NCI CENTER FOR CANCER RESEARCH

# Fellows & Young Investigators Newsletter

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## *From the Editor's Desk*

We welcome you to yet another exciting Summer edition of the Fellows and Young Investigators Newsletter. This issue gives a synopsis of motivating events that took place on various NIH campuses like the 15th Annual CCR-FYI Colloquium, NIH Career Symposium, Fort Detrick Spring Research Festival and PostBac Poster day. Read on to learn about the CCR-FYI Outreach committee's latest activity. In addition, fellows share their experiences at various conferences such as the AACR, Keystone Symposium, Gordon conference and the International Society of Extravascular Vesicles meeting. Finally, we bring to you an interview of one of our NCI alumna, who took up an off-the bench career in scientific writing and is now working with Qiagen. We hope you will enjoy reading what we have put together. If you have any comments or suggestions, or are interested in contributing to the CCR-FYI Newsletter, please send an e-mail to smita.kakar@nih.gov.

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**Providing support for fellows at CCR**
CCR-FYI Association is supported by the CCR Office of the Director

# CCR-FYI News

## Reflections on the 15th Annual NCI CCR-FYI Colloquium

The 15th annual NCI CCR Fellows and Young Investigators (FYI) Colloquium was held on March 23-24th 2015 at NCI Shady Grove campus in Rockville, MD with the theme of "Basic Research to Precision Medicine". Around 200 NCI fellows were in attendance for two keynote addresses, over 130 oral and poster presentations, several career development workshops and a career fair.

As a new postdoctoral fellow at NCI who helped organize and also attended the colloquium, I found the experience invaluable. Since the colloquium is planned solely by members of the NCI CCR-FYI steering committee, comprised of fellows from across NCI, it provided a great opportunity for me to build leadership and organizational skills, to network as well as present my research. I would like to reflect on a few aspects of the colloquium that I found particularly useful
.
The opening remarks were given by Dr. Jonathan Wiest, Associate Director of the Office of Training and Education (OTE) followed by words of advice from Dr. Glenn Merlino. Both speakers encouraged the fellows to take advantage of resources offered at NCI to enrich their training and improve their skills. A special emphasis was placed on taking the annual CCR-FYI Fellow's survey since its results will help the NCI leadership know about the fellows' experiences and improve any shortcomings in the future. In addition, both speakers encouraged fellows to complete the annual training plan and discuss it with their mentors to make sure their professional and career goals are communicated effectively with the mentor and are being fulfilled during their stay at NCI.

The majority of both days were filled with scientific talks and discussions. From the keynote talks by Dr. Joanne Murphy-Ullrich and Dr. Christina Annunziata, outstanding postdoctoral fellow awardee talk by Dr. Eric Tran and the oral presentations by selected fellows to discussions during the poster presentations, all provided a great venue for exchanging and sharing ideas among fellows. I had the chance to present my work at the poster session and hear other fellows' feedback that I found very useful.
In addition to the talks and poster presentations, the CCR-FYI members put in a lot of effort in planning the workshops and identifying and contacting appropriate individuals to serve as panelists. I personally had the opportunity to moderate "Careers in Academia" along with Dr. Lei Sun. The workshop was well received by the attendees mainly due to the enthusiasm of our four panelists to share their career trajectory and the series of questions from the audience that followed.
Finally, the two-day colloquium came to an end with an inspiring talk by Ms. Shelby Robin, a pediatric nurse, who talked about her story of fighting Ewing's Sarcoma in her teenage years. She went through years of chemotherapy and lost a leg, but finally became cancer free and has been living a normal life using a prosthetic leg. Her talk highlighted the importance of basic science and clinical research in helping patients.
Overall, I truly enjoyed this two-day colloquium and highly recommend it to any NCI fellow and am eagerly looking forward to the next one in 2016!

***From the planning committee Co-chair:***

On behalf of the FYI Steering Committee, I would like to thank everyone who attended the 2015 FYI Colloquium. For those of you who did not attend, as you can read from Dr. Abulwerdi's recap, you missed out on two excellent days of science, professional development, and networking opportunities! This year we chose as our theme, "Basic Research to Precision Medicine", which is now a hot topic in the research community due to President Obama's "Precision Medicine Initiative" that he announced at the beginning of the year. Our three keynote speakers, Dr. Joanne Murphy,

Dr. Christina Annunziata, and Dr. Eric Tran, highlighted the advances towards precision medicine.

The CCR-FYI would especially like to highlight each of the fellows who were given awards this year:
Dr. Eric Tran of the Surgery Branch was awarded the Outstanding Postdoc Award for his achievements during his post-doctoral fellowship in Dr. Steven Rosenberg's lab.
The Outstanding Postgraduate Award was given to Ms. Jennifer Dine, a graduate student in the NINR Graduate Partnership Program.
Travel awards for outstanding oral presentations were given to Adam Waickman (Experimental Immunology Branch), Wei Gao (Laboratory of Molecular Biology), Diego Presman (Laboratory of Receptor Biology and Gene Expression), and Alexander Gorka (Chemical Biology Laboratory).

Ms. Shelby Robbins (top left) sharing her childhood experiences. Dr. Eric Tran (center) receiving the Outstanding Postdoctoral Fellow award from CCR-FYI co-chairs (top right). Audience learning from career development workshops (bottom left). The CCR-FYI colloquium planning committee (bottom right) after the event.

