The 2017 11th Annual VPA and Shared Resources Symposium planning committee was delighted to welcome Roger Chalkley, Senior Associate Dean of the Biomedical Research Education and Training (BRET) office, to give opening remarks. BRET is a huge resource for postdocs in the biomedical sciences because they offer many career development workshops for all types of careers beyond obtaining a Ph.D., and most of their services are applicable to all academic Ph.Ds.

The BRET office is part of the NIH BEST Consortium: a group of 17 national institutions with funding from the NIH to expand career development opportunities for graduate students and postdocs. The BRET office also does a great job of compiling outcome information and sharing it with our postdoc community. In tradition with this, the thesis of Roger's talk was to enlighten us with current stats and common misconceptions about postdoctoral scholars using an interactive poll survey. Approximately 30% of postdocs change to a different career goal by the end of their postdoc tenure, so this kind of information and guidance from the BRET office is extremely interesting. Roger would pose a question such as: "In the country as a whole today, are the numbers of Ph.D.s awarded in biomedical research increasing, same or decreasing over time?" and the audience would answer the question and then see the data (the number of white postdocs in the US is staying the same). This was a really fun way to interact with the audience and really engaged those in attendance. Some of the questions Roger posed are listed below along with the answers to those questions in Italics.

**What do Vanderbilt postdocs do when they leave? How many of them will be in a tenure track faculty position? 10-25%**

I often hear that nowadays most postdocs end up doing at least two postdoc fellowships. Is this close to the truth? 21% of postdocs at Vanderbilt go on to do a second postdoc.

**Do Vanderbilt Faculty think there should be institutional support for training for a wide range of careers? Over 90% of Vanderbilt faculty strongly agree or feel neutral that time should be spent on developing careers outside of traditional academic research.**
VPA and Shared Resources Symposium Break Out Sessions

The 11th Annual VPA and Shared Resources Symposium saw the introduction of breakout sessions, featuring four different panel-type discussions on diverse career development topics held in parallel. Here are brief summaries of these sessions written by attendees.

Careers in Bioinformatics and Data Science
by Mohit Chadha, Ph.D.

The “Careers in Bioinformatics and Data Science” session consisted of an invited panel of three Nashville area Vanderbilt alums at different stages of their career who have successfully leveraged their doctoral training in basic science and engineering to be a part of the rapidly growing sector of data science. A 2012 article published by the Harvard Business Review called data science as “the sexiest job of the 21st century”. A lot has happened since then: computers have become more powerful, cloud computing and digital data storage costs have declined significantly and continue to do so, sensors have become cheaper and ubiquitous, self-driving cars are beginning to become a reality, there is talk of artificial intelligence and deep learning causing massive job disruptions across all spheres of life, and data science as a career option is seeing an explosive growth. A visit to any of the major massive open online course websites shows data science as their most popular course offerings. Silicon Valley companies (e.g. Insight Data Science) and data science boot-camps are capitalizing on the new-found opportunities to create pipelines of trained individuals with promises of jobs in a matter of weeks.

Chances are that you have heard of data science as an emerging career option regardless of your discipline. It is not hard to decipher what a data scientist does, but Nate Silver, of the famous ’FiveThirtyEight’ blog described it best when asked: “I think data scientist is a sexed-up term for a statistician”. Regardless of whether you agree with that statement or not, if you are considering this path as a career option outside of academia, then opportunities abound. The panel speakers shared their stories on their transition to the field and the questions by participants covered various aspects of life as a data scientist. During the Q&A, a common theme emerged, that of the importance of all the clichéd career-development topics we keep hearing. The significance of informational interviews, networking and the development of soft-skills was not lost on the audience. Another aspect of working outside academia in a quantitative field was the difference and the nature of the work. When deadlines and output is most important, careful thinking, implementing and re-evaluating the project to optimize and produce the best results is generally not feasible, and in-fact can be potentially counter-productive. When funding is not flowing from the government or a non-profit,philanthropic organization but rather from a “client”, the end-product delivered in a timely manner is often the most important goal. The panel highlighted that the work is generally fast-paced, where hopping from one project to another in a quick manner is usually the norm. Lastly, the availability and importance of mentoring, feedback and resources for personal growth was another theme that was voiced by the three-member panel. The speakers stressed that it was only after leaving academia did it become apparent that being part of a great university offered tremendous resources for personal growth, skills and career development. Good mentorship and the availability and use of these resources was instrumental in shaping their career trajectories.

