

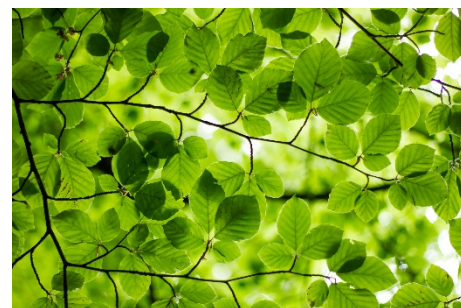
CCR Fellows & Young Investigators Newsletter



Center for Cancer Research

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Spring 2020



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In these challenging times, despite the improving spring weather, you may be cooped up inside your house while the world is dealing with an unprecedented pandemic. Having something interesting to read is the perfect way to pass the time!! Learn more about how to best use your time working remotely to boost your job search, career development programs for NCI Fellows, reading groups to connect with scientists that share your interests, tips to find work-life balance, how to get the best out of big scientific meetings (because in-person meetings will be back), and more!!

...And don't forget to check out the flyers at the end of this document for all the ways you can be involved in all the exciting and enriching activities of the CCR-FYI.

I hope you enjoy reading the Spring 2020 Newsletter. – Alida Palmisano (Editor-In-Chief)

Inside this issue

- ▶ CCR-FYI Symposium 2
- ▶ My approach to get a job at FDA 3
- ▶ The value of the Diversity Career Development Program (Part 2) 5
- ▶ You are the Force that holds the Balance together 8
- ▶ The CCR Central intranet: an online portal to help you get your job done..... 11
- ▶ A Newcomer's Perspective to ASCB/EMBO 12
- ▶ Culture Shift Required: Ethics in Science..... 14
- ▶ Science, Technology, and Society: a new reading group at NCI-Frederick 15
- ▶ History of Women in Science – Nobel Laureates Part 5..... 17

CCR-FYI Association is supported by the **Center for Cancer Training (CCT)** and CCR Office of the Director, National Cancer Institute



CCR FELLOWS AND YOUNG INVESTIGATORS

CCR-FYI NEWSLETTER

call for WRITERS and editors...

The **Summer edition of the FYI Newsletter** will be focused on how the COVID19 outbreak has impacted the fellow population, science and society at large.

If you are interested in WRITING or editing for the CCR-FYI Newsletter, please contact Alida at alida.palmisano@nih.gov for further details.

Connect with CCR-FYI



CCR-FYI Symposium

CCR-FYI SPECIAL SEMINAR

**CANCER 20/20:
ENVISIONING THE FUTURE OF RESEARCH AND CARE**

AUG. 12TH, 2020

9 AM – 5 PM

**NCI Shady Grove Campus
9609 Medical Center Dr.,
Rockville, MD 20850**

This special CCR-FYI Symposium will feature keynote speakers, career panels and interview workshops originally scheduled for the 2020 CCR-FYI Colloquium in March. Spend the day at the NCI Shady Grove Campus and prepare for the next stage of your scientific career. Registration information will be released shortly.

Academic and Non-academic Interview Workshops

What can DIS do for you?
Workshop

Multiple Career Panels
Scientific Careers in Government
Academic Careers
Lab to Market Training

Keynote Speakers
Dr. Oliver Bogler, CCT Director
and more

Networking Event
5:30 pm at Yard House
211 Rio Blvd. Gaithersburg, MD
20878

My approach to get a job at FDA

by: Hirdesh Kumar

“At the FDA, I now have first-hand understanding and appreciation of what it takes to get a drug to market” said Dr. Geeta Negi, an invited career panelist in the 13th Annual NIAID Fellows Workshop. Dr. Negi is a toxicology reviewer at the Center for Drug Evaluation and Research (CDER) at the Food and Drug Administration (FDA). She is responsible for reviewing and evaluating the nonclinical module of Investigational New Drug Applications (INDs), New Drug Applications (NDAs), and Biologic Licensing Applications (BLAs), and for making recommendations about the clinical safety of drug products. The FDA’s mission is to protect public health by regulating the food supply, human and veterinary drugs, medical devices, and cosmetics. The FDA always looks for experts with deep understanding of science and an interest in impacting public health. People who work at the FDA can be part of decision-making processes and can work on all aspects of drug discovery, development, approval, and marketing. Other specific benefits of an FDA job include flexible workplace, work hours, training, and on-campus childcare facilities. After the NIAID-fellow workshop, I briefly met and thanked Dr. Negi for her excellent career advice. The next day I emailed her and showed my interest in regulatory science. I asked Dr. Negi for an informational interview to learn more about her job as a toxicology reviewer. I received valuable information that guided me to prepare for my next job search at the FDA. Based on my phone informational interview with Dr. Negi, I

want to share here with you the steps I followed to prepare for my next job at the FDA:

- 1. Find your area of interest(s):** The FDA is a large federal agency that employs scientists with diverse expertise. Identifying suitable jobs at the FDA was my first priority. As per Dr. Negi’s suggestions, I attended some online courses available at the FDA website. The [“FDA 101”](#) course helped me to get an idea about the organization components of the FDA. Next, I searched the FDA employees in my LinkedIn connections (1st or 2nd or even 3rd level connections). Among them, I shortlisted 5 individuals that had different job profiles but somewhat similar technical skills as mine. I sent personalized messages to those LinkedIn contacts and initiated informational interviews. A workshop from OITE (available online), [“Using LinkedIn for career success”](#), is an excellent source for advice on how to use your LinkedIn account effectively. Based on all those informational interviews, my technical expertise and my in-depth interest in the drug development process and drug regulatory affairs, I decided to focus on pursuing a regulatory scientist position at the CDER, FDA.
- 2. Prepare for the job application:** Once I finalized what I needed to focus on, the next step was to prepare myself to apply for the position. To better understand the role of a regulatory reviewer and the drug approval process, I reviewed a case study, [“Drug Approval—Bringing a New Drug to the](#)

[Market](#)”, available online on the FDA website. In addition to technical skills, a regulatory scientist position demands effective written- and oral-communication skills. [NIH Fellows Editorial Board \(FEB\)](#) is an excellent platform to improve my written skills, and being a selected member of FEB, I have been refining my reading/writing skills. The post-doctoral training at the NIH provides excellent opportunities to improve the technical- and soft-skills through **Foundation for Advanced Education in the Sciences (FAES) courses**. I registered for a writing-intensive workshop, [“Writing and Publishing a Scientific Paper \(GRAD500\)”](#), to work on my writing skills. Another option for me to consider are opportunities for **“Details” at the Office of Intramural Training and Education (OITE)**, to improve my soft skills. Furthermore, I **review research articles** for different international journals to get advanced access to the emerging ideas and trends in my field of expertise.

3. **Job hunting:** Dr. Negi mentioned that many FDA jobs are posted on [USAjobs.gov](#) and these jobs require the USA citizenship. For the non-citizen jobs, there is no uniform platform and such jobs are posted on different job boards. The FDA also hires post-doctoral fellows for their regulatory research fellowship, which can be a great opportunity for a smooth transition into regulatory affairs ([ORISE fellow](#)).

The most important advice to find the dream job is the three-word mantra **“networking, networking, networking”**! In line with this, I regularly meet new people based on my career interests, and I schedule at least one informational interview per week. In one of my recent conversations, an IT strategy manager advised me to prepare a **master CV**. A master CV is a document that contains all diverse skills that one has gained during his/her scientific career. I regularly update my master CV and tailor it to construct the most relevant CV/resume to best fit the requirement of the advertised job I am applying for.

The more I learn about regulatory science, the more interested I become in this field. The informational interviews with Dr. Negi and others were very useful to prepare me for my job search in regulatory science. A last piece of advice from Dr. Negi: for a career in drug regulation it may seem difficult to get your foot in the door as the career requires a formal education, but what the job really takes is a commitment to ongoing training, strong analytical skills, and an aptitude for incredibly detailed work. I am taking different reading/writing courses and attending workshops and meetings to improve my soft-skills, and I look forward to working as a regulatory scientist at the FDA.

The value of the Diversity Career Development Program (Part 2)

by: Lorena Parlea

What it takes to transition to a new, independent position goes beyond technical expertise and scientific knowledge. Arguably, a long list of “soft skills” has to complement the professional expertise of the modern scientist. Some experiences gained throughout graduate school and beyond can be considered “transferable” skills. Other skills like effective communication, leadership, time management can be reinforced by consistently putting them to practice and developing additional aptitudes will make the scientist a competitive candidate in the job market today.

The NCI Center for Cancer Training (NCI CCT) offers a wide palette of training seminars, workshops and fellowships. NCI CCT has launched the Diversity Career Development Program (DCDP), which is a year-long fellowship with a multi-component structure. (For a description of the program, please see part 1 of the article series in the [CCR-FYI Newsletter](#)). About half of the DCDP fellowship is dedicated to workshops and seminars for professional development. The other half of the fellowship is dedicated to working with a career coach (who happens to hold a Ph.D. in Biological Engineering from MIT!). The latter seems to be the favorite part among the DCDPers.

In a quest to find out about the success of the DCDP program, I contacted some of the alumni. The majority of the participants from the first two cohorts moved on to independent positions within 2 years. The remaining participants who

are still at the NIH have moved up to Research Fellow, Staff Scientist or Principal Investigator positions. The third cohort has about half and half – half of the participants transitioned to the next step in their career, half are still working on their postdoctoral positions at NCI. While that already speaks volumes about the success of this program, it does not portray the whole picture. Since it is difficult to quantify the success rate in percentages and numbers, I decided to collect personal assessments to get a better idea on the impact of this program. I asked the alumni how they think the program helped them in their career. For the participants who moved on to independent positions I asked if the program helped their transition.

Unanimously, the participants thought the program was valuable. Interestingly, the favorite part of the fellowship differs from individual to individual, yet the majority circles back to working with the professional coach, Samantha Sutton, Ph.D. For example, working with Samantha to craft a roadmap for navigating one’s career was the highlight of a former DCDP participant, currently a Staff Scientist at NCI (CCR/HAMB).

Another main component incorporated into the program is the requirement to have a second mentor, possibly multiple mentors. If the PI is chosen according to the scientific research field, the second mentor can have a completely different or complementary area of expertise. The second mentor can be picked according to

one's own criteria, such as someone in a particular career track. Working with an additional mentor who knows more about the career path one wants to follow can be tremendously helpful. Besides, the relationship dynamics with the second mentor can be completely different than the one with the PI.

