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SAVE THE DATE!

The 13th CCR-FYI Colloquium

“Innovation into Action: Today’s Discoveries, Tomorrow’s Treatments”

March 25-26, 2013

Advanced Technology Research Facility, Frederick, MD

Free to all CCR trainees

Providing support for fellows at CCR

CCR-FYI Association is supported by the CCR Office of the Director

CCR-FYI News

The 13th Annual CCR-FYI Colloquium: Mark your calendars!

It's that exciting time of the year again! The National Cancer Institute (NCI), Center for Cancer Research Fellows and Young Investigators Steering Committee (CCR-FYI) invites you to participate in the **13th Annual Fellows Colloquium, "Innovation into Action: Today's Discoveries, Tomorrow's Treatments"**. Join us for two days packed with workshops, seminars, a career fair, networking, happy hours and much more. Unlike previous years, this year's colloquium is uniquely defined by a theme representing the CCR. The event is scheduled for **March 25th and 26th, 2013 at the Advanced Technology Research Facility (ATRF), Frederick, Maryland.**

ATRF, about 4 miles from Fort Detrick, is located at a premier biomedical research campus in Frederick. The colloquium will provide a wonderful opportunity for attendees to share their research findings and will be a fruitful networking opportunity. Fellows were encouraged to submit an

abstract as this colloquium provides a platform to share your exciting research findings with your peers, and compete for the \$1000 travel award. The submitted abstracts will be selected for poster and oral presentations, and travel awards will be granted to the top 4 presentations. The Colloquium also presents an opportunity for postdocs to compete for the prestigious "Outstanding Postdoctoral Fellow" award. Contestants are nominated by the principal investigator, and the top 6 candidates contend for the award. The winner is chosen as a keynote speaker for the Colloquium.

This year's "Outstanding Postdoctoral Fellow" is Brid Ryan, a fellow in the Laboratory of Human Carcinogenesis. In addition, we are excited to have experts in different areas of research as keynote speakers for the event. Dr. Deborah Morrison, Chief of the Laboratory of Cell Signaling and Development at NCI will present her work on molecular signaling events involving Ras-Raf signal transduction in cancer. We are also privileged to have Dr. Michael Gottesman at the Colloquium. He is the Chief of the Laboratory of Cell Biology as well as NIH Deputy Director for Intramural Research, and his laboratory works on identifying mechanisms of drug resistance during

chemotherapy after several rounds of treatment.

Furthermore, Dr. Pamela Ohashi from University of Toronto will be sharing her research on autoimmune and anti-tumor immune responses. The Colloquium will also feature a special presentation by Noreen Fraser, a cancer survivor with Stage IV breast cancer.

Noreen has produced and directed short films and award winning television shows such as *Entertainment Tonight*, ABC's *Home Show* and the *Richard Simmons Show*. She will be sharing with us her journey since 2001, when she was first diagnosed with breast cancer that later metastasized to her bones.

The colloquium will provide fellows, graduate students and post baccalaureates an opportunity to explore their career by participating in carefully planned workshops. While the

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“Transition to Academia” and “Science Culture in Industry” workshops will address research-based careers, “Careers in Science Education and Science Writing” will offer insights into careers away from the bench. Panelists will share helpful information on how they made their career transition, skills needed to be in a position like theirs, and what their jobs entail. Among the exceptional team of panelists, we will have Dr. Emily M. Leproust, Agilent Director of Applications and Chemistry Research and Development (Genomics), and former NCI fellow, Dr. Johanna Abend now working at Novartis, who will familiarize us with the culture at their firms. My personal favorite is the Science Writing workshop that has been very popular among fellows. This year, we are delighted to have our own former NCI fellow, Dr. Chhavi Chauhan as one of the panelists. Dr. Chauhan accepted a Scientific Editor position with the American Society for Investigative Pathology for two of its journals in April 2012. Additionally, former NCI fellows, Dr. Adam Berger and Dr. Karobi Moitra will share their transition into the world of science education. There will be a diverse group of speakers and career workshops that would be of utmost value to every Colloquium participant.

In addition, there will be officials from Division of International Services, Fogarty Inter-

national Center and Office of Training and Education to address visa issues and international opportunities for fellows interested in careers abroad. Finally, those who will be actively looking for jobs within the next year; yes, there will be a career fair at the Colloquium attended by many companies and biotech firms around the area to update you with helpful information about the job market, potential new positions at these firms, and what attributes and skill sets the companies are looking for.

We are thankful to the CCR Office of the Director and the Office of Training and Education for the funding for the Colloquium. All members of the CCR community, including postdoctoral and clinical fellows, graduate students and post-baccalaureate fellows are welcome at the Colloquium. Please visit <http://ncifrederick.cancer.gov/events/CCRFellows2013/> for registration and additional information. We look forward to seeing you in March!

