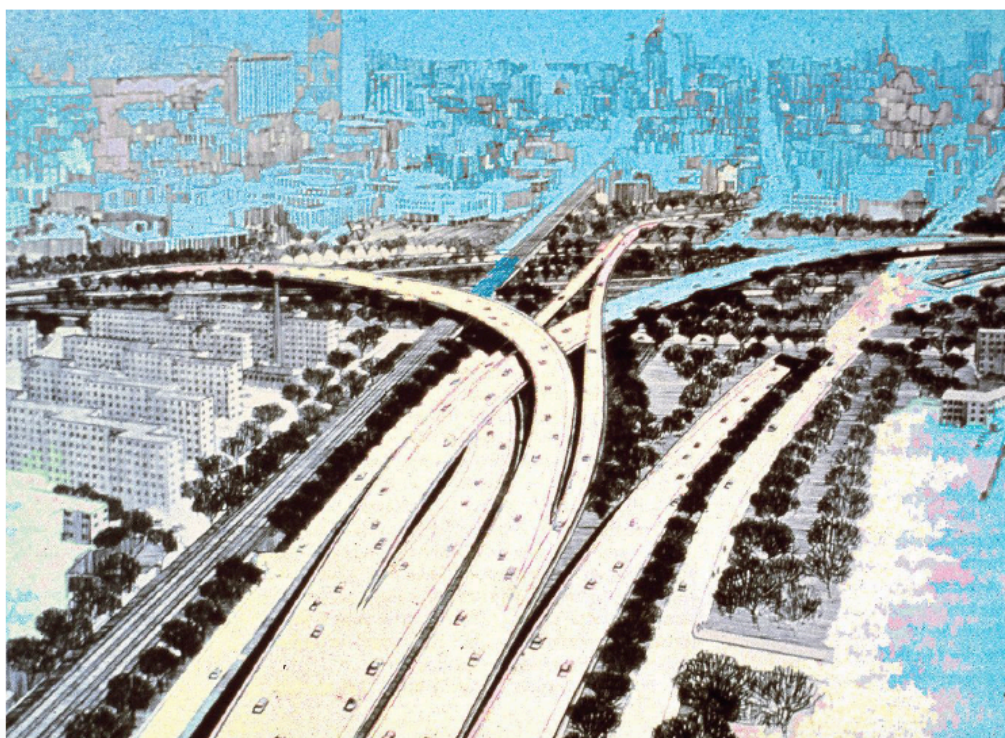


Conference Proceedings
for the
STEM Career Symposium
held on March 26, 2016



Organized by

UC San Diego Postdoctoral Association
Salk Society of Research Fellows
SBP Science Network
Scripps Society of Fellows

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Acknowledgments

On behalf of the Postdoctoral Associations of UC San Diego, Salk Institute for Biological Studies, Sanford Burnham Prebys Medical Discovery Institute, and Scripps Research Institute, we would like to thank all attendees, panelists, and sponsors for supporting the 3rd Annual “What Can You Be with a PhD?” STEM Career Symposium! The growing difficulties to secure funding and the increased scarcity of tenure track faculty positions have made it imperative to explore other career options. There are multiple career paths outside of academia, some of which many postdocs may not be aware of. This was the impetus behind the creation of this Symposium, to enable interaction with experienced professionals to help inform and guide future career decisions.

The previous events organized by the UC San Diego Postdoctoral Association (PDA) in 2014 and 2015 were very successful. This year, for the first time, we were able to organize this event as a collaborative effort by multiple Postdoctoral Associations to reach out to even more attendees, more speakers, and more sponsors. We hope that by attending the Symposium postdocs and grad students are able to discover many new possibilities for a bright future.

The Postdoctoral Associations would especially like to thank all of the speakers for generously volunteering to share their stories and wisdom. We also extend our deepest thanks to our sponsors. We are grateful for your support in our postdoc career development efforts. Lastly, we also thank all of the Postdoctoral Associations’ members who volunteered to make this year’s STEM Career Symposium a success.

