

The PhD Post

A newsletter written for YOU by your peers

The Stand-up Scientists

Britni Sanchez, PhD

Comedy and science rarely meet outside of cheesy sitcoms. These sitcoms depict scientists as socially inept nerds to be laughed at, not with. I'm ecstatic to tell you about an innovative new collaboration between comedy and science that started right here in Colorado. The Peer Revue, pun intended, is a comedy program featuring scientists. That's right, funny scientists. The Peer Revue was started by Kyle of Science Riot, who describes it as "an educational nonprofit working to popularize science through innovative programming, comedy, outreach, and entertainment."



The Peer Revue is putting scientists and audiences through an unprecedented experiment in science communication and comedic entertainment. Each event features STEM professionals from diverse backgrounds

delivering eight-minute comedy routines about cool things in their areas of expertise. These are not professional comedians, but all participants have recently completed workshops sponsored by The Peer Revue training them how to write and perform comedy, with help from a professional comedian.

Unlike the dry and didactic science we're used to from classes and seminars, The Peer Revue highlights that science can and should be entertaining. As the Peer Revue continues, they have the potential to connect with larger audiences from both scientific and non-scientific backgrounds. The efforts of this program provide exactly the kind of communication needed to bridge the gaps in knowledge and enthusiasm between scientists and non-scientists.

After speaking with Kyle, I decided to try delivering science-themed stand-up for myself. It was absolutely a great experience, and I even got a few laughs. The crowd was friendly and the comedians gave me great advice about what I could improve for next time. Altogether, I learned a lot about myself and how I communicate with an audience. I think everyone should try it, at least once. We can all learn to communicate our science better and, trust me, after trying to get strangers to laugh at your science jokes, giving that update talk to your department or presentation to your fellow classmates will seem easy by comparison.

Do you have an exciting topic in science that you'd like to share with an audience? If your friends in the cell culture room think you're HeLa-rious and you're tired of Schrodinger's cat jokes, then consider signing up for the waitlist to attend a workshop and perform at The Peer Revue. If you're not up to performing, come be an audience member. More information and upcoming events can be found at (<http://www.peer-revue.com/>).

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Interested in contributing? Contact chiharu.graybill@ucdenver.edu or sarah.e.clark@ucdenver.edu

Toto, I've a feeling we're not in undergrad anymore

You did the applications. You got accepted. Now you're here, taking classes, looking for a lab and getting overwhelmed. So, take some advice from a former first-year grad student. Treat grad school like a job, because it is a job. Most of your learning will be outside of class. If you don't know something, go ask for help. It's easy to get overwhelmed and feel like you don't deserve to be here. That's called Imposter Syndrome and we all feel it. You've gone from being the biggest fish in a small pond to a regular sized fish in a really big pond. Don't worry, you'll grow and find other fish to help you.

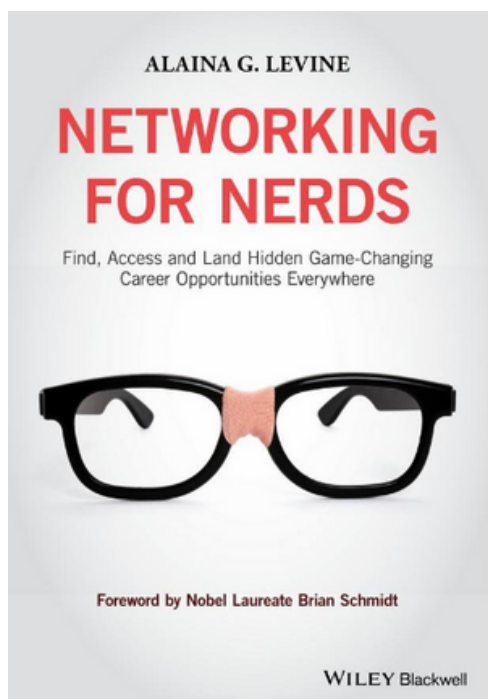
The finish line seems very far away now, it's important to know what skills you want to have when you get there. Acquire those. PhDs don't come with faculty job offers. Publish papers and write grants. Network with people. Start doing informal interviews and apply for internships. Use organizing programs like Mendeley and Scrivener.

Picking a lab can be intimidating. Talk to your potential advisor and committee. Interview other students in the lab. Find out where they went after graduation and how long it took. Is the mentor hands-off or do they give directives? Ultimately, it is up to you to set your goals and graduate. Get a planner and try the Pomodoro Method. Set small goals that lead to big ones and ask: "is this getting me closer to finishing?" Stand up to your committee and tell them when you're dropping a dead-end project or sticking with something that's working. Remember: you don't eat a piano in one bite.

