From September 16-20, institutions across the nation held special events to observe National Postdoc Appreciation Week. At DFCI, we celebrated by hosting the ever popular ice cream social event, which featured tasty treats from J.P. Licks. Our capstone event for the week was the 9th Annual Postdoc and Graduate Student Retreat, held on September 20 at the Dante Alighieri Cultural Center in Cambridge, MA. Thanks to the hard work of the PGSAO and the PGA Retreat Committee, this year’s retreat was a big success!

The retreat kicked off with a fun ice-breaker game of networking bingo, followed by talks from four DFCI postdocs about their ongoing research. In the next session, Lauren Celano, CEO of Propel Careers, moderated a panel discussion where we learned about the experiences of former postdocs in different bioscience careers ranging from “traditional” paths in academia and industry to alternative careers in science writing/publishing, consulting, business development, and intellectual property law.

Following the professional development session, attendees enjoyed a delicious Italian lunch and moved upstairs for a dynamic poster session where 31 postdocs and graduate students presented their latest findings. We then regrouped in the main hall for a keynote address by Dr. William Sellers, a former clinical fellow and faculty member at DFCI who now serves as Global Head of Oncology at the Novartis Institutes for Biomedical Research. Dr. Sellers gave a captivating talk about the history of Gleevec and other cancer therapies that were developed through genetic research, and discussed key challenges and strategies for creating novel targeted therapies in the future.

The day finished on a high note, as postdocs networked with each other and with speakers at the cocktail reception and awards presentation. Dr. David Frank was honored with the 2nd Annual Mentor-of-the-Year Award in recognition of his positive impact on the career advancement of his laboratory members. The two best oral and two best poster presenters, chosen by popular vote, were presented with $1,000 prizes by CSO Dr. Barrett Rollins (see pg. 2 for interviews with the awardees). Lucky winners of this year’s raffle drawing included Hugh Gannon, who won the coveted Kindle Fire, and Ruben Ferrer Luna, who received tickets to the Blue Man Group show!
Getting to Know the Winners of the Retreat Awards

Andriy Marusyk – Award for Best Oral Presentation
5th year postdoc in the laboratory of Dr. Kornelia Polyak, Department of Medical Oncology
PhD in Molecular Biology from the University of Colorado, Denver

Any special ways you plan to use your award? I will use the award money to cover some professional expenses (such as paying for my AACR membership and attending some local networking events); the rest will come in handy to support the costs of raising 2 kids in Boston.

What are your key strategies for giving a successful talk? Giving decent talks is a skill that can be developed over time by a) knowing what makes a good presentation, b) practicing, and c) getting feedback and incorporating it for the next presentation. Joining the Longwood chapter of the Toastmasters public speaking club, which meets at DFCI, was very helpful in this regard.

What do you enjoy most about working at DFCI? Being at the center of an amazing and unique research hub, which allows access to collaborations, seminars etc. I am grateful to the PGA for their help in exploring these options.

What are your non-work related interests? I enjoy spending time with my wife and kids. Besides this, I like mastering “the sweet science of bruising” at the Boston Boxing gym.

Mohini Rajasagi – Award for Best Oral Presentation
5th year postdoc in the laboratory of Dr. Catherine Wu, Department of Medical Oncology
PhD in Tumor Immunology from the German Cancer Research Center (Heidelberg, Germany)

What got you interested in the topic you presented at the retreat? One aspect that I really enjoy about DFCI is the close dialogue that takes place between laboratory science and its translation to the clinic. While my research interest has been in tumor immunology from the time of my graduate studies, the translational aspect of my postdoctoral project and the idea of developing a new cancer immunotherapy approach for patients is what got me most interested.

What are your key strategies for giving a successful talk? My key strategies include (a) knowing the background of my audience, (b) preparing slides with a clear flow, (c) keeping a good pace during my talk, and (d) connecting with the audience, as I want people to be as excited about my work as I am.

What do you want to do after your postdoc? I would like to join a pharmaceutical company and continue working on research in translational oncology.

Michaela Reagan – Award for Best Poster Presentation
3rd year postdoc in the laboratory of Dr. Irene Ghobrial, Department of Medical Oncology
PhD in Biomedical Engineering from Tufts University

What is your feedback about the PGA Retreat? I wish more postdocs would attend! This is a very useful, educational, and fun event that lets postdocs know that their hard work is appreciated and celebrated. It also facilitates interactions between postdocs in different fields and departments.