Sincerely,

UCSD Postdoctoral Association
Salk Society of Research Fellows
SBP Science Network
Scripps Society of Fellows

Panel 1

Research & Development

Moderator: Qiang Zhu

Guang Chen, PhD

Scientific Director on Translational Research and Behavioral Pharmacology, **Janssen R&D**

Karen Gutekunst, PhD

VP of Diagnostic Development, **Illumina**

Tushar Menon, PhD

Scientist, **Vertex Pharmaceuticals**

Karsten Sauer, PhD

Director of Cancer Immunology, **Pfizer**

Tom Wu, PhD

Associate Director of Medical Chemistry, **Genomics Institute of the Novartis Research Foundation (GNF)**

Please introduce yourself, tell us about your background and career path.

All speakers have good records during previous academic training. Two of them actually had faculty appointments before.

Even you decide to move into industry in the future, you still need to perform well in academia to earn your credibility and prepare yourself well in terms of technique and soft skills.

What motivated you to make a transition into industry? What was the most challenging aspect of your transition?

To apply knowledge and skills in a short time period, make a real product, close to clinic.

Learn how to manage people and communicate well with others.

What recommendations do you have for postdocs who are interested in R&D jobs to best prepare themselves?

The key is networking. It is not about what can you do, it is more about who do you know?

Pay attention to your professional appearance like your LinkedIn.

What is a typical work day like for you?

Most of time, a lot of meetings and interactions with coworkers.

Transferrable skills?

Problem-solving, analytical, communication, leadership.

Panel 2

Research & Development (Non-Biology)

Moderator: Christian Urban

Francesco Carobolante, PhD	(C)	VP of Engineering, Qualcomm
Supriya Jaiswal, PhD	(J)	CEO, Astrileux
Jorge A. Martinez, PhD	(M)	Senior Engineer, Cymer
Marcel Nassar, PhD	(N)	Senior Research Engineer, Samsung
Harvey S. Smallman, PhD	(S)	Director, Visual Analytics, Pacific Science & Engineering Group

Motivations for transition, key factors for success, challenges experienced:

S: I was groomed for academia, and at the bottom of the pecking order when I got a job as a professor. Flexibility is a key factor for success, particularly for me I was open to applied science. The culture shift between academic and commercial environments was a challenge.

C: Tangible skills, communication, and transferable knowledge are key

N: The distinction between university and industry environments can be blurry. Inflexible working hours and having to align with the company can be a challenge.

J: The inefficiency of academia was a motivation to start my own company. Pressure and deadlines are challenging to cope with.

M: Also deadlines

How did job roles in grad school/postdoc expose you to other careers?

C: Be excited about your career, and have curiosity. Don't limit yourself to what you're taught in classes. Build something.

N: Expand your horizons and expose yourself to lots of different topics. I took classes in many different fields.

J: Everyone has multiple careers in their life. Physics taught me an ethic.

M: I became a handyman/engineer for my lab, and thus indispensable.

S: I like the problem solving aspect of my work, and having an outlet for creativity. I use the pedagogy I developed in academia to explain things to engineers.

Feelings about the transition, especially if your academic environment was unsupportive.

N: Engineering academia was rather supportive

J: Sending out resumes online was ineffective. Meet people in person to give out your resume. Make your resume relevant to what the company needs.

S: Resume -> What have I done. Companies are interested in what you *can do for them*. Tailor your resume specifically to the company.

Startup vs. large company?

J: Small company has lots of logistics work you will have to deal with yourself. You need experience in corporate life first.

M: Big company advantages are that there is always something to do, and lots of resources. Disadvantages are lots of meetings.

S: Small company -> Tolerance to risk is necessary.

C: Make mistakes to learn from

N: large companies can deal with green card related paperwork easier?

Notes during open Q&A

-Apply the process of science you have learned, not necessarily the exact scientific knowledge you've acquired.

-The structure of research is a transferable skill.

-Your research/communication responsibility balance may change.

-Publication record depends on the field

-Have an outlet to relieve pressure (hobbies)

-Document your skill set and processes even for failed projects.