Travel awards for outstanding poster presentations were given to Sam Dahlhauser (Chemical Biology Laboratory), Xintao Hu (Vaccine Branch), Jianjian Zhu (Cancer and Developmental Biology Laboratory), and Tiffany Lyle (Women's Malignancies Branch). Thank you to the Office of Training and Education for funding these travel awards to help CCR fellows attend national conferences this year. A very special thank you to Drs. Robert Wiltrout and Glenn Merlino in the Office of the Director for their continued support in professional development activities for CCR fellows; Dr. Jonathan Wiest for all of his support and guidance of the FYI; Ms. LaTasha Beasley of the Center for Cancer Training for all her help with colloquium event planning; and Ms. Mary Velthuis and Ms. Erika Ginsburg for providing support during the colloquium.

The two-day event is the culmination of eight months of planning by a group of post-docs on the FYI steering committee. The CCR-FYI Steering Committee would like to thank the members of the Committee: Emilee Senkevitch, Rami Doueiri, Leigh Greathouse, Smita Kakar, Vijay Walia, Lars Boeckmann, Lily Xia, Lei Sun, Julia Scheiermann, Allison Burrell, and Namal Liyanage for all their hard work in planning and executing the colloquium. Also, a thank you to all the other members of the Steering Committee for their help in judging abstracts and presentations, and moderating sessions during the colloquium.

The CCR fellows on Colloquium Committee decide everything from location, theme, keynote speakers, workshop topics and panelists, survivorship speaker, networking events, and travel award recipients. It is an excellent opportunity to develop and refine leadership skills. Some of our decisions are made based on input of other CCR fellows, so thank you to everyone who responded to our post-colloquium survey. If event planning is something you are interested in, or if you would like to make a contribution to the 2016 Colloquium, we would love for you to join us!

Contributed by:

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*Colloquium Planning Committee Co-chair*
*Cancer and Inflammation Program*

# Outreach

## Boy Scouts Activity

In addition to our annual Food and Toy Drive for the NIH Children's Inn, the CCR-FYI Outreach group organizes hands-on activities for various organizations. This year, we collaborated with a Boy Scout Troop in Frederick to help 16 scouts earn their Chemistry Merit Badge. On February 25th, 2015, four volunteers from the CCR-FYI outreach sub-committee, Emilee Senkevitch, Smita Kakar, Anna Trofka and Li Xia went to demonstrate three chemistry experiments to the local Boy Scouts of America troop. In this article, we provide insight into their experience of the evening.

*Anna Trofka*: One of my favorite memories growing up as a child was learning about science. I loved to learn about how things work and why things happen. Being able to share that love of science with children is something that I have wanted to do since I got my PhD. I joined the CCR-FYI Outreach Committee in order to bring hands-on science experience to different groups. Recently, we had the opportunity to lead experiments with the Boy Scouts, to help them meet the requirements for their Chemistry Merit Badge. The experiment I led was on the properties of water – surface tension and hydrophilic verses hydrophobic molecules. In preparing the lesson, I remembered back to my chemistry class in middle school where I first learned about all the cool things that water does, which as an adult scientist now, I had lost appreciation for. It was great relearning everything that I had forgotten about water.

Emilee Senkevitch demonstrating the copper sulfate experiment to the scouts.

On the night of the troop meeting, we met the leaders of the Boy Scouts and watched as they started their meeting. There was a new member in attendance and the boys seemed to go out of their way to make him comfortable. It gave me a new appreciation for the Boy Scouts and the community that it fosters between the members. As we were leading the experiments, I noticed two things; one, the scouts were excited to be doing something and two, they left with an appreciation of science. No, not all of the scouts were on task all the time, and sometimes it seemed like they weren't listening, but I am glad that I was able to show them how cool science, and water, can be.

*Li Xia*: In my opinion, the best way to learn science is through hands-on experience. The "Cartesian Diver" is a perfect example of how to learn science and have fun at the same time. With a soda bottle, a pipet bulb and some paper clips, you can do your own magic show. I could see that all of the boys from the Boy Scout troop were fascinated by this magic experiment that I was able to demonstrate. They could not wait to make their own magic divers. I believe that interest and curiosity are the keys to motivating young kids. I enjoyed sharing my science knowledge with them in a way like this. As a foreigner, I had not heard of the Boy or Girl Scouts before, and now, I got the chance to see how dedicated these young people are. Additionally, this outreach activity gave postdocs like me an opportunity to practice our communication skills, which nowadays many jobs require. What is more convincing than making kids understand science?

*Emilee Senkevitch*: The experiment I taught the boys was an inorganic chemistry single displacement reaction. I liked this experiment because you can actually "see" the chemistry happening in real time. In this experiment, the boys placed zinc nails into a blue copper sulfate solution. Since the zinc is more reactive than the copper, the zinc on the surface of the nail will swap places (or displace) with some of the copper in the solution. So the nail will get a copper-colored coating and the blue copper sulfate part of science, because while the nails turned brown-red quickly, it took almost an hour for the solution will start to become more yellow-green. In the end, the boys learned that patience is a big solution to start to change colors.