What got you interested in the topic you presented at the retreat? I've been interested in cancer-induced bone disease since my graduate school years, and I've always been interested in science, engineering, and medicine; working on cancer-bone models lets me explore all three fields.

What are your networking strategies? I co-chair the Young Investigator Committee of the International Bone and Mineral Society and I am very involved in their conferences. My Department of Defense grant and the conference awards that I have received have allowed me to travel and present worldwide.

What are your non-work related interests? Running, cooking, reading, biking, traveling, and rock-climbing... tons of fun things!

Tony Barnitz – Award for Best Poster Presentation
3rd year postdoc in the laboratory of Dr. Nicholas Haining, Department of Pediatric Oncology
PhD in Immunology from the University of Pennsylvania

What got you interested in the topic you presented at the retreat? I've been interested in infectious disease and immunology research since college, while the topic of transcriptional control of differentiation is a much more recent interest.

How do you approach setbacks in your research? To give one recent example, I had been searching for a while for the right antibody for an experiment, but nothing seemed to work; plus, I ran into resistance from potential collaborators in obtaining new antibodies. After a thorough search of the supplemental methods, I came across the contact information of a company that was willing to supply a key antibody. From there, I was able to make the discoveries that led to the work that I presented at the retreat.

What are your non-work related interests? I enjoy traveling with my wife, reading, hanging out with friends, and playing with my dog. Our next trip may be to the Galapagos Islands...
Get More Bang for Your Buck!

As grad students and postdocs, we live on a shoestring budget, so here are some ways to make our money stretch farther:

1. Rethink your daily caffeine fix – Did you know that the average American spends about $1,000 per year on coffee? You can save up to $5 a day by making your own coffee. If you’re still intent on buying your favorite latte, make sure to take advantage of your cafe’s rewards program and get free cups from time to time.

2. Pack your own lunch – On average, eating out for lunch costs about $6, while a packed lunch costs about $3. If a penny saved is a penny earned, you’ve just doubled your income with this approach! If you do decide to buy lunch, don’t forget that the Yawkey cafeteria gives DFCI employees a 10% discount.

3. Take advantage of employee perks – As DFCI employees, you can get discounts on gym memberships, movie tickets, and even cell phone service plans. Check out the DFCI intranet for more information. Your Harvard ID also gives you free access to the Harvard University gym, Harvard museums, and LMA shuttle rides as well as a 15% discount at Boston area retail stores such as Ralph Lauren and The Tannery.

4. Save on heating costs – Winter is coming...GOT it? Turning down your heat by 10 degrees before leaving for work and before going to bed can save you up to 14% in heating bills. For those who use oil, filling up your tank during the off-season can get you better prices. You can also join a fuel coop for savings of up to 20% on oil bills.

5. Sign up for online coupons – If you are not into cutting coupons out of newspapers and magazines, you can simply sign up for sites like Groupon, Amazon Local, LivingSocial, and CBS Local Offers for great deals on anything from haircuts and auto maintenance to personal trainers and travel packages.

Bench to Business: Postdoc to Entrepreneur

Being an entrepreneur is often equated with being your own boss, which sounds like a great deal. But can a postdoc in academia successfully move into a position that requires business acumen as well as scientific expertise? The answer to this question is yes! In recent years, there has been an increasing focus on taking research out of the lab and commercializing it.

For some postdocs, transferring their technology to the market remains a priority throughout their research career, but many are unaware of the impact such a move can have on their career if they themselves are the entrepreneurs that are launching the venture. Transition from the lab bench to the outside world of business startups can be a truly rewarding and successful experience, as it offers an opportunity to focus on a single problem with huge commercial potential and also to have a say in the direction of your endeavor.

To facilitate the transition from apprentice to entrepreneur, many academic institutions are offering insights into entrepreneurial career tracks and providing mentoring to postdocs who wish to make this change. Harvard and Dana-Farber are very supportive of cross-disciplinary and cross-university collaborations, and have a variety of resources for those interested in learning more about the intersection of business and science. For example, Harvard Medical School offers a free, 10-week, non-credit course called Healthcare Innovation & Commercialization that helps PhDs, postdocs and MDs to excel at entrepreneurship and innovation in life sciences and medicine. Student organizations such as the Harvard Biotechnology Club and the Harvard GSAS Business Club also provide many great educational and career development resources for scientists interested in pursuing business-related careers.