So if you have been wondering about all the hype and career options in data science and bioinformatics and if the prospect of leaving academia is something that you are considering, a simple web-search should help you in that direction. There are various resources available for free or are very cheap that can quickly help you learn the basic tools of the trade. As a Ph.D. and a postdoctoral scholar if you have done anything quantitative, then you already have most of the necessary skills. Additionally, you can always reach-out to the panel members for an informational interview or to seek answers to specific questions (a brief biography of all the panel members in all the breakout sessions is available on the VPA website).

Case Studies in Intellectual Property
by Laura Daniel, Ph.D.

The Intellectual Property (IP) breakout session was conducted by Seth Ogden, Ph.D., J.D., associate at Patterson law firm. The path Dr. Ogden look is a long one, but if you know academia isn’t for you then may want to consider a career in IP. There are a number of ways to go down this path, but I will focus on the way Dr. Ogden completed the journey. After obtaining a Ph.D. in Cancer Biology from Vanderbilt University, Dr. Ogden treated studying for the patent bar exam like a full-time job. He estimates putting in over 200 hours preparing for the exam, which many attorneys say is harder than the bar exam.

After you have passed the patent bar exam you can either go straight to law school or get a job as a patent agent to see if you like the work. Dr. Ogden decided to go “all in”; he crossed his fingers and hoped he would like the job. It is a big gamble because at the end of this journey, patent bar exam fee + LSAT fee + student loans + bar study course + bar exam = MANY years of debt. While in law school, Dr. Ogden was able to gain experience in IP by doing an internship at a local law firm. This put him in an ideal position to get a job as a patent attorney when he finished law school and passed the bar exam. He continues to work as a patent attorney and loves his job.
New and Junior Faculty
by Chris Smith, Ph.D.

The junior faculty panel consisted of: Kelsey Hatzell, Ph.D., Assistant Professor of Mechanical Engineering and Chemical and Biomolecular Engineering; James Dewar, Ph.D., Assistant Professor in the Department of Biochemistry; Maithilee Kunda, Ph.D., Assistant Professor of Computer Science and Computer Engineering in the Departments of Computer Science and Electrical Engineering; Anita Disney, Ph.D., Assistant Professor in the Department of Psychology. Below are some of their suggestions:

General Advice: Having a K award from NIH, especially a K99, greatly improves your chances of obtaining a facility position because you would be entering your new position with research money. However, if you obtain a faculty position without funding it is often useful to defer your start date and spend six months to one year submitting grant proposals. You will have less time to work on proposals with your new faculty responsibilities; if the timing is right you can start in conjunction with your new grant award and be one step closer to tenure.

Targeting jobs: Two of the panelist, Kunda & Hatzell, took a narrow approach and applied to targeted schools while Dewar & Disney cast a broad net and applied to several places. The important point is that wherever you accept a faculty position you need to insure it is the right fit, but you will not know until you visit. As a general rule, good people are in good departments.

Application materials: Prepare all your documents well in advance to give ample time for colleagues to review and you to revise.

Recommendation letters: It is critical that your recommenders get their letters in early (be proactive and set early deadlines for them). Often, committees will assume the earlier they receive the letter the more enthusiasm the recommender has for you. Try to have each recommender speak to a different part of you as a candidate; consider offering to draft a letter that they can modify.

Cover letter: Don't underestimate the importance of the cover letter. It is often the only document committee members read. Make sure it is specific and tailored to the job you are applying for.