Submitted by:

Smita Kakar, PhD

*Macromolecular Crystallography Laboratory
Biomolecular Structure Section*

CCR-FYI Celebrates Its Postdocs

Do you struggle and try to make up jumbled sentences to clarify, to someone in your family or to one of your non-scientist friends, what you do as a postdoc? Well, feel free to memorize the following: “postdoc is an individual holding a doctoral degree who is engaged in a temporary period of mentored research and/or scholarly training for the purpose of acquiring the professional skills needed to pursue a career path of his or her choosing”. Then don’t forget to follow that statement (you may even mumble inaudibly) with “Thank you NPA”. The National Postdoctoral Association (NPA) assisted the NIH and NSF in adopting the above formal definition in 2007. If NPA does not ring a bell, then you are also probably unaware that all NCI postdocs are entitled to free NPA membership (a \$ 35.00 value) because CCR is a sustaining member. NPA was established in 2003 as a non-profit organization to aid in enriching the postdoc experience and to advocate for the advancement of the careers of over

60,000 postdocs (89,000 by some estimates) in the US.

Since 2009, the NPA has been sponsoring the National Postdoc Appreciation Week (NPAW), an annual event that recognizes and celebrates the vital contributions made by US postdocs in sustaining the nation’s robust scientific research enterprise. An equally important objective of celebrating NPAW is to put the spotlight on the postdoc profession, thereby creating further awareness among the larger community. Within a year, in 2010, the U.S. House of Representatives officially recognized the NPAW! The 2012 NPAW events were held from September 17-21, during which 112 institutions in the US and Canada hosted 203 events to celebrate their postdocs – an impressive gain from 89 participating institutions and 171 events in 2011.

As a sustaining member institution, the NIH organized various events on all its campuses

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across the US to celebrate its postdocs and their contributions. NIH's enthusiasm and patronage for NPAW was well evident, as the celebrations in the Bethesda campus spilled over from the NPA-declared week onto the following week. Celebrations included trivia games, kickball tournaments, breakfast, ice cream socials, and many other events.

Under the NCI patronage, the CCR-FYI steering committee had organized various events on the Bethesda and Frederick campuses on the 19th of September to mark the NPAW. Even if on a modest scale, the CCR-FYI-sponsored celebrations attracted a substantial number of postdocs and the events were well attended and appreciated. In Frederick, the celebration started with the postdoc community attending and supporting two of their CCR colleagues, who presented their research as part of the ongoing FYI-Seminar Series (FYI-SS). Besides the postdocs, the 80-plus audience included postdocs, graduate students, staff

scientists and PIs. The crowd and the captivating talks again reinforced the FYI-Seminar Series as one of the premier platforms for the NCI Postdocs to showcase their cutting-edge research and enhance their communication skill set. The audience also enjoyed pizza, chips and soda, kindly sponsored by Dr. Stephen Hughes, Dr. Alan Perantoni and Dr. Jeffrey Strathern. Next followed a group photo shoot of the participating postdocs, and the resulting photos are guaranteed to dispel, once-for-all, the pervasive stereotype of scientists as someone with messy hair, wearing lab coats and goggles all the time, holding effervescent test tubes, and always brandishing a maniac smile! This annual photo shoot remains the only avenue for visually documenting the impressive diversity of the postdoc population at NCI.

Over 40 postdocs attended the next item in the agenda – the ICE CREAM social. The attendees took advantage of the free ice cream and had the opportunity to get to know more of their

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CCR-FYI postdocs who took part in the 2012 National Postdoc Appreciation day events held at the Frederick National Labs for Cancer Research in Frederick



CCR-FYI postdocs “chilling out” at the Ice cream Social (left) and enjoying the evening of “networking” with their peers (right): events held by the FYI steering committee on the National Postdoc Appreciation day, 2012.

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NCI colleagues; the ice cream apparently had lured out even some of the steadfast holdouts! The CCR-FYI greatly appreciates Dr. Peter Johnson's generous contribution towards the purchase of the ice cream. The celebration extended into the evening with a networking social event for the postdocs at Brewer's Alley in downtown Frederick. About 25 postdocs participated and enjoyed a much-deserved and relaxing evening while also networking with other postdocs in the CCR.

The CCR-FYI committee extends its sincere gratitude to Drs. Jeffrey Strathern, Howard Young, and Jonathan Wiest for enthusiastically supporting the NPAW events, organized by the CCR-FYI, both financially and morally, and also for their consistent support for providing an enriching and wholesome training experience for the NCI postdocs. Finally, special thanks are also due to the FYI steering committee members and, most importantly, the postdoc volunteers who made the day a truly enjoyable and memorable one!

