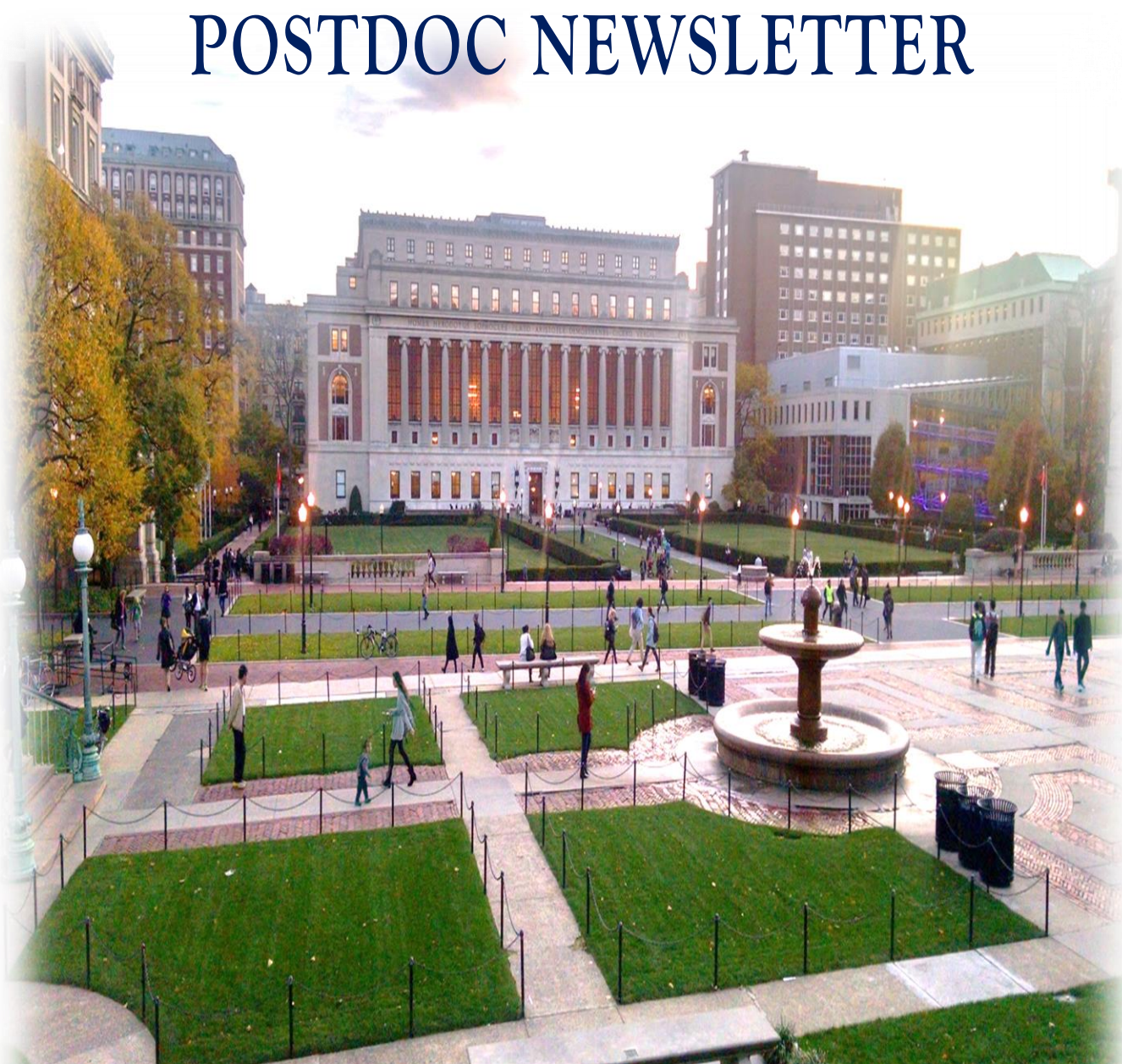




COLUMBIA UNIVERSITY POSTDOC NEWSLETTER



Featuring
Women in Research: Boosting confidence

by Jennifer L. Robinson

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EDITORS' NOTES

Welcome to the second issue of Columbia University's very own Postdoc Newsletter! We are very excited to do this again, to bring you news, stories and info from our campuses and beyond. We thank you for accepting our first edition with open arms, for all your suggestions and encouragement, and we look forward to more.

We warmly welcome Jennifer L. Robinson, PhD, to our editorial board. We would also like to extend farewell wishes to our former editor Alyssa Chamberlin, who is now a Medical Writer with the BGB Group.

If you would like to get on-board, shoot us an e-mail at cupostdocnewsletter@gmail.com! We welcome any level of involvement, from sending us your favorite quote, to writing a novella about the hardships in the life of a postdoc, to joining the editorial board.

Speaking of which, this edition is proudly brought to you by:

Mulugeta Semework Abebe, PhD, a Postdoctoral Research Scientist in the Department of Neuroscience with a research focus on single cell neurophysiology of environmental memory, cortical and subcortical mechanisms for eye movements, attention, and spatial processing. Newsletter sections managed include: Research Center Highlights, In the City of New York, Upcoming meetings and Cover page design.

Rory Flinn, PhD, the Director of the Office of Postdoctoral Affairs. Newsletter sections managed include: New Postdocs, Postdocs on the Move, Funding Opportunities, and Events from OPA.

Yalda Moayedi, PhD, a Postdoctoral Research Fellow in the Department of Dermatology with a research focus on usage of naturally derived compounds in treating skin cancer and neural circuits that possess light touch. Newsletter sections managed include: In Your Own Words, Housing Want Ads and proofreading/copy editing.

Thomas Postler, PhD, a Postdoctoral Research Fellow in the Department of Microbiology & Immunology with a research focus on host-pathogen interactions and immune signaling. Newsletter sections managed include: Research Center Highlights, Random Wisdom and Fun, Dreamy Data and Collaboration Corner.



L to R: Yalda, Sitharam, Thomas, Rory, Mulugeta and Jennifer

Sitharam Ramaswami (Ram), PhD, a Postdoctoral Research Scientist in the Department of Systems Biology with a research focus on understanding interferon response in lung epithelial cells. Editor-at large. Newsletter sections managed include: Career Focus and Special Mention.

Jennifer L. Robinson, PhD, a NIDCR K12 postdoctoral fellow in the College of Dental Medicine and the Department of Biomedical Engineering currently working on characterizing the effects of estrogen signaling on the temporomandibular joint (TMJ) fibrocartilage and designing biomaterial systems to address TMJ degenerative disease. Newsletter sections managed include: Recently Published, Not To Be Missed in the City of New York, and Women in Research, the featured article.

RECENT AWARDS AND HONORS

Leroy Joseph, PhD, a postdoc within the Division of Cardiology in the Department of Medicine, received the American Heart Association's (AHA) Council on Basic Cardiovascular Sciences (BCVS) Travel Grant to attend the AHA Conference in November, 2015 in Orlando, FL.