The fun thing about working with the Boy Scouts is that this particular troop is a wide age range. The group really took on a team approach, with the older boys who had taken chemistry helping the younger boys. The outreach committee gives us an opportunity to share our love of science with the outside community. If scientific outreach is something you are interested in, we would love for you to join us!

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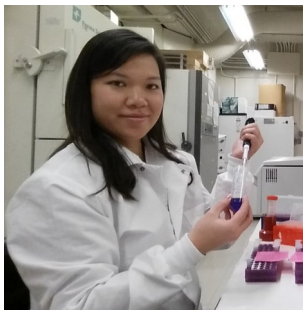
## Elementary Outreach Program Volunteering in Frederick

Instructional time for core science teaching in elementary schools has decreased over the past few years. According to the National Center for Education Statistics, instructional time spent on science in first through fourth grade has decreased from an average of 2.6 hours taught per week in 1987 to 2.3 hours taught per week in 2008. The NCI's Elementary Outreach Program (EOP) is combatting this decrease in instructional science hours by providing supplemental science activities with the help of volunteer scientists and Fort Detrick staff.

Since its inception in 1997, the EOP has offered free science workshops facilitated by Fort Detrick volunteers targeted towards first through fifth graders at nearby elementary schools. Volunteers include anyone who works at Fort Detrick such as scientists, interns, military employees, etc. The class visits are about two hours long during which volunteers will teach two classes with an average of 25 students per class. The workshops consist of four science stations and an EOP volunteer to facilitate the activities at each station. The science educational activities are based on a curriculum assembled by teachers to help supplement the students' science education and range from making slime and learning about states of matter, to culturing bacteria and learning about antibiotics and sanitation. The students get very enthusiastic to get a taste of true lab experiments that they might not have been exposed to before. They are also given a science journal to record their observations and to learn the importance of the scientific method and record keeping.

The volunteering process is simple. Interested volunteers should fill out the volunteer interest form at http://ncifrederick.cancer.gov/Programs/General/EOP/ or email eop@ncifcrf.gov. Volunteers are then given a step-by-step lesson plan for the workshop that they wish to volunteer for. Volunteers can participate as much as their schedule permits, whether it is only once or twice a month. Everyone is welcome to volunteer, so sign up today!



Contributed by:

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# Events

## Dispatches from the 2015 NIH Career Symposium: There's no such thing as luck

Symposium Overview

Early one Friday morning a few weeks ago, the Natcher building overflowed with graduate students, postbacs, and postdoc trainees for the annual NIH Career Symposium organized by the Office of Intramural Training and Education (OITE). Some participants had travelled all the way from New Jersey and North Carolina (I guess I should stop complaining about having to walk over from Building 10).

Lori Conlan, Director of the Office of Postdoctoral Services (OPS) and Career Center Services, prefaced the symposium with the theme for this year: "There's no such thing as luck". Indeed, at the end of the day, it seemed to me that getting that next job in ones career trajectory boiled down to overcoming inertia (sending out 50 job applications) and getting out of one's comfort zone (networking, anyone?).

Sharon Milgram, Director of OITE, started off the day's series of seminars with "Career Myths to Let Go". She started the list with her pet peeve of calling non-academic positions "alternative careers". According to her, none of them are alternative, really, since they all contribute to the scientific enterprise. She also reiterated that one's current PI cannot, and should not, be expected to provide all of your mentorship needs (i.e. science, career, personal). Contrary to the popular belief that "only publications matter", she advised trainees to focus on both building your publication history AND developing your interpersonal skills. She advised jumpstarting the latter by taking leadership training courses, for example. Lastly, she gave tips on how to keep the momentum going beyond the symposium. Action points included following up with a panelist/speaker or a peer via email, committing to changing one career development habit, tracking the time spent on career development, cultivating relationships with career mentors, and using career counseling resources available at the OITE.

What followed were diverse speaker panels ranging from science education to industry, regulatory affairs, and even technology transfer. For the first time this year, there was also a panel of former NIH postdocs who now hold positions in Europe.

Since I want to hold onto my pipets, though not necessarily as a traditional university professor, two panels caught my eye: "Academic Careers in Unexpected Places" and "Bench Work in Unexpected Places". I present a detailed review of both in the second half of this article.

In the afternoon, there were several skill blitzes (very short, almost manic-paced presentations) on relevant topics for the scientist jobseeker. Topics included how to navigate USAJobs.gov (by Lori Conlan) and how to write resumes and cover letters (a standing-room-only presentation by Amanda Dumsch).

There was also an OITE-run photo booth where you could have your headshot taken for your LinkedIn or ResearchGate profile. This was great, since my LinkedIn photo is maybe three years old. Before the symposium, I'd never even heard of ResearchGate ("Oh great, another online profile", grumbled my inner introvert). The photos were then uploaded to a Picasa web album, which participants could download from. For those who opted out of the web album, OITE directly emailed you the photo. Kudos to OITE's Ulle Klenke and colleagues for providing this service!

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Panel Reviews

"Academic Careers in Unexpected Places"
Panelists:
Suman R. Das, PhD, Associate Professor, Infectious Disease Group, J. Craig Venter Institute
Audray K. Harris, PhD, Investigator, NIAID/NIH
Luke D. Lavis, PhD, Group Leader, Janelia Research Campus, HHMI
Claudia M. Palena, PhD, Investigator, NCI/NIH

Luke talked about the perks of working for an HHMI-funded institution: no teaching, no tenure reviews, no grant writing, and the ability to do risky science (otherwise not NIH-fundable). He meets with his immediate supervisor once a year

and is reviewed by a committee every four years. On the other hand, Suman divulged that 80% of his salary comes from grants and federal contracts. He keeps up with grant writing, which enables him to expand his lab from a small group of four to a vibrant group of 14 scientists today.