*Submitted by:
Janani Varadarajan, PhD
Vector Design and Replication Section
HIV Drug Resistance Program*

The Inaugural **CCR-FYI** Food, Toy, and Gift Drive: A Huge Success

The CCR-FYI welcomed its new baby, the Outreach Committee, last Fall. The Committee chose as its first activity, a Food, Toy, and Gift Drive that benefited the NIH Children's Inn on the NIH-Bethesda Campus. The Children's Inn is a home away from home for the children who are receiving treatment at the NIH. Over 10,000 children from all over the US and 84 countries have stayed at the Children's Inn over the past 22 years and donations are vital to keeping it in continuous operation. We hosted the drive at the Frederick National Laboratory for Cancer Research (FNLCR), NIH-Bethesda, and the Advanced Research Technolo-

gy Facility (ATRF) campuses from December 13-20, 2012. The Drive was extremely successful; over 400 food items and 150 toys/gifts were collected as donations during that single week. The food items included canned goods, pastas, international foods, soup mixes, a variety of snacks, and baby food. These food items help to stock the shelves of the Inn's 24-hour accessible Help-Yourself Pantries for the children and their families who arrive late in the evening or are undergoing financial hardships. The numerous gifts included many stuffed animals, board games, a hand-puppet theatre stage set, picture books, activity books, cards, and stickers. Items that can be shared such as games



Julie Heinecke (left) and Janani Varadarajan (right) with donations for the NIH Children's Inn on the Bethesda Campus.

collected as donations during that single week. The food items included canned goods, pastas, international foods, soup mixes, a variety of snacks, and baby food. These food items help to stock the shelves of the Inn's 24-hour accessible Help-Yourself Pantries for the children and their families who arrive late in the evening or are undergoing financial hardships. The numerous gifts included many stuffed

animals, board games, a hand-puppet theatre stage set, picture books, activity books, cards, and stickers. Items that can be shared such as games

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and cards are placed in the Gameroom for all the children to play with. The stuffed animals and smaller gifts are put into individual mailboxes for each child as part of "Thoughtful Treasures".

We were thrilled to see the expressions, ranging from amazement to appreciation, on the face of the staff at the Inn when we unloaded our collection in the lobby. They couldn't help but mention many times how pleasantly surprised they were at the large number of items we were able to raise in such a short period of time. On behalf of the children, they also extended their gratitude to everybody that helped with the donations. We are grateful to everyone who donated these much-needed items; your graciousness is truly appreciated by the CCR-FYI but more importantly by the children and their families staying at the Inn. We extend a special thank you to Ms. Fereshteh Abedinpour at the ATRF, for going out of her way to help with advertising and collecting donations at ATRF. We also thank Ms. Katie Stagliano, Dr. Alyson Freeman, Dr. Christina Rangel and all the CCR-FYI members for helping with collecting donations and advertising the Drive. Because this Drive was a huge success, we are considering making this a semi-annual Food, Toy and Gift Drive to help the Inn provide for the children in need.

Submitted by:

*Julie Heinecke, PhD
Molecular Mechanisms Section
Radiation Biology Branch*

*Janani Varadarajan, PhD
Vector Design and Replication Section
HIV Drug Resistance Program*



NCI Center for Cancer Research
Fellows & Young Investigators



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.

Articles

Science Administration and Office Details: Getting Experience Away From the Bench

As fellows at the National Institutes of Health (NIH), one of the world's leading biomedical research facilities, we have many opportunities to enhance our careers in the laboratory. Aside from bench work, there are also opportunities to gain experience outside the laboratory to enhance one's career. One of the lesser known opportunities is to do a detail as an unpaid intern with one of the administrative offices, depending on one's interests and availability of a mentor. As a current NCI research fellow and Center for Cancer Research (CCR) Office of Training and Education (OTE) intern, I want to spread the word about these possibilities and to share my invaluable experience of doing an office detail with other fellows.

Until a few months ago, I had not heard of the possibility of doing an office detail until I met with our former career counselor, Elaine Diggs. I sought Elaine's advice as I am currently in the stressful process of trying to find my next position before my fellowship ends. Unfortunately, despite several years of training aimed at becoming a professor at a research institute, I have come to realize that my interests in this typical career path have waned, in part, due to fewer funding and job opportunities. My background and training has been primarily in basic laboratory research, science education, and mentoring

trainees--I had little experience outside of this to enhance my resume for other types of positions. I knew I was facing a monumental task in my job search and I needed advice, so I met with Elaine and shared my interests and career development needs.

Because I enjoyed the mentoring opportunities and the experience of helping science trainees with their career goals, I still want to have some involvement working with junior scientists, but not in the typical academic research career path. Exactly how is another question. To help me explore the possibilities, Elaine gave me the very helpful suggestion of doing an office detail with the CCR OTE under the mentorship of its Director, Dr. Jonathan Wiest.