Anupama Khare, PhD, a postdoc in the Department of Systems Biology, was recently awarded an NIH K99/R00 Pathway to Independence award, through the NIAID, for a project on the mechanisms underlying interspecies bacterial interactions.

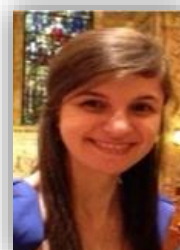
POSTDOCS ON THE MOVE

Nitzan Soffer, PhD, recently joined Intralytix, Inc. as a Research Scientist after having completed her postdoc training in the Department of Environmental Health Sciences in the Mailman School of Public Health. In her current position she is managing projects focused on the isolation and utilization of bacteriophages (phages) that kill pathogenic bacteria.



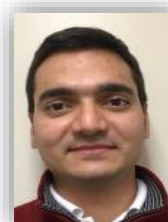
Kirsten M. Ø. Jensen, PhD, recently started a tenure track assistant professorship in the department of Chemistry, at the University of Copenhagen, after having completed her postdoc training in the Department of Applied Physics and Applied Mathematics. Her research currently focuses on the structural characterization of Advanced nanomaterials with the aim of developing new and improved materials for energy conversion and storage.

Jennifer S. Haghanah, PhD, recently joined L'Oréal USA Research & Innovation as a Sr. Scientist in the Hair, Applied Research Department after completing her postdoc training in the Department of Chemical Engineering. In her current role she is developing and identifying innovative technologies for hair applications with clear consumer perceivable benefits.



Kenneth McCallum, PhD, recently joined UncommonGoods as a Data Scientist, after having completed his postdoc training in the Department of Biostatistics within the Mailman School of Public Health. In his current position, he analyzes purchase data to better understand customer behavior and preferences.

Spandan Shah, PhD, recently started as a Flow Core Scientist in the Department of Medicine and the CCTI at Columbia University after having completed his postdoc training in the Department of Dermatology. In his current position, he provides flow cytometry consultation to researchers, runs training sessions, and ensures quality control related to flow cytometry.



RANDOM WISDOM AND FUN

"The most exciting phrase to hear in science, the one that heralds new discoveries, is not Eureka! but 'That's funny'..."

• - Isaac Asimov



Did you know...

...that there are an estimated 10^{31} tailed bacteriophage virions, making it the most abundant organism on Earth? The entire population turns over every 4-5 days, requiring roughly 10^{24} productive infections every second.

...that at resting heart rate, a red blood cell takes about one minute to circulate through the whole body?

... that the popping noise made by knuckle cracking remains poorly understood?

... that the sex of alligators is determined by the temperature of egg incubation ($<30^{\circ}\text{C}$ yields females, $>34^{\circ}\text{C}$ yields males)?

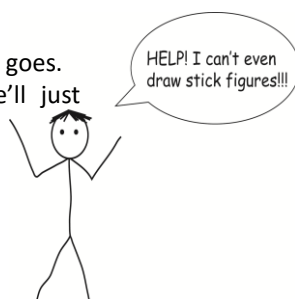
... that dolphins and other sea-dwelling mammals do not typically drink water? Instead, they extract it from their food directly or by metabolic breakdown.

Cartoon Search

Good with a pencil or Photoshop? Bored? Got the craving to be a contributor to the *legendary* Postdoc Newsletter?!

You have come to the right place.
We are looking for cartoons drawn by post-docs for our next issue! Anything goes.
Well, within reason. Until then, we'll just keep stealing from XKCD.

Interested? Shoot us an e-mail at cupostdocnewsletter@gmail.com for more information.



Columbia University Postdoctoral Society (CUPS)



COLUMBIA UNIVERSITY POSTDOCTORAL SOCIETY

CUPS Mission: The mission of CUPS is to facilitate a constructive and positive experience for postdoctoral professionals that will benefit postdoctoral professionals and Columbia University alike. The association will facilitate career and social development, and provide networking opportunities with the goal of fostering collaboration among scientists and other professionals. Through these activities, we as postdocs will be better able to define our roles in the university and community, allowing us to become successful educators, researchers and professionals.

Who we are: A council of postdocs, two co-presidents, a secretary, and a treasurer. We represent all people appointed as postdoctoral research scientist/scholars, postdoctoral research fellows and postdoctoral clinical fellows at Columbia University. We also welcome associate research scientists!

What we do: Meet once a month to plan our professional development, networking, and collaborative efforts.

What we're looking for: Motivated individuals, with a desire to help lead the development of this young organization! (See Committee list below.)

Committees: *Community Building* (e.g. networking, social hours.), *Research and Professional Development* (e.g. lunch talks, career building events), *Outreach and Communication* (e.g. newsletter, website, information events for new postdocs).

Contact to join: os2266@columbia.edu or ja2250@columbia.edu

UPCOMING STEPS:

☑ FIRST MONTHLY
MEETING OF THE
ACADEMIC YEAR

ELECTION OF A
☑ TREASURER,
☑ SECRETARY,
VICE PRESIDENT AND
TWO CO-PRESIDENTS

FORMAL
RECOGNITION BY
THE UNIVERSITY

FUNDRAISING

By Octavi Escala Semonin

WOMEN IN RESEARCH: BOOSTING CONFIDENCE

I will venture to guess that each person reading this has battled with confidence issues sometime in their early career. Personally, this lack of confidence first manifested my freshmen year of college. These times of self-doubt increased once I started undergraduate research. Regardless of the positive feedback I would receive from advisors and my continuous progress in scientific understanding, the more I conducted research the more I lacked confidence. My advisor continued to inform me that without confidence, developing credibility and achieving success would be difficult. And I agree - it is hard to lead a group of people without exuding confidence. Thus, I began searching for explanations and possible methods to begin building confidence.

Somewhat serendipitously, last winter, I received an email from Lee Bollinger, the president of Columbia University, with a campus-wide invitation to a discussion with Katty Kay and Claire Shipman on confidence for women. Both of these women, world recognized journalists and advocates, spent years investigating why women lack confidence and published this work in the [Confidence Code](#). When I initially read this book, I felt it had been written for me. I was pleased to realize I am not the only one fighting confidence issues. Within the book, the authors give evidence of the genetic predispositions of confidence and related traits. While I could discuss the scientific findings for hours, I decided it would be best to provide a set of tools compiled from this book for each of us to work with in tackling low confidence. Honestly, whether you are male or female, I believe these tips will be helpful in changing your way of looking at issues that elicit anxiety and decrease confidence.

Thus, here are my 10 takeaway messages from this work:

1. Striving to be likable is the opposite of confidence.

This may be my biggest downfall. My inherent wiring has always told me to do my best to make sure we all get along. World peace, right? However, this often meant I neglected my own values in order to help others stand true to theirs which definitely affected my personal confidence. And as I get older, I realize some people don't care too much for me – but they also don't care too much for people in general. And this is ok.