The extensive workload and lax schedule creates a paradox where nothing has to get done but there's always something you should be doing. This can make everything that's not work feel like procrastination. Declare days off for yourself where you will not work. Go to the mountains. When you are working, find a café that makes nice tea and will let you work for 8 hours. Find a restaurant that will send you tasty food when you're too busy to cook. Grad school is challenging. If you set yourself goals and find a good mentor and friends to help it can be a great experience. Before you know it, you will be on the other side, giving advice to the next group.

Matt Davidson, PhD

Book Review



Review by Chiharu Graybill, PhD

Are you looking for a job right now or will you be in the near future? Stop looking at job posts online. You are not going to find anything that comes close to what you might want to do. You deserve better than that, says the author of "Networking for Nerds," Dr. Alaina Levine.

According to Dr. Levine, only 10 percent of jobs are ever posted on job search sites. This means that 90 percent of the jobs out there are not even visible to us. Regardless of whether you are looking for a job in academia or industry, the only way you can unlock these hidden opportunities is to network, network, and you guessed it right, network.

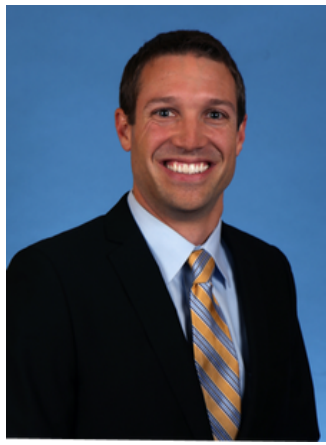
Dr. Levine is "an award-winning entrepreneur, science journalist, science and engineering careers consultant, professional speaker and corporate comedian, and executive communications consultant and coach"(1). As a professional networker and through her personal experiences, she provides practical guides to powerful networking skills and ultimately to reach our dream careers.

This book is like a reference book; it is easier to look up a specific networking situation you may encounter than try to read it from the beginning to the end. However, the book tells you how you should prepare and behave to take advantage of many networking scenarios. Even if you feel uncomfortable about networking, this book will convince you of its importance and you will be compelled to put on your networking hat for the next opportunity.

1. <http://www.alainalevine.com/>

Footsteps Series: Interview with Dr. Derek Drechsel

Interview by Rwik Sen, PhD



Dr. Derek Drechsel is a Senior Health Scientist for Cardno ChemRisk in Boulder, CO. As a scientific consultant, he conducts toxicological evaluations for a wide variety of chemicals encountered in occupational, environmental and consumer product settings. Dr. Drechsel received his Ph.D. in Toxicology from the School of Pharmacy at the University of Colorado.

1. Why did you decide to pursue your current career?

I started to explore different options shortly after receiving my Ph.D. I decided to pursue a career in scientific consulting because I wanted to be exposed to a diverse set of projects with visibility in my day-to-day life.

2. What do you find most and least rewarding about your current career?

The best part of my work is not knowing what type of project that I might be working on later that day, next week or next year. I'm exposed to a lot of exciting projects and there are flexible pathways for developing my own career. I also enjoy engaging with my colleagues and peers across various disciplines as well as relating scientific issues to the general public. The most rewarding aspect is seeing the impact of my work every day. This can be in the form of products found on store shelves and in one's home to stories covered in the news. On the flip side, consulting presents a unique set of challenges in terms of time management (i.e., travel, short deadlines, long hours, multitasking) that can make for a difficult adjustment.

3. How did your scientific training prepare you for your current position?

The most important piece of my training was learning to be a scientist. The skills learned in the critical evaluation of data, communication in forms of writing and presenting to different audiences, and managing projects were far more valuable than any specific technical information that I learned.

4. What do you think you will be doing 5 years from now?

I expect to continue as a scientific consultant for many years to come. I can foresee my focus being directed towards a more specific issue based on personal interests or business opportunities. I enjoy the fast-paced and diverse environment.

5. What advice would you give to a current CU Denver/Anschutz trainee who wants to transition to your profession?

Scientific consulting can entail a diverse set of opportunities. Consider if you want to stake your expertise as knowing 'a little about a lot' or 'a lot about a little'. Both paths present different challenges and opportunities. When thinking about any career, find and talk to someone who works in the field or profession of interest. Everyone has a different career path, and a world of opportunities exist, so don't be afraid to explore.

Announcement



The NIH BEST (Broadening Experiences in Scientific Training) has a new blog series featuring our own Rwik Sen (right).

From their website (<http://www.nihbest.org/phdpostdoc-blog>): "The PhD/Postdoc blog series features scientists at different stages of career development as they explore and plan for their next steps." Take a look every Wednesday for new posts!