Despite having some doubts about doing an office detail, it helped that I knew the former fellow and current Director of the Harvard Medical School Office for Postdoctoral Fellows, Jim Gould, who was a former intern with the CCR OTE. Jim had only good things to say about the value of his experience as a CCR OTE intern, so I decided to give it a try.

To get the ball rolling, I contacted Jonathan and found him to be one of the most supportive people with whom I have had the opportunity to interact. Jonathan was happy to have

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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

Jonathan S. Wiest, PhD

Director for Training and Education

Tel: 301.451.9638

wiestj@mail.nih.gov

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someone on the Frederick campus interested in working for his office to help communicate training needs and opportunities for fellows. The next step was to discuss the idea with my Principal Investigator and obtain his support and approval to work a few hours per week for Jonathan for an initial 3-month period.

Currently, I commit one hour per week to Jonathan's office meetings by teleconference to communicate the status of my various duties and to learn about training opportunities for fellows that are in the works. I also spend time contacting and meeting several people on the Frederick campus who are involved in CCR fellow training activities, which has allowed me to build my network, and I help advertise the career development workshops offered at the Frederick campus by the NIH Office of Intramural Training and Education. Further, I provide extra support to the Fellows and Young Investigators Steering Committee by volunteering on subcommittees who need an extra pair of hands to initiate or complete various projects, and I have been working on setting up guest lecturing experiences for Frederick fellows at some of the local universities and colleges, which is an

ongoing project that has led me to interact with some of the professors and further expand my network.

While my internship has not ended, I have already experienced many benefits from this opportunity, including more community involvement, networking, and valuable science administration/project management experience. If you are a fellow who has an interest in exploring your career options, I highly recommend contacting Jonathan (wiestj@mail.nih.gov) for helpful advice about career opportunities and to discuss what NIH has to offer. Fellows can also make an appointment to meet with our current career counselor, Dr. Shawn Mullen, who will visit Frederick on the fourth Tuesday of each month. Registration for appointments can be done at the OITE website: https://www.training.nih.gov/career_services/appointments.

*Submitted by:
Jessica Smith, PhD
Viral Mutation Section
HIV-Drug Resistance Program*

Conference Highlights of Fall/Winter 2012

The 24th EORTC-NCI-AACR Symposium on Molecular Targets and Cancer Therapeutics



From left to right, members of the Translational Genomics Section of Medical Oncology Branch: Marianne Kim, PhD, Research Fellow, Lidia Hernandez, MSc, Senior Research Associate, Anne Noonan, MB BCH BAO, Clinical Fellow, Christina M Annunziata, MD PhD, Principal Investigator.

In November 2012, I attended the 24th EORTC-NCI-AACR Symposium on Molecular Targets and Cancer Therapeutics which was held in Dublin, Ireland. The conference was at the Convention Centre Dublin, a state of the art facility which opened in 2010. The conference was very well organized and even had attendants present on the escalators and in front of the meeting hall rooms with covers for your coffee cup! The conference delegates came from all over the world; a third were from the US, a third from Europe and the remaining third were from the rest of the world. Given the multinational nature of the conference, it was an ideal opportunity to meet with scientists and clinicians working in our field. My PI, Dr. Christina Annunziata, and two members of our lab, Marianne Kim, research fel-

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low, and Lidia Hernandez, senior research associate, also attended. We each presented posters describing our research. For me, in particular, it was very satisfying to have the opportunity to present my research in my home country. I particularly enjoyed the size and design of this conference since it was possible to attend practically all sessions, and it lent itself to lots of interaction among people with clinical and research interests. In contrast to conferences in earlier years, where hitting one target appeared to be the strategy in cancer therapy, the conference in Dublin highlighted that one target may not be enough, and that inhibiting one pathway may upregulate another. The importance of incorporating biomarkers into clinical trial design was emphasized. Dr. PA Futreal presented an interesting talk on how intratumor heterogeneity and branched evolution of the genomic landscape in tumors can present a challenge to personalized medicine and the development of biomarkers. I highly recommend this conference for NCI trainees interested in translational science and developmental therapeutics.

*Submitted by:
Anne Noonan, MB BCh BAO, MSc, MRCPI
Translational Genomics Section
Medical Oncology Branch*

The 17th International Conference of the Inflammation Research Association

Every two years, the Inflammation Research Association (IRA) organizes an International Conference that attracts about 200-300 pre-clinical and clinical research scientists working in industry, government, and in academia. The main goal of the conference is to bring together researchers from all over the world with the common interest of how basic inflammation research can be used to develop new therapeutic agents for diseases such as rheumatoid arthritis, asthma, and psoriasis. This year's conference was held in early September at The Sagamore Resort on Lake George in Bolton Landing, New York. The meeting began with an evening keynote address on cytokine involvement in T-cell mediated skin diseases delivered by Dr. James Krueger of The Rockefeller University. There were 1-2 main symposiums each day of the meeting that included one on new technologies, applications, and animal models in inflammation research, and another on novel approaches to developing treatments for inflammatory bowel disease. The latter symposium was of particular interest to me because it involved the area of my research. There were several minisymposiums throughout the meeting with one focusing on trauma and infection-induced inflammation and another on new drug inhibitors. There were 2 poster sessions which were both well attended.