Audray and Claudia, both Stadtman investigators at NIH, discussed the advantage of the Stadtman application mechanism, allowing applicants to be hand picked by interested institutes at the NIH. Claudia reiterated the importance of developing a research plan distinct from her previous PI, with whom she did her postdoctoral work. All panelists seem to agree that prospective investigators need a well-thought-out research plan and a network of advocates who will alert you of opportunities. Your network could be your collaborators (as with Suman's case), your journal club, mailing lists (e.g. NIH interest groups) or even your previous or current PI.

Suman gave a note of encouragement to visiting fellows: "If they (prospective employer) want you, they will take care of you (i.e. visa needs)", he said. He mentioned that JCVI's HR department routinely facilitates paperwork for foreign scientists visa requirements (J1 waiver, etc.).

Audray related how he submitted his research plan three times before getting interviewed. His parting words of wisdom were: "Know what you want, and go for it."

"Bench Work in Unexpected Places"
Panelists:
Cameron H. Good, PhD, Bioengineering Scientist (Altus Engineering), U.S. Army Research Laboratory
Aurelio Bonavia, PhD, Scientist, Aeras
Yanbao Yu, PhD, Staff Scientist, J. Craig Venter Institute
Patricia Dranchak, PhD, Research Scientist, NCATS
Betsy Jean Yates, PhD, Research Chemist, FDA

Yanbao, a former NIH visiting fellow, sent out 50 applications and received five phone interviews. He found his current position advertised online (naturejobs.com). He was hired as a postdoc at JCVI and was promoted to Staff Scientist within eight months.
Patricia leads a small group at NCATS and divides her time between bench work and administrative work. She holds a contractor position, which she found through networking. She describes NCATS as a growing institute, tripling its work force in the last four years.

Cameron, also a former NIH postdoc, mentioned that, in contrast, the Department of Defense (DOD) hiring for scientists is flat since no one is retiring (must have good benefits, I figured).

For both Cameron's and Betsy's work places, options for non-US citizens are practically non-existent due to the nature of their work. However, there are workarounds, at least for the FDA.

Aurelio also reminded the audience not to rule out non-profit organizations. For instance, his company, Aeras, is currently developing a vaccine for tuberculosis with the help of the Bill and Melinda Gates Foundation. However, most of the bench work is contracted out to contract research organizations (CROs). Aurelio admitted that he himself is no longer doing bench work.

Patricia and Cameron, who were both hired as contractors for the NIH and the DOD, respectively, shared the advantages of contract workers. Although benefits vary depending on the company that hires you, work hours are flexible and salaries are competitive. Most of the permanent research staff are contractors, according to them.

Someone from the audience asked whether postdoctoral experience is recommended for these positions. The answer was: it depends. In non-profit organizations, postdoctoral experience is not required. However, for government positions, having postdoctoral experience will bump up your "grade" (i.e. your level as an employee, which is also reflected in your salary).

For their parting advice, they recommended networking. How? "Show up at events," said Patricia. Aurelio also reiterated "people generally want to help."

Contributed by:

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# 2015 Spring Research Festival

Fort Detrick hosted the 19th Annual Spring Research Festival (SRF) from May 4th to 7th 2015. It was also the third one sponsored by the National Interagency Confederation for Biological Research (NICBR). The entire scientific community of Fort Detrick proudly showcased their research in the form of oral and poster presentations.

The Festival started with the '*NICBR scientific symposium*' on the first day. The symposium kicked off with an intriguing talk by the keynote speaker, Dr. James Crowe, Director, Vanderbilt Vaccine Center, on the '*Genetic and Structural basis for antibody-mediated neutralization of viruses*'. This was followed by 26 short talks by students and postdoctoral fellows selected from a pool of submitted abstracts. The selected talks represented research from NICBR partners such as National Cancer Institute (NCI), U.S Army Medical Research Institute of Infectious Diseases (USAMRIID), Naval Medical Research Center (NMRC) and United States Department of Agriculture- Agricultural Research Service (USDA-ARS).

The second day featured the '*NICBR Research Collaboration forum*' that highlighted collaborative research between two or more partners of NICBR. The best NICBR collaborative publication was awarded to Dr. Julie Dyall from NIAID-Integrated Research Facility (NIAID-IRF) and Dr. Pamela Glass (USAMRIID) for their article titled: *Repurposing of clinically developed drugs for treatment of Middle East Respiratory Syndrome Coronavirus infection* published in the journal, *Antimicrobial Agents and Chemotherapy*.