2. Stop ruminating.

How many hours have we wasted thinking about botched experiments, a poor presentation, a neglected networking opportunity, etc.?!! Sadly, these re-occurring thoughts drastically affect our ability to confidently run similar experiments or have a stellar performance. The past is the past and we can only focus on the necessary steps to learn from our experiences and move forward.

3. Pursuit of perfection hinders confidence.

Many of us have perfected the ability to be perfect, right?! In the Confidence Code, Katty and Claire discuss and evaluate a large body of evidence that suggests this pursuit of perfection is gender biased. Specifically, at a young age, girls are more likely to be the teacher's helper and enjoy doing everything correctly. In Pavlovian fashion, these girls are then praised, further reinforcing this behavior. Thus, these girls are not learning the important lessons of trying things on their own and learning from their mistakes. Sounds familiar to me. Most little boys could care less. Again, as I grow in my training, I consciously remind myself that we can't do everything perfectly but we can strive to do everything well. I remember a quote I saw on one of my professor's doors, "Don't let the pursuit of perfection get in the way of really good". Let's work on being really good.

[Continued on Page: 16](#)

CAREER FOCUS

In this second issue of the Career Focus series for Columbia University postdocs, we turn our focus on Science Policy.



Preethi Chander, PhD

Program Specialist,
NIH.

Contributing author,
ASBMB Today.

Dr. Preethi Chander, PhD works as a Health Science Program Specialist at the National Institute of Dental and Craniofacial Research (NIDCR) at National Institute of Health (NIH) in Bethesda. Dr. Chander is a structural biochemist who did her postdoc training at NIH on examining the function of proteins found in the retina that are involved in the visual cycle. She obtained her PhD in Biochemistry and Molecular Biology from Purdue University. She worked on contract as a Science Program Analyst at the National Eye Institute prior to joining NIDCR.

As a postdoctoral fellow at the NIH intramural program, she realized there was a whole lot more to science than just lab work. “I am a big picture person and my work in science policy allows me to take a broad look at science related issues, while using my scientific skills.”, she says.

As a science program specialist at the NIH, Dr. Chander is part of a team that ensures that the best science is funded, and she serves as one of the points of contact for scientific investigators, once their research is funded. She spends most of her day responding to emails from researchers from all over the world. She organizes and attends meetings with people, both within NIH and beyond, on scientific and administrative matters. She also attends scientific conferences to reach out to

investigators and to stay abreast of the field. In short, a typical day for her, she says, “...is trying to understand the science and then translating it toward various analyses, generating reports, and talking to scientific investigators about science funding and such.” She is also quick to emphasize some challenges that come with the job. Since a science program specialist functions at the interface of research at the lab at one end, and the administrative side of scientific funding at the other, translating the languages from either parties, for the other side to do their roles efficiently can be quite challenging. Regarding career progression, she points out that people in similar positions grow into advisory roles in science policy and scientific program management. Also there are multiple options available in private, public and federal sectors for a specialist to advance professionally.

... a team that ensures that the best science is funded and serve as one of the points of contact for science investigators...

“Critical thinking, analytical and communication skills are key. The ability to translate language from the technical world to the real world and vice versa are critical to effectively do your job functions.” she says. Dr. Chander also emphasizes the value of time management and organizational skills. She has some advice on how to develop these skill sets. One way to gain experience in writing and communicating science to the lay public is through writing for your own blog or the university’s newsletter. Another way to gain experience is through writing for a scientific professional society. Dr. Chander, during her scientific research years started to

CAREER FOCUS: Continued...

volunteer as a contributing author for American Society for Biochemistry and Molecular Biology's member magazine, ASBMB Today. She continues to write for the magazine- to this day. Her articles can be found at

<http://www.asbmb.org/asbmbtoday/>.

... translating the languages from either parties (academic & administrative), for the other side to do their roles efficiently ...

During her postdoc years, Dr. Chander joined the NIH fellows committee that serves an excellent platform to develop leadership, management and communication skills. Sitting on various committee that addresses fellows' issues and activities, she says, helped shape her thinking of where she would want to be, when she left the bench. "Organize and contribute to events related to scientific policy related issues. The National postdoc Association, your university's student body or your scientific professional society are some excellent places to look for such opportunities." she suggests.

Dr. Chander herself actively participated in seminars and meetings where science policy issues were discussed, and volunteered in science outreach activities. She says, "...reaching out to people in various scientific administrative roles to learn how science administration works, their career path, interests, job roles and skill sets can be highly inspiring to help explore your potential."

She mentions Science Careers (From the journal Science; <http://sciencecareers.sciencemag.org/>) and Biocareers (<http://biocareers.com/>) blog as valuable resources.

I asked her about working for the federal government: why she chose NIH and how

she felt working there? This is what she had to say. "NIH is the world's largest funder of biomedical research. It is also one of the premier places to conduct scientific research. Being part of the federal government, with a dense repertoire of scientific knowledge, this place offers great opportunities for growth and service to the scientific community. Working with the federal government does offer a sense of security and is a great workplace. The NIH consists of 27 institutes and centers, each contributing in a unique way to the mission of biomedical research. This offers numerous opportunities that allow for independence and variety."

She closes out by saying, "As scientists, it is our duty to communicate our discoveries to the public and provide context to our findings. A career in science policy allows me to engage the public in science and science related issues in a meaningful way."



We hope you like our Career Focus section. If there are any specific career options that you would like us to cover in the forthcoming issues, please feel free to write to us at cupostdocnewsletter@gmail.com.

RESEARCH CENTER HIGHLIGHTS

The New York State Psychiatric Institute's (NYSPI) MRI Research Program offers a core service for the entire Columbia and NYSPI community. The unit (located at [1051 Riverside Drive New York, NY 10032](#)) has a GE 3T MR750 scanner and runs human and animal research studies utilizing many MR modalities and techniques, including fMRI (resting-state connectivity and task-based activation), MR spectroscopy for assessing *in vivo* neurochemistry, structural MR connectivity (diffusion tensor imaging), arterial spin labeling (blood flow), contrast-enhanced cerebral blood volume imaging, high-resolution structural imaging and other techniques. The unit is involved in developing and supplying pulse sequences, RF coils, MR-compatible equipment including stimulus, response and psychophysiological monitoring equipment (ECG, EEG, blood pressure, pulse oximetry, end tidal CO₂). It also awards free pilot hours on a competitive, peer-reviewed basis, to help all investigators, especially young and new investigators, obtain preliminary data for grant submissions. A call for applications for the next round of pilot awards will be announced in early 2016.