One of the participants, a postdoctoral fellow (LCIM/NCI Frederick), most appreciated the lessons on how to have difficult conversations. Another fellow (LCIM/NCI Frederick) felt she learned most from the lessons about work and communication style. Increasing the awareness about various working styles, how to work with someone with a different working style, and how to communicate with people from different backgrounds was a revelation for this fellow. Learning about different aspects of management, such as time and personnel management, was yet another one of the fellow's favorite subjects. Creating one's own brand was another one of the alumni's favorite accomplishments after completing the program.

One of the facets of DCDP that everyone seems to cherish is being part of a community: working with peers, establishing strong connections, and even friendships. Realizing that your colleagues face similar issues, such as the impostor syndrome, helps alleviate the sense of loneliness. And yes, even the accountability among the buddy-groups was appreciated! The sense of community reverberates outwards as well, by giving back to the community. Escorted by DCDP participants, students from Baltimore County Middle School visited laboratories at NIH and did experiments, and finished the day

by having lunch with the participants. DCDPers also organized a unique hands-on science activity designed to simultaneously entertain and educate residents of the Children's Inn at the National Institute of Health .

Another one of the most appreciated parts of the program appeared to be finding your superpowers. "I learned a lot about myself and what makes me stand out from others," said a former participant who is currently the Scientific Program Administrator at American Association for Cancer Research. "I know where I shine and where I need work, and how I can utilize all the tools in my toolbox to be successful". Finding one's superpowers, overcoming the "impostor syndrome" and building up one's confidence, as well as being part of that community seemed to be overall the most prized values of the program among participants.

Personally, I believe the worth of this program for me goes beyond what I can express in a few words. While sorting out papers in my office, I recently found by chance our first DCDP assignment, which asked us to define our goals and expectations from the program. Looking back, I realized that I achieved all my goals for this program, and all my expectations were exceeded! Yes, I did have to invest a lot of time in this fellowship, time that was a positive investment in myself. And yes, I did have to juggle the research and the fellowship, yet it taught me a great deal about time and people management and multitasking – after all, these were some of my learning goals. The "return on investment" for the time spent as part of this fellowship materialized in tangible skills that I

not only use in my current position, but I am sure make me a more rounded scientist.

If you have questions and you want to learn more about the DCDP program, please contact Dr. Ofelia Olivero at oliveroo@exchange.nih.gov.

For more information, visit <https://www.cancer.gov/grants-training/training/idwb/dcd-program>



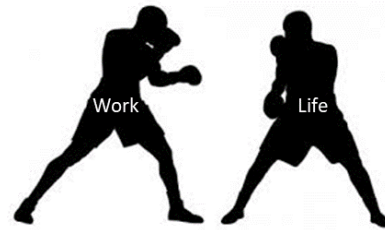
Diversity Career Development Program (DCDP) community service at the Children’s Inn at the NIH on August 29th, 2017. The Diversity Career Development Program organized a unique hands-on science activity designed to simultaneously entertain and educate residents of the Children’s Inn at the National Institute of Health. Four DCDP participants worked together planning, demonstrating experiments and explaining the scientific principles behind each experiment to the kids. Children learned concepts such as non-Newtonian fluids, water absorption, DNA extraction (from strawberries) and magnetism (magnetic slime). Kids were able to explore and enjoy the experiments.

You are the Force that holds the Balance together

by: Molly Congdon

The idea of balance has been around for centuries: good and bad, light and dark, right and wrong, happy and unhappy, Jedi and Sith, the list goes on. In recent decades, discussion of a new form of balance has become prevalent in our society: “work-life balance.” It is a phrase commonly heard today that many struggle with, but what does it mean and, more importantly, how do you successfully achieve it?

As evidenced by the numerous articles written, books published, and workshops that have been conducted over the years, many people believe that they struggle with maintaining a healthy work-life balance. Overall, the term is relatively new, originating at the end of the 70s and early 80s. In simple terms, work-life balance is defined “as the amount of time you spend doing your job compared with the amount of time you spend with your family and doing things you enjoy.”[1] In actuality, work-life balance means something different to everyone. In addition to doing leisure activities, “life” can include other required but less desirable duties, such as chores or paying bills. Some may picture work-life balance as an uneven analytical scale with work on one side and life on the other. Others may visualize it as “work” and “life” boxers fighting it out in a ring for domination of their time, a divided pie chart, a juggling act, or an equilibrium equation. In the end, how you visualize the disproportion does not matter. What matters is if you classify yourself as



someone who is struggling and desiring to maintain the balance.

A feeling of inadequacy at successfully reaching work and/or life goals can bleed into other aspects of your life. Feeling off balance between various components of your life including work, life tasks, relationships with family and friends, time for yourself, etc. can leave you physically and mentally exhausted, as well as highly stressed. Mental repercussions can include anxiety, decreased concentration, depression, insomnia, and irritability. Additionally, physical manifestations can range from a weakened immune system, high blood pressure, digestive issues, and heart disease. Combined, these symptoms can result in a decrease in your work productivity and quality, as well as negatively impact your relationships, both professional and personal [2-5]. The resulting super storm of feeling inadequate and depressed can keep spiraling out of control leading to burnout. Therefore, reaching a work-life balance that is acceptable to you is important for your personal well-being and for those around you.