-Be flexible on how you phrase things

-Interview: Think on your own feet for that it helps researching problems the company is facing

-Management leadership/team skills are important and can come from many places

-Be an active participant in your lab/group

Panel 3

Clinical and Regulatory Affairs

Moderator: Evelyn Walenta

Sonja Billes, PhD

Owner, Medical Writer, **August Scientific**

Maria Jose Cortes-Mateos, PhD RAC

Regulatory Affairs Associate, **DJO Global, LLC**

Sandra Matsumoto, PhD RAC

President of Global Regulatory Affairs, **Evoform, Inc.**

Joanne McNelis, PhD

Clinical/Regulatory Scientist, **Cato Research**

Kristin Taylor, PhD

Head of Clinical Development, **Zafgen, Inc.**

The three major parties involved in clinical trials are Clinical Affairs, Regulatory Affairs, and Medical Affairs. Their tight collaboration is essential for the success of clinical trials, and their functions often overlap. Especially small companies might have one person doing all three jobs. Put simply, Clinical Affairs are mostly involved in the operational part of clinical trials, including design, implementation, and management of clinical trials; Regulatory Affairs interact strongly with regulatory authorities like the FDA and make sure that the clinical trials are implemented in compliance with laws and regulations; and Medical Affairs communicate the science involved in clinical trials.

The major differences between being in academia and working in any of the above mentioned fields is that there will be more than one project to focus on. Therefore it is important to be able to realize fast what is important and what has less priority. Communication is key. Clinical trials are a team effort, and instead of reporting to one professor it is more likely to report to 3 people or more. Relying on other members of the project team (scientists, marketing etc.) were examples of the major challenges noted for these professions. Additionally, due to the tight regulations by the FDA and other regulatory organizations the administrative effort is bigger.

The pharmaceutical industry develops fast, as well as the FDA regulations are constantly changing. Therefore, although a task of several years, clinical trials are conducted under constant time pressure. Being part of the good as well as the bad times of the clinical research industry was mentioned as one of the most positive and negative aspect of this field. To be successful in this industry you have to be open to new things, read a lot, and constantly learn.

Work days in this field vary a lot depending on the position and status of the Clinical Trial. Working as an independent contractor, like Dr. Billes, leads to a high fluctuation of work load. There can be weeks without assignments, followed by weeks of 12 hours work days. However, it is your choice how much you want/can accomplish. Employment based jobs have less extreme fluctuation of work load, but come with less freedom concerning core hours. Clinical Trial associated jobs can be very versatile but rarely come in constant 9 to 5, 40 hour work weeks.

What all fields have in common is lots of writing and reviewing of documents and lots of meetings. Therefore, scientific writing experience, strong analytical skills, effective communicating/negotiating skills, as well as time management skills gained during a PhD/postdoc are most transferrable and should be highlighted on your resume when applying for Clinical/Regulatory/Medical Affairs related jobs. Explain during the interview that you know what you are getting into, and do your research on the company.

Several certificates/modules are offered locally and online, which are great ways to learn more about the field and demonstrate to perspective employers that you have made a serious commitment to this career path.

e.g. UCSD extension (<http://extension.ucsd.edu/>), San Diego State University (SDSU, <https://www.sdsu.edu/>), Regulatory Affairs Professionals Society (RAPS, <http://www.raps.org/>)

Networking is vitally important to the job search process. Local chapters of national organizations have monthly/bimonthly meetings and are a great way to network and learn more about these fields.

e.g. San Diego Regulatory Affairs Network (SDRAN, <http://www.sdran.org/>), San Diego Clinical Research Network (SDCRN, <http://sdcrn.net/>), American Medical Writers Association – Pacific Southwest Chapter (AMWA-PACSW, <http://www.amwa-pacsw.org/>)

It is common to enter these fields from other departments within industry – most often within the same company. It may be possible to work closely or even work in Regulatory or Clinical groups while working in R&D for example. Another way to start off a career in Clinical/Regulator Affairs are fellowship and development programs mostly offered by big CROs (Clinical Research Organizations).

e.g. Cato Research (Fellow, <https://workforcenow.adp.com/jobs/apply/posting.html?client=catoresearch>), Quintiles (CRA Development Program, <http://www.quintiles.taleo.net>).

