

# THE PGA POST

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DANA-FARBER  
POSTDOCTORAL AND  
GRADUATE STUDENT  
ASSOCIATION

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## PGA Announces Travel Award Program

The DFCI Postdoctoral and Graduate Student Association (PGA) is piloting a competitive travel award program as of June 1, 2014. The travel award is designed to assist postdocs and graduate students with conference travel expenses. Our goal is to encourage fellows and students to present their work at conferences, thereby enhancing their professional development.

Two \$1,000 awards will be awarded each fiscal year. The awards will be given out in two rounds, and one applicant will be selected per round.

To be eligible, applicants must be first authors on conference posters or talks. Preference will be given to fellows and students who have not attended a conference while working at DFCI; however, applicants who

have previously attended a conference are still welcome to apply. The award can only be used for expenses to attend a professional conference where the applicant will be presenting work, and cannot be used to cover expenses for special training programs or professional workshops. Furthermore, the majority of the research described in the abstract must have been performed during postdoctoral training or graduate work at DFCI. Applicants may apply for the award prior to being officially accepted to a conference, but winners must attend the conference.

The application packet will include an application form, a personal statement, and a copy of the conference abstract. The application form and personal statement will be used to gauge how attending the conference will enhance the applicant's professional development as well as to determine extent of financial need. These two documents will be reviewed by a panel of peer judges from the PGA. The conference abstract will be judged based on scientific merit by a DFCI faculty member. Faculty judges will not have access to the application form or the personal statement. This initiative is aimed at providing postdocs with career enhancement opportunities throughout the year.

## Call for Mentor of the Year Award Nominations

The PGA and PGSAO are pleased to announce a call for nominations for the third annual DFCI Mentor-of-the-Year Award!

The DFCI faculty member chosen will be awarded \$500, to be used for future mentoring activities. The award will be announced and presented at the 10th Annual Postdoctoral and Graduate Student Retreat on Thursday, September 18, 2014.

Visit <http://dfcionline.org/departments/pgsao/mentor-of-the-year/> to learn more.

Submit your nomination statement by **Friday, August 15, 2014** to [dfci\\_pga@dfci.harvard.edu](mailto:dfci_pga@dfci.harvard.edu)

## Where @ DFCI?



Do you know where this is?  
Send your answer to  
[dfci\\_pgapost@dfci.harvard.edu](mailto:dfci_pgapost@dfci.harvard.edu)

The first 2 people with the correct answer will receive a \$5 gift card!

**First round Travel Award applications are due by August 1, 2014, with the winner to be announced by September 2014.**

Applications for the second round are due by February 1, 2015 and the awardee will be announced by March 2015.

For application forms, visit <http://www.dfcionline.org/departments/pgsao/pga/travel-award/default.aspx>.

E-mail completed applications to:  
[dfci\\_pga@dfci.harvard.edu](mailto:dfci_pga@dfci.harvard.edu)

# Transition to the Pharmaceutical Industry:

## An interview with DFCI postdoc alum Austin Dulak



*Austin Dulak is currently a Senior Scientist with the bioinformatics group at the pharmaceutical firm AstraZeneca; he works on interpreting large-scale genomic data and identifying biomarkers of drug sensitivity. Austin received a Ph.D. in Molecular Pharmacology from the University of Pittsburgh. From 2011 to 2013, he worked as a postdoctoral fellow in the laboratory of Dr. Adam Bass (DFCI Medical Oncology) where his research focused on the analysis of gastrointestinal tract cancer genomes, in order to functionally interpret novel events that are targeted by somatic alterations.*

### What brought you to DFCI?

My major research interest has focused on all forms of cell signaling, from phosphorylation cascades to transcriptional networks. Towards the end of my graduate training, I was invited to speak at an AACR-IASLC joint meeting in San Diego, at a session that included Matthew Meyerson and Jeffrey Engelman. While all of my work was based

on non-mutated receptor tyrosine kinase signaling, these individuals were discussing cell signaling and drug-targeting mechanisms specific to only mutated genes. They were excited by the prospect of using next generation sequencing to identify new cancer genes and pathways, which may be therapeutically exploited to selectively target cancer cell growth. Their enthusiasm was infectious, and I knew that I wanted to be part of these life-changing discoveries that were primarily originating at DFCI.

### Did you have any Eureka! moments?

The one moment that really stands out is the excitement generated by our first set of whole genome sequencing results, which showed a very interesting mutagenic signature in gastroesophageal junction tumors. These data supported the hypothesis that gastroesophageal junction tumors are driven by mutagens that are specific to this organ site.

### What is it like to work at Astra-Zeneca?

It is a huge change from academia. For example, line management is a management style that is particular to industry. I receive the top-level requests for each project from different lead investigators who are strongly invested in a specific compound that they are trying to bring to market or that targets a specific gene. My line manager is responsible for ensuring that the work is completed in a timely manner and in

the appropriate fashion, but he may not necessarily be directly invested in the particular drug or target projects. It is essential to have open lines of communication with both types of people, to ensure that you are performing to the best of your ability and in a way that moves projects forward.

