



Outline

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Page 2: Nicholas Barbieri bids us an emotional **farewell**, stepping down as PEC co-chair.

Pages 2-3: Aliza Rubenstein gives us some important pointers on how to **read a research article**.

A New Taxonomy of Postdoctoral Career Outcomes

By Chandrani Mondal

In academia, it is common knowledge that only a small percentage of postdoctoral fellows will obtain tenure-track faculty positions. To make informed career decisions, postdoctoral fellows must be aware of career options available to them after their training. Despite three major reports in the past twenty years calling for systematic tracking of postdoctoral career outcomes¹, there has been little to no information available at the program/institutional level. In 2016, UCSF came out with the first comprehensive examination of postdoctoral career outcomes at the program level; however, this study was limited to data obtained from labs that were a part of a Ruth L. Kirschstein National Research Service Award (T32) program, which may not be representative of most institutions nationwide¹.

A new tool was recently developed by scientists at the National Institute of Environmental Health Sciences (NIEHS) examining career outcomes for nearly 900 NIEHS postdoctoral fellows from 2000-2014². The study, published last month in Nature Biotechnology, compares differences in career outcomes between US and international scientists, includes a hierarchical taxonomy clearly defining (a) job sectors, (b) job types, and (c) job specifics, and uses unique visualization techniques, including a Sankey diagram (shown on the right), to relate a, b, and c².

The authors of this study found that nearly half of the postdoctoral fellows included in this study were employed in the academic sector, and the rest were primarily working in the for-profit / government sectors. They then examined different job types (e.g. around 30% of postdoctoral fellows in the academic sector entered tenure-track positions). They further subdivided job types into 20 job-specific categories (e.g., primarily basic research, science writing/communications, etc.). When comparing career outcomes of international and US postdoctoral fellows, the dataset was

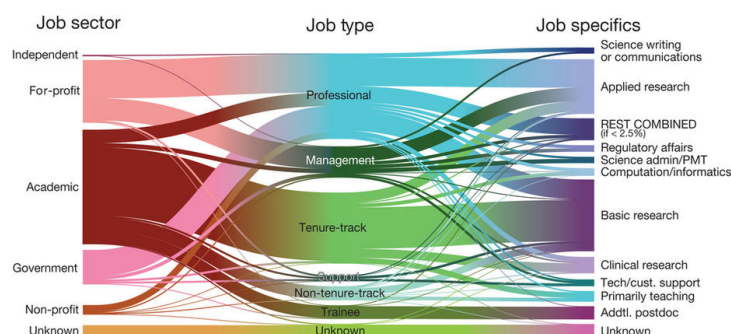
equally representative (49% US and 51% international). Interestingly, 2/3 of tenure track positions were held by international fellows, but approximately 45% of those positions were outside of the US².

This detailed analysis of career outcomes for postdoctoral fellows is a template for individual programs and institutions to follow in order to provide postdoctoral fellows with the appropriate data necessary to evaluate career options and obtain appropriate training. While this would require much more work on the part of the institution (e.g. reaching out to alumni, extensive tracking), it would be highly beneficial to postdoctoral fellows, who need more support than ever to be prepared for the modern work environment.

References

1. Silva, E. A., Des Jarlais, C., Lindstaedt, B., Rotman, E. & Watkins, E. S. Tracking Career Outcomes for Postdoctoral Scholars: A Call to Action. *PLOS Biol.* 14, e1002458 (2016).
2. Xu, H., Gilliam, R. S. T., Peddada, S. D., Buchold, G. M. & Collins, T. R. L. Visualizing detailed postdoctoral employment trends using a new career outcome taxonomy. *Nat. Biotechnol.* 36, 197 (2018).

Postdoctoral career outcomes².



Co-chair Corner

From co-chairs Agata Kurowski & Nicholas Barbieri

Greetings Fellow Postdocs,

We hope that 2018 has been treating you kindly despite the gloomy weather. Thankfully, spring seems just a few weeks away, at least according to rodents!

At PEC, we have spent the last month planning events and initiatives for this year, from socials to professional development programs. None of this would be possible without your contribution by completing the **Annual Postdoc Survey**, which enables to get a pulse of our postdoc community. So, thank you for turning the 2017 edition into another success! With these new data, PEC has been and will be able to advocate for our rights and benefits with the offices of the Graduate School of Biomedical Sciences and the Icahn School of Medicine. The results give us an idea about what our fellow postdocs reckon as more prominent to have a fulfilling experience during their fellowship. Keep an eye on your inbox since we are sending a summary of the results later this week (sneak peek: postdocs are awesome!).

Also, we're always looking for **new motivated postdocs to join the Postdoc Executive Committee!** If you are interested in joining our team, come to one of our monthly meetings to get more information. PEC meetings are held the **second Tuesday** of each month at **noon** in the Hess Building room 10-101. The next one will be on March 13th!

The 3P's of Article Reading: Preparation, Pre-reading and Perusal

By Aliza Rubenstein

Have you ever plodded your way through a dense research paper only to reach the end and find that you don't have the faintest idea of what you've read? Or perhaps you're attempting to recall the article that you read last week, only to discover that your memory is hazy at best? Well, you're certainly not alone! Studies show that 68% of academics find reading articles to be their most challenging and time-consuming career activity¹. In fact, in my attempt to find tips on how to read scientific articles effectively, I was assaulted by reams of material on the subject, both scholarly² and less so³. I found myself doing a literature review on how to do a literature review. Talk about meta-meta!

That said, here are a few tips and tricks that I have found most effective, organized into the three P's of article reading: preparation, pre-reading, and perusal. Enjoy!