Panel 4

Scientific Writing & Communications

Moderator: Amanda Moore

Heather Buschman, PhD	Senior Manager, Communications and Media Relations, UC San Diego Health Sciences
Nena Chavira, PhD	Marketing Science Writer, Illumina
Amy Cullinan, PhD	Social Media Manager, Illumina
Tiffany Fox, PhD	Public Information Representative, Qualcomm Institute, UC San Diego
Sharon Schendel, PhD	Graduate Education Specialist, Sanford-Burnham Prebys Graduate School
Peggy Vorwald, PhD	Account Executive, Little Dog Communications

The basic tenets of the job descriptions of all the panelists was very similar, which is to take complex scientific advancements, whether it be in the private or public sector, and distill the message into an informative and interesting message catered to the desired audience.

A summary of the panelists' career paths to their current position:

- 4/5 panelists were PhD graduates and their transition into their current position started in graduate school
 - sought out extra writing and editing responsibilities within their department or through independent work
- While working at Illumina, Amy wanted to focus on Illumina's communications with social media, but there was no position with this defined role. By expanding her job responsibilities to prove what she could do, she created a position for herself.
- 1 panelist majored in journalism and was a columnist at the Union Tribune before taking a position at the Qualcomm Institute at UC San Diego as a Public Information Representative – she saw that print journalism wasn't thriving anymore and opted to move into science communications at UC San Diego
- The first job out of academia/school for all the panelists was not their current position – each took a job in science communications, editing, medical writing, journalism, etc. and over time

discovered what they liked/disliked about their previous jobs, which led them to their current position

What motivated the panelists to transition into a career in science writing and what were the most challenging aspects of this transition?

- The resounding answer of what attracted the panelists to a career in writing/communications was that they preferred writing and editing manuscripts, writing their thesis, or making presentations over doing the bench science. These activities also allowed for more creativity and expression.
- The panelists found the transition to be not very challenging since most were already doing extracurricular activities that prepared them for their first or current job.

What are the most and least rewarding aspects of the panelists' jobs?

- The majority loved the ability to instill passion in other people about science. They love being able to take a complex idea, break it down and share it in a way that a broader audience can understand and benefit from
- All the panelists enjoyed their ability to be more creative in their current roles
- The least rewarding aspects of the job include:
 - When in PR roles – a lack of independence since everything must be continually edited or approved
 - Too many meetings to attend, which cuts into writing time
 - When scientists try to do their role for them – since the majority of the panelists work with scientists to help them communicate their research sometimes their role involves coaching/convincing scientists how to write their press releases, etc.

Recommendations for current graduate students and postdocs who are interested in a career in science writing and communications

- It's easy to get some experience now!
- Take on some extra work to help other write/edit manuscripts, start a blog, engage other scientists on twitter, take some extra classes (The UC San Diego class by Lynne Friedmann was recommended), find freelance work, volunteer with a science outreach program
 - This will give you the opportunity to figure out if you like writing or communications and it will also add skills to your CV

- Look out for fellowships or internships to get some experience (one panelist had a health communications internship in the National Cancer Institute's press office)

What does a typical work-day look like?

- A lot of the panelists start early, especially if their role involves information or clients that are in an east coast time zone.
- The most important parts of the day are the carved out and essential times set aside to write (usually multiple articles/papers at once)
- Sometimes the day can be unpredictable in length (ex. if working in PR position at a busy time)
- Some panelists get to travel to attend and report on conferences
- Most of the panelists do outreach activities to engage the community in science – some of this is paid and some is volunteer
- A work-day seems to be much more variable than the predictable work day of an academic scientist

Panel 5

Consulting & Management

Moderator: Dalila El Ouarrat

Matt Cross, PhD

Medical Liaison, **Teva Pharmaceuticals**

Amy Duncan, PhD

Co-Founder & Chief Marketing Consultant,
Goldfish Consulting, Inc.

Beatrice Marturano, PhD

Associate Clinical Project Manager Director,
Quintiles, Inc.