Miranda Hanson at the Sagamore Resort, NY for the 17th IRA Conference.

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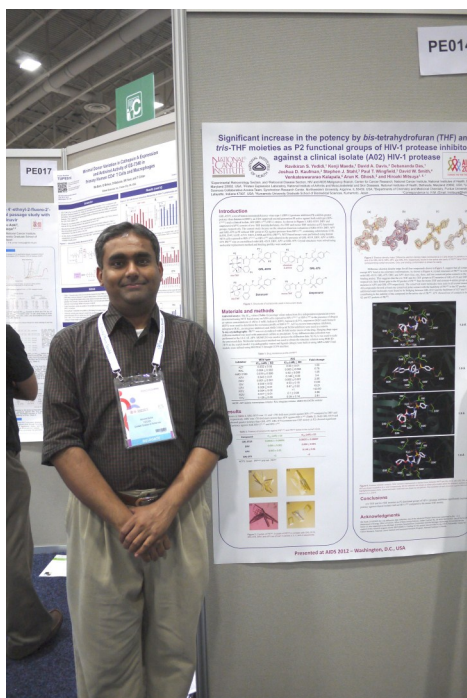
There was a competition for the poster with the “highest scientific impact”, whose recipient would win a cash prize. The conference also hosted a scholarship competition for young investigators which included both poster and oral presentations. On the last evening of the meeting, attendees gathered at a dinner banquet, where several honors and awards were handed out. This is the second IRA conference that I’ve attended since being a postdoc and I’ve had a formidable experience each time. I’ve also won cash prizes at both conferences which makes attending them even more rewarding! The small size of the meeting along with it being held in a relaxed setting allows for open, productive scientific discussions among attendees. I would recommend this conference to anyone interested in inflammation and therapeutic applications- from undergraduate students to principle investigators.

Submitted by:
Miranda Hanson, PhD
Laboratory of Molecular Immunoregulation
Cancer and Inflammation Program

The XIX International AIDS Conference

The XIX International AIDS conference (AIDS 2012) was held in Washington D.C. in July 2012. The theme of the conference was "Turning the Tide Together" and focused on human rights and HIV, as well as the global village. Attending this conference has completely changed my perspective on AIDS. With more than 23,000 participants

from 183 countries, the conference had a lot to offer young scientists like myself. The U.S. Secretary of State, Hillary Clinton, with a warm welcome, set a goal for a generation free of AIDS. Dr. Havlir, professor of medicine at University of California, San Francisco and co-chair for AIDS-2012, commented on the impact of financial crisis on science. The World Bank president, Jim Yong Kim, mentioned that the investment in HIV is not only for AIDS but can also help progress the research in other global problems such as tuberculosis. Kathleen Sebelius, US Secretary of Health and Human Services, described the availability of more than 150 anti-retrovirals through PEPFAR (President's Emergency Plan for AIDS Relief). Former US president Bill Clinton expressed his gratitude to all of those who encouraged the scientific progress that has been made so far. Humanitarian Elton John explained the difference between the AIDS disease and the AIDS epidemic emphasizing the role of stigma acting as a fuel towards the creation of epidemic as well as the importance of humanity to counteract. I received excellent feedback from both scientists and non-scientists about the contributions of my research at NCI to solving the global epidemic. The 20th International AIDS Conference (AIDS 2014) will be held in Melbourne, Australia (www.aids2014.org).



Ravi Yedidi presenting his poster at AIDS 2012 in Washington D.C.

Submitted by:
Ravikiran S. Yedidi, PhD
Experimental Retrovirology Section
HIV and AIDS Malignancy Branch

Finding Ways to Present Your Research

With budget issues affecting travel to conferences, fellows must find ways to get experience presenting their research as well as other sources of funding for travel. As young investigators try to establish themselves in the ever-competitive fields of biomedical research, it is essential that fellows do what they can to get as much experience communicating their science. With the approval and support of their Principal Investigators, fellows have many opportunities to get experience presenting their research while here at the NIH.