Research statement: Mention in your research statement what data and projects you will be bring with you. Address what your projects will be and how it will make you independent from your former advisor.

Teaching statement: For the teaching statement (if required), list specific courses you could teach; this gives the committee an idea about what needs you might fill. Furthermore, it shows you have done your homework on the department.

Starting your lab: Be proactive. Ask questions, get answers. Don't be afraid to say NO to service requests; if it isn't essential for your early career development don't do it. You have limited time before your tenure review, and your focus needs to be on research and teaching.

Key Take Home Points: If you don't feel prepared for the application process, don't worry as people seldom do. Put the “true you” in your application; if you do you can be pretty much guaranteed that the job you are offered will be right for you.

“Leveraging your Ph.D.” - Dr. David Shifrin
by Oluchi Nwosu-Randolph, Ph.D.

Dr. David Shifrin’s session was a reflection on traits we have acquired while earning a Ph.D. Dr. Shifrin spoke about the pros and cons of flexibility, persistence, ability to work well under pressure, and tendency to be data-driven. For instance, our doctorate demonstrates our ability to stick with a project. However, this same tenacity when facing a specific goal can turn into tunnel vision, a sense of entitlement to things going our way, or a thin skin in the face of criticism. Given these opposing realities, Shifrin encourages us to seek pushback rather than shy from it, check our egos at the door, and remember that life is outside of our control—a tall order, but sound advice nonetheless.

Finally, he suggests putting yourself in situations where you might be the only scientist to develop what he thinks is the most valuable skill that we can acquire: the ability to connect with people. We need to mingle with people outside of the research community because the work we do—regardless of our discipline—will likely impact people. Before worrying about how to talk about what we do, however, we should focus on understanding what others care about and need. In this sense, the extent to which you can leverage your Ph.D. depends on the effectiveness with which you relate to others. For translating the value of our research to non-scientists, Shifrin recommends two books: Houston, We Have a Narrative by Randy Olson, and Making the Complex Compelling by David Chapin.
2017 National Postdoc Appreciation Week Social Events

PICNIC IN DRAGON PARK

OFFICE OF POSTDOC AFFAIRS
OPEN HOUSE

Announcements from the VPA Executive Board

VANDERBILT UNIVERSITY
POSTDOCTORAL ASSOCIATION

12th Annual SYMPOSIUM

WHEN: THURSDAY, APRIL 12, 2018
WHERE: STUDENT LIFE CENTER, VANDERBILT UNIVERSITY

Interested in joining the symposium planning committee? Contact postdoc@vanderbilt.edu.

Postdoc Talk Call for Articles!

Would you like to contribute an article or a topic idea for the postdoc newsletter?

The postdoc newsletter committee invites article contributions from postdocs who would like to share their experience, a story, accomplishments, food recipes, good reads or other informative topics. Please contact niyati.vachharajani@vanderbilt.edu to contribute your entries.
VPA Symposium Honors Excellence Among Postdocs and Mentors
by Boone Prentice Ph.D.

POSTDOC OF THE YEAR: Jennifer Wisecarver, Ph.D.

The annual Postdoc of the Year Award recognizes a postdoctoral scholar at Vanderbilt who has demonstrated outstanding scholarship, mentorship, and service to the community. Nominations are submitted by faculty members and the awardee is selected by the Office of Postdoctoral Affairs.

This year’s winner is Dr. Jennifer H. Wisecaver, a postdoctoral scholar in the Department of Biological Sciences. Dr. Wisecaver was nominated by her advisor, Professor Antonis Rokas, and was recognized for her outstanding productivity and research into secondary metabolite production in fungi and the genes that control this metabolism. Dr. Wisecaver will move to Purdue University this fall as an assistant professor of biochemistry.

MENTOR OF THE YEAR: Manus Donahue, Ph.D.