The interim director, Dr. Mark Slifstein (PhD, Associate Professor of Neurobiology), is a Columbia researcher who started with PET image analysis and has more than 100 peer-reviewed articles in various extents of neuroimaging. Users of the MRI Research Program receive the daily assistance of coordinator Joe Figliolia (M.A., Figliol@nyspi.columbia.edu). There are experts on preparatory activities such as structural pulse sequence design, grant writing, experimental stages of scanner functionality and clinical issues, as well as data processing issues. Ongoing areas of development that will soon be made available to the user community include multi-band acquisition techniques (for rapid acquisition combined with high spatial and temporal resolution), implementation of Human Connectome Processing Pipeline standards (with the gracious help of several investigators who are spearheading the initiative here), and real-time fMRI that provides instantaneous visual feedback to subjects while they are being scanned (based on their brain activation). The unit has recently launched its XNAT server system that facilitates easy transfer of data for investigators at Columbia and NYSPI as well as their collaborators at other institutions, and is currently building a computational cluster and storage system that will eventually be made available to the user community. Image post-processing is supported by several software packages including: **LCModel**, **FSL**, **Freesurfer**, and **SPM**. The center also manages many educational and collaboration listservs aimed at facilitating collaboration within specific areas of MRI research. One can be added to any of the listservs by emailing Mr. Figliolia. (To schedule a scan: mriunit@nyspi.columbia.edu). Additionally, the center runs courses in MRI physics and data analysis methods, under the direction of Alayar Kangarlu (PhD, Director of Physics and Education). More information can be found at <http://nyspi.org/mri>.

We sincerely thank Dr. Slifstein for his help in preparing this article, and wish the program's highly valuable operation even greater success.

WELCOME TO COLUMBIA: NEW POSTDOCS

Chelsey Kivland, Anthropology
Michael Inkpen, Applied Physics & Applied Math
Jae Kyung Jang, Applied Physics & Applied Math
Alexander Klenner, Applied Physics & Applied Math
Nicholas Stone, Astrophysics
Yadong Sun, Biology
Gerald Rustic, Biology & Paleo Environment
Matthew Harke, Biology & Paleo Environment
Mykola Boryduh, Biomedical Engineering
Adriaan Campo, Biomedical Engineering
Bo Peng, Biomedical Engineering
Yifei Zhang, Biomedical Engineering
Shreya Chakrabarti, Biomedical Informatics
Kayla Quinnes, Biomedical Informatics
Andrew Goldstein, Biomedical Informatics
Zhaoqi Liu, Biomedical Informatics
Anando Sen, Biomedical Informatics
Katrina Fincher, Business Management
Vahid Sarhangian, Business Management
Areeje Sabbagh-Khouri, Center for Palestine Studies
Indrani Banerjee, Chemical Engineering
Kai Zhang, Chemical Engineering
Xiaodong Yin, Chemistry
Peter Sebej, Chemistry
Fiene Horeischi, Chemistry
Megan Todd, Columbia Aging Center
Timo Koskela, Computer Science
Francisco Jesus Rodriguez Ruiz, Data Science Institute
Hannah Nissan, Earth Institute
Saleem Khan Amsad Ibrahim Khan, Earth Institute
Ali Mehmani, Earth Institute
Robert Elliott, Earth Institute
Evelyn Rynkiewicz, Ecology, Evolution, and Environmental Biology
Felippe Alexandre Silva Barbosa, Electrical Engineering
Changhyuk Lee, Electrical Engineering
Mark Brenckle, Electrical Engineering
Patricia Kowalski, Environment Health Science
Melissa Gervais, Environment Health Science
Pierre Billon, Genetics & Development
Nikolaos Drosos, Harriman Institute
Douglas Mackay, Harriman Institute
Olga Bertelsen, Harriman Institute
Maksim Hanukai, Harriman Institute
Louisa McClintock, Harriman Institute
Rune Reyhe, Harriman Institute
Franziska Keller, Harriman Research
Lijie Rong, Herbert Irving Comprehensive Cancer Center
Alexander Fedotov, Herbert Irving Comprehensive Cancer Center
Sarah Ghabrial, History
Matthew Wyman-McCarthy, History
Chen Chen, Industrial Engineering & Operations Research
Bo Chu, Institute for Cancer Genetics
Adina Lemeshow, Institute for Human Nutrition
Mel Win Khaw, Institute for Social and Economic Research and Policy
Michael Phillis, Journalism
Freya Irani, Law
Babak Mohit, Mailman School of Public Health
Samer Naif, Marine Geology & Geophysics
Daniel Litt, Mathematics
Guillaume Barraquand, Mathematics
Daniel Litt, Mathematics
Jun Ogawa, Mechanical Engineering
Aslan Miriyev, Mechanical Engineering
Christine Chung, Medicine Cardiology
Bjoern Toennes, Medicine Cardiology
Van Khue Ton, Medicine Cardiology
David Anstey, Medicine Cardiology
Danielle Brunjes, Medicine Cardiology
Yang Cao, Medicine Cardiology
Cheng-Han Chen, Medicine Cardiology

Pablo Codner, Medicine Cardiology
Tadayuki Kadohira, Medicine Cardiology
Wenbin Zhang, Medicine Cardiology
Jordan Axelrad, Medicine Digestive & Liver Diseases
Whitney Jackson, Medicine Digestive & Liver Diseases
Seung Up Kim, Medicine Digestive & Liver Diseases
Christopher Packey, Medicine Digestive & Liver Diseases
Elias Spyrou, Medicine Digestive & Liver Diseases
Yongchun Zhang, Medicine Digestive & Liver Diseases
Wendy McKimpson, Medicine Endocrinology
Junjie Yu, Medicine Endocrinology
Thomas Enzler, Medicine Hematology & Oncology
Lorenzo Falchi, Medicine Hematology & Oncology
Douglas Marks, Medicine Hematology & Oncology
Matthen Mathew, Medicine Hematology & Oncology
Akaitz Dorronsoro Gonzalez, Medicine Immunology
Kazuhiro Furuhashi, Medicine Immunology
Jason Zucker, Medicine Infectious Diseases
Tae-Sung Kwon, Medicine Infectious Diseases
Nenad Macesic, Medicine Infectious Diseases
Rafeel Syed, Medicine Nephrology
Raja Masood, Medicine Nephrology
Vladimir Liberman, Medicine Nephrology
Syed Husain, Medicine Nephrology
Hila Milo Rasouly, Medicine Nephrology
Saritha Kartan, Medicine Pulmonary
Yoland Philpotts, Medicine Pulmonary
Deborah Haisch, Medicine Pulmonary
John Kim, Medicine Pulmonary
Reza Samad, Medicine Pulmonary
Brice Laffleur, Microbiology
Martin Strauss, Microbiology
Hacer Savas, Neurology
Antonio Lara, Neuroscience
Chung Dang, Neuroscience
Lenzie Ford, Neuroscience
Deepti Singh, Ocean and Climate Physics
Katinka Bellomo-Repetto, Ocean and Climate Physics
Xuan Cui, Ophthalmology
Young Kim, Pathology
Vartika Mishra, Pathology
Thomas Comollo, Pharmacology
Yuanjun Zhou, Physics
Eliyahu Wilner, Physics
Nele M.A.G Callebaut, Physics
Thomas Bachlechner, Physics
Lior Embon, Physics
Zunaira Shuja, Physiology and Cellular Biophysics
Kayla Downing, Psychiatry Child and Adolescent
Jeneane Solz, Psychiatry Child and Adolescent
Adam Zamora, Psychiatry Child and Adolescent
Natalie Brito, Psychiatry Developmental Neuroscience
Philip Jai Johnson, Psychiatry Gender Sexuality Health
Christine Rael, Psychiatry Gender Sexuality Health
James Murray, Psychiatry Integrative Neurosciences
Tal Harmelech, Psychology
Marion Dapsance, Religion
Roger Fu, Seismology, Geology & Tectonophysics
Clement Francois Dominique Perrin, Seismology, Geology & Tectonophysics
Takashi Senda, Surgery
Vanessa Cowan, Surgery
Elisabet Arango Tomas, Surgery Cardiothoracic
Katherine Gash, Surgery Colorectal
Neda Valizadeh, Surgery Colorectal
Hsing-I Ho, Systems Biology
Lingling Jiang, Systems Biology
Maura Allaire, Water Center
Pongphisoot Busbarat, Weatherhead East Asian Institute
Justin Reeves, Weatherhead East Asian Institute
Steffen Rimner, Weatherhead East Asian Institute