Hope Mirendil, PhD

Senior Analyst, **ICON, PLC**

Tracy Yeo, PhD

Managing Director, **ChinaBio Consulting, LLC**

1. The panelists had the transition at different stages in their academic career. One after master, one after PhD, two after Postdoc and one after being associate professor. Even though they had different motivation, all of them were very conscious about their transition and each had taken specific steps to make that transition possible. They suggested to everyone that the sooner you start preparing yourself the better (most of them used their last year in academic job for networking, courses, practicing interview skills etc)

2. All of the panelists mentioned that their work day varies. However they all had in common that their typical day as consultant/project managers/liaisons involved a lot of meeting (between 50-80% of their time), and that strong communicational skills are absolutely essential. For some of the consultants it was important that they had also some marketing skills, but all agreed that it was not essential.

3. One of the questions was, what the differences working for a life science or smaller consulting company versus the Big companies like McKinsey etc. One of the panelist answered that those type of jobs are great if you just want to get out of academia and dont really know what you want to do with your carreer, However, they are typically not the type of jobs that people do very long, and are mainly used to step toward another position.

4. The panelist all seem to agree to that their specific science expertise, probably did not contribute to them getting hired in the position they are now. And also they said that the publications record you

have does not count at all for this career path. In fact, their companies are way more interested in the type of activities you have participate/organize or experienced OUTSIDE of academia.

5. About job prospects, the consultants said that life science consultants are always sought after especially in San diego. However, the project manager PM and medical science liaison MSL said that there is a lot of demand for these jobs these days and said this is a good time to jump in. MSL said that April-June is the time that a lot of companies start hiring new people.

Resources:

Consulting platforms:

<http://www.apdconsultinggroup.com/>
<http://www.scripps.edu/california/scc/>

Project Management certification program (PMP)

<https://www.pmi.org/>

Panel 6

Teaching

Moderator: Carolina Quayle

Ranita Ghosh Dastidar, PhD	(RGD)	Adjunct Professor, Miramar College & Cuyamaca College
Star Lee, PhD	(SL)	Academic Coordinator, UC Riverside
Stanley Lo, PhD	(SLo)	Assistant Professor, Cell and Developmental Biology, UC San Diego
Peter Newbury, PhD	(PN)	Associate Director, Center for Engaged Teaching, UC San Diego
Sarah Stockwell, PhD	(SS)	Assistant Teaching Professor, Division of Biological Sciences, UC San Diego

What specific teaching-related experiences or skills would you say were most helpful in transitioning from graduate school/postdoc to your current position? Are there resources available for postdocs interested in teaching to gain more experience?

SLo: Experiences: summer teaching and guest lectures. To be a good teacher you have to collect information on the success of the students – “evidence-based teaching”.

PN: Taking good courses and being a conscious teacher can be just as effective as years of experience. Resources: college classroom at UCSD; commons.com

SS: Combine theory and practical experience. Take thoughtful approach.

SL: Salk Science mobile bus. Find out what a “good educator looks like”. Take a teaching postdoc. Be a **TA** and do outreach programs.

RGD: Identify what you love. Interact with your students and know their personal needs. College classroom at UCSD. Center for integrated research.

What do you find most rewarding and most challenging about teaching?

SL: Is a coordinator. Per week: give assignments for TAs and walk them through on how to introduce new concepts to their students.

SLo: Be reflective about teaching; be organized and on top of things; develop network with colleagues.

PN: Communication.

SS: Enjoy the process of figuring out how to explain things – teaching is like research, plan and try different methodologies to figure out what works better in different circumstances. Scheduling can be difficult – be on top of things.

RGD: A lot of preparation is necessary. Use active teaching to engage students. Modify to improve your classes every time more.

How are the needs of different types of students different (i.e. community college x university x high school...) and how does a teacher has to adjust the teaching style to each circumstance?

PN: Think of your experience as a student and then realize that doesn't apply to everyone. Find out as much as you can about your students and then adapt.

RGD: Every level of students present new challenges. Be able to adapt to different backgrounds and also to what each student plans to do with the information you are sharing with them.

SL: Explain in a way that your students will be able to understand – may have to assume students have limited knowledge..

SLo: Understand the diversity of students backgrounds. Remember that everyone can learn. Remember the value of non-formal education.

Q&A:

What inspired you to be a teacher?

PN: Family experience – “natural thing”.