This was followed by '*Ebola Virus Mini Symposium*' in the afternoon that consisted of 11 twenty-minute presentation. Many of the speakers were from USAMRIID, but there were also speakers from NIAID-IRF, the Zalgen Labs, and the National Biodefense Analysis and Countermeasures Center. The event was well attended with over 60 attendees eager to hear about the current Ebola research, innovation, and situation in Africa. Dr. James Noah, biochemist at the NBACC, gave an intriguing presentation on the "Persistence Characteristics of Ebola Virus Variant Makona in Clinical Matrices on Five Common Surfaces". This talk gave insight into the longevity of Ebola in secretions like dried blood and vomit, and on surfaces like carpet and personal protective equipment. Dr. Luis Branco, co-founder of the Zalgen Labs, gave an exciting presentation on "*Field Validation, FDA EUA and WHO Approval of the Recombinant EBOV RDT for Rapid Detection of Acute Ebola Virus Infections*". This provided a wealth of information regarding the organic process of developing Ebola detection technology and the rigor it undergoes for federal approval and clinical usage.

However, the most insightful and captivating presentations were those presented by the USAMRIID team, which chronicled the researchers and military members' visit to Liberia and their quest to create a safer and more streamlined protocol for the health professionals helping Ebola patients. The USAMRIID speakers identified the problems that contributed to an unsafe environment for health professionals and solutions to remedy the issues. For example, the decrepit electrical system in some of the Liberian clinical lab facilities were unable to handle the electrical requirements of the high tech instruments brought from USAMRIID; therefore, the USAMRIID team had to rewire the electrical system. Another issue was the unclear labeling or absence of labels on specimens from potential Ebola patients. The researchers provided the Liberian health professionals with tools for better labeling. Overall, the presenters' personal stories and photos made the reality of Ebola diagnosis and treatment in Liberia come to life. In essence, the mini-symposium on Ebola was intriguing and informative. Hearing about the exciting drugs, improvements, and progress in Ebola research made the audience optimistic about their efforts toward management and eradication of Ebola.

The last two days featured a poster blitz session, poster presentations by fellows and staff, Biomedical Research Equipment and Supplies Expo, and a health, education and safety expo. The poster presentations depicted excellent research being done by the scientific community of Fort Detrick. The oral and poster presenta-

tions were judged and selected for awards. The Outstanding Presentation awards were given to Dr. Avijit Roy (USDA-ARS), Dr. Dennis Watson (NCI), Dr. Leah Randles (NCI), Dr. Balamurugan Kuppusamy (NCI), Dr. Robert Cory Bernhards (USAMRIID), Dr. Janice Duy (USAMRIID) and Dr. Christopher Stefan (USAMRIID). Outstanding Poster awards were distributed to 24 presenters.

This year's festival was a success yet again and we thank the organizers for putting this event together. A special note of thanks to Amanda Cecil (USAMRMC), SRF Chair for her hard work! The SRF is a great opportunity to present your research and judge others' work by volunteering as a poster judge. It is also an excellent way to network and know the people around you, especially if you are new to Fort Detrick.

Contributed by:

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## Postbac Poster Day– A perspective of a New Postbac Fellow

On April 30th 2015, as spring was drawing to an end, NIH hosted the Postbac Poster Day. This was an event that excited and motivated the post baccalaureate fellows, especially the ones that were presenting posters. On this day, the postbacs put on a unique show and told the stories behind their hard work to the larger NIH community. Participants came from more than ten institutes within NIH, ranging from clinical research to basic science. During this event, we exchanged ideas, shared our joys at work and intrigued others minds. It provided a great opportunity for the young postbacs like myself to gather together, and mingle with the rest of the more matured NIH community.

The event took place at the Natcher Conference Center, a signature building on the main campus in Bethesda, MD. There were two sessions of poster presentations, between which the keynote speaker Dr. Audrey J. Murrell was scheduled to talk. Dr. Murrell gave a very inspiring speech in which she spoke about cultivating relationships instead of "networking", which means, building long-lasting and meaningful connections with people. In this case, both parties will benefit more from each other in the long run. I felt that this was especially meaningful for young researchers like us, since we still have a long way to go in our career paths, and more support is always welcome.

Since I joined the lab less than two months ago, I did not present a poster. However, I still went to the event to get a sense of what my peers are working on. It was an eye-opening experience, and I was amazed at the wide range and depth of the work that they do. Needless to say, everyone did a great job. Previously, I had only known research conducted at the bench, where researchers hold pipettes and work on petri dishes and tubes. This event provided me with a chance to be acquainted with other forms and fields of research as well, such as what it is like to work with lab animals, taking actual patients' samples from clinics, developing mathematical models for certain protein behavior, engineering potential anti-bacterial agents using viruses, and conducting thought experiments on behavioral disorders, such as ADHD. It was a science carnival for a new postbac like me!

The Postbac Poster Day was a meaningful and intellectually stimulating event for me. It was a great event for both exciting science stories, current health-related issues, as well as socializing. It was fascinating to hear the presenters tell their research stories. This event has made me more aware of where to find news and updates within NIH, as well as the greater scientific and health communities. All in all, it was a wonderful experience.

Contributed by:

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# Conference Highlights: AACR Annual Meeting, Spring 2015

Dr. Brajendra Tripathi (center) at AACR 2015 with fellow attendees.