RECENTLY PUBLISHED

Pharmacologic inhibition of JAK-STAT signaling promotes hair growth

Sivan Harel, Claire A. Higgins, Jane E. Cerise, Zhenpeng Dai, James C. Chen, Raphael Clynes, Angela M. Christiano

Department of Dermatology, Department of Systems Biology, Department of Genetics and Development, Columbia University

Article was published on October 23, 2015 in Science Advances: Clinical Medicine and has been featured on CUMC's newsroom and multiple science blogs. Read the full article here <http://advances.sciencemag.org/content/1/9/e1500973>.

Dr. Sivan Harel and colleagues illustrate the use of a topical drug to promote hair growth for individuals with hair loss (alopecia) attributed to quiescent hair follicle (HF) cells. Specifically, Janus kinase – signal transducer and activator of transcription (JAK-STAT) pathway inhibitors applied topically were shown to initiate the hair cycle in mice and promote hair follicle growth in humans. Current pharmacological therapies focus on preventing future hair loss and fail to promote activation of the growth phase of the hair cycle. Exciting results from Dr. Harel's work in mice illustrate the inhibition of the JAK-STAT pathway promoting the activation and/or proliferation of HF stem cells. Further, these results indicate the role of JAK-STAT signaling in maintaining HF cell quiescence providing a therapeutic target to prevent hair loss. The two drugs investigated in the study, ruxolitinib and tofacitinib, are FDA-approved for the indications of blood disease and rheumatoid arthritis, respectively. Based on earlier preclinical studies by the authors, these drugs are currently in clinical trials for alopecia areata, an autoimmune disease that causes hair loss. Thus, these studies highlight the potential to target the JAK-STAT pathway to promote hair growth for individuals facing multiple forms of alopecia in which the hair cells are quiescent.

Dr. Christiano, the lead investigator on the study, highlights the potent and robust effect these topical drugs have on quickly stimulating hair growth. While other topical agents promote hair growth, it typically grows heterogeneously in tufts. These JAK-STAT inhibitors promote the growth of longer hair more homogeneously in human skin grafted to mice.

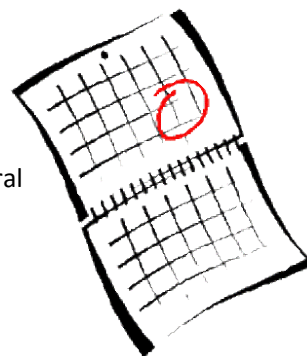
While these results are promising, these studies were conducted on healthy, wild-type mice. Therefore, future studies investigating the role of these inhibitors on patients with alopecia will provide further evidence for the use of these drugs as therapeutics for male patterned baldness and other conditions in which the hair follicles are in a resting state.

Call For Submissions

Are you a Postdoc or a Fellow who has recently published? Would you like to share your work with the Columbia University community? If so contact us at cupostdocnewsletter@gmail.com. Please submit the article information along with quarter page summary of significance and impact of this publication in your field.

FUNDING OPPORTUNITIES

Postdoctoral fellowships are available from a variety of sources and across nearly every discipline. Please visit <http://www.postdocs.columbia.edu/funding.html> to view resources available to you that will aid in your search for funding opportunities as well as to see an expansive list of specific postdoctoral fellowship opportunities. Below is a list of NIH and NSF postdoctoral fellowships and career development awards with deadlines in the coming months:



NIH K-awards (career development/pathway to Independence awards): Next new applications deadlines: February 12th and June 12th 2016; Next resubmissions deadline: March 12th and July 12th 2016

<http://grants.nih.gov/training/careerdevelopmentawards.htm>

NSF Earth Sciences Postdoctoral Fellowships (EAR-PF): Next deadline: January 12th 2016

<https://www.fastlane.nsf.gov/servlet/fastlane.pdoc.DisplayProgramType>

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503144

NSF Science, Technology, and Society Postdoctoral Fellowships (STS): Next deadline: February 2nd 2016

<https://www.fastlane.nsf.gov/servlet/fastlane.pdoc.DisplayProgramType>

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5324&org=SES&from=home

NIH F32 (postdoctoral fellowships): Next deadlines: December 8th 2015 and April 8th 2016

<http://grants.nih.gov/grants/guide/pa-files/PA-14-149.html>

NSF Astronomy and Astrophysics Postdoctoral Fellowships (AAPF): Next deadline: October 12th 2016

<https://www.fastlane.nsf.gov/servlet/fastlane.pdoc.DisplayProgramType>

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5291&org=MPS&from=home

NSF Mathematical Sciences Postdoctoral Research Fellowships (MSPRF): Next deadline: October 19th 2016

<https://www.fastlane.nsf.gov/servlet/fastlane.pdoc.DisplayProgramType>

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5301&org=MPS&from=home

NSF Social, Behavioral and Economic Sciences Postdoctoral Fellowships (SPRF): Next deadline: October 31st 2016^h

<https://www.fastlane.nsf.gov/servlet/fastlane.pdoc.DisplayProgramType>

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504810&org=SMA&from=home

NSF Postdoctoral Research Fellowships in Biology (PRFB): Next deadline: November 1st 2016

<https://www.fastlane.nsf.gov/servlet/fastlane.pdoc.DisplayProgramType>

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503622&org=DBI&from=home

EVENTS FROM THE OFFICE OF POSTDOCTORAL AFFAIRS (OPA)

On September 17th over 200 faculty, postdocs, students, and staff came together to celebrate the research accomplishments of the University's postdocs at the 2015 Columbia University and NYC ASCENT Postdoc Research and Career Symposium held in Lerner Hall. Over 100 postdocs and 1600 graduate students also attended a graduate level career fair the following day, on September 18th, which featured over 75 employers and was held as part of the symposium.