Center for Cancer Research (CCR) fellows have numerous opportunities to present research seminars for little to no cost. For example, CCR fellows can take advantage of the biweekly Fellows and Young Investigators' Seminar Series (FYI-SS) held at the Frederick campus by volunteering to present their research. Fellows may contact Alyson Freeman (alyson.freeman@nih.gov) or Linda Brubaker (brubakerld@mail.nih.gov) to reserve an available date. In addition, fellows can ask their PIs to be nominated for the new FYI Presents Outstanding Achievement in Science series held in Bethesda. The CCR-FYI also offers the PASS series (Presentation and Seminar Skills), which is an excellent opportunity for CCR fellows to get expert training in presentation skills and learn how to give a great seminar. Fellows may contact Leigh Greathouse (greathousekl@mail.nih.gov) for information.

Some off-campus opportunities to speak may be available through scientific groups or societies. For example, the Frederick chapter of Sigma Xi, an international scientific research honor society, meets monthly at the Frederick Community College for a seminar and for the "discussion, practice, mentoring and teaching of science". It is

important to note that speakers and attendees do not have to be members of Sigma Xi. Interested fellows can contact the president, Katie Stagliano via email (katie.roth.stagliano@hotmail.com), for more information about the seminars and how to

become an invited speaker.

NIH fellows can also take advantage of presentation opportunities at NIH-associated meetings, including the annual CCR FYI Colloquium in the Spring, the Frederick National Lab and Fort Detrick Spring Research Festival, the Postbac Poster Day at the NIH Spring Research Festival, and the NIH Research Festival held in the Fall.

Not only do these NIH-associated events afford fellows the opportunity to gain valuable

presentation experience, but they may also give fellows a chance to compete for travel awards so that fellows may also present their work at meetings outside the NIH. For example, an abstract submitted for presentation at the CCR FYI Colloquium may be chosen for an oral presentation and a \$1000 travel award. Outstanding presentations at the Postdoctoral and Post Baccalaureate Symposium held in conjunction with the Frederick National Lab and Fort Detrick Spring Research Festival may also be chosen for travel awards. In addition, NIH fellows can submit an abstract this Spring to the NIH Fellows Committee FARE (Fellows Award for Research Excellence) competition for a \$1000 travel award. Finally, fellows should consider becoming members of scientific societies within their fields and search for travel awards that may be available through these organizations as well. Most offer free or discounted member rates.

In summary, there are many opportunities

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for fellows to get experience presenting research at NIH-associated events—be it at seminars, symposia, or research festivals—and fellows can use some of these opportunities to earn awards for travel to outside meetings. Additional sources of travel awards include the NIH FARE competition and scientific

More information can be found through the following websites:

CCR-FYI-associated events: <http://ccr.cancer.gov/careers/fellows/default.aspx>

Frederick Sigma Xi chapter: <http://sigmafederick.wetpaint.com/>

Frederick National Lab and Fort Detrick Spring Research Festival: <http://springfest.ncifcrf.gov/GeneralInfo.aspx>

NIH-associated research festivals: <https://www.training.nih.gov/>

FARE award: <https://www.training.nih.gov/felcom/fare>

Submitted by:
Jessica Smith, PhD
Viral Mutation Section
HIV-Drug Resistance Program

Off-the-Bench-Careers: Scientific Editor



The CCR-FYI Newsletter regularly highlights career paths in science. This edition focuses on the area of scientific editing. The primary responsibility of a scientific editor is to enhance the scientific content of manuscripts

and abstracts that are published in scientific journals by working in conjunction with authors and editors; coordinating reviews and special content for the journals and journal websites; and closely working with the Managing Editor on other journal projects.

Chhavi Chauhan, MS, PhD, is pursuing a career in scientific writing and editing. Dr. Chauhan currently works as the Scientific Editor for *The American Journal of Pathology* and *The Journal of Molecular Diagnostics*. An interview with Dr. Chauhan reveals what it takes to break into this field.

Dr. Chauhan is a former member of CCR-FYI Steering Committee, where she served in the newsletter subcommittee. She earned her PhD in

Molecular Biology from Loyola University of Chicago. In 2010, she joined the laboratory in Stem Cell Regulation and Animal Aging Section in the Mouse Cancer Genetics Program prior to starting her job as a scientific editor at the American Society for Investigative Pathology (ASIP).

Why did you decide to leave bench science and go into scientific editing? What science training skill sets do you use in scientific editing?

Soon after joining the NCI, I was exposed to a lot of scientific writing and editing. A couple of my colleagues were writing and publishing extensively and I got involved in writing, reviewing, and editing manuscripts, review articles, book chapters, and books with them. In fact, I started enjoying scientific writing and editing so much that I would volunteer to review for my colleagues and soon enough I started to review for various Journals as an invited reviewer. In 2011, I was identified among the top 5% reviewers for *PLoS One*. In addition, I wrote a few book chapters and a couple of review articles. I took a workshop in scientific writing and editing. I attended the segment on Science Writing Careers at the NIH career fair. I got more engaged

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with the forums that are available at the NCI: worked in the capacity of a scientific writer and editor for the FYI newsletter and joined the Fellow's Editorial Board (FEB), where we edited between 1 to 4 manuscripts every week.

