Welcome to the CNSPY Newsletter. Here, we report the most recent networking and career development events sponsored by CNSPY. This issue highlights many new initiatives for CNSPY. We recruited new board members and participated in team building activities to reform the board and bring in fresh perspectives. We also hosted our first consulting workshop, which was a great success! With CNSPY’s new energy, we hope to continue improving the programs that we bring to you! This issue also features a one-of-a-kind Career-in-Focus section. We interviewed Christina Agapakis to understand more about the unique non-traditional role she carved out for herself as the Creative Director for Ginkgo Bioworks. Learn how you can use your degree and incorporate all of your interests - such as art, music, dance, and science - to create the ideal career for yourself.

- Victoria Schulman, SPYglass Editor-in-Chief and CNSPY Blogger

CNSPY in focus

CNSPY was established to provide graduate students and postdocs with a platform to explore diverse career options and build an extensive professional network of peers, career mentors, and faculty advisors. Our events allow our members to meet and learn from career mentors while simultaneously building a community of peers and colleagues. We aim to establish new avenues for collaboration, business ventures, and job opportunities while also supporting an entrepreneurial environment among science trainees at Yale.

Welcome New Members of the Leadership Team

After recruitment, we welcome Tianyi Yuan, Supriya Kulkarni, Lydia Hofstaetter, and Sandra Martinez-Morilla, as the newest members of the Communications Team, and Caroline Rufo, Qianni Cheng, Natasha Dudzinski, Leela Dodda, and Jun Liu as the newest members of the Events Team.

Business Team
Lie Ma, Daniel Mori, and Seongseop Kim

Communications Team
Elaine Guevara, Lydia Hofstaetter, Supriya Kulkarni, Sandra Martinez-Morilla, Victoria Schulman, and Tianyi Yuan

Events Team
Claudia Bertuccio, Qianni Cheng, Leela Dodda, Natasha Dudzinski, James Havey, Ira Kukic, Jun Liu, Leo Ma, Aritra Pal, Nayi Wang, and Tenaya Vallery

We are always looking for dedicated individuals who are interested in exploring new career avenues and sharing that passion with our members. If you are one of those people, we want to hear from you! Apply to join the team!

JOIN THE TEAM! Apply here or email us
Dr. David Lewin, Ph.D., Senior Associate Director of Licensing at the Office of Cooperative Research (OCR) at Yale University

On Wednesday, March 2nd, 2016, CNSPY invited David Lewin to meet with students and postdocs interested in technology transfer and discuss this career option. He began the session by describing the difference between tech transfer and patent law. Tech transfer is the business development behind monetizing a new technology developed in academia, whereas patent law involves the legal protocols that protect intellectual property.

Dr. Lewin was introduced to tech transfer in graduate school when he developed an improved version of a northern blot apparatus that he then patented with the help of OCR at Yale. After graduation, he worked at biotech and pharmaceutical companies where he gained critical experience dealing with patents and technology transfer that was necessary to become a tech transfer professional. With his personal story, he highlighted that most positions in this field require prior experience handling patents and licensing agreements. Thus, he advised interested students and postdocs to volunteer at the tech transfer offices at their academic institutions as he did. He also stressed the importance of proactively seeking out these volunteer opportunities, including shadowing, apprenticing, or interning with a knowledgeable technology transfer professional, because these roles are not usually advertised.

When broadly discussing this career path, he pointed out that tech transfer is a very people centric job with a wide spectrum of technology deals, ranging from thousands to millions of dollars in net worth that need to be handled. You must be able to interact/converse with various groups of scientists, both in academia and biotech/pharma, with niche ideas. Thus, he encourages speaking to scientists outside our specific fields and diversifying our knowledge bases.

On a daily basis, although he noted that no two days are alike, he has regular and constant meetings with the scientists who have new ideas/technologies and the interested recipient parties, i.e. Biotech/Pharma; these meetings occupy the majority of his workday apart from licensing and drafting various legal documents.

Dr. Damon Love, Ph.D., Oncology Medical Science Liaison (MSL) at Eli Lilly & Company, New York City

Dr. Love was recently featured in the Career-in-Focus section of the last issue of the CNSPY Newsletter (found here). After many readers expressed interest in meeting Dr. Love, we invited him to join us on Monday, April 4th, 2016, to further discuss his career as an MSL.

