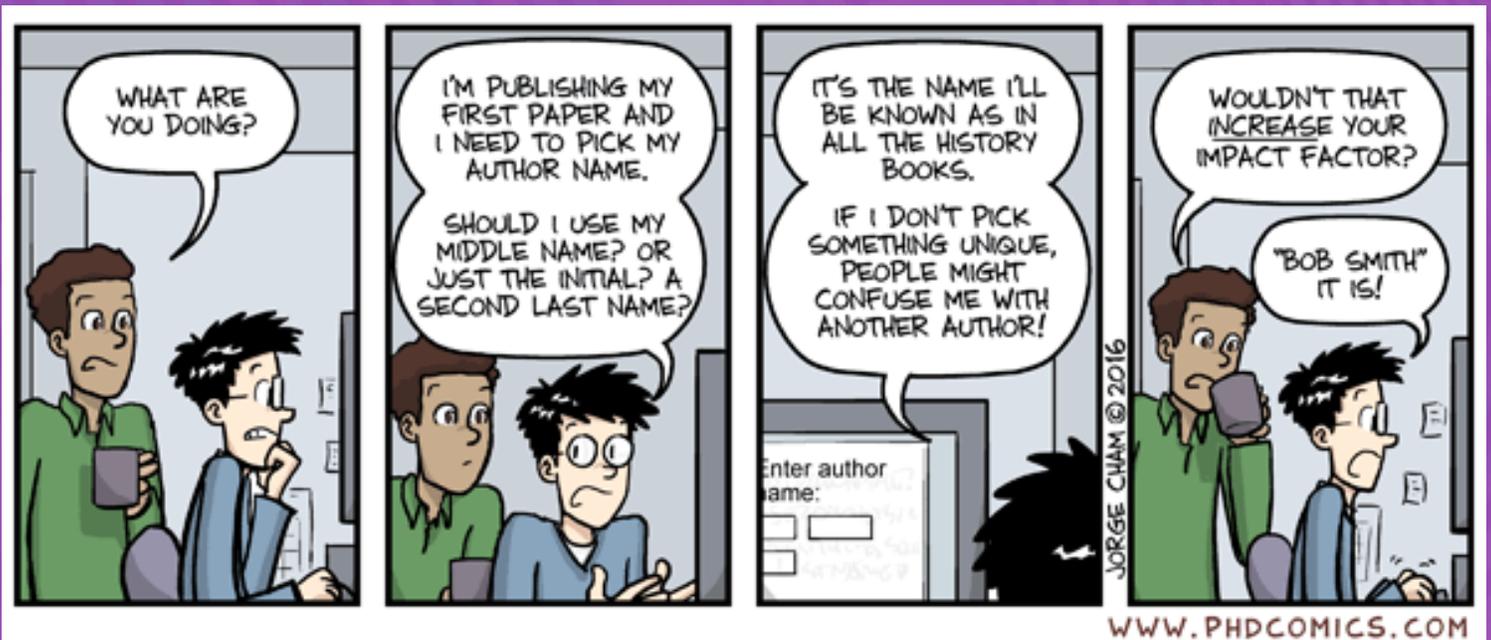
“Speaking about Science: Giving Scientific Talks”
with Scott Morgan

Please register with Yvette Pittman (pittmanyv@mail.nih.gov)

Up to 25 participants

“Speaking about Science” is a highly interactive workshop that introduces a 9-step preparation process to prepare a clear and engaging talk for a variety of scientific audiences. Topics include: the presentation of data, identifying the theme and focus, how to create effective visual aids, and how to begin and end a talk.

PhD Comics



<http://phdcomics.com/comics/archive.php?comid=1890>