Unfortunately, there is no one-size fits all answer on how to achieve the perfect work-life balance. The path that everyone takes to reach

their “work-life” balance goal is unique; however, the first step is same.

1. **Identify the cause of the problem** – Are you taking on too many tasks or is something demanding more of your time and focus than you would prefer? Be honest with yourself. Only once you identify the source of the pressure can you begin to regain your footing.

After the source of your imbalance has been identified, you can begin to change the structure of your life and find your center again. While the idea of change may be overwhelming, not all changes need to be major. You can quickly implement subtle, impactful changes that can cause minimal disruption to your daily routine. Examples of such changes include:

1. **Prioritize responsibilities** – This may be helpful if you separate tasks into groups such as professional responsibilities, “non-negotiable” responsibilities, and other responsibilities.
2. **Setting manageable goals** – Acknowledge the true time tasks take, how much committable time and energy you have in each day, and plan your tasks accordingly. And do not procrastinate. Nothing increases your stress level like procrastinating a project and finishing at the last minute.
3. **Unplug** - Take a step back from the electronics that rule modern society. Set boundaries on when you check email during

the day, night, and weekend, and put your notification settings on silent to reduce disruption through out the day.

Extensive changes may take more effort and time to implement since they require a more substantial change to the structure of your daily life or go against your natural tendencies. These personal adjustments may include:

4. **Take time for yourself** – Take 15-30 minutes for yourself to get personal tasks done, fit in a short workout, or just meditate to check-in with yourself. It is O.K. to give yourself time to have fun. This can also be a great way to reduce stress and have something to look forward to during the week.
5. **Be efficient with your time** – Limit time wasting activities and people. Set boundaries in your life concerning time you spend doing certain activities or with certain people who distract you from achieving your goals. Drop activities from your schedule that do not help you reach the life you want.
6. **Communicate your needs** – Do not be afraid to speak to your employer about your needs, stress at work, and career goals. If practical alternatives to the current situation exist, such as a more flexible work schedule due to family commitments, your boss may be accommodating. You will not know if you do not ask.
7. **Ask for help** – No one likes to admit defeat, but you also do not have to tackle life alone. If you are overwhelmed on a project or personal task or establishing a successful

work-life balance, talk to a colleague, friend, or counselor for advice or assistance. Insight from another may provide the alternative view you need to overcome your predicament.

8. ***Learn that it is O.K. to say no*** – Learn to say no. When you are asked to take on a new task, be honest with yourself. If it will take more time than you can commit, will not help advance your skills or credentials on your CV, or you do not really want to do it, simply say no.

The amount and types of alterations required to conquer the dark side and bring balance back into your life will vary depending upon how off kilter your life is. Start with the small, simple changes and let yourself adjust. Once you have established a new “normal,” reassess your situation and make more changes as needed. Life is never perfect, and events outside of your control (illness, death of a loved one, etc.) can have substantial impacts on your work-life balance in the short term; however, those impediments should pass in time. While a quick fix to obtaining and maintaining a positive work-life balance would be desirable, imbalance is part of life. Where there is light, there is dark. In between it all is you, navigating life’s shades of grey. Maintaining a successful balance is a constant process, requiring regular self-evaluations. Therefore, when assessing your work-life balance proficiency, do not focus on the bumps in the road, instead focus on your overall well-being.

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The CCR Central intranet: an online portal to help you get your job done

by: Lianne Priede

Did you know that there is an online “one-stop shop” tailored to CCR fellows and trainees that allows them to easily access the vast amount of online information they need every day to get things done? The CCR Central intranet consolidates many sources of information in one convenient location. All you need to log in is your NIH username and password.

If you do not immediately see what you are looking for in the bullets under each section, click “View All Topics” or simply use the CCR Central search bar. Alternatively, take a spin through the site with one of the [quick video tutorials](#).

In the [Fellows/Trainees section of CCR Central](#), you will find, among other topics:

- [Resources & Support](#), which has information about the NIH Office of Intramural Training and Education (OITE), NIH Loan Repayment Programs, as well as courses and workshops available to fellows.
- [Mentoring & Training](#) contains the new electronic Individual Development Plan (eIDP) to help you establish project goals, responsibilities, and discuss career plans and training expectations.
- [Awards, Funding & Career Development](#) houses many of the currently available awards and funding opportunities available to fellows that are housed within CCR, NIH and from preapproved outside funding opportunities.

Wish we had something that’s not there? Let us know via the [feedback button](#) on every page.



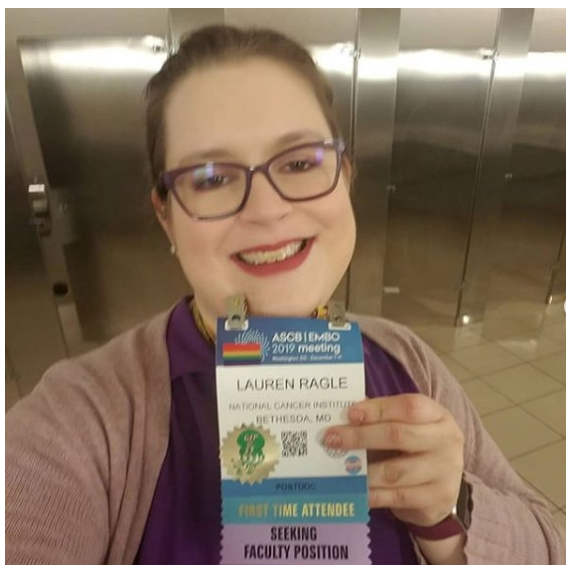
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Got a Mac? Find it in your dock.