It was a great experience to attend the 106th American Association for Cancer Research (AACR) annual meeting, which was held at the Pennsylvania Convention Center in Philadelphia, PA from April 18-22, 2015. The theme of this year's meeting was "Bringing Cancer Discoveries to Patients". In this meeting, scientists from all over the globe highlighted the latest, most exciting discoveries in every area of cancer research and emphasized the link between fundamental cancer discoveries and the treatment of cancer patients. AACR is a 'must-attend event' for people working in cancer research, because it offers the opportunity to be exposed to a wide spectrum of topics under the umbrella of 'cancer biology' in one conference. It is a place where cancer researchers can come together as a community and discuss scientific endeavors. I was lucky to catch up with a number of colleagues and friends, who attended this year's meeting, and delighted to see their remarkable accomplishments. AACR 2015 included a diverse range of subjects from multidisciplinary research areas, with outstanding posters and many invited talks given in plenary sessions and major symposia. A wide range of innovative technology and professional development programs such as grant writing workshop for young researchers was also included in the program, which was a valuable experience for me that is hard to find anywhere else. The AACR annual meeting is a place where one can have the opportunity to meet the world leaders in cancer biology research, and discuss research findings with peers. The poster session offered a stimulating atmosphere for discussion among scientists in various stages of their research careers. I was given the opportunity to present a poster titled, "Inactivation of the tumor suppressor DLC1 by the oncogenes SRC and ERK1 in lung adenocarcinoma", and my presentation was well received. The poster session offered a stimulating atmosphere for discussion amongst scientists in various stages of their research careers. I found it particularly helpful to get feedback from senior investigators working in my field. Overall this is a fantastic meeting that can provide several opportunities to any researcher who has an interest in cancer biology. I look forward to attending AACR's annual meeting and having the opportunity to repeat this wonderful experience. I highly recommend this annual meeting to everyone in the field of cancer research.

Contributed by:

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## Opportunities to Practice Talks for Conferences, Seminars & Job Interviews

The **PASS (Presentation and Seminar Skills)** series has teamed up with Scott Morgan, a science communicator with over 15 years experience the co-author of the book, 'Speaking about Science', to provide CCR scientists with an hour-long session of one-on-one tutoring. During this session, you will go through your presentation with Scott, where he will provide feedback on style, content, delivery of message, etc. A week or two later, you will have the opportunity to present your talk in front of your colleagues and to receive constructive feedback. Scott will also attend and provide additional feedback following the presentation.

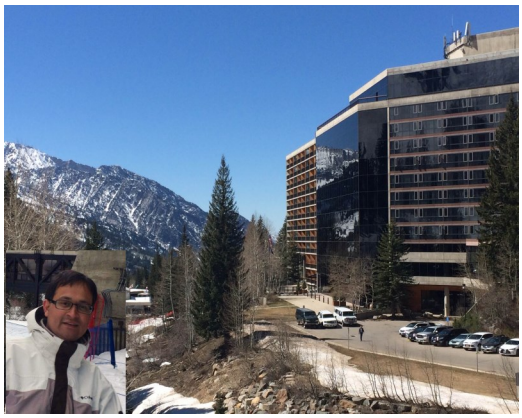
We will work with you and Scott to arrange a suitable time and schedule. This is a wonderful opportunity for anyone who wishes to improve his/her presentation skills either for a meeting presentation or job talk. If you are interested in taking advantage of this opportunity or have additional questions, please contact Barbara Rath at barbara.rath@nih.gov.

# Conference Highlights: Keystone Symposium

The 2014-2015 Keystone Symposia meeting on "T cells: Regulation and Effector Function" was held over March 29-April 3, 2015 at Snowbird Resort, Utah. This was my first experience attending a Keystone Symposia, a series of meetings organized all year focused on a range of molecular biology topics. This particular meeting brought together leading T cell biologists from academia, industry and government to share and discuss their most novel cutting-edge scientific endeavors during almost 50 oral presentations and over 3000 poster presentations. Leaving no stone unturned, sessions at this meeting covered almost every topic of T cell biology including T cell development, recognition and response to pathogens and cancer, differentiation, metabolism, trafficking, regulation and autoimmunity.

This exciting Keystone meeting was a gold mine of information and opportunities, not only to gain from, but also to share your research experience with the global community of T cell immunologists. Podium talks from the pioneers in the field on groundbreaking new findings were intense. Attending workshops focused on specialized themes of T cell biology gave me a unique flavor of how genomic and technological advancements are changing scientific approach of immunologists to unfold the role of this very important cell type in battling viral infections, pathogens and cancer. I was really amazed to see the opportunities provided to budding graduate level scientists by the Keystone committee to give podium presentations. As a graduate student, I presented my preliminary data on 'Genomic stress encountered by T cells upon antigen stimulation' in a poster session, and received constructive feedback through informal chats during this session.

Mixing a bit of adventure and leisure with intense scientific work did not seem to be a bad idea to me. There was beautiful sunny weather and a perfect snow cover on the mountain slopes to take skiing lessons. I took the opportunity to learn skiing and the next day, I was surprised to see myself skiing on bunny slopes accompanied by the most prominent senior faculty and speakers who shared their scientific successes and failures, motivations and career decisions they made amidst career crisis with us. 'Social hour with Lite bites' in the evenings was the ideal time for networking, bridging collaborations and also speaking with editors from immunological journals.



Shashank Patel at the Keystone Symposia in March 2015.

From my personal experience at this meeting, I strongly recommend all fellow graduate students and post-docs to attend Keystone conferences. Keystone symposia provide financial support through travel awards to junior members to attend these meetings. I think that there is an unavoidable existence of hierarchical or institutional barriers between junior and senior members of scientific community in day-to-day work. I feel that Keystone meetings do an excellent job of eliminating such barriers so that everyone in science can benefit from open communication.