"Lab Genie"



Breanna Symes, PhD and Laurissa Hughes

The Career Corner

Career Exploration: let your happiness guide your way

Hey, PhDs, there is no right career for you.

Yep – that’s what I said. But, you ask, aren’t I supposed to be a tenure-track faculty member? Or, maybe an industry researcher or a teacher? My answer – yes. You could do ANY of those things, and so much more. But, there is no right career for you, because there are MANY right careers for you.

The myth is that we are supposed to do one thing for our careers. The reality is that scientific training provides you a highly valuable skillset that is applicable to a variety of professions. Your challenge is not determining what you CAN do, but what you WANT to do. Once you know what you enjoy most about your work, you’ll find that there are many different professions, in many different sectors, that will allow you to do those things.

Here’s an example: Many PhDs consider becoming a teacher; however, they define that career as being an instructor at a university. When asked why they want to teach, they’ll say, “I enjoy helping others learn” or “I like explaining complex ideas in simple ways”. Well guess what, that’s basically what a Medical Science Liaison (MSL) does ... and what a consultant does ... and what certain academic administrators do (or at least try to do ...). If you start to understand what you enjoy doing, you can find careers that will allow you to do those things – and trust me, there are a lot of options out there for you.

So, how do you figure out what you like doing? It generally starts with self-awareness, which you can start building with personality assessments (e.g., Strengths Finder). Next, pay attention to those awesome days. Keep a journal and write down what happened anytime you feel really energized or satisfied with your work. Look back in a couple of months and identify patterns (e.g., on good days I was talking about science). Look at job postings and find interesting options. Then, identify the common core responsibilities between all of those positions.

Realizing that you’d enjoy multiple careers can relieve a lot of anxiety about making the “wrong” choice. And, understanding what you like to do can help you find interesting positions in many different sectors, including outside of the safety of academia. So, what DO you like doing? I think it’s about time to find out ...

Bruce H. Mandt, PhD
Director, Career Development Office

Taboo Topics

As scientists, we are taught to explore every minute facet of reality—to question, probe and examine those unexplored details of existence that improve our grasp and knowledge of the universe. But, as in every field, there are some taboo topics we prefer not to acknowledge because they might embarrass or undermine our scientific discipline. I introduce this column: “Taboo Topics,” to face those uncomfortable issues head-on.

The Mean Mentor

Everyone recognizes the existence of mean mentors in academic science. A mentor is an individual who is supposed to guide you towards your ultimate goals and take pride in your efforts and accomplishments. Yet, there are numerous mentors whose efforts seem to undermine, rather than encourage, the efforts of their mentees. Trainees report being publicly demeaned, ridiculed, insulted, and disrespected by their mentors, even to the point of being regularly broken down to tears. Individuals who have experienced verbal attacks personally or second-hand report psychological trauma that left them questioning their commitment to a career in scientific research; many also experienced physical illness from anxiety. Some left their labs because of this abuse, while others have turned away from academia altogether.

What is the purpose behind this abusive behavior from some mentors, and why is it tolerated? It may be the product of a past age where verbal abuse was viewed as a sort of “rite of passage” for future Principal Investigators to endure until they took the reins of their own laboratory. Whatever the intentions (conscious or not) may be, the impact on trainees is clearly damaging, and difficult to rectify. When asked if they utilized their institution’s resources for addressing these issues, all abused mentees reported no, for fear of repercussions. The power of mentors in the scientific community is immense, and invoking their ire invites a swath of negative impacts on the mentee’s future. Without a mentor’s help, it is incredibly difficult to obtain grants or publications, the currency of academic science.

So what can we do to address this issue? On one hand, mentees can (and should) look out for one another. If there is a particular mentor with a habit of driving their mentees out of science, prospective mentees should be warned to avoid that mentor. On the other hand, interviewed mentees believe that, realistically, change must come from the top—only by recognizing their own behaviors and the impact of those behaviors on their mentees can mentors take responsibility for their actions and modify their methods. Many individuals with real power over others fail to recognize the extent to which that power affects perception. A person in a more powerless position (like a mentee) can take criticism much harder when it comes from a person in a more powerful position (like a mentor), for fear that this criticism will have negative repercussions for their future career. The key is to recognize the impact that this criticism has on the mentees, and adjust the frequency/extent of criticism accordingly. No mentee should walk through the door shaking with fear of seeing their mentor. A mentor is meant to be a guide along the path of knowledge—not a chariot racer with a whip in hand.