Postdoc Poster Session
Photo courtesy: Michel Divito



Graduate level career fair
Photo courtesy: Makeda Sutherland

The symposium commenced with poster presentations from over 100 postdocs spanning 50 departments across the University. The breadth of the research presented created a truly unique opportunity for researchers to learn about exciting and innovative research both within and outside of their disciplines and perhaps form new collaborations. Ten postdocs were honored with top poster prizes. The awardees were:

Jennifer Robinson, College of Dental Medicine and Department of Biomedical Engineering; Justine Kupferman, Department of Neuroscience; Deepika Suri, Department of Psychiatry; Ying Jean, Department of Pathology and Cell Biology; Chan Aye Thu, Department of Biochemistry and Molecular Biophysics; Katherine Alfredo, Earth Institute, the Columbia Water Center; Ilan Jen-La Plante, Department of Chemistry; Kirsten Marie Jensen, Department of Applied Physics and Mathematics; Shukun Luo, Department of Biological Sciences; and Katarina Roos, Department of Chemistry

Following the poster session, short research talks were given by 5 postdocs whose abstracts were selected by faculty review committees from the 110 abstracts originally submitted for their significance, innovation, and impact. Each of these postdocs was provided a \$1000 award donated by A&S, SEAS, CUMC, the Office of the EVP for Research, and the NYC ASCENT program. The awardees were:

Xi Chen, Department of Biological Sciences (Sahin Lab), Melody Cheng, Department of Neurology (Kuo Lab), Alp Kucukelbir (NYC ASCENT Fellow), Data Science Institute (Blei Lab), Michael Metzger, Department of Biochemistry and Molecular Biophysics (Goff Lab), and Dessislava Nikolova, Department of Electrical Engineering (Bergman Lab).

EVENTS FROM OPA: Continued...



Dr. George Yancopoulos

Photo courtesy: Michel Divito

The keynote talk for the symposium was delivered by [Dr. George Yancopoulos](#), the President and CSO of Regeneron Pharmaceuticals, Inc. and a Columbia University PhD/MD Alum. The keynote talk focused on the founding of Regeneron and how their novel approaches in tackling debilitating diseases have led to remarkable treatments and well positioned Regeneron as a leader in the Pharmaceutical industry. The symposium sessions on the 17th ended in a widely attended networking reception.

The event was co-organized by the Office of Postdoctoral Affairs (OPA) and the NYC ASCENT Program, a professional development program for computer science and computer science related postdoctoral trainees at Columbia, Cornell, CUNY, and NYU. OPA also received significant assistance from the postdoctoral council, the Office of Research Initiatives and the EVPR office. The career fair was run by the Center for Career Education in partnership with OPA and NYC ASCENT.



Postdoc award winners : (left to right) Rory Flinn (OPA Director), Melody Cheng, Michael Metzger, Alp Kucukelbir, Dessislava Nikolova , Xi Chen, Michael Purdy (EVP for Research), and Sahar Kazemini (NYC ASCENT Coordinator).

Photo courtesy: Michel Divito

UPCOMING EVENTS

Career Panel Series: 3 career panel sessions will run from January through March focused on careers within the data science, entrepreneurship, technology transfer, and financial sectors.

Communication Series: This 5-part workshop series will run from January through March and will cover topics such as developing and delivering effective research presentations, manuscript writing, interpersonal communication, conflict resolution, and negotiation.

Fundamentals of Teaching mini-course: This mini-course will run from April through June and will cover topics such as how students learn, effective teaching strategies, teaching philosophies, and course and classroom management.

IN YOUR OWN WORDS

The Commuter

By: Qiana Brown, PhD, MPH, LCSW

The Commuter is a column that details the daily commute of a postdoctoral research fellow in and out of the City, and captures both her enthusiasm about becoming a New Yorker, and the A-Train shenanigans that abound.

Call Me In NYC!

On my way into the City this morning I had an epiphany – I needed a NYC cell phone number! After all, what New Yorker doesn't have a NYC cell phone number? Six months had passed in my endeavor to become a New Yorker, and I still had a Maryland cell phone number. I needed to remedy this as soon as possible. I got off of the A-Train at 168th street. I called my cell phone company as I walked from the train stop to my office. I asked the representative to "upgrade" my number to a New York City number – after all, I am practically a New Yorker! I also asked the representative to make sure to give me a good number, a good "City" number. I didn't want people to think that I lived in Upstate New York or in some suburb of the City. I wanted a NYC number! By the time I got to my office, I was one step closer to being a New Yorker – and I had a New York City cell phone number to prove it! I love NYC!

Qiana Brown is a postdoctoral research fellow in the Department of Epidemiology at the Mailman School of Public Health. Follow Qiana on Twitter [@DrQianaBrown](https://twitter.com/DrQianaBrown).



Have a story, poetry or other literary piece that you want to share? Submit an entry to be included in the next edition of the postdoc newsletter at: cupostdocnewsletter@gmail.com with the subject line "In your words."

SPECIAL MENTION

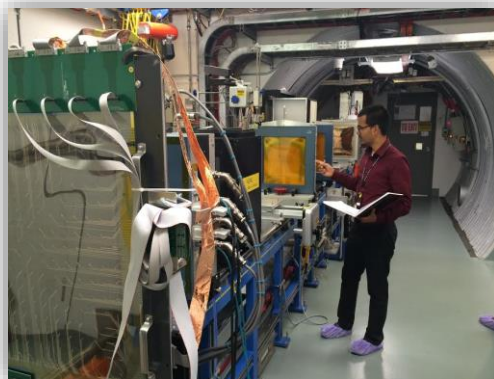


Dr. Kunal Chaudhary, PhD, a postdoc from the Dept. of Radiation Oncology and The Center for Radiological

Research, got a once in a life-time opportunity to work at the NASA space radiation laboratory situated in Brookhaven National Laboratory (BNL). The research program that spans for four weeks in June was a part of [NASA Space Radiation Summer School](#) (NSRSS). He was one of the only fifteen candidates from across the globe who got selected to this highly competitive program.

Dr. Chaudhary who has a Master's degree in Molecular Medical Biotechnology from University of Gent, Belgium, obtained his PhD from Aachen University, Germany, before joining Columbia as a postdoc. The Center for Radiological Research receives research funding for several projects from NASA. He credits Dr. Eric J. Hall (College of Physicians & Surgeons of Columbia University) in motivating him to apply for this prestigious program. The application process involved submitting a letter of intent and going through a series of background checks. Dr. Chaudhary got extremely interested in NASA, and in particular this program, as it is "the only facility where one can study how space radiation can cause damage to the ability of human cells to carry out DNA repair and cell division". The study is particularly important as these ionizing radiations can cause mutations resulting in cancer, among others, in astronauts. Candidates from diverse backgrounds such as Physics, Mathematics, Medicine and Biology were selected for the summer program.