There is a widely over-used quote from Sir Isaac Newton: "If I have seen further than others, it is by standing upon the shoulders of giants." Well, in today's rapidly changing scientific landscape, such giants may change every year, so to keep up with dynamic advancements; it is indispensable to attend conferences like Keystone Symposia!

Contributed by:

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# Conference Highlights: Gordon Research Conference on Stem Cells & Cancer 2015

The Fifth Gordon Conference on Stem Cells and Cancer was held at the Ventura Beach Marriott in Ventura, CA, February 15th-20th, 2015. It is a bi-annual meeting organized by internationally recognized scientists Leonard Zon (Harvard Medical School, HHMI) and Lenhard Rudolph (Leibniz Institute for Age Research, Germany). The major focus of the conference was to understand how cancer stem cells behave and interact within their niche with a sub-focus on the interplay between normal stem cells and cancer biology. Major topics discussed included cancer stem cell biology, diversity of cancer stem cells, metastasis, genetic and epigenetic regulation of normal stem cells, aging and cancer, and clonal evolution. These were investigated in multiple cancer models, such as melanoma, leukemia, lymphoma, muscle tumors, colon cancer, breast cancer, squamous cell cancer, medullar blastoma, and others. Another major topic was stem cell niche, which refers to the microenvironment where the stem cells reside. The interaction between stem cells and their niche provides a dynamic system required for sustaining stem cells. I was able to hear some spectacular talks given by leaders in this field such as Elaine Fuchs, Joan Massague, Irving Weissman, Toshio Suda, and Margaret Goodell. The therapeutic aim of this conference was to target cancer stem cells and their niches.

There was a Gordon Research Seminar associated with this conference, which allowed graduate students and postdoctoral fellows to share their work with experts in the field. I had the opportunity to present my research on hematopoietic stem cells at a well-attended poster session and I obtained some very insightful feedback from the attendees.

The conference was held in the beautiful city of Ventura, a fairly small city; it is located between Malibu and Santa Barbara on the blue Pacific Ocean. I went whale watching with some friends I made at the conference. We saw some gray whales and calves, and quite a few dolphins that made it such an amazing experience.

Overall, this conference was outstanding and it allowed us to have a better understanding of how cancer evolves and how cancer cells interact with their niches. The next Gordon Research Conference on Stem Cells and Cancer will be held in Europe in 2017, and I highly recommend it to fellows who are interested in stem cell research and cancer biology.

Dr. Lei Sun attending the Gordon Conference in Ventura in February 2015.

*Contributed by:*

*Lei Sun, Ph.D.*
*Mouse Cancer Genetics Program, Hematopoiesis and Stem Cell Biology Section*

# Conference Highlights: EVs are not Cell Debris: ISEV 2015

During the 1980's, exosomes were considered organelles that remove cell debris and unwanted molecules, however they are now thought to be just as important for cell-to-cell communication and may serve as biomarkers for certain disease conditions and therefore be considered therapeutic targets in the future. I first came across the world of exosomes when I discovered that the membrane protein CD47 is secreted into cell culture media present on extravascular vesicles (EV) and plays an important role between T cell and HUVEC cell communications (Matrix Biol. 2014;37:49-59). During my research, I came across a journal that is specific to EVs; the Journal and Society for Extravascular Vesicles; (http://www.journalofextracellularvesicles.net/index.php/jev) and I was excited to get the opportunity to attend and present my work at the International Society of Extravascular Vesicles (ISEV) conference on April 23-26 2015 in Washington DC. This meeting was shared with the NIH Extracellular RNA Communication Consortium and around 600 scientists participated. Plenary sessions by Director of the NIH, Francis S. Collins, M.D., Ph.D. and the 2013 Nobel Prize winner for Physiology or Medicine, Professor James Edward Rothman, Ph.D. kicked off the meeting.

The ISEV meeting attracted a large and diverse mix of scientists to a common platform, which meant that it was a wonderful conference to attend and learn more about many different types of vesicles and their functions. The ISEV conference committee organized a full education day where speakers discussed new innovations, methods and current challenges in the field of EVs. During this meeting I learnt that EVs are not only vesicles released from cells but that they are enriched with miRNA, mRNA and proteins. They also exist in most body fluids and have exponential potential as a biomarker for many diseases.

The main highlight of this conference was the opportunities provided to the young investigators in the form of either a 15-minute talk or a 5-minute poster talk. I had the opportunity to present my work, giving a talk entitled: 'CD47 Modulates microRNA in Extracellular Vesicles in a Cell-specific Manner'. It was received well by the audience. The senior investigators were involved with "Meet the experts" morning discussion sessions during which they shared their EVs expertise with young scientists for all four days. In addition to this, there were networking opportunities for young scientists during the poster sessions as well as during coffee and lunch breaks. Overall, this was a great meeting with plenty of opportunities to learn and gain new knowledge about the growing field of EVs. To learn more about the next ISEV meeting in 2016 in Netherlands, please check out the ISEV website.