In short, Dr. Love works to share information about new drug compounds at Lilly with academic opinion leaders studying particular disease states. Likewise, he then reports back to the Lilly scientists regarding any new research or clinical information gained from academia that may be relevant to Lilly’s drug development efforts. Moreover, he often works to establish collaborations between Lilly scientists and clinical researchers to move forward with clinical trials of new drug therapies.

Given these duties, his role as an MSL involves a lot of travel to the offices of academic opinion leaders and renowned clinicians. This allows for a lot of flexibility, and he sets his own schedule for the most part, as he is only limited by the doctors’ schedules. Additionally, because most of his work takes him out of the office, he actually does most of his work from home, i.e., preparing for meetings with thought leaders, conducting conference calls with his coworkers, dealing with administrative work, and writing up meeting summaries.

Dr. Love also pointed out the downsides of his job; he regularly has a lot of paperwork to fill out, which he hates. The details of every meeting with a researcher or clinician must be documented for legal reasons – to protect Lilly and the MSL in the event that either party gets sued. To that end, there are many things that an MSL cannot say, which can be tricky at times. Particularly, since he is not a salesman, he cannot be “sales-y.” Rather, he must stay neutral at all times; thus, if he highlights the positives about a potential new drug, he must also point out the negatives. He noted that, because Lilly is a larger company, it is probably more strict about regulations than a smaller company would be, so if you like the MSL role but you’re not a rule-follower, you may prefer working for a smaller company with less stringent policies.

For those interested in a career as an MSL, he highlighted that most MSLs have postdoctoral experience;
very few graduate students are hired straight from grad school. Moreover, he advised choosing your postdoc wisely such that your project has clinical relevance to a particular disease because being able to explain research in terms of human health and advancing drug therapies is key for an MSL.

Dr. Love further discussed how the MSL role is often a stepping stone for other careers as well. After being at Lilly for only 6 months, he was already receiving emails and calls from recruiters for other types of medical communications positions, both internally and externally.

We thank Dr. Love for generously giving his time to CNSPY to answer questions both here and in the Career-in-Focus section of our previous Newsletter.

Dr. William Leiserson, Ph.D., AAAS Science and Technology Policy Fellow, National Institute of Justice

On Monday, April 25th, Dr. Leiserson joined us to discuss his transition from academia to public policy. After working for 20 years at Yale, going from postdoctoral associate to lecturer, he decided to take the risk of starting a new career in policy because he wanted to have a more direct impact on society. He talked about his experience during the two-year AAAS Fellowship and the importance of being able to communicate science to non-scientists, like politicians.

Dr. Leiserson highlighted that researchers are perfectly qualified to carry out this kind of job. Moreover, he strongly encouraged attendees to explore this professional pathway by engaging with nonprofit organizations or the federal government through fellowships. Once inside the institution, he recommended switching positions until you find the one that best meets your expectations.

Dr. Leiserson also pointed out that being a fellow could be stressful due to the uncertainty of the position and ever-changing government policies. However, despite these uncertainties, he still found it rewarding because learning new skills and knowledge was incredibly fulfilling and he never regretted his decision.

Finally, Dr. Leiserson gave invaluable tips about how to apply for this fellowship. Interested U.S. citizens with a Ph.D. may apply from May 1 until November 1 here.

CNSPY thanks Dr. Leiserson for sharing his experience with us, and we also thank Ira Kukic and Leela Dodda for organizing the event.

Dr. Suzanne Sobel, Ph.D., Senior Medical Writer at PAREXEL International

On Thursday, April 21st, 2016, CNSPY invited Suzanne Sobel to meet with students and postdocs interested in pursuing medical writing as a career option. Dr. Sobel initiated the session by giving an overview of her career path. After obtaining her Ph.D., gaining experience as a postdoctoral fellow, and working at the bench for biotech companies, she shifted her focus to medical communications. As a senior medical writer, Dr. Sobel specializes in regulatory writing to form clinical study reports as part of the common technical documents (CTDs), the dossiers that are submitted to regulatory agencies for drug approvals in the US, Europe, and Japan.