SS: Always enjoyed explaining things as far as she can remember.

SLo: It was always natural and had a lot of teaching experiences through his life.

SL: TA was exciting, had a good mentor. Learned more and more about it in the teaching Postdoc.

RGD: Good teaching peers.

What are the qualities of effective teachers?

SLo: Being able to understand how different people learn.

PN: Care about your students. “What can I do to engage every student and give the opportunity to express their strengths?”.

RGD: Humility.

SL: Empathy.

SS: Remember that is not all about having credentials. “What do you really know?”. Learn from your

students and accept feedback.

What exactly is a teaching postdoc?

SL: Gives you lots of teaching opportunities and helps you figure out what it is all really about. Allows you to get involved with the community of educators.

What opportunities are out there for people to get involved in education and learn more and start teaching?

commons.com

UCSD postdoc association

Outreach programs at all levels (Salk, UCSD, museums, private opportunities too)

Volunteer – a lot

The Chronicle of Higher Education – chronicle.com

SABER – Biology Education Research - <https://saber-biologyeducationresearch.wikispaces.com>

Center for Integrated Research Teaching and Learning - www.cirtl.net

Summer jobs at UCSD

Higher Education Community on Twitter

Journal Clubs on UCSD campus

Diversity workshops

Conferences

Panel 7

Business & Entrepreneurship

Moderator: Waseem Akhtar

Kara Bortone, PhD	(K)	Head of Company Sourcing, JLABS San Diego
Jay Bryant	(J)	Director of Graduate Recruiting and Admissions, Rady School of Management, UC San Diego
Sylvia Norman, PhD	(S)	Founder, Molecular Diagnostic Consulting
Howard (Hao) Pan, PhD	(H)	Regional Account Manager, Nanostring Technologies
Julio Unamuno	(JU)	CEO, LabFellows

How do grad students/postdocs prepare for Business & Entrepreneurship during their grad student/postdoc years?

K: They can prepare them by attending networking events and taking part in leadership opportunities.

J: By taking part in events such as UCSD entrepreneurship challenge

S: They can get business & entrepreneurship preparation by networking events such as organized by San Diego Biotechnology Network.

H: By going out to networking events and network with business companies by highlighting the importance of your work

JU: He advised to take advantage of business & entrepreneurship resources available in San Diego and get started with business without wasting any time.

What kind of resources are available for business & entrepreneurship if a grad student or postdoc wants to get started?

K: There are several resources available in and around San Diego including JLABS incubators, where by paying a nominal fee per month, they can get access to lab space and equipment. These incubators are excellent resources for business to get started in an industry setting. Generally having an approved Small Business Innovation Research (SBIR) grant is an excellent starting point to get into JLABS incubators.

J: San Diego entrepreneur challenge is an important resource to get started with your idea that can be expanded with SBIR grants later. Having an MBA degree will tremendously help during the business startup.

S: There are several resources available including her own consulting agency that help acquire funding and resources for startup companies. For female entrepreneurs, Hera Hub is a wonderful angel investor funding resource.

H: He suggested to make use of networking opportunities to put out your idea and network with companies. In addition, to make use of available opportunities in the San Diego area.

JU: Make use of all the wonderful opportunities available in the area including his own company LabFellows that provides necessary resources to start new business and expand existing business.

Notes during open Q&A

- Make use of all the available resources and do not get disheartened by the risk involved in business & entrepreneurship.
- Business incubator with potential can be later funded by JLABS with proper agreements in place.
- Networking events are key to success in industry including business startups.
- As soon as you have a great business idea, start working on your business team e.g, what can I do and who will take care of resources and who will take care of marketing etc.
- Convincing investors is key for business startup, therefore, improve your communication skills. MBA degree can be handy for that and also for team management.

