Another Successful Postdoc and Grad Student Retreat

For the 11th year in a row, the DFIC Postdoctoral and Graduate Student Association (PGA) and the Postdoc and Graduate Student Affairs Office (PGSAO) carefully planned the Annual Retreat for Postdocs and Grad students - and it was a success! The retreat took place on September 18th at the Linda K. Paresky Conference Center at Simmons College, with a total of 125 attendees. The first 50 postdocs and graduate students who attended were given the opportunity to sign up for a free professional photo shoot, which took place the following week.

The retreat opened with a networking game, and was followed by the first speaker, Dr. Megan Mittelstadt, Lecturer in Genetics, and Landry Cancer Biology Curriculum Fellow at Harvard Medical School. Dr. Mittelstadt gave an overview of teaching-related careers, ranging from teaching postdocs, K-12 outreach, and academic tenure-track positions. She discussed the experience needed to enter a teaching-focused career and tips for preparing a teaching statement. Dr. Mittelstadt’s knowledge and advice was new and was greatly welcomed by most in the room. The teaching element was included in this year’s Retreat because of a strong interest in teaching opportunities and training expressed by a large percentage of postdocs and graduate students who completed the 2014 PGA survey. Attendees with a wide range of career goals in mind found her presentation extremely informative and helpful in their career planning.

Dr. Mittelstadt’s talk was followed by a career panel, skillfully moderated by Lauren Celano, CEO of Propel Careers: the panel included scientists with careers in consulting, data-mining, policy, entrepreneurship and academia, represented by Derek DiRocco, Ph.D., Andres Heilmann, Ph.D., Shashi Murthy, Ph.D., and Michael Grey, Ph.D., respectively. After the career panel session, postdocs and graduate students had the opportunity to network over lunch with the panelists at round-table discussions. During the afternoon poster session, 23 postdocs shared their work with fellow colleagues. Attendees listened to informative talks by Ekaterina Pak, Nathan Moore, Ph.D., David Labbe, Ph.D. and Mandar Muzumdar, M.D., who were chosen to give oral presentations. Ekaterina Pak won the award for the best oral presentation and Radhika Mathur for the best poster presentation.

The keynote speaker was Rudolf Jaenisch, M.D., Professor of Biology at MIT and a founding member of the Whitehead Institute. Dr. Jaenisch spoke about his exciting scientific research discoveries in the areas of epigenetics and stem cells. During the Q&A session after his talk, Dr. Jaenisch gave very direct and insightful advice to the attendees about what makes you successful in science.

The retreat concluded with a cocktail reception, where the winners of the poster and oral presentations were announced, raffle prizes were handed out, and the 2015 Mentor-of-the-Year was revealed. This award was given to Kornelia Polyak, M.D., Ph.D. with a check of $500, to be used for mentoring-related activities in her lab. Travel award recipients were Jessie Hsu, Ph.D. and Amanda Balboni, Ph.D. won the first round of travel awards for 2016, and Tiago Matos, M.D., won the award for the second round of 2015. Some of the great raffle prizes included a $200 voucher for a pool party at Jillian’s and two vouchers for all-day rock climbing and gear at Rock Spot Climbing.

The PGA would like to express its sincere thanks to all our speakers, judges, panelists, donors, members of the retreat committee, and all those who helped out. We would also like to express our gratitude to our major supporter, AstraZeneca, as well as to our general supporters: American Association for the Advancement of Science (AAAS), Cytel, Stemcell, SBH Sciences and Mersana Therapeutics for their generous donations. The PGA and PGSAO celebrate another successful Annual Retreat, and we hope to see everyone next year!

Special thanks to our sponsor:

AstraZeneca
Dr. Juliann Chmielecki completed her postdoc at DFCI and the Broad Institute from 2011 to 2013, studying the genomics of lung adenocarcinoma and rare sarcomas. She then joined Foundation Medicine as a Senior Scientist, where she was recently appointed Associate Director of Cancer Genomics.

Can you describe your current job at Foundation Medicine? What do you do on an average day?