Dr. Sobel briefly introduced the important arms of medical writing: medical journalism, medical marketing, continuing medical education, and regulatory writing. She asserted that every Ph.D. graduate has the transferrable skills required for a career in medical writing and that postdoctoral experience is not necessary. However, prior to applying, she recommended building a freelance writing portfolio by volunteering with local pharmaceutical and/or continuing medical education companies and contributing to their projects. Dr. Sobel also noted that becoming a part of the American Medical Writers Association and attending meetings and workshops organized by the society was extremely helpful in making important professional connections in the field. Dr. Sobel also emphasized the importance of networking in medical communications and suggested attending different events and building professional relationships with peers.

Dr. Sobel’s typical workday involves meeting with clients and her team to discuss client requirements and the specifics of the documents, writing/editing/revising the documents underway, and resolving any issues that arise. She mentioned that she works on different therapeutic areas with companies of various sizes and hence must adapt to the client’s expectations without compromising the accuracy of the document, which can be challenging. She also emphasized the scientific and moral responsibility of the medical writer to present the observations of a clinical study without over or under representing the results, irrespective of the client’s expectations.

Dr. Sobel ended the session by reiterating the importance of being flexible while building a freelance writing portfolio and networking with professionals in the field. She also advised trainees who are interested in moving away from bench research to begin thinking about career options early and work towards building a base that will help them pursue those options.

CNSPY would like to thank Dr. Sobel for her time and for sharing her input about working towards a career in medical communications.
CNSPY Mixers

Quarterly mixers bring together former, current, and prospective CNSPY members. Our mixers are held at Kelly’s Gastro Pub with free appetizers and chances to win free drinks! We also invite guests with CNSPY success stories who are willing to share their experiences. Look for details about our next mixer in the CNSPY emails!

The next mixer is planned for next month, so don’t miss it! Look out for details in the CNSPY weekly emails.

Networking in Nature

Now that the weather is improving, our Networking in Nature series will resume with new leadership. Originally brought to us by former CNSPY Executive Board Member, Yixiao Zou, Networking in Nature allows trainees and career mentors to mingle while hiking the trails of Connecticut! Our new leaders, Nayi Wang and Aritra Pal, have made plans to take the program and its participants to new places!

East Rock Park with Matthew Calabrese, Ph.D., Principal Scientist in the Structural Biology and Biophysics Department at Pfizer

On Saturday, April 16th, four CNSPY members went on a hike with Dr. Matthew Calabrese in East Rock Park. During the three-hour hiking event, participants talked about networking skills, job application strategies, and potential recruiting opportunities with Pfizer. The responsibilities and requirements of different departments within Pfizer were also discussed. Additionally, attendees had the opportunity to discuss Pfizer’s current process of selecting molecular structures and the obstacles associated with this drug development process. The event was very helpful for students who plan to graduate soon and are passionate about joining big pharmaceutical companies after graduation. CNSPY thanks Dr. Calabrese for sharing his time with Yale trainees.

The next Networking in Nature event is scheduled to take place next month with John Overton, Senior Director of Sequencing and Lab Operations at Regeneron Pharmaceuticals. Look for details in the CNSPY weekly emails to register for this event.

CNSPY Team Building

As a new initiative to boost morale and foster a sense of community among the leadership team, CNSPY Board Member and Social Chair, Ira Kukic, proposed that the board engage in more team building activities. As such, in addition to biweekly meetings, the team now also takes part in fun activities off campus.

Escape New Haven

On Thursday, March 10th and Friday, March 18th, 2016, CNSPY went to Escape New Haven to initiate and welcome the new board members into the group and participate in a team building exercise. Escape is a New Haven-based version of the popular adventure game in which participants are “locked up” inside a room with a mystery waiting to be solved! Utilizing the elements present in the room, participants have to sequentially solve a series of puzzles, secure keys (a representative orange paper key appears in the top right of the picture below), unlock themselves, and escape the room.

As first timers at this game - and, moreover, fairly new acquaintances - the Escape administrators commended our groups on almost getting to the end (each group solved either the Space Station or the Crypt puzzles). It was a great icebreaker for the new members and helped with team bonding. The activity emphasized the importance of teamwork, different approaches/points of view required to solve the puzzles, and cooperation! Members also agreed that without a collective effort, they wouldn’t have made it as far as they did. Working as a team also enabled them to identify and appreciate distinct qualities and strengths in each team member.