### What is your typical day like?

My day is often divided among various efforts, with the greatest amount of effort placed on performing biomarker analyses on internally generated data, or mining publicly available data to answer drug project questions. I might also be involved in open review sessions for specific projects and meetings or online discussions with our bioinformatics team. Sometimes, I will be needed in a meeting with outside collaborators, to ensure that work is being completed in line with AstraZeneca's expectations. A lesser amount of time might be spent testing new techniques for developmental projects, such as mutation-calling algorithms.

Finally, there is a strong emphasis on personal development within the organization. So, for example, I spent time generating a novel idea around DNA damage response, and writing a proposal to hire a postdoc. Luckily, I was successful on my first try! This is certainly not an exhaustive list, but it covers all major aspects of an ideal day.

### Any final words of advice?

I want to leave you with a piece of advice that my graduate mentor Jill Siegfried at University of Pittsburgh shared with me: "a postdoc is about you growing as a scientist and a person." As a postdoc, it is easy to become a lab employee, but that's not the goal. The goal is to learn how to generate and test your own hypotheses, and to challenge the current paradigm. For a future in academics, this will allow you to write that exciting transition grant, and for industry, it will give new insight on different ways to selectively target diseased cells and give hope to a great number of individuals with these pathologies.

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*The goal is to learn how to generate and test your own hypotheses, and to challenge the current paradigm."*

*- Austin Dulak*

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# Where the Grass is Greener: How to Get a Green Card



Image: <http://american-x-sophomore.blogspot.com/2009/11/green-card-maze.html>

International scholars comprise more than 50% of the postdoc and graduate student population at DFCI. Without a green card (GC), international postdocs cannot apply for many US-based fellowships and grants. Transitioning from academia to industry can also be very tricky. The annual quota of industry H-1 visas is usually exhausted within 1-2 weeks of the application start date (April 1); therefore switching from academia to industry means that one would have to receive a job offer by January-March and apply for an H-1 by April, but can only start working in October!

Obtaining a GC is an obvious but non-trivial solution to these problems.

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DFCI does not sponsor employment-based GCs, because postdoctoral positions are considered non-permanent. However, one may self-petition for a GC, using either the EB-1A (Aliens of Extraordinary Ability) or EB-2 (National Interest Waiver) categories. EB-1A is applicable to aliens that have been internationally recognized as experts in their field of study. Criteria for EB-1A eligibility include prominent awards, membership in prestigious associations such as the National Academy of Sciences, and an excellent publication record (<http://www.uscis.gov>). EB-2 NIW criteria are slightly less onerous, making it the preferred category for most junior researchers: the primary requirement for this category is successful demonstration of the individual's contribution to furthering the US national interest. Since public health has always been considered a national priority for the US, most approved NIW petitions come from postdoctoral researchers in

medicine and engineering. Unfortunately, severe backlogs in the EB-2 category for Chinese and Indian nationals can extend the wait time by up to 10 years.

One other important factor to consider is the application cost (regular - \$1650, premium \$2295). Most applicants seek legal counsel, which can add additional fees ranging from \$5,000-\$10,000, although a DIY approach is possible: <http://www.greencardapply.com/service.htm>. For those interested in getting advice from a lawyer, the PGSAO and HR can provide more information regarding free Q&A sessions and credential reviews from Boston and Cambridge-based lawyers. Given the time and budgetary constraints in applying for a GC, international postdocs are encouraged to look into the permanent residency process as soon as they begin their postdoctoral training.

## Seeing is believing: Scientific video protocols

Seeing a scientific technique or procedure often has more impact than just hearing or reading about it. If reading a scientific paper makes you scratch your head, and if reproducing published experiments in your own lab setting with just a set of written instructions is a daunting task for you, then worry no more. Help is here in the form of online experimental videos.

BenchFly (<http://www.benchfly.com/video-protocols>) is a scientific video platform designed by researchers and video experts. It is a collection of video protocols, everything from running a simple gel electrophoresis, to troubleshooting difficult molecular cloning reactions. It even allows you to post your own scientific videos, like YouTube does, for teaching routine lab techniques to your lab staff and trainees. It can help streamline

protocols and save time in standardization of experiments.

JoVE (Journal of Visualized Experiments, (J Vis Exp)) is the first and only PubMed/MEDLINE-indexed, peer-reviewed video journal. It is a great resource for detailed research article specific experiments. JoVE is fully accessible through PubMed, which links to the web site (<http://www.jove.com/>) that publishes scientific research in a video format. JoVE films and edits videos of researchers performing new experimental techniques, which facilitates experiment

reproducibility, especially in cases where traditional written and static picture-based print journals fail to convey the intricacies of experimental steps involved. Recently, JoVE has also introduced a bookmarklet called the Ask JoVE button (<http://www.jove.com/ask-jove>): it creates a collection of peer-reviewed videos that demonstrate the techniques used in your published text-based scientific article.