My current job involves working with other scientists to better understand trends and discoveries in our tumor sequencing data, to educate non-scientists about our technology, and to collaborate with external and internal teams on diverse projects.

How did you decide to move out of academia and into industry?

I never had a set plan to move out of academia. When I found this opportunity through, I knew almost instantly that it was the right move. The data and research were very intriguing, but the biggest pull was the emphasis on helping patients, and on how the work being done at Foundation Medicine was having an immediate impact.

How did your postdoc at DFCI prepare you for your next step in your career?

The skills I learned during my postdoc were very transferrable to the current position – this position really felt like an extension and expansion of my postdoctoral research.

What did you have to learn on your own when you left academia?

I had to learn how the business world works. I had limited experience with industry before I took this job, and it was important to learn about the company’s goals, and how these direct the day-to-day activities.

Can you compare your experience working in academia to working as a scientist in industry? What are the biggest differences and similarities?

From a research perspective, the two experiences have been very similar. I am still pursuing interesting scientific questions, and working with sequencing data. I find the pace of work in industry to be much faster. My network has also expanded to involve colleagues across multiple fields, and I work with many different groups within the company.

What personal and professional characteristics do you think helped you to reach the position you have in your career?

I think the most important characteristic is to be passionate about what you do. It is also helpful to have good communication skills, to always be open to new ideas, and to follow your instincts, even when the going gets tough.

What advice do you have for postdocs thinking about transitioning from academia to industry?

There’s no magic formula for making the transition: every position requires different skills. In general, work on something that excites you, be willing to learn new things, and work diligently.

Any special ways you plan to use your award?

I’m putting it towards a vacation in Europe next summer with my sister!

What are your non-work related interests?

I'm involved in many Harvard graduate student groups including Science In The News, an organization with a mission to communicate science to the general public. I'm also excited about science policy and I hope to work towards improving the structure and funding of scientific research in the future.

Radhika Mathur - Best Poster Award PGA Retreat

I'm happy to continue research in this field for my postdoc. I'm particularly interested in SWI/SNF chromatin remodeling complexes as they are mutated in 20% of all human cancers. Investigating the mechanisms by which these complexes function may thus unveil an epigenetic mechanism of oncogenesis that is broadly relevant in cancer.

What got you interested in the topic you presented at the retreat? Or What do you want to do after your postdoc?

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Open Science

Have you ever wondered whether the reviewer who trashed your manuscript was a competitor? Have you ever struggled to get access to data or to the code in a published research article, to verify the results? Or have you ever simply wished that your article was open access by default?

In the scientific publishing process, academic researchers frequently struggle with these or similar questions. To overcome such limitations, Open Science is an emerging movement that aims to make scientific communication more transparent and rigorous. In Open Science, the full spectrum of research is made available to the public by practicing open principles, including open peer-review, open access, open source, and open data. According to Laurie Goodman, Ph.D., founder of the Open Science journal GigaScience, the latter two principles are of particular importance, as they also ensure reproducibility of scientific discoveries. Dr. Goodman emphasizes that this must be achieved at the level of raw (rather than processed) data, and of original analysis code (rather than software tools).

While practicing open source is a strong movement on its own, sharing data among academic collaborators almost always includes political negotiations about co-authorships, and raises concerns in researchers about losing out on exclusivity. Open Science encourages researchers to rapidly make new datasets publicly available, prior to publication in a research article, without losing on exclusivity by making use of internationally recognized and fully citable Digital Object Identifiers (DOIs) for data alone. This free service is provided by the DataCite.org platform.

The motivation behind promoting Open Science is that scientific progress should more directly benefit the society that funds the large majority of academic research through tax-payer moneys. In fact, Open Science has also reached the Dana-Farber Cancer Institute: Prof. John Quackenbush, Ph.D., Director of the Center of Cancer Computational Biology at DFCI, was honored by the White House as an Open Science “Champion of Change” in June 2013 for his ongoing efforts in establishing an informatics infrastructure that facilitates ready access to scientific data and code.