Board members agreed that the experience was exciting and extremely fun, and they look forward to more team building events like these in the future!
Consulting Workshop

CNSPY hosted its first-ever workshop on consulting with Dr. Nicole Gravagna, Ph.D., Business Consultant, Executive Coach, and Author on Tuesday, May 3rd. Dr. Nicole Gravagna spoke to a crowded room of Yale trainees about her shift from academia to consulting. She detailed the path she followed after she finished her Ph.D. as she looked for professional alternatives outside academia until she found her current position.

Dr. Gravagna exposed the advantages of a “pathless career” like hers, where there is space for innovation, inspiration, and an immense variety of opportunities to open up because you can establish your own goals. However, she also pointed out the necessity of building mental toughness to handle the uncertainty that comes with being freelance.

Dr. Gravagna generously shared some tips with the attendees on how approach this type of career. In this respect, she talked about T.I.I.E.S. (Test, Integrity, Internal view, External view, Stochasticity) and the way she set up her own goals in her professional life.

For Dr. Gravagna, the key to success in her unconventional job is humility and caring for client’s problems. Proof of her good deeds is that she finds new clients by word of mouth due to her excellent reputation.

Dr. Gravagna highlighted that Ph.D.-holders are absolutely qualified to perform this kind of job. As an example of translatable scientific skills, she thinks peer reviewing and understanding both specific and general problems are scientific skills that are highly appreciated in business consulting. Furthermore, she strongly encouraged the audience to explore this professional pathway through volunteer opportunities, as she did, as well as using online platforms like upwork.com. Finally, Dr. Gravagna recommended that the attendees create their own professional path to achieve career happiness.

We thank Dr. Nicole Gravagna for sharing her experience with us, and Dianna Bartel, Caroline Rufo, and Claudia Bertuccio for organizing the event.

Site Visits

CNSPY-sponsored trips to local companies in the industry sector became popular last year. This year, our site visit program, led by James Havey, continues to enable students and postdocs to preview the facilities and benefits that accompany a career in industry.

Boehringer-Ingelheim, Ridgefield, CT

On Thursday, February 4th, 2016, a group of 14 CNSPY members enjoyed a morning at Boehringer-Ingelheim. They participated in tours of three different facilities: 1) an analytical lab, 2) the toxicology department, and 3) the production plant. Our hosts highlighted the process by which Boehringer-Ingelheim determines the purity of the compounds it synthesizes, the toxic effects of those compounds when administered, and the mechanisms by which they produce products to scale for performing clinical tests. Participants also had the opportunity to discuss the typical career progression of a Boehringer-Ingelheim employee and how it relates to scientists just embarking on their career journey. The event was an excellent opportunity to experience the infrastructure and culture of a large, private, pharmaceutical company.

CNSPY is very grateful to our hosts at Boehringer-Ingelheim and James Havey for organizing such a wonderfully beneficial event!

CNSPY Blog

The CNSPY blog continues this year with biweekly posts offering advice to help improve your networking and interpersonal skills. Every other Wednesday, CNSPY Blogger, Victoria Schulman, highlights many small things that could make a big difference. To get direct access to this content, subscribe to the CNSPY Blog.

Recently the blog has featured guest blogger, Supriya Kulkarni, who recently joined the Communications Team here at CNSPY. Read her debut commentary on a recent Science Careers article anout how to decode the job description here. Also, find her original post on how to handle criticism in the workplace here.

We will continue to accept proposals for blog ideas from guest bloggers. If you have an idea or a strategy for successful networking, interviewing, or communicating in general, consider guest blogging for CNSPY! If you’d like to write for the CNSPY blog, contact Victoria Schulman.

There are always new developments, opportunities, events, and programs hosted by CNSPY. Stay tuned by signing-up on our website, joining our LinkedIn group, or following us on Facebook or Twitter @cnspy
FAQs

What is a Creative Director?
Creative director is not a traditional title in a biotech company. As such, the role is quite open-ended, and the responsibilities may be very broad. Working at the boundary between the technical and public-facing elements of a company, the role could include working as a translator, communicating the work of bioengineering to customers and consumers, collaborating with the creative teams of other companies, artists, designers, and social scientists to develop new creative concepts that explore future applications of biotechnologies. Similar projects and responsibilities may be found in a biotech company’s marketing, communications, or design departments. In Christina words: “For me, the key is creativity and the key to creativity is collaboration. Bridging boundaries between different fields and ways of knowing are the first step for creative problem solving and design.”