A Newcomer's Perspective to ASCB/EMBO

by: Lauren Ragle



As a new member of the American Society for Cell Biology (ASCB), I attended my first meeting with them in December 2019. It was a joint meeting held with the European Molecular Biology Organization (EMBO). Having a bioorganic chemistry background, I have attended meetings connected to the American Chemical Society (ACS). However, my experience at the ASCB/EMBO meeting this past December was not only educational, but really heartwarming. I found most of the people attending the meeting to be friendly and willing to discuss a number of topics with one another. Many people were even catching up with old friends; it felt like a family. Just like the ACS meetings I have attended in the past, I find there are several tips to make navigating a large meeting easier.

First, consider creating a plan by going through the meeting program and app. Be sure to

download the meeting app on your phone before the first day. This allows you to start getting familiar with it. Many meeting apps, including the one for the ASCB/EMBO meeting, have a personalized calendar where you can mark the talks and posters you're interested in attending and the app will remind you when your talks are coming up. This is helpful to maximize your time and experience.

Another tip I find helpful is to take advantage of the flags/stickers for badges. At this conference, there were flags you could add to your badge including things like "first time attendee", "seeking faculty position", or "seeking graduate students". It made for an easy way to find people and connect face-to-face. In addition to badge flags, there were various stickers – including ones to indicate your preferred pronouns. Having several LGBTQIA+ friends, I was particularly happy to see the inclusion.

It also helps to identify what you want to get out of the conference; for instance, you can use it as a venue to seek a position or find people to hire. At ASCB/EMBO there was an available job board near the roundtable discussions on the Exhibitor Floor which allowed people to post current job openings at their various institutions. Job seekers were even posting copies of their CV with business cards – something I wish I had thought of before! Now that I know job boards exist at meetings, I will bring several copies of my CV to future

meetings. I'm also going to inquire about job boards similar to this at future meetings. If you cannot make it to ASCB/EMBO or the meeting you are attending does not have a physical job board, you can also post a job (ASCB members get 50% off job postings) and find jobs at <http://jobs.ascb.org>, the new ASCB online job board.

For more career and professional development activities at the meeting, several small programs took place throughout the conference in available theater spaces on the Exhibitor Floor. Various speakers had programs for people who were interested in things from working at a Primarily Undergraduate Institution (PUI) to information on Undergraduate and Predoctoral Grant Programs. In addition to attending some of these sessions, I also went to the Education Minisymposium, since I want to become a faculty member at a PUI. In both the seminar sessions and the minisymposia, I was able to connect with peers and potential mentors, which is one of the great things about meetings!

However, be aware that some symposia may be extra popular. I tried to attend a particular talk on lipid trafficking, but the room was so full that people were crowded around the door in the hallway. Since I was unable to get into that particular talk, I went back down to the Exhibitor Floor – something that I think is sometimes overlooked and undervalued.

My last tip is to visit the exhibit floor. There, I met with vendors I was familiar with and ones

I've never heard of before. As a future professor, I even stopped by a few booths set up by textbook publishers. After striking up a conversation (and flipping through a Biochemistry textbook), the Norton vendor asked if I'd like a copy of their updated edition. I was able to receive a free copy after the meeting. Some of the scientific supply vendors had specials they could offer new professors, something that I made a note of, should I need to start my own research lab. Almost every other booth had free items available. I picked up several totes, shirts, and pens. However, the best thing I did on the exhibit floor was make connections and learn about new technologies available to me, including new tools to make my research "greener" and more environmentally conscious.

Overall, while the overall structure and scientific schedule of this conference was similar to others I attended in the past, I really enjoyed the ASCB/EMBO conference this past year. My two main tips are to create a game plan on day one (or before, if you downloaded the app to your phone) and to visit the exhibitor floor when you have down time. Your plan should include what your goal is for the conference and a list of talks you must see. Be sure to get there early! If you have downtime (or cannot squeeze into the room where an interesting talk is located), be sure to hit up the vendor floor. You never know when you'll meet a new friend or potential collaborator!

Culture Shift Required: Ethics in Science

by: Luna Homsy

It seems, these days, that scientific discoveries are being announced at a rapid-fire pace. The year 2020 has been full of scientific and biomedical strife with the insurgence of COVID-19. It has also brought us discoveries that have expanded our understanding of the edges of the habitable universe. -A newly-discovered exoplanet named [K2-18b](#) has rainclouds and might be able to sustain life. It has also allowed us a glimpse into the shoes of our genetic ancestors by learning that the [central arch of the foot](#) is essential to overall stiffness and bipedalism—giving us an idea of how and when ancient hominids gained the ability to walk and run on two feet.