Prepare. Arm yourself with the necessary equipment and readiness. To be in optimal reading mindset, get an adequate amount of sleep the night before. Make sure that you're well hydrated and have had something to eat. Set aside at least a ½ hour to an hour, and perhaps more if the field is unfamiliar to you. And most importantly, get rid of all distractions. Turn off your phone, close your e-mail, maybe

February is also **Black History Month**: a number of initiatives, from talks to documentary screenings, have been taking place in Mount Sinai and around the city. They are a precious chance to take some time off your bench or your computer to join culture celebration and to reflect on past and current societal challenges. You can consult the Office for Diversity and Inclusion for a complete list of the events.

Finally, this will be my last **co-chair corner** since my mandate as co-chair is going to end in March. It's been an intense and very productive year and I am honored and proud of being able to work with such a great team of postdoc fellows in the PEC! Among my most treasured moments organizing *Postdoc Day 2017* and the *Puerto Rico and Mexico Fundraiser*, and establishing the *Postdoc Awards* will always hold a special place in my heart. And it will be shared, weirdly enough, with the infinite number of meetings, emails, and exchanges with my fellow teammates and with both the Graduate and the Medical School offices to constructively and collaboratively try and bring necessary changes to our community. I will never forget this experience. Thanks to all of you!

Keep up being inspiring!

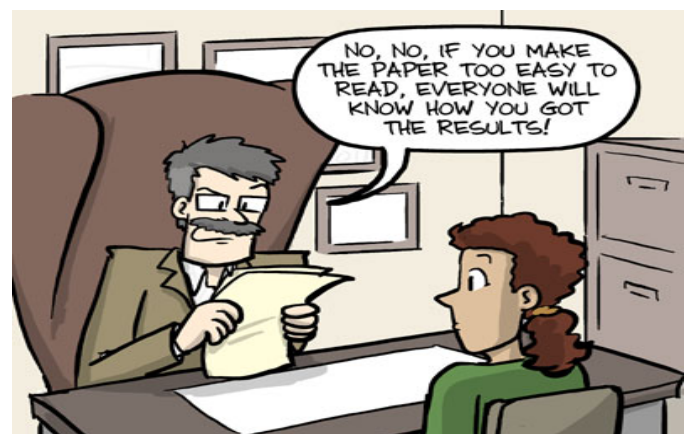
Nicholas



even print out the paper so that the siren lure of social media goes unanswered. If you're reading the paper on hard copy, get a pen and two highlighters to take notes. Hunker down and move on to the following step.

Pre-read. In this five-minute step, familiarize yourself with the context, primary contributions, and structure of the paper.

(continued on Page 3)



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If the article is irrelevant to you or badly written, you may not need to go any further than this step, so this is important. Begin with the bolded parts of the paper (title, section and subsection headings) and skim the keywords and abstract as well. Ask yourself what kind of paper this is, its context to your field, and how clearly it has been written. If and only if the paper is important to your research and well-written, you may proceed to the next step.

Peruse⁴. This is the most crucial step and the one where researchers have the most trouble. First, be an active reader. Read the paper section by section, while summarizing each section in a notebook/Word doc/evernote note/benchling entry/literature review matrix⁵ in a file or folder dedicated to research papers. Use bullets or outlines to replicate the structure of the paper (i.e. one bullet per paragraph and sub-bullets for supporting points of the paragraph). Feel free to copy sentence fragments verbatim in your notes; while you may feel that this is a waste of time, writing it down aids in internal memory retrieval and can serve as an external *memoire de livre*.

When (note that I say when, not if) you come across a point that you do not understand, you have one of two options. For terms or concepts that are of central importance to the paper, look them up so that you'll be able to keep reading. If you're prone to traveling down rabbit-holes, set a timer to stop yourself from getting distracted. Terms that are less

crucial may be highlighted with a different color. Once you're finished reading, you can look them up. Along those lines, if you come across references that look interesting, highlight them with a third highlighter.

Note the strengths and weaknesses of the study. Determine whether findings are supported by the evidence and, if the paper is in a field that you are familiar with, discern whether findings are unique and supported by other work in the field. Check reproducibility of the paper, particularly concerning sample size. Finally, ask yourself which other factors might affect results.

And you're done! Congratulate yourself, but not for too long. You have another paper to read, so get cracking.

Footnotes:

1. Statistics are false.
2. Keshav, S. (2016) How to Read a Paper. <https://blizzard.cs.uwaterloo.ca/keshav/home/Papers/data/07/paper-reading.pdf>
3. <http://www.sciencemag.org/careers/2016/03/how-seriously-read-scientific-paper>
4. Interestingly, peruse means to look over with care, in case you've ever thought the opposite.
5. <https://www.scribd.com/doc/98246252/Lit-Review-Matrix>

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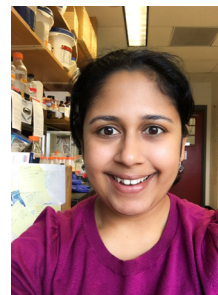
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Chief editor: Rewatee Gokhale.

Assembler: John Sekar

Contributing editors: Delaine Ceholski, Agata Kurowski, Ben Shackleton, Chandrani Mondal, Madeline Pfau, Erik De Water, Annalena La Porte, Nebojsa Kezunovic, Aliza Rubenstein

We have a new Chief Editor!



Rewatee Gokhale is a postdoctoral fellow in the Department of Oncological Sciences. Her research is focused on understanding how Rabex-5, a ubiquitin ligase, regulates Ras signaling in *Drosophila*. She's interested in science communication and outreach and can be found tweeting [@wouldbescientist](https://twitter.com/wouldbescientist).