If you already have an exciting early-stage idea but aren’t sure how to implement it, consider entering a business plan competition; Harvard Business School, MIT Sloan, and many other business schools sponsor annual entrepreneurship contests in which scientists and MBA students have the opportunity to work together as a team. Such programs help you to understand how your discovery or invention fits into the broader process of commercialization. By going through this experience, you can learn about key issues such as the amount of capital needed to take your technology from small-scale bench experiments to high volume manufacturing. Harvard’s Innovation Lab (i-lab) is another useful resource for those who are interested in entrepreneurship; the programs offered by the i-lab cover a wide range of disciplines and provide growth opportunities for ventures irrespective of their stage of development.

Finally, Harvard’s Office of Technology Development and Dana-Farber’s Office of Research and Technology Ventures also encourage formation of new ventures around technologies and discoveries from our research communities. These offices can help with a number of issues, such as funding, licensing, and development of early-stage technology into commercially viable products. With the right set of tools and mentoring, you can move your research innovations, as well as your careers, into the marketplace.
Curiosity Corner

A scientific miracle: changing brownies into a super workout snack! It’s no secret that pumpkin (or Cucurbita moschata) is a super food, with a résumé that boasts a rich source of vitamins A, C and K, and bioactive compounds, all of which reportedly have anti-cancer, anti-obesity, and anti-diabetes properties. Recently, a Japanese research group set out to determine whether this spectacular squash also contributes to enhanced exercise performance. To test this hypothesis, mice were orally administered increasing doses of pumpkin extract (or vehicle control) over the course of 14 days; this was followed by a series of physical and biochemical tests to assess the level of exercise-induced fatigue. The authors report that ingestion of pumpkin led to a dose-dependent increase in murine grip strength and in overall swim time prior to the onset of fatigue. Biochemically, these results were correlated with reduced levels of circulating biomarkers for muscle fatigue such as lactate, ammonia and creatine kinase, and increased glucose levels, which indicate performance maintenance. With the holiday season (and those extra pounds) quickly approaching, this recipe for Pumpkin-Spiced Brownies offers a sneaky way to add an extra dose of pumpkin to your diet. Check it out – it may even increase your chances of staying trim well into the New Year!

Pumpkin-Spiced Brownies

Reagents:
- 1 cup 100% pure pumpkin puree
- 1 cup coconut milk
- 1/3 cup melted coconut oil
- 2 eggs
- 1 tsp apple cider vinegar
- 2 tbsp raw honey
- ½ cup almond flour
- 4 tbsp coconut flour
- 1 tsp baking soda
- ¼ tsp salt
- 1 tsp cinnamon
- 5 tbsp raw cacao (or normal baking cocoa)
- ½ cup dark chocolate chips (I use extra dark 63% cocoa)

Protocol:
- Preheat oven to 350 °F and grease square baking dish.
- Mix liquid ingredients together using a food processor or electric mixer.
- In a separate bowl, combine all dry ingredients (except chocolate chips).
- Slowly add the dry ingredients to the wet ingredients and then stir in the chocolate chips.
- Pour batter into baking dish and cook for 45 minutes or until an inserted knife comes out clean.
- Garnish with chocolate-covered pumpkin seeds for an extra delicious (and nutritious) crunch.

Resources:

Book Review

Regenesis: How Synthetic Biology Will Reinvent Nature and Ourselves, by George Church and Ed Regis

As the title suggests, Harvard geneticist George Church challenges us to think beyond our present day limitations, and instead imagine a world in which our health care, economy, and even our own genetics are shaped by synthetic biology. He argues that harnessing the power of synthetic biology will not only enable us to bypass many diseases (by manipulating our own genome), but will also alter the course of human evolution by resurrecting organisms (such as Neanderthals) that are extinct. Church paints a beautiful picture of how synthetic biology can basically fix any and all problems, but he also encourages us to think carefully about the motivation underlying the creation of organisms and about how the use of synthetic biology may affect our personal privacy and security. “Regenesis” is a masterful piece of scientific literature that speaks to scientific and non-scientific audiences alike, provided they are willing to enter Church’s world with an open and courageous mind.

Like this article? Check out the author’s blog, “Scientifically Delicious” at http://scientificallydelicious.wordpress.com, to find out how other foods can work to keep us feeling healthy.