As technology becomes more advanced and our understanding of the world we live in grows, we, as *fellows and young investigators*, have a responsibility to consider the ethical implications of studies—who is affected and how. Scientific ethics is not a new subject. Government employees and non-employees alike are expected to continuously take [training modules](#) on ethics. Institutional Review Boards, administrative bodies dedicated to protecting the rights and welfare of subjects recruited to participate in research activities by focusing on the legal, scientific, and social (i.e., *ethical*) implications of the research, are implemented in all federally funded US research institutions. These efforts are important—if not vital—to the moral core of scientific discovery, and the present culture of the STEM field must prioritize ethics in tangible ways.

Ethics comes in various forms—some of which are intersectionality and diversity. Addressing bias in science and technology will result in a fairer, more functional society. As an example, medical care is less accurate when health professionals do not address their biases and work in a more intersectional manner. Physicians have a responsibility to “recognize the ways in which their patients’ identities may impact their medical care, focusing on the patients’ attitudes toward their providers and the efficacy of their treatment plans” ([Cho, 2019](#)). Intersectionality is a facet of ethical behavior—in considering “how patients’ multiple identities affect both their own attitudes toward their physicians and their physicians’ attitudes toward them may help improve diagnostic accuracy” ([Cho, 2019](#)). It is not only physicians who may fail to be inclusive. There are many examples of the technology designed by scientists failing to be inclusive, like the story shared in a [tweet](#) about the British government’s online facial recognition technology rejecting her photo submission because it could not process her facial structure. Not investing in ethical practices and methods on the front end will end up costing tax payers more money, wasting time and resources, and generally making for a less effective world.

Another consideration for ethical and more fair science is accessibility to resources. The struggle to connect more people to publicly funded science is not new; [students](#) and [researchers](#) alike have called for open access to publicly funded research (in 2020 and 2012, respectively). Multiple bills have

been introduced in the Congress and the Senate: Federal Research Public Access Act ([2006](#), [2010](#), [2012](#)), the Fair Access to Science and Technology Act ([2013](#), [2015](#), [2017](#)). Currently, publicly funded studies are behind a paywall for one year. There is a chance the current White House administration will issue an executive order that will reduce the one-year paywall limit. It is worth considering how

much money in science goes to publishing companies (and their executives) instead of funding actual research.

We stand on the shoulders of giants; they expect us to hoist others up too. The future of science and research culture lies in our hands. Will we prioritize ethics, in a way that creates a fairer, more equitable world?

Science, Technology, and Society: a new reading group at NCI-Frederick

by: Dorothy L. Butler

Scientific interest groups at the NIH serve the purpose of bringing scientists with similar interests together to share and learn about new topics in their area of interest. Group interests range from artificial intelligence to free radicals to membrane proteins. Each group is unique in the engagement it offers its members. Some groups have symposia with poster sessions and lectures, while others have reading groups or mentoring programs. Because the NIH has scientists at all career levels, it is important to have interest groups that cover topics outside the typical technical areas of science. Interest groups that cover topics such as global health, patent law and technology transfer, and science policy are important for young scientists who want to pursue careers away from the bench.

There are some interest groups that have not yet gained official status as a scientific interest group but are working towards getting more official recognition. One of the newest groups that fall under this category is the Frederick Branch of the Science, Technology, and Society (STS) Reading Group. The Frederick STS Reading Group was started by postbaccalaureate fellow Sarah Flaherty. She heard about the STS Reading Group in Bethesda and wanted to offer something similar to the fellows at the Frederick campus. Before either group can become an official Scientific Interest Group, they must identify a faculty member willing to serve as an advisor.

According to their mission statement, the STS Interest Group “aims to establish a collaborative space where individuals from across the NIH can critically examine the ways in which science and

its technologies inform and are informed by our social world.” This includes topics that stretch beyond the typically technical discussions that might be present at other interest group meetings. Some of the topics they plan to cover include parental refusal of pediatric care, the opioid epidemic, the neuroscience of poverty and adversity, cosmetic versus therapeutic surgery, and racial bias in data algorithms. The STS Interest Group wants to engage with people who can bring perspectives from not only science and technology but also from sociology, anthropology, philosophy, and history.

The STS Interest Group meetings started with a reading group that met once a month to discuss articles from both science and humanities scholars. The opening discussion was on an article from *The New Yorker* titled “The Mistrust of Science” by Atul Gawande. The next article was “Who’s Afraid of Dissent? Addressing Concerns about Undermining Scientific Consensus in Public Policy Developments” from *Perspectives on Science*. Briefly, the two articles covered some instances of public mistrust of science, the rise in pseudoscience to undermine scientific findings, and included suggestions for how to combat this mistrust and improve public trust in science. While improving public trust in science might seem like a daunting task, it is an important one that makes for lively discussion. Most of it

focused on the tension between healthy skepticism versus harmful science denial among the public and what role scientists can and should play.

The group is new and welcoming more participants. The balanced amalgamation of society, policy and science in this group will help participants in diversifying their perspectives. There are homemade brownies to provide extra incentive to show up and participate. If you are interested in discussing how society and science can co-exist, or even collide at times, come join the discussion!

If you are close to Bethesda, their STS Reading Group meets weekly. The Frederick branch meets on the last Wednesday of every month in the Café Room of Building 549. If you are interested in getting involved as a participant or in a leadership capacity of the Frederick branch, contact Sarah (flahertysj@nih.gov) or show up to one of the meetings.