What's the job market like now for scientific editing positions?

You will be surprised how many opportunities are out there. I started my current job last summer and had started applying early in the beginning of last year; I still get calls for interviews from other places. Since there is a range of options in scientific writing and editing (technical writing, regulatory writing, freelance writing, medical writing and editing, journalistic scientific writing, blog writing, to name a few), there is a plethora of opportunities, you just have to start applying.

What skill sets that you gained during your postdoctoral training do you use in your editing work?

It helps a lot to have an extensive and diverse scientific background as it allows me to comprehend the science and understand things better to communicate with the authors. Having a scientific background definitely helps a lot. My job profile is such that I have to juggle a lot of responsibilities at the same time, prioritize my work. It is similar to working on several projects in the laboratory at the same time and prioritizing experiments to make the most of the limited time scientists have, while juggling to attend several meetings.

Do you think there is a limitation as a non-native speaker?

I do not think that being a non-native English speaker is limiting at all if you have a good command over the language. I have personally met

many editors that are non-native speakers, many of them with their own business (working as freelance editors). There are a lot of opportunities if you are serious about the profession.

What is a typical day like for you?

The majority of my day involves editing manuscripts prior to the production process. These manuscripts have already been reviewed and accepted for publication. I read and edit every single accepted manuscript for its scientific content (Abstract length, figure and review citations, plagiarism, scientific language, formatting, etc). I also communicate with the authors to resolve any remaining issues prior to production. In addition, I assist the Director of ASIP Journal CME Programs, Dr. Mark. E. Sobel, in compiling the CME question for both the *AJP* and the *JMD*.

Also, I prepare a monthly write-up in the *AJP* (This Month in *AJP*) featuring five articles that are recommended by the reviewers/ editors/ Editor-in-Chief for their timeliness and provide the online highlight content for both journals. On several occasions, I attend Scientific Meetings and Science Editor Meetings and compile reports for the Journal office if needed.



Chhavi Chauhan currently works as the Scientific Editor for *The American Journal of Pathology* and *The Journal of Molecular Diagnostics*.

What is the most fun aspect of your job?

I think the most fun part is to read about the latest developments in different aspects of science and to have the opportunity to keep myself abreast with various cutting-edge discoveries on a daily basis. I like the intellectual challenge involved in editing manuscripts from diverse fields of science and being updated on several fronts. My most favorite part is reading and comprehending the manuscripts to make the experience better for the readers.

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Do you miss working in the laboratory?

As I am constantly exposed to cutting edge science every day, I do not miss working in the laboratory. We all work hard in the laboratories so that the science we do and the experiments we perform in the laboratory can be translated into a meaningful contribution to the society. I strongly believe that improving the content and appeal of the published articles for the betterment of science and community at large is equally gratifying as focusing on a problem in the laboratory. To sum it up, I do not miss working on the bench anymore.

How much science is involved in your current work?

It is all science from morning to evening, other than the occasional administrative and marketing decisions that I seldom get involved in, to discuss and improve the content and reach of the Journals to the readers.

How do you see your career progressing from where you are now?

I enjoy scientific writing and editing and I see myself growing more and more every day in this field. I personally think that there is no one career anymore. Every career and field is extremely dynamic and ever evolving. I am learning to take advantage of the various opportunities that I come across every single day at my job. Currently, a timely progression to Managing Editor seems to be the short-term goal. However, I am being exposed to new realms. I can see myself diversifying

my portfolio more in the future. I enjoy scientific writing and editing so much that I see myself following this field as a career for the longest amount of time.

Would you recommend this career path to others?

Definitely for those who enjoy scientific writing and editing. I think it is extremely essential for anyone to find what they are passionate about in life. As a PhD candidate, I did not particularly enjoy writing my thesis. However, as a postdoc, I had a whole different perspective. I thoroughly enjoyed critiquing the manuscripts for their scientific content and validity to further improve the quality of submitted science to improve the reading experience for the readers. In addition, I enjoyed writing papers, abstracts, review articles, book chapters, and even animal study protocols for that matter. My recommendation would be to find something you are really passionate about as that will be a really fulfilling career.

*Submitted by:
Ting Wang, PhD
Neural Development Section
Mouse Cancer Genetic Program*

Opportunities to Practice Talks for Conferences, Seminars & Job Interviews

The **PASS (Presentation and Seminar Skills)** series has teamed up with Scott Morgan 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. Scott has over 15 years of valuable experience in science communication and has recently co-authored a book, 'Speaking about Science'.

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 Leigh Greathouse (kristen.greathouse@nih.gov). Available slots will be filled on a first come – first served basis.