Dr. Chaudhary explains his time at BNL as structured and fun. The day would begin with lectures at 9:00 in the morning, continuing till 6:00 in the evening after which, the candidates would get together for homework and dinner. The program also included hands-on training in multiple subject areas. "Most of us used to work and chat until midnight. Oh! We had "Marti the MARTIAN" as our classmate. It was fun.", he says. Dr. Chaudhary fondly reminisces enjoying space dust beer. The candidates, at the end of the intensive program, were also required to give presentations.



"The main purpose of this program is to expose young minds to radiations, specifically space radiations.", he says. Meeting people from diverse backgrounds from all over the world, also the scientists and engineers at NASA, and interacting with them is something Dr. Chaudhary says he'll forever cherish. "I would definitely do it again but I guess I cannot re-apply. It's once in a lifetime opportunity, and I am so glad I snatched it."

Returning to Columbia after four weeks at BNL, he says, "I learned so much. The training provided me a new perspective on the project I am currently working on. I would like to explore the study of heavy ions as a mode of treatment."

WOMEN IN RESEARCH: Continued...

4. Fail fast to increase confidence.

There is plenty of evidence that illustrates the positive effects of “failure” on boosting one’s confidence. This idea is paramount to research and hands-on learning. Jessica Lahey, in her book [*The Gift of Failure: How the Best Parents Learn to Let Go So Their Children Can Succeed*](#), describes failure as a valuable gift which is often misidentified as tragedy. Basically, the only way to train oneself to be resilient and regroup after failure is to fail fast and start wiring the brain to learn from the failures, come up with new plans, and eventually find a solution. Practices that we are familiar with, such as getting all A’s and never failing a test, do not help. In her work, Jessica mentions a student who’s afraid of failure, scientifically termed atychiphobia, and recognizes the effect it has on her overall learning process. In order to gain confidence in our abilities to solve problems and provide insight on the topics we are working, we must fail and fail and prove to ourselves we can learn from these experiences and come up with better ideas. Every researcher knows nothing works the first time, or second, or third, or.... well you get the picture! I need to rewire my thoughts on failure as well; I’m definitely a little anxious that those of you reading this article may consider it a failure!

5. Daily steps to increase confidence.

- A. Meditate. Meditation shrinks the fear center of the brain, the amygdala.
- B. Be grateful. Gratitude increases happiness and optimism.
- C. Think small. Break down every overwhelming feeling into small, tackle-able pieces.
- D. Sleep, move, share. Stay well rested and active. Increase oxytocin levels through human interaction – like a nice hug!
- E. Practice power positions. Amy Cuddy’s TED talk, [*“Your body language shapes who you are”*](#).
- F. Write down negative thoughts. Do this at night and combat each with a positive response. Once you’ve done this for every negative thought, throw away the paper. Or better yet, tear it up, shred it, burn it, or use it as a dog pee pad.

6. Trust your gut!

Because you are AWESOME!

7. Occasionally being vulnerable and showing compassion is received well and may boost confidence.

So – this goes against a lot of what I was taught in graduate school. If you want to succeed as a female scientist/engineer along with the men, you must be one of the men. Why? I was born a woman and I would like to use my innate skills. Thankfully, new evidence shows this may not be the case. There is new evidence that more feminine traits such as empathy, approachability, and humor, characteristics that many would argue decrease your credibility and power, may give many successful leaders an advantage. What this really comes down to is be you - avoid being someone you are not. This will surely decrease your confidence if you always feel like you are acting. If you are an empathetic person, then allow that trait to seep into your professional life. If humor helps you deal with stressful situations – then let it help you in the workplace as well. Just remember that moderation is your friend.

8. Be authentic.

Don’t sacrifice who you are and your inner strengths. We are all endowed with unique strengths. While we spend the majority of our time denouncing these innate strengths and instead focusing on enhancing the skills that need work, why not capitalize on the skills at which we are naturally good. This is a point heavily focused on by Tom Rath in [*StrengthsFinder*](#) and is easily the subject of further discussion elsewhere.

WOMEN IN RESEARCH: Continued...

9. Think less and take more action.

This circles back to the earlier point about ruminating. The more you think negative thoughts or ways in which you could have done things better, the more often you will talk yourself out of taking action and moving forward.

10. Purpose = “that which I wake up for” (Japanese translation)

I LOVE this! If we are truly involved in work for which we are passionate, then the confidence will come naturally. However, it is true that we must have the experience in what we do to remain credible and instill confidence. Mindy Kaling, in her new book [Why Not Me?](#), discusses where she gets her confidence. For her, it stems from entitlement – specifically entitlement that only comes from hard work. Thus, work hard (which we all do) to enhance our feeling of competency and entitlement which will hopefully translate to confidence.

There you have it. Ten ideas to help boost confidence. While I know I will continue to battle with the things I don’t know and the inherent lack of confidence that follows, I am hopeful these 10 recommendations will help me and others convert poor confidence to true empowerment. We deserve it!

Programming Note: Claire Shipman will be back at Columbia (CUMC) on December 3rd to discuss “The Science and Art of Confidence: What Women Need to Know”. Definitely attend if interested in further discussing these topics.

Thursday, December 3, 2015, 4pm
Alumni Auditorium
[650 West 168th St.](#), First Floor
Registration Required, Reception to Follow

HOUSING WANT ADS

Have an extra room that needs to be filled or want to find a roommate to fill a new place? Have an apartment worth of things to sell? Send an email to cupostdocs@gmail.com with the subject line “housing want ads” to list an ad in the next issue.

Check out <http://postdocs.columbia.edu/housing.html#2> for information on housing in NYC along with a listing of useful websites for finding housing. Also, look at the Columbia University off-campus housing assistance page for listings geared towards the Columbia community (<http://facilities.columbia.edu/housing/intro-ocha-3>).

IN THE CITY OF NEW YORK

Theatre/ Music



•Celebrate Brooklyn

<http://bricartsmedia.org/performing-arts/celebrate-brooklyn>

•Summer stage

<http://www.cityparksfoundation.org/summerstage/>

•Concerts

<http://www.timeout.com/newyork/music/summer-concerts-in-nyc?>

•Theatre

<http://www.newyorkcitytheatre.com/>

Sports



•Soccer

<http://www.meetup.com/NYCWorldCup/>

•Basketball

•Baseball

•Hockey

<http://http://www.nycgo.com/sports>

•NYC Mayor's cup

•NYC Marathon

<http://www.tcsnycmarathon.org/>

•Sports News

<http://www.nytimes.com/pages/sports/index.html>

Science/Art festivals



•World Science Festival

<http://www.worldsciencefestival.com/>

•USA Science and Engineering Festival

<http://www.usasciencefestival.org/>

•NY Events & Festivals

<http://www.timeout.com/newyork/things-to-do/events-festivals>

Movie events



•Rooftop Films

<http://rooftopfilms.com/>

•Summer outdoor movies

<http://www.thrillist.com/entertainment/new-york/outdoor-movie-nyc-calendar>

•Park Events

<http://www.nycgovparks.org/events/free-summer-movies>

•NY Film Festivals

<http://www.filmlinc.com>

Exhibits and shows



•Javits center events

<http://www.javitscenter.com/events/events/>

•TimeOut New York best museum exhibitions

<http://www.timeout.com/newyork/attractions/best-museum-exhibitions-in-nyc>

•NYC shows

<http://www.broadway.com/>

NOT TO BE MISSED IN NYC



88th Annual Macy's Day Parade

For those of you in town for Thanksgiving (November 26th), park yourself on the parade route and watch “bigger-than-life” balloons of beloved characters such as Sponge Bob Square Pants and Charlie Brown’s Snoopy pass by. The easiest place for viewing is between 59th and 75th streets on Central Park West. Parade starts at 9 am but you’ll definitely need to secure your front-row spot by 6 am.