Why switch to a career like this?
A creative director or similar position is suited for people with a lot of creativity and passion for both science and art. A scientist interested in a more artistic career might look for opportunities as a science writer or illustrator, but as tough as the academic job market is, being a freelance science writer or bioartist is not an easy or lucrative path either! There are more and more spaces and jobs opening up in this strange in-between world between science and art, but there is certainly no well-trod career “path” to follow. While such a position allows for flexibility in following your own interests, it also requires the ingenuity to pave your own way.

What kinds of skills are needed to be successful in these roles?
A successful creative director needs to be able to see how other people make sense of the world and communicate effectively between people of different world-views. Especially important are communication skills, reading, writing, talking to people, finding your own voice, and developing a critical eye. Networking is equally critical, for the job itself as well as finding a suitable position in the first place.
Roles like this are still being defined and you also need the skills to identify those needs and shape those roles for yourself. The first step is to realize when you’re learning the “right” sorts of skills and to learn how to seek out the opportunities to learn more.

Opportunities while you’re at Yale:
If you’re interested in exploring a career as a creative director for a company, there are many ways to better prepare yourself for this field during your academic training:

1) Practice your writing skills by starting a blog
2) Write or edit for the Yale Journal of Biology and Medicine
3) Join Science Diplomats for opportunities to practice communicating science to the public
4) Network on LinkedIn, Twitter, and Facebook
5) Pursue your interests outside of lab
How did you get interested in what you do? Did you consider other career paths?
As a student, I probably changed my mind about my career path every semester. I never had a particularly clear image of what I wanted to be "when I grew up" other than that it was going to be something that had to do with science. I remember being so struck at the start of graduate school about how it seemed like everyone knew exactly what they wanted to do, down to the subspecialty of biochemistry that they were interested in pursuing! I knew I liked chemistry and biology. I also knew I liked politics and art and literature and music. As a first year grad student those seemed like they were totally separate from what I was doing in science classes or in lab, but the further I got through my PhD, the more I realized how you can't separate politics and art from science. It was at that point that I knew what I wanted to do was find a place in between science, technology, and culture, and since then I followed opportunities as they've emerged. I'm still not sure exactly where it's going to end up!

Can you share your career path with us from graduate student to what you do now?
There were a few really important decisions and turning points for me.

1. Choosing to work with Pam Silver for my thesis work. I hadn't heard of synthetic biology before I met her, but she and the work her lab were doing were so interesting that I dove right in and became really passionate about the research and the community.

2. Starting a blog. This was back when blogs were more of a thing, but my blog was a really important opportunity for me to form my opinions and beliefs about the science I was working on and its place in society. The first decision I made was directly relevant to this second one—Pam always supported my "outside" interests and activities as long as she saw that I was making progress on my path to graduation. She recognized how these interests, though they maybe weren't directly impacting the design and success of my benchwork, were directly impacting my growth as a scientist. Through my blog I learned a lot about the science, I learned about how to write and design websites and make videos, and I learned about different approaches to science that helped me make sense of things.

3. Applying for and getting accepted to the Synthetic Aesthetics project—a month-long residency where scientists were paired with artists to explore potential applications and implications of synthetic biology. Again, Pam was very supportive, and having a month to explore something so different from what I was doing in the lab and to work with an amazing artist, Sissel Tolaas, was an incredible opportunity. My focus entirely shifted after this experience, and though I was still doing scientific work in the lab, I was also writing and teaching and creating artwork in this space just beyond the science.

4. Deciding to leave academia. Timing with things in my personal life aligned well with the wrapping up of my postdoc projects, but I didn't have a next step fully planned out. I went freelance; I kept writing for other outlets and I started a magazine, which connected me to so many wonderful people (including Zuri Sullivan, who led me directly to you and your newsletter!); I taught designers and artists at the Art Center; I started consulting for Ginkgo about these issues that I'd become so passionate about—media, communication, design, and storytelling. When timing with personal stuff and geography worked out again, that led to the role I have now.