For more information about Scientific Interest Groups at the NIH visit: <https://oir.nih.gov/sigs>. There are quite a few, and one is bound to spark your interest.

History of Women in Science – Nobel Laureates Part 5

by: Molly D. Congdon

Introduction

In this edition of the Women in Science: Nobel Laureates series, we highlight the career and contributions of an astounding, renowned woman, whose research had profound impacts on the understanding of radioactivity and led to the discovery of radium and polonium. Doctor Marie Curie is the first person and the only woman scientist to be the recipient of two Nobel Prizes. In 1903, she was awarded the Nobel Prize in Physics along with Doctors Antoine Henri Becquerel and Pierre Curie “in recognition of the extraordinary services they have rendered by their joint researches on the radiation phenomena discovered by Professor Henri Becquerel.” Almost a decade later, she was the sole recipient of the 1911 Nobel Prize in Chemistry “in recognition of her services to the advancement of chemistry by the discovery of the elements radium and polonium, by the isolation of radium and the study of the nature and compounds of this remarkable element.”

Marie Curie, née Sklodowska, Ph.D.



Marie Curie, née Sklodowska was born on November 7th, 1867 in Warsaw, part of the former Russian Empire and now Poland. She was the youngest of five children. Her father, a secondary-school teacher, was responsible for her initial scientific education. From a young age, Marie had a passion for science elegantly expressed in her own words: “I am among those who think that science has great beauty.” Upon her mother’s death, Marie became a governess since her father could no longer support the family. Although the financial hardship prevented her from obtaining a formal higher education at the time, she continued to

read and pursue her studies independently in her spare time.

In 1891, she moved to Paris, France, where she lived with her sister. This move gave her the opportunity to follow her dreams of obtaining a higher education. There she studied mathematics and physics at the Sorbonne, and met Pierre Curie, a professor in the School of Physics in 1894. They married the following year.

Inspired by Henri Becquerel’s discovery of radioactivity in 1896, the Curies followed their shared passion for science together. Their laboratory conditions were less than ideal, and they carried large teaching loads to maintain a living. After observing that a uranium ore known as pitchblende was substantially more radioactive than uranium itself, Marie and Pierre set out to identify the source of the additional radiation. Using the standard techniques of the time, they

ground, filtered, precipitated, acid treated, dissolved and recrystallized the pitchblende to isolate the elements. Finally, they were able to obtain a black powder that was over 300 times more radioactive than uranium. They named this newly identified element polonium, atomic number 84.

Upon further study of the residual extraction liquid, they realized that it still possessed a high level of radioactivity. Concluding that this second new, highly radioactive element comprised an even smaller percentage of the pitchblende than polonium, they set out to prove its existence. They called this new element radium and published a paper in 1898 supporting its existence; however, their work was highly criticized by the scientific community since they had not yet isolated a physical sample. "One never notices what has been done; one can only see what remains to be done," Marie famously stated.

To prove radium's existence, Marie and Pierre obtained large quantities of a pitchblende industrial waste product in which the uranium had been removed. This industrial byproduct was substantially cheaper, and extremely radioactive. Using the same process, Marie diligently extracted miniscule quantities of radium from kilograms of byproduct. The physically demanding work began to take a toll on their health. What we now know as the early stages of radiation sickness, fatigue, nausea, reddening and blistering skin on their hands became common place. Despite these ailments, they persisted and successfully isolated enough radium from its radioactive isotopes to obtain full elemental

characterization and examined its properties in 1902. The following year, in 1903, Marie successfully defended her doctoral thesis in physics and was awarded the Nobel Prize in Physics along with Pierre Curie and Henri Becquerel.

Tragedy struck in 1906, when Pierre was killed in a horse and cart accident. Upon her husband's death, Marie carried on, filling his position as Professor of General Physics at Sorbonne and becoming the first female professor. She also continued their research and studied the therapeutic properties of radium. In 1914 she was appointed as the founding Director of the Curie Laboratory in the Radium Institute of the University of Paris.

In addition to advancing the scientific community's understanding of radiation, Marie Curie's research was vital for the development of x-ray technology used in surgeries. During World War I, she developed "portable" x-ray units for field use. Marie even drove x-ray equipped ambulances to the front lines and held training courses for medical personnel. These devices helped doctors identify and treat bullet and shrapnel wounds, as well as fractures. During World War I, Marie was named the Head of Radiological Services section of the International Red Cross.

Along with her substantial contributions to science and medicine, Marie Curie was a wife and mother to two daughters. Her oldest daughter Irene Curie, born in 1898, followed in her parents' footsteps, becoming a scientist. Irene and her husband Frederic Joliot studied the nucleus of the

atom and were awarded the 1935 Nobel Prize in Chemistry for their contributions to science. Eve, Marie Curie's second daughter born in 1904, forged her own path as a journalist and writer. When questioned about the topic of work-life balance, Marie Curie said, "I have frequently been questioned, especially by women, of how I could reconcile family life with a scientific career. Well, it has not been easy."