NYC Restaurant Week: January 18-February 5

Enjoy prix-fixe 3-course meals for \$25 (lunch) and \$38 (dinner) at participating restaurants throughout the city. Find more information at <http://www.nycgo.com/restaurant-week>.



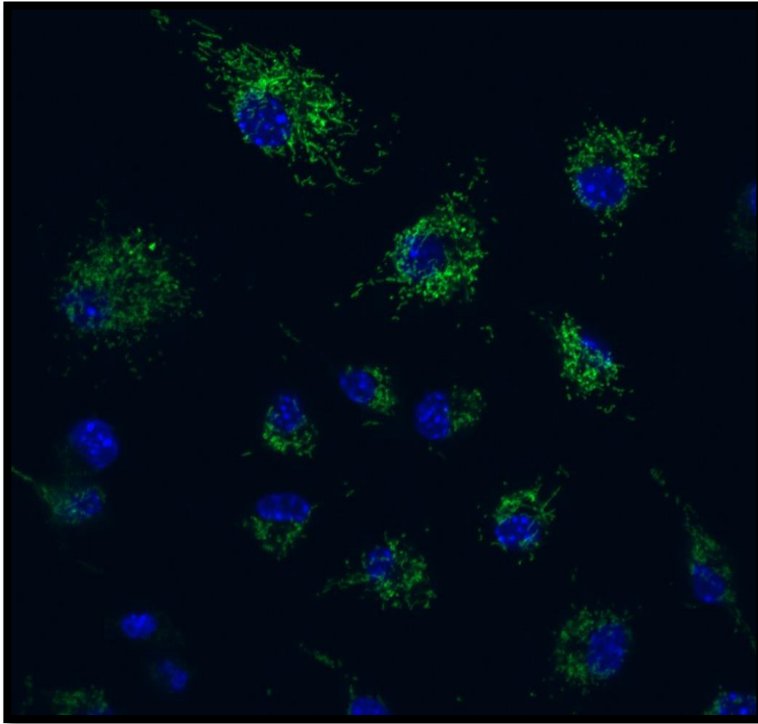
Holiday Events in NYC

Lighting of the Rockefeller Center Christmas Tree Lighting of the giant evergreen in Rockefeller Plaza (between 48th and 51st and 5th and 6th avenues) will take place on Wednesday, December 2nd with live performances from 7-9pm. Tens of thousands will flock to see the annual event. The tree will remain up until January 8th.

Windows at Macy's and Bergdorf Goodman Grab a warm cup of coffee or hot chocolate and take a stroll down 5th avenue to check out the elaborately decorated windows. Be sure to check out the windows at Macy's on 34th street and Bergdorf Goodman on 5th between 57th and 58th streets.

Ice Skating at Bryant Park Grab a friend or loved one, put on your scarf and gloves, and head to Bryant Park for a lovely afternoon of ice skating. The rink is open for skating from 8am – 10pm daily from October 30th to March 6th. Admission is free. Skate rentals are \$15.

DREAMY DATA



Mouse macrophages expressing GFP targeted to mitochondria (green) and stimulated by TLR4 ligand LPS for 20 min. Nuclei stained with Dapi (blue). Confocal microscopy. Picture courtesy of **Dr. Alice Lepelley**, Department of Microbiology & Immunology (CUMC).

COLLABORATION CORNER

Can't get that experiment to work?

Need out-of-lab expertise?

Want to try out some new-fangled equipment?

Perhaps we can help you. Well, not “we”, but someone on campus. In this section of the Newsletter, you can suggest co-operations, ask for recommendations or even offer your expertise, if you're looking to get on some else's paper. We will print your requests in the next issue.

Send us an e-mail at cupostdocnewsletter@gmail.com for more information.



FUTURE MEETINGS & CONFERENCES

American Public Health Association(APHA) Annual Meeting & Exposition

◆ Oct. 31-Nov.4 2015 ◆ Chicago, IL

www.apha.org/events-and-meetings

American Astronomical Society(AAS) 227th Annual Meeting

◆ 4 – 8 January 2016 ◆ Kissimmee, FL

<http://aas.org/meetings/aas227>

American Accounting Association (AAAHQ) Meetings

◆ January - May, 2016 ◆ TX, CA, VA, GA, W

<https://www2.aaahq.org/meetings/default.cfm>

American Association for the Advancement of Science(AAAS) Annual Meeting

◆ Feb. 11-15, 2016 ◆ Wash., DC

<http://meetings.aaas.org/program/meeting-timeline/>

American Chemical Society ACS 251st National Meeting & Exposition

◆ March 13-17, 2016 ◆ San Diego, CA

<http://www.acs.org/content/acs/en/meetings.html>

American Statistical Association(AMSTAT) Meetings

◆ July 30 – August 4, 2016 ◆ Chicago , IL /Joint Statistical meeting

<http://www.amstat.org/meetings/index.cfm>

The American Sociological Association(ASA) 111th Annual Meeting

◆ August 20-23, 2016 ◆ Seattle, WA

http://www.asanet.org/AM2016/AM_2016.cfm

Society For Neuroscience (SfN) 45th annual meeting

◆ November 12 - 16, 2016 ◆ San Diego, CA

www.sfn.org/

American Society for Cell Biology (ASCB) 2015 Annual Meeting

◆ December 3-7, 2016 ◆ San Francisco, CA

<http://www.ascb.org/future-ascb-annual-meetings/>

NYAS scientific/career development events that may interest you. Soon:

[Risky Business](#)

Saturday, January 30, 2016 ◆ 11:00 AM - 4:00 PM

[Genome Integrity Discussion Group Year-End Meeting](#)

Monday, February 1, 2016 ◆ 1:30 PM - 4:30 PM

For others go to:

<http://www.manhattancc.org/events/eventdetail.aspx?EventID=1640>

New York Postdocs <https://sites.google.com/site/newyorkpostdocs/>

National Postdoctoral Association <http://www.nationalpostdoc.org/>