The Mentor of the Year Award is presented annually to a faculty member at Vanderbilt who has demonstrated outstanding postdoctoral advisement, scholarship, and service to the community. Nominations are submitted by postdoctoral scholars and the awardee is selected by the VPA Symposium Planning Committee.

This year’s winner is Dr. Manus J. Donahue, associate professor in the Departments of Radiology and Radiological Sciences, Neurology, Physics and Astronomy, and Psychiatry. Dr. Donahue was nominated by a postdoctoral fellow in his lab, Dr. Rachelle Creszenzi, who highlighted her advisor’s willingness to go the extra mile to ensure his students and postdocs are successful by providing guidance on everything from operating lab equipment to writing grants and manuscripts. In particular, Dr. Donahue was recognized for his enthusiastic support of his trainees’ career goals and for his support during personal life challenges. Dr. Donahue’s work focuses on the development of magnetic resonance imaging (MRI) methods to study mechanisms of neurovascular couplings in health and disease.

Snapshots from the 2017 VPA and Shared Resources Symposium
On Discussions of Being a Vegan...
by Dara Naphan-Kingery Ph.D.

“I don’t miss meat or dairy, but I do miss having friends.” – Julio Torres

There’s a stereotype about vegans that being a vegan is the first thing they will tell you about themselves. I would say that this specific stereotype didn’t arise in a vacuum. I won’t speak on behalf of all vegans, because I might be projecting (there you have it – I’m a vegan, I will reify that stereotype!), but sometimes, deep down, I want to dramatically shout from the rooftops with a megaphone that exploiting animals is just plain wrong and will lead to the very avoidable destruction of us all. But how do you say this politely without alienating your friends and loved ones (or turn people away from reading this article…for that matter)? This is a conundrum I think about a lot these days: how to discuss this very taboo subject around eating when eating is a necessary and central part of life, and when our food choices have far-reaching consequences.

Before I pontificate on how and why I believe this is such a conundrum (I don’t have an answer to the question), I wanted to quickly share my own journey through veganism. I only recently became a vegan when I moved to Nashville for a postdoctoral research position earlier this year. I knew when I uprooted that I wanted to reinvent myself in a positive way, and a confluence of things happened: I was bored one day, and happened to watch a Netflix documentary called “Food Choices,” and it struck a chord. I had toyed with the idea of being vegetarian for a long time but was constantly surrounded by delicious meat. Since I had moved to Nashville months before my partner (meat-eater), I was making all my own meals, and thus, it was the perfect opportunity to make a change. I’m not lying when I say that it was a challenge. I had eaten meat, dairy, and eggs my whole life. I savored steak, chicken wings, pizza-you name it. Because I’m a glutton for punishment, right when I moved to the South, the home of BBQ, I went “cold-turkey” from total omnivore to anti-omnivore.

Like Julio Torres, I actually don’t miss meat or dairy at all. The main inconvenience is that this lifestyle requires more planning and forethought, time to make your own food (unless, you can splurge at places like the Sunflower Café or Avo here in Nashville). The trickiest part has not been my relationship with food, but rather—you guessed it—my relationships with non-vegans (even vegetarians—who I have something in common with!). I’ve read that the best way to “enlighten” others about veganism is to simply “lead by example”—in other words, don’t make vegans look like self-righteous lunatics by trying to sneak in a wagging finger about meat-eating every time climate change is mentioned. But thinking it, and not saying it, can be so difficult. Let me explain why.

Again, I can’t speak for other vegans, and it might be because I’m a newer vegan, but to justify my passion that is at times inconvenient (okay…it’s like swimming upstream, or, as my husband calls it, “walking on stilts in high heels”), I constantly consume information on veganism. This information is so unsettling that keeping it to myself feels like ignoring a massive elephant in the room (as you can see, I still use animals in as many idioms as possible). For example, I follow vegan and animal rights organizations on my Facebook feed that present me with provocative memes like, “there’s a reason you take your kids to an apple orchard and not a slaughterhouse” and searing footage of undercover operations of animals whose lives are painful and short. Like satiating an addiction, I watch and read anything I can get my hands on about “where” this food comes from (really, a question of “how”), the effects that animal agriculture has on our planet, and the negative effects that eating stressed out animal flesh and their by-products has on our health.