Breanna Symmes, PhD



Looking for funding? Let ORDE help

As a Postdoc, finding your own funding is often an important part of your career advancement--or even a requirement for your continued employment. While NIH awards are tried-and-true sources of funding, there are many other foundations with specific funding goals that may fit your research aims. The Office of Research Development and Education (ORDE) at CU Denver offers many resources to help faculty find and obtain funding. However, a perhaps a lesser-known service is the “Personalized Fund Search for Faculty.” Even us ‘lowly’ postdocs can take advantage of this resource!

Interested? Simply email ORDE Director Lynette Michael at: lynette.michael@ucdenver.edu to schedule your 15-minute phone interview. Have our elevator pitch prepared! When I tried this out, I was asked to explain my proposed research topic area, title, and goals. In a few days I received a document summarizing the search results. A total of ten grant programs were identified, including eight non-federal opportunities. Several of these were disease-specific foundations I hadn’t heard of before and have since applied to (fingers crossed). Overall, I found this service to be a great starting point for my funding search. While we are often told another set of eyes can improve your grant, it turns out another perspective can also be helpful in the very beginning of the process.

Sarah E. Clark, PhD

Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) Student Chapter at University of Colorado Anschutz Medical Campus



SACNAS is an inclusive, national organization dedicated to fostering the advancement and success of minorities (of all ethnic backgrounds and genders). Specifically, SACNAS supports careers in Science, Technology, Engineering and Mathematics (STEM)- from college students to professionals (sacnas.org).

There are over 115 Student and Professional Chapters who carry out the mission to further the work, effectiveness, and public understanding of and appreciation for underrepresented minorities in science. Without the involvement of corporations, individuals, community supporters, and other organizations, the push for these advancements will fall short. For this reason, we urge individuals from different science majors and science-related majors to come together for academic, community service, and social activities.

A recent press release by Mayor Jackie Biskupski of Salt Lake City, Utah, where the 2017 SACNAS Diversity in STEM Conference will be held, mentioned this is one of the largest and most diverse gatherings of underrepresented minority STEM students and professionals (in academia, the government and private sectors) across the country.

Through organizations like this, we have the tremendous opportunity to actively practice what it truly means to be an advocate- for each other, for future generations, and for the field at large. This passion fuels our desire to promote progress by finding strength in our diversity, thus we welcome you to join our family, our cause.

Alexis Catala, PhD Candidate

Why network?

NETWORKING IS EVERYTHING when it comes to finding your first job in the industry. But how exactly can we build a professional network in industry while working in an academic environment? This question puzzled me for a long time, until I stumbled upon the Academia Industry Alliance (AIA) and Rocky Mountain BioTechnology Symposium (RMBTS).

Whether you are actively looking for an industry position, or just want to explore career options outside of academia, being part of AIA events can help you be connected and informed. By simply asking other attendees questions like "what do you work on?," "why did you choose your current career?," or "what is the best part of your job?," you can gather first-hand information that fits your specific needs. For me, those conversations had a great impact on defining my interest in industrial research and prepared me for what to expect in a different career path.

Like many of you who have been in academia since college, making that first step to network with "outsiders" was intimidating for me. Slowly, however, I realized that non-academics come to these AIA events because they want to network with academics- some seeking collaboration or consulting, others simply like to hear about different aspects of science. From analyzing a scientific question with your own expertise to connecting financial consultants with biomedical researchers on campus, you may be surprised how much you have to offer. Another great way to increase your presence at these events is to be part of the AIA team - serving on the executive board, volunteering for RMBTS, or simply spreading the word. Not only do these activities provide you extra opportunities for networking, but they also appear as great communication and leadership experience on your resume. After all, what is there to lose if the worst thing that could happen is you meet some of the nicest people on campus?

Qi Liu, PhD and

Research Scientist at Sharklet Technologies Inc.

Acronym

CU Anschutz SACNAS Chapter

SACNAS Officers

Zoila 'Isabel' Fernandez (President), Alexis D Catalá (Vice President), Emmanuel 'Manny' Rosas (Secretary), Meagan Chriswell (Treasurer), Carlos E Catalano, PharmD, PhD (Faculty Advisor)

Activities

Monthly Meetings, every second Tuesday of the month. Split Stories, a space to sharing your unique experiences, challenges, and successes, will be taking place on the first Tuesday of every month, and we encourage all to participate.

Coffee Hour, every fourth Tuesday of the month

Contact Information

Officers: UC email addresses (independently), SACNAS@cudenver.edu (collective); Social Media: <https://www.facebook.com/SACNASAMC/>; SACNAS Google Calendar: <https://calendar.google.com/calendar/embed?src=hqod1o1h0gud97h2c3bailu50o%40group.calendar.google.com&ctz=America/Denver>