As a result of high-energy radiation exposure from her research, Marie Curie's health began to decline at the end of the 1920's due to leukemia. She passed away on July 4th, 1934 and by orders of French President Mitterand in 1995, was reburied with her husband Pierre in the Patheon, an honor reserved for France's most revered dead. Marie Curie leaves behind a profound

impact on the fields of chemistry, physics, and medicine. As the female minority in a male dominated field, she was dignified and held in high esteem by her fellow scientists. She is known for lecturing reporters to "be less curious about people and more curious about ideas." The recipient of numerous awards, Marie shines as proof that one can overcome obstacles, maintain an impactful scientific career, be a great humanitarian, and raise a family simultaneously.

"I was taught that the way of progress was neither swift nor easy" -- Marie Curie.

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Activities of interest for FELLOWS!

- Sallie Rosen Kaplan Postdoctoral Fellowship
- National Postdoctoral Association
- FYI Activities: Join the Colloquium Planning committee, Join the Steering Committee!!



Sallie Rosen Kaplan Postdoctoral Fellowship for Women Scientists in Cancer Research (SRK Program)



What happens during the transition from trainee to independence? How do we better retain and advance the careers of women in science? How can we better face the competitive nature of the job market?

SRK Program Provides

- Leadership skills • Confidence building • Additional mentorship • Networking Opportunities • Peer-to-peer connections

SRK Program Elements

- 30-week professional coaching with customized program • Monthly meeting with second mentor selected from senior women in government, academia, or industry • Additional workshops by NCI Office of Workforce and Professional Development • Additional coaching on presentation and communication skills • Career development panel discussion • Grantsmanship seminar

For more information:
<https://www.cancer.gov/grants-training/training/at-nci/srk>

Join the 2021 CCR-FYI Colloquium Planning Committee!



Are you interested in networking with extramural scientists, exploring alternative careers in science, or giving back to the community? **The planning of the 2021 CCR-FYI Colloquium will begin in July 2020!**


To join, begin attending the CCR-FYI monthly meetings in Bethesda and Frederick on the last Thursday of the month, at 11am.






Providing Valuable Training Experiences for CCR Fellows

For more information, please contact:
Jessica.Eisenstatt@nih.gov, Amy.Funk@nih.gov, and Srikanta.Basu@nih.gov



What the NPA Does:

- Promote positive change in the postdoctoral experience.
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Join the CCR-FYI SC! Meetings are held monthly in Bethesda and Frederick on the last Thursday of the month, at 11am.

Providing Valuable Training Experiences for CCR Fellows

For more information, please contact:
Molly.Congdon@nih.gov and Jessica.Eisenstatt@nih.gov

Activities of interest for FELLOWS!

- Diversity Career Development Program
- FYI Activity: Join the Newsletter Team!!
- Mark your Calendars: National Postdoc Appreciation week! (September 21-25, 2020)
- Frederick Diversity Committee



**Center for Cancer Training
Diversity Career Development Program**



Applications Due: Fall 2020
Duration: Dec. 2020 – Nov. 2021


Engineer your inner core:

- identify and celebrate your unique talents
- develop your superpowers
- confront your inner dialog and limiting beliefs
- learn to have difficult conversations
- build strong relationships and networks.
- set a vision, goals and define priorities
- build confidence as scientist, leader, and individual

How to apply: (J1- Visa holders are eligible)

- NCI intramural fellows should talk to their supervisors about the program
- Complete the [application](#), submit a personal statement and an updated CV
- Supervisor will be automatically emailed with a instructions on how to submit a Letter of Support

For more information, please contact:
Dr. Ofelia Olivero at oliveroo@exchange.nih.gov



**Join the CCR-
FYI Newsletter
Team!**

Are you interested in a career in science journalism or mass media communication? Join the CCR-FYI Newsletter Team to gain valuable experiences and skills!

Open positions:

- Writer • Editor • Advertisement Designer

Skills:

- Professional writing • Communicating science and non-science related topics to the public • Presenting academic information in a popular manner • Non-science investigatory writing

Benefits:

- Supportive team environment • Flexible writing topics • Gain writing experience • Network with fellows outside of your group
- Positively influence the training experience with valuable information

Providing a Voice for CCR Fellows

To join, please contact: alida.palmisano@nih.gov

Mark Your Calendars



National Postdoc Appreciation Week
September 21 - 25, 2020


A week of activities for fellows to recognize the significant contributions that postdoctoral scholars make to U.S. research and discovery.

Events will be held on the Bethesda and Frederick Campuses

Past events include
Dark Roast and Donuts*
Free coffee and donuts!
Brown Bag Lunch Seminars
*Take a moment for some personal enrichment while enjoying lunch. Free cookies provided!***
Trivia Respite From Lab
Get off campus to celebrate the end of the week and relax with other fellows!

Questions? Contact: Molly.Congdon@nih.gov
*Supported by the CCT Office of Training and Education.
**not provided by government funds





Frederick Diversity Committee
Promoting Diversity

MISSION
To celebrate diversity, inclusion, promote productivity, work-life balance and career satisfaction.

WHO WE ARE
The Frederick Diversity Committee (FDC) is a group of fellows from NCI-Frederick striving to promote diversity and inclusivity at the Frederick campus

FDC creates avenues for trainees to engage in:

- Personal and Professional Development
- Career Exploration and Enrichment
- Networking
- Mentorship

FDC meets every 3rd Friday at 1pm

<https://ncifrederick.cancer.gov/Diversity>
Frederick Diversity Committee