Thus, this isn’t just a diet, it’s an infectious way of living; it very quickly became a central part of my identity. So, it’s a damned if you do—damned if you don’t kind of thing. Simply avoiding animals and animal by-products (not proselytizing veganism) raises eyebrows and causes eyes to roll in and of itself. But sorry Gandhi, simply being the change I wish to see in the world doesn’t feel like enough. And while I would like to be outspoken about injustices and help make an even bigger impact than my personal abstention, at the same time we receive “negative interpersonal sanctions” when we’re deviant and break norms like this—as we learn in introduction to sociology.

Think about it. The topic naturally pops up when planning a meal, at the grocery store, or eating. Someone biting into a juicy cheeseburger isn’t going to ask why someone’s a vegan (they might, but they’ll regret it), and a vegan’s not going to tell that person slurping down their accompanying milkshake that they’re actually causing extreme suffering to voiceless innocents at the expense of their own momentary satisfaction (if they want to have dinner with that person again). No one wants to hear or tell others things that might challenge their long-standing relationship with food or be shamed or shame someone else. It’s such a sensitive topic that it’s awkward to talk about.

I personally don’t like to be “high-maintenance” and treated as “special” or have others accommodate me. I don’t like meat-eaters feeling like I’m looking down on them from a cloud of judgment. This part of me wants to minimize this now very important part of my identity to avoid conflict, which is why I hesitated to write this piece. But I ultimately figured that while I don’t like being confrontational, the other part of me thought (and this while this may sound vegan cheesy…but totally real), being a vegan might just be the easiest way we can all make a positive change in the world, and counter all the hate with some love. And if I’m going to be damned either way, why not start a conversation about how to best talk about food choices, so we don’t hurt anyone’s feelings.
Good Eats, Reads, & Laughs: Inspiration for Leisurly Activities

Finding your POWER to Publish
by Laura Daniel, Ph.D.

I recently had the fortune to read the book “Publishing Your Medical Research” written by Dan Byrne. Byrne is a faculty member in the Department of Biostatistics at Vanderbilt; he teaches two courses in Vanderbilt’s MSCI program: Biostatistics I and Medical Writing for Clinical Investigators. His areas of expertise are predictive modeling and the learning healthcare system.

Daniel Byrne walks through the steps to getting research published in “Publishing Your Medical Research” 2nd ed. In this book, Byrne breaks down the process into five logical categories: Planning, Observing, Writing, Editing, and Revising (POWER).

I expected the main focus of the book to be on the actual writing of the manuscript after the task of collecting and analyzing data had been completed; however, as Byrne points out writing doesn’t start with the data in hand; writing begins with just an idea for an experiment. This book begins with planning the experiment, walks through data collection and data analysis, and ends with how to edit and revise the final product.

Brevity appeared to be one of Bryne’s goals in writing this book. He briefly covers many topics and then recommends additional resources the reader can use to study needed topics in more depth. This is useful because not all topics are necessary for all research projects and to include everything would have been overwhelming.

Byrne surveyed journal reviewers and editors about topics such as why they rejected manuscripts and what advise they would give to people writing a manuscript. This was presented in various formats and often included figures, I found this aspect of the book very informative. Byrne’s book caters to the clinical scientist with large sample sizes; however many of the same principles can be applied to basic research.

The book was an informative, easy read, and covered all the necessary topics to get your research published. I recommend this book to anyone who is struggling with experimental design, data analysis, or difficult reviewers.