What was the most challenging part of your transition from academia to your current field?
Every transition is challenging, but I think we've come to imagine the border separating academia and everything else as much bigger and scarier than it actually is. The edge of academia isn't a cliff, it's actually quite a nice border town where there are very friendly people doing all sorts of interesting things. Finding the right people in that town and being able to see myself in the sorts of things they did made the transition a lot easier because I could see more of where I would land once I jumped off the ledge.

What is a typical day like for you?
I'm not sure that there is a typical day, but I do spend a lot of time making slides and writing emails! If I look around my desk right now I have some jugs of fermenting vinegar at my feet (a collaborative experiment with small-scale fermentation), a book about perfumes on my left, and sketches for a booth I'm designing for a conference on my right. On any day I might be talking to perfumers, to our customers’ Research and Development (R&D) or marketing teams, or to designers or scientists we're collaborating with. I might be attending a conference to learn more about another industry or to share Ginkgo's story with a different group of people. I might be working on writing a new presentation about a new product, or writing an article about biodesign. So, it really varies, but every day is certainly exciting.
Interview with Dr. Christina Agapakis, Ph.D. (Continued...)
Creative Director, Ginkgo Bioworks, Boston, MA

What skills did you need to develop in order to move into your current position?

I’m learning a lot more about business that I didn’t have the opportunity to learn as a student or postdoc. I’ve spent a lot of time trying to understand how people understand complex scientific concepts; my challenge now is learning how to get into the “head” of a company.

Is there room for career development and/or advancement for someone in your position?

I’m always learning and growing personally, and the company is learning and growing quickly as well. If you’re doing graduate-level research, you should never settle for a position where you’re not allowed room for personal development and growth, certainly after you leave academia but really especially in your thesis or postdoc research positions.

Is there any last advice you would give to someone looking to pursue a similar transition to a position like yours in a biotech start-up?

All companies work differently, and they are all different from academia. It can be hard to even know what kind of jobs exist and what it would mean to have that job. The best thing is to find opportunities to meet people who work in industry (any industry that you might be interested in!) and ask them about what they do. This can be at conferences, structured networking events, or even online. “Networking” can seem really icky, but at its best it means connecting with people that you genuinely think are interesting. Those relationships are vital to growing as a scientist and developing in whatever career path you choose.

We thank Dr. Christina Agapakis for participating as our featured scientist in this issue’s Career-in-Focus section to highlight her unique role as Creative Director with Ginkgo Bioworks.

Career-in-Focus Section Career Spotlights on the Website

Our Career-in-Focus section career spotlights provide valuable insight into a number of career paths that are useful for graduate students and postdocs who are interested in careers outside of academia.

Although our newsletters have long been archived on the CNSPY website for future reference, we realized that the format in which these Career-in-Focus sections were presented were not conducive to quick, easy, and informative searches. We have fixed this issue, and all of these sections are now featured on a separate page of the CNSPY website to allow easier, faster searching by highlighting these pages with individuals’ names and career paths.

In the past, we have interviewed individuals in:

- Academic Administration
- Academic Research
- Biotechnology Patent Law
- Industry R&D
- Management Consulting
- Medical Science Liaison
- Non-Profit Organizations
- Science Education
- Science Policy
- Science Writing
- Start-up Companies

We have plans to interview individuals from grants administration and NIH, but we are open to suggestions as well. Let us know if there is a certain career path you’d like us to explore, and we’ll do our best to seek out career professionals in those areas to provide insight for you and the Yale Community. Email Victoria Schulman with your requests!

Thank you for reading!!

CNSPY Leadership Team

Co-founders - Thihan Paddukavidana, Rebecca Brown
Executive Board - Prabitha Natarajan, Claudio Bertuccio,
Victoria Schulman, Tenaya Vallery, Daniel Mori, Seongseop Kim, Lie Ma, and Ira Kukic
Advisors - Yan Gao, Lu Jin, and Shalini Nag

Career Network SPYglass - Editor-in-Chief Victoria Schulman, Elaine Guevara, Lydia Hoffstaetter,
Supriya Kulkarni, Sandra Martinez-Morilla, Tianyi Yuan, and Contributors