Contributed by:

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NATIONAL CANCER INSTITUTE

NCI Center for Cancer Research
**Fellows & Young Investigators**

CCR FYI

**What is the CCR-FYI?**

The NCI CCR Fellows and Young Investigators (CCR-FYI) Association was organized to foster the professional advancement of young scientists at the CCR and is supported by the NCI CCR Office of Training and Education (OTE).

**Who can participate?**

All young investigators including postdocs, postbacs, graduate students, research fellows, clinical fellows, technicians, and staff scientists.

# Careers in Scientific Writing: An Interview with Dr. Miranda Hanson-Baseler

There are a multitude of careers one can pursue following their fellowship at the NIH. The FYI committee especially likes to highlight these options in workshops and hosts suitable panelists at many events throughout the year. One particular career option is scientific writing and editing. We like to talk to former post-docs at the NIH to hear about their exciting careers.

Dr. Miranda Hanson PhD

Dr. Miranda Hanson-Baseler recently finished her post-doc at NCI-Frederick, and currently holds the position of Senior Specialist, Technical and Marketing Writing at QIAGEN in Frederick, MD.

Dr. Hanson-Baseler received her B.S. in biology from Wheeling-Jesuit University in 2005. Following a summer internship at West Virginia University's (WVU) Cancer Center, she decided to pursue a career in research. At WVU, she studied the effects of prenatal heavy metal toxicity on T cells and earned her Ph.D. in Immunology and Microbial Pathogenesis in 2009. Dr. Hanson-Baseler then began her post-doc in Dr. Scott Durum's lab in the Cancer and Inflammation Program at NCI-Frederick, where she studied the therapeutic potential of *Lactococcus lactis* delivery of IL-27 in the treatment of inflammatory bowel disease. After working at NCI for over 4 years, she decided to move away from the bench and into industry as a writer and editor.

We interviewed Dr. Hanson-Baseler to gain insight into her new career.

**Why did you decide to leave the bench for a career in scientific writing?**

While I did enjoy working in the lab, I would much rather write about science than spend my time at the bench doing experiments. As far back as I can remember in my childhood, I always liked writing and science. Being a technical/marketing writer for a biotech company is a perfect combination for me.

**How did your post-doc prepare you for your scientific writing career? What skills acquired during your post-doc help you in your current job?**

In addition to working full time in the lab, I wrote as much as I could outside of the lab. For example, I was chief editor of the FYI newsletter, served on the Fellows Editorial Board, and actively contributed articles to NIH's and NCI's Offices of Communications. Having a lot on my plate at all times and learning to prioritize each of those tasks has helped me a lot in my current position. At this moment, I have over 35 job requests in my queue, most of which are classified as having high priority. If I only focused on my research while I was a post-doc, I think being able to handle a heavy workload now would be a lot more overwhelming.

As a tech/marketing writer, I have to write and/or edit handbooks, application notes and promotional material. Having lab experience and knowing what researchers want to know about reagents and other products makes writing the materials much easier and hopefully, more customer-friendly.

**Describe your typical workday at Qiagen and how do you manage your time?**

On most days, I'm in the office around 7:30 am and leave around 5. I keep a list of high priority items on my desk so I know what I absolutely need to complete within the next day or two. Throughout the day I will get a large amount of emails that require my immediate attention so then I have to put whatever I am working on aside and address the "really high priority" items. On any given day I am editing technical documents, such as handbooks and application notes and marketing materials such as flyers and direct emailers. Writing for QIAGEN's website is also a large part of my daily workload. And then there

are a number of meetings on a daily basis.

**How would you describe your current work/ life balance?**

At QIAGEN, I think the work/life balance is what you choose it to be. QIAGEN does not expect me to work outside of normal business hours; however, I will work a few hours at home in the evening and on the weekends to meet a deadline or prevent myself from getting too behind on certain tasks. I have a difficult time turning the "work mode" off sometimes and I think that stems from being a grad student and a post-doc. Maybe it will wear off soon!

**What do you like most about your current job?**
I like being able to read and write about a lot of different scientific topics so I'm constantly learning. I also enjoy being able to have a tangible product at the end of the day. One aspect that I did not like about research was the lack of instant gratification. Having a job where I am able to check tasks off of my list is great! Another positive aspect of my job is that my day never really goes as expected. I always try to have a plan for the day but a few emails or phone calls can derail all of those plans. Sometimes this can be a negative but it does make for minimal dull days.

**What advice would you offer to current NCI post-docs who are interested in a scientific writing career?**
Write as much as possible! As a post-doc at the NIH, you have so many opportunities to write for scientific audiences as well as the general public. I remember the day when Lori Conlan looked at my CV and said that it reflected a researcher with a bit of writing experience rather than a writer with research experience. When I left our meeting, I contacted every NIH office of communications and scientific organizations that I could to ask if they were looking for any volunteer writers. You have to remember that you may be competing for the same writing job as writers with years of experience. You have to excel at your main position as a post-doc in the lab as well as hone your writing skills.

Contributed by:

*Emilee Senketvitch PhD*
*Cancer and Inflammation Program*

## To all CCR trainees

**Did you know that the *CCR Office of Training & Education*:**

- **Assists trainees and mentors with mentoring issues**
- **Assists in submitting applications for various funding mechanisms**
- **Provides opportunities for expanding collaborative interactions**
- **Assists trainees in the transition to different career paths**
- **Provides numerous courses**
- **And much more!**

***CCR Office of Training & Education***
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