Reproducibility - A serious Issue In Science

Reproducible research is a cornerstone of science. Reproducibility is the concept that results should be replicable, either with an independent experiment or with the same data and software. Reproducibility - or rather the lack of it - has taken center stage in today’s “omics” era, given the gigantic amount of data that is generated and the potential impact of these data on human life. Twitter wars have erupted and articles have been written that discuss the issues surrounding potential batch effects and highlighting independent lab reproducibility. Yoav Gilad’s recent tweet that exposed blunders of analysis published in a high profile PNAS article was retweeted 137 times and received 113 likes – while not at the celebrity status of Miley Cyrus’ ‘I’m on a prime time’ minimum, this is a fairly impressive number for the science community.

Producing multiple independent datasets between or within a lab can be time-consuming and costly, but there are many ways to provide reproducible analyses of the data we generate. In analyzing data we employ complex software based on specialized algorithms and techniques. Every use and run should come with a record of the software’s version number - even one uptick in software can lead to a difference in output.

Perhaps the easiest way to ensure reproducibility in results is to keep a detailed log of the bioinformatic analyses. Just as we keep detailed notebooks in the lab, version numbers should be recorded - this can be accomplished by writing software in a literate programming paradigm. For example, the script to develop the figures in your next article can be written into a sweave or knitr markdown script, which is part code and part documentation that produces an HTML document with all code/algorithms and output.

1: tinyurl.com/TwitterScience
2: tinyurl.com/ReproducibleResearch

APPLY NOW!

PGA Travel Award

Deadline: Feb 1, 2016
Website: http://dfcionline.org/departments/pgsao/pga/travel-award/

Mark the Date: CCGD Symposium
(Precision Cancer Medicine)

Date: Jan 29, 2016; Time: 8:30 am—5:00 pm
Venue: Jimmy Fund Auditorium
Registration: http://dana-farber.org/CCGD

Special thanks to Alison Taylor for contributing, and to Jennifer Molina and Sonal Jhaiveri. If you are interested in contributing to the PGA Newsletter, Email your comments and suggestions to dfci_pgapost@dfci.harvard.edu

Editorial Team: Siddha Kasar; Nadia Hassounah; Alison Taylor; Patrick Grossmann; Joseph Paulson

Website: http://dfcionline.org/departments/pgsao/pga/travel-award/
As parents, it is never easy to leave your little ones in someone else’s care. Josephine Klitgaard, a fellow post-doc and mother of two lovely baby girls, says “the most difficult thing about going back to work after a pregnancy is to find a child care provider whom you can trust with your baby’s well-being”. Although center-based child care options have been available to LMA employees for quite some time, there is an unmet need for home-based child care facilities, as identified at the 2011 child care summit organized by Harvard Medical School.

As a result of this, the LMA Family Child Care Network (LMA FCCN) was established in September 2013 after careful deliberation and research, to help employees find the right type of child care for their specific needs. This program is licensed by the Department of Early Education and Care (EEC). Child care providers are vetted by Nurtury, a local non-profit organization with more than 130 years of experience in providing early care. The selection process includes site visits, interviews, background checks, referrals and documentation review. Nurtury also conducts regular reviews and inspection of the participating providers, to ensure highest quality care for your little ones.

For additional information, or to fill apply for LMA FCCN services, please visit http://www.masco.org/working/LMA-family-childcare

Image source: URL above

PGA Calendar

Feb 18, 2016 - Ethical Issues: The Scientist as a Responsible Member of Society
Presenter: Jennifer Kesselheim, M.D.; Time: 2:00 - 3:30 PM
Location: Yawkey 308

Feb 11, 2016 - Childcare Information Series Part 1
Time: 2:00 - 3:00 PM
Location: Yawkey 308

March 10-April 7, 2016 - Manuscript Writing Workshop
Presenter: Sonal Jhaveri, M.D.; Time: 3:00 - 4:30 PM
Location: TBD

For more information please visit http://dfcionline.org/departments/pgsao/events/