If you would like to glance through the book you can find it either at Eskind Library or you can borrow the book through the BRET office by contacting Kim Petrie. Better yet, you can buy the book through Amazon using the following link: https://www.amazon.com/dp/1496353862

3 Tips from “Houston, We Have a Narrative: Why Science Needs Story” by Randy Olson
by Dusty Miller, Ph.D.

Tip #1: Use the ABT (And, But, Therefore) format.
The ABT format replaces multiple ‘ands’ with ‘buts’ and ‘therefores’. This format is also known as the “They Say/I Say” in argumentation; it was first identified by George Hegel in the 1700s and has three parts: thesis, antithesis and synthesis.

and , but therefore .

Which sentence is more engaging? 1) “In my lab we study physiology and biochemistry and we believe the molecular level is important and are investigating…”; or 2) “In my lab we study physiology and biochemistry but we believe there are important question to address at the molecular level therefore…” Our brains naturally hold onto storylines in the ABT format.

Tip #2: Tell a big story.
Theodosius Dobzhansky, a seminal geneticist, said “Nothing in biology makes sense except in the light of evolution.” This statement can be hair-raising because it’s not entirely true. The use of the superlative has been beaten out of us in general. Hair raising and all, try it:

“Nothing in ______ makes sense except in the light of ______.”

You can decide later if you want to use this phrasing, but if it doesn’t come easily, have you found your narrative?

Tip #3: Try the Logline Maker Template
A logline is a short summary; it could be a summary of a book, a movie, or a scientific idea. Find your narrative by filling in the blanks with descriptions of the words in italics:

The Logline Maker Template:

In an ordinary world ___________

A flawed character ___________

has a catalytic event ___________

which upends his/her world ___________

the character decides to take action ___________

but when the stakes get raised ___________

the character must learn to ___________

in order to overcome the opposition ___________

and achieve the goal ___________
“Vegan Pumpkin Basil Pinwheels”
Adapted from: www.elephantasticvegan.com

Prep time: 8 min
Cook time: 15 min

Ingredients:
• 1 package vegan puff pastry dough (16x9 inches)
• 1/3 cup cooked pumpkin or pumpkin puree
• 1/2 teaspoon salt
• 1/4 cup loosely packed fresh basil leaves.

Method:
1. Pre-heat the oven to 400°F.
2. Roll out the puff pastry dough.
3. If you’re using a cooked pumpkin add it into a blender along with the salt and mix until it’s smooth. // If you’re using pumpkin puree, add the salt and give it a good mix.
4. Spread the salted pumpkin puree on the puff pastry dough, leave out the bottom border.
5. Sprinkle the basil leaves on top
6. Roll the puff pastry dough in (as tight as possible) and close the edge.
7. Cut the puff pastry dough roll in about 25 pieces.
8. Place the pinwheels on a baking sheet and place them in the oven for 15 to 20 minutes until golden brown.

“Cauliflower Buffalo Wings”
Adapted from: www.hotforfoodblog.com

Prep time: 8 min
Cook time: 15 min

Ingredients:
• 1 head of cauliflower (approx. 4-5 cups of florets)
• 1/2 cup unsweetened non-dairy milk
• 3/4 cup all-purpose flour
• 1 cup frank’s red hot sauce
• 2 tsp garlic powder
• 2 tsp onion powder
• 1 tsp cumin
• 1 tsp paprika
• 1/4 tsp sea salt
• 1/4 tsp ground pepper
• 1 tbsp earth balance buttery spread

Method:
1. Pre-heat oven to 450°F.
2. Wash and cut cauliflower head into bite sized pieces/florets.
3. Mix all ingredients (minus teh earth balance and hot sauce).
4. Dip each floret into the mixture and coat evenly. Lay florets in an even layer on the parchment-lined backing sheet.
5. Bake for 25 minutes, flipping the florets halfway through.
6. For the wing sauce, melt earth balance on low heat and mix in hot sauce. Remove from heat, stir together, and set aside.
7. Remove cauliflower from oven and coat with wing sauce.
8. Bake at 450°F for another 25 minutes, flipping at halfway.