Panel 8

Intellectual Property & Science Policy

Moderator: Elisa Lazzari

Garrett Anderson, PhD, JD

Associate, **Wilson Sonsini Goodrich & Rosati**

Martin Ellinger, PhD

Scientific Analyst, **Morrison & Foerster**

Jane Moores, PhD

Assistant Vice Chancellor, **Office of Innovation & Commercialization, UC San Diego**

Shannon Muir, PhD

Senior Program Associate, **California Council on Science and Technology**

This panel featured a variety of professional figures working in intellectual property law, technology transfer and science policy. Garrett and Martin both work at private law firms in the process of preparing patent applications, but at different levels. As Scientific Analyst, Martin provides scientific expertise and assists in the patent process, working with patent attorneys. This is an entry-level position that does not require a law degree or passing the California Bar exam to start. Garrett works as Associate (a position that requires a law degree), and is involved in patent drafting, negotiation, conformity to intellectual property regulations, and he is in direct communication with the clients. Jane's professional profile at the UCSD Office of Innovation and Commercialization can be described as a mediator, between UCSD research groups, law firms and national and foreign patent offices. She supports the licensing and transfer of UCSD innovations and knowledge to commercial use while ensuring proper intellectual protection. Shannon works in science policy, as Senior Program Associate at the California Council for Science and Technology (CCST), a non-profit corporation that provides scientific advice to policymakers. She was a Science & Technology Fellow in Sacramento during 2014-2015 and worked with the Senate Health Committee. Her duties included the preparation and analysis of legislation passing through the committee, and meeting with legislative staff, constituents, advocates and lobbyists to review bills and discuss health-related issues.

For postdocs and graduate students interested in IP law, panelists suggested to first consider what type of long-term position is desired and to conduct research on positions available within different firms, as some push PhDs to eventually obtain a law degree, while others have stable analyst tracks. Speak with individuals within law firms and recruiters about the environment within each firm. A law degree (3

years full-time, 4 years part-time) is not required to enter the field, but is essential to climb within the firm hierarchy, in order to progress from entry level positions like Scientific Analyst to an Associate or Partner.

Technology transfer positions do not require a law degree but some industry/business experience is highly appreciated. For more exposure to technology transfer, a limited number of internships are available at some institutions. If you are interested, inquire at local Technology Transfer offices to see whether an internship is possible. The Licensing Executives Society (LES) also offers some training for technology transfer professionals.

If you would like to pursue a career in science policy, available fellowships include the AAAS and CCST fellowships, and many professional societies also sponsor fellowships in Washington. Fellows serve a year-long assignment in one of the branches of the government or associated agencies. AAAS fellowships are restricted to U.S. citizens or green-card holders, while CCST does consider H1/J1 visa holders as potential candidates, if a sponsor is available. No prior experience in policy is required, but involvement in postdoc / student organizations or advocacy groups is beneficial: you can demonstrate that you are interested in making decisions for causes or groups.

Regarding challenges faced during their careers, panelists in law and tech transfer agreed that the schedule is very different from academia: much more flexibility is required and priorities often change from day to day. One must respond to new events as they occur, even though strict deadlines must be followed. Unforgiving environments for failure in patent law: if you work with a small start-up company as a client, mistakes can lead to the failure of the company and loss of jobs. On the positive side, always learning and involved in new and exciting technologies, a variety and constant change of projects keeps things interesting. In tech transfer, finding an agreement that works for everyone and getting a successful license in place, ensuring an idea gets to market, is very satisfying.

In science policy, the pace of legislative action is often frustratingly slow, and the failure of bills can be disheartening. Even with this pace, science policy experts pose an important role in informing lawmakers about scientific issues and determining the appropriate response to and regulation of new technologies and events. This is critical not only to the future of scientific research, but also in determining how technologies influence society.

Future career prospects in patent law include staying within the firm as either a patent scientist / scientific analyst, or getting a law degree and becoming an associate and potentially a partner. In addition, analysts and lawyers may also work directly in patent / innovation offices of client companies to provide legal guidance, or work for a university intellectual property / tech transfer office. Venture capitalists also increasingly need intellectual property experts on staff.

Tech transfer professionals may also switch between academia and industry, and may conduct licensing for businesses, scout for technologies, or do consulting work.

In science policy, career options are not limited to government entities; professionals frequently find positions in non-profit organizations involving government relations, science diplomacy, fundraising and advocacy. Science policy experience is also valuable in lobbyist firms, particularly in the biotech industry, and many policy experts serve as consultants.