As video-based scientific publishing is catching on, other publishers like Cell and New England Journal of Medicine are also introducing video format in their publications. This inclusion of scientific videos with articles in journals will, hopefully, improve scientific reproducibility and make researchers' time in the lab a bit easier.

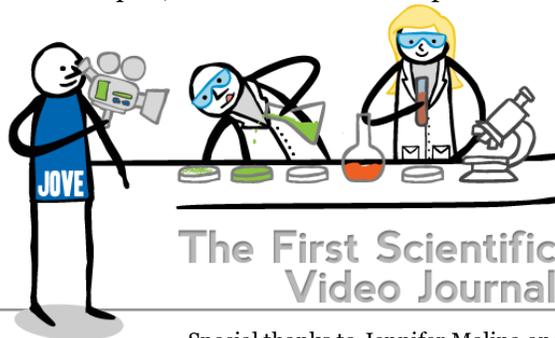


Image: [www.jove.com](http://www.jove.com)

### Editorial Team

Reina Improgo, Monica Ter-Minassian, Siddha Kasar, Deepika S. Das, and Nicole Spardy

Special thanks to Jennifer Molina and Sonal Jhaveri.

If you are interested in contributing to the PGA Newsletter, email us at

[dfci\\_pgapost@dfci.harvard.edu](mailto:dfci_pgapost@dfci.harvard.edu)

Comments and suggestions are also welcomed!

## Postdoc Puzzle

All answers in this word game contain the letters **POST** or **DOC**.

1. Bugs Bunny's favorite question.  
\_\_\_\_\_ ' \_\_\_\_\_ ?
2. You will find many of these printed presentations in conferences.  
\_\_\_\_\_
3. "An Inconvenient Truth" is an example of this.  
\_\_\_\_\_
4. Medical examiners perform this kind of procedure to determine cause of death.  
\_\_\_\_\_
5. In football, a team scores either 1 or 3 points when a ball goes between these.  
\_\_\_\_\_
6. An area or part of a building where trucks usually deliver your reagents and supplies.  
\_\_\_\_\_
7. A quick, clever reply to an insult; also refers to a quick return thrust in fencing or swordplay.  
\_\_\_\_\_
8. Famous brand of boots with yellow stitching.  
\_\_\_\_\_
9. A set of beliefs or body of teachings usually taught by a religious or political group.  
\_\_\_\_\_
10. Neither snow nor rain nor heat will keep him from doing his work.  
\_\_\_\_\_

**Answers:** 1. What's up doc? 2. Posters 3. Documentary 4. Postmortem 5. Goal Posts 6. Loading Dock 7. Riposte 8. Doc Martens 9. Doctrine 10. Postman (but you also get a point if you answered postdoc!)

## PGA Calendar

**Wednesday, May 28, 2014** – Social Media for Scientists Part 1: Navigation & Profile Building in LinkedIn with Sabrina Woods, LinkedIn Trainer & Career Services Professional  
**Time:** 3:00 – 5:00 PM  
**Location:** Smith 308/309

**Thursday, June 5, 2014** – Career Pathways and Networking with Anne Gierahn, Consultant at Fletcher Spaght, Inc  
**Time:** 3:00 - 4:30 PM  
**Location:** Smith 308/309

Events subject to change. Visit <http://www.dfcionline.org/departments/pgsao/events/> for updates.

## Edible gardening inside a concrete jungle...

While living in a big city definitely has its perks, hobbies such as gardening can be less than fruitful due to limited space. If you find yourself cov-

eting suburban-sized lawns this spring, why not try setting up your own mini-sized vegetable garden, using containers and some sunny space?

Tips to get started:

- **Garden location:** Whether dealing with a roof top deck or a windowsill, you'll need to consider 3 factors: sunlight, water and weather. Most plants require 6 hours of sunlight per day; utilizing southern- or western-facing spaces will maximize sun exposure. Boston falls into Hardiness Zone 6, making it conducive for growing leafy greens, berries, tomatoes and many types of herbs.
- **Choose the right container:** Most plants will do well in pots that have an 8-10 inch circumference. Plastic is the cheapest, lightest and most durable option, but you may want to splurge on a more decorative glazed clay container, especially if you plan to set up a garden inside your home.
- **Maximize your space:** Successive gardening is a great way to continuously harvest throughout the entire growing season. Multiple plants with different growth rates can be planted in the same pot, and replaced as they stop producing fruit. See McGee and Stuckey's "The Bountiful Container" for great suggestions of plants that work well together.



Looking for some horticultural inspiration? Search Pinterest for "apartment gardening".

**Want something bigger?** Check out the Boston Natural Areas Network to find a community garden near you. <http://www.bostonnatural.org/cgFind.htm>

Project idea & image: <http://jillm.com/2012/04/window-herb-garden-ikea-hack/>