CCR Research Highlight: Acriflavine increased the insulin sensitivity in obese mice-The drug may offer new options for diabetes treatment

Suppression of hypoxia inducible factor 1 (HIF1) in adipocytes may offer new treatment options for type 2 diabetes (T2D) patients. According to a report published by Jiang et al. (J Biol Chem, Dec. 19, 2012, PMID: 23255598), acriflavine (ACF), a HIF1 inhibitor, has been traditionally used to treat microbial infections in humans and fish. ACF ameliorated high-fat diet (HFD) induced insulin resistance in the obese mice.

Obesity is a major risk factor for T2D. Adipocytes from obese subjects contribute to the initiation and progression of T2D in multiple pathways, including hypoxia (low oxygen). Obesity triggers hypoxia in adipose tissue because oxygen supply cannot meet the increased cellular energy demand. This leads to increased level of HIF1, a master regulator of oxygen homeostasis. HIF1 is a heterodimer between HIF1 α and ARNT. At normal oxygen levels, HIF1 α is first hydroxylated, and then rapidly degraded via the ubiquitination pathway. Under hypoxic conditions, however, hydroxylation is inhibited due to lack of oxygen. HIF1 α is stabilized and forms heterodimer with aryl hydrocarbon receptor nuclear translocator (ARNT) to activate its target genes.

Overexpression of HIF1 α or constitutively active HIF1 in adipose tissue is deleterious. However, the exact mechanism of HIF1 function in adipose tissue during hypoxia is not fully understood. Previous research by Jiang and colleagues identified some changes in gene expressions and improved insulin sensitivity when they disrupted HIF1 by genetic ablation of HIF1 α or ARNT. They showed that HIF1 knockout in adipocytes is associated with changes in SOCS3-STAT3 expression and induction of adiponectin. In the new study, they offer compelling evidence that HIF1 suppressed the expression of adiponectin, which increases the insulin sensitivity, via a SOCS3-STAT3 pathway. By CHIP and luciferase reporter assays, the authors demonstrated that HIF1 di-

rectly activates SOCS3, which leads to decreased STAT3 phosphorylation. One of the direct targets of STAT3 is adiponectin. Thus, less phosphorylated STAT3 has a reduced transcriptional activity, resulting in decreased expression of adiponectin. Moreover, the current research pushed the T2D drug discovery one step further. ACF has been recently shown to inhibit HIF1 dimerization and transcriptional activity. In this study, Jiang and colleagues report that ACF could increase the expression of adiponectin by suppressing HIF1-SOCS3-STAT3 signal transduction pathway both in adipocyte cell culture and in obese mice. ACF-treated mice had more serum adiponectin, leading to an improved insulin sensitivity and glucose tolerance.

Remarkably, mice treated by ACF gained much less weight compared with the control group when both groups are challenged with high-fat diet. An assessment by the authors of the level of serum alanine aminotransferase, a biomarker for cellular toxicity, ruled out the possibility of nonspecific toxicity by ACF.

HIF1 also plays an important regulatory role in β -cells, muscle and liver, all of which are affected by T2D. In β -cells which secrete insulin, a body of research showed that modestly increased HIF1 activity is beneficial for β -cell function. To minimize this counter-effect, the authors delivered ACF directly to the adipose tissue by intraperitoneal injection.

In conclusion, the current study by Jiang et al. suggests that inhibition of HIF1 in adipose tissues may open new avenues for T2D treatment. However, any future clinical development to target HIF1 should maintain a delicate balance for the optimal function of HIF1.



*Submitted by:
Jianfei (Jeffrey) Zhao, PhD
Gene Regulation Section
Laboratory of Metabolism*

Upcoming Events

13th Annual CCR-FYI Colloquium

- March 25th and 26th at ATRF, Frederick, MD
- Registration closes on **March 4**

NCI-Frederick Postdoc Seminar Series

- Every other Wednesday, watch email for details. Free pizza and soda are provided.
- We are looking for speakers to give 20-25 minute talks
- If you are interested in presenting as a speaker, please contact Linda Brubaker (brubakerld@mail.nih.gov)

6th Annual NIH Career Symposium

- May 14, Natcher Conference Center, Bethesda, MD

FARE is back for FY 2014!

NIH intramural trainees are invited to submit applications for the annual Fellows Award for Research Excellence (FARE) competition. Winners will receive a \$1,000 travel award* to attend a scientific meeting, present their work at the 2013 NIH Research Festival, and serve as judges for the next FARE competition. Application and abstracts must be submitted online between February 20 and March 20. For more information, please visit:

<https://www.training.nih.gov/felcom/fare>

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Miranda Hanson, PhD
Jianfei (Jeffrey) Zhao, PhD
Smita Kakar, PhD
Jessica Sine, BS
Jessica Smith, PhD
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