

National Institutes of Health



Visiting Fellows Committee

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Contributing to global science development by building careers

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Science Voices from Home The Academic Career Path in the United Kingdom

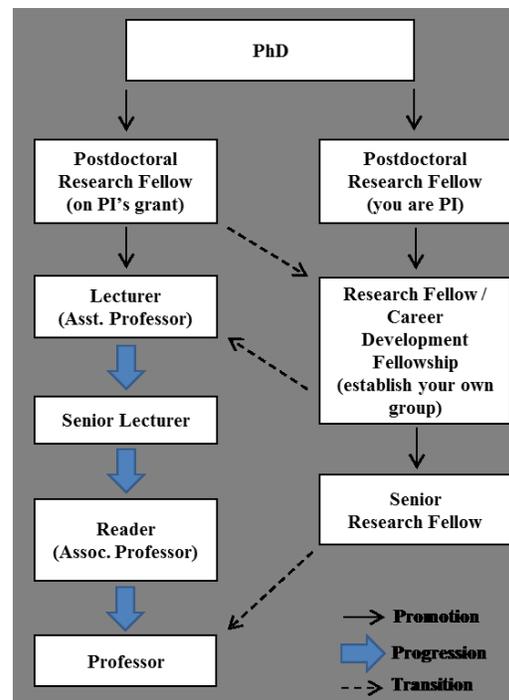
By Kevin Ramkissoon, PhD

On June 17, 2014, the National Institutes of Health (NIH) Visiting Fellows Committee hosted Dr. Sarah-Jayne Blakemore for the Science Voices from Home lecture series, which aims to provide NIH fellows with insight and advice on the state of science and careers in countries around the world. The route to a permanent academic position at a university in the United Kingdom (UK) differs from that in the United States (US). Dr. Blakemore, a Professor of Cognitive Neuroscience and Co-director of the Wellcome Trust PhD Programme in Neuroscience at the University College of London, outlined the two most common paths to a professorship taken by scientists in the UK.

The first familiarly begins with a postdoctoral fellowship on another person's, i.e., a principal investigator's (PI), grant. Multiple postdoctoral fellowships, ranging in length from 1 to 3 years, are not uncommon, with many PhDs choosing the "visiting fellow" route and undertaking a fellowship outside the UK. Next, one would apply for a lecturer position. While the terms of employment may differ among universities, with some requiring a 1- or 2-year probationary period, lecturer positions are generally considered to be permanent positions. The progression that follows takes one through the ranks of *lecturer* (equivalent to an associate professor in the US), *senior lecturer*, *reader* (equivalent to an associate professor), and finally on to *professor*.

The lecturer path comes with significant teaching and administrative responsibilities; however a lecturer's days in the laboratory do not have to end. Lecturers are eligible to apply for grants to support research, but as an employee, their salary must come from the university.

The second path, that of a research fellow, offers more flexibility. Recently minted PhDs can apply for independent research fellowships on which they are the PIs. This path takes one from *research fellow*, through *senior research fellow*, and as with the previous path, on to *reader* or *professor*. The competitive nature of research fellowships in the UK, and the value placed on a strong publication record, usually mean that most individuals apply only after completing at least one postdoctoral fellowship.



Academic career paths in the United Kingdom

With a fellowship in hand, the next challenge is finding laboratory space. Luckily this is not typically a difficult endeavor. In addition to being able to guide one's own research, fellowships make young scientists quite attractive to universities. Real estate usually comes in the form of space in the laboratory of a more established PI – preferably one with shared research interests, thus allowing for mentorship and collaboration. Research fellows can also apply for project grants to support postdoctoral fellows, equipment, and

travel expenses. Most successful PIs hold multiple grants simultaneously.

Independent research fellowships also free scientists from the majority of teaching and administrative responsibilities that accompany a lecturer position, allowing more time to be devoted to research. While the rules vary across the various funding agencies, it is also usually possible for fellows to move from one laboratory or university to another with funding in tow. A research fellow can also advance to become a university professor, but this is not an automatic progression and only occurs if there is a specific need or desire by the university.

It is possible to switch between the two career paths outlined at specific points. As a postdoctoral fellow on a PI's grant, one can apply for a career development fellowship, thereby gaining independence. This would be the most applicable route forward for current NIH fellows. Alternatively, research fellows can be considered for lecturer positions, putting them on the somewhat more assured path to a professorship. It should be noted that the latter jump comes with a caveat – it is extremely difficult to switch back to the research fellow path. The reason being that most research and career development fellowships offered in the UK are specifically purposed to help make scientists who are not yet permanently established attractive to universities.

The structured academic career paths in the UK offer stark choices that require consideration of important issues like the availability of, and eligibility for, independent fellowships, future mobility, and the balance of teaching and research duties desired. A permanent position at a university may seem like a godsend to current postdoctoral fellows, however many scientists build successful careers entirely based on fellowships. While not without its challenges, for many like Dr. Blakemore, the rewards are well worth any associated risks.

Where are they now? An Interview with Valentine Panel, PhD

By Delphine Quenet, PhD

Being a postdoctoral fellow at the National Institutes of Health (NIH) does not mean you will pursue a career in Academia. In fact, the NIH is a good place to diversify your skills and explore alternative paths. For instance, the Office of Intramural Training and Education (OITE) and the Foundation for Advanced Education in the Sciences (FAES) offer many workshops and numerous persons ready to help you in your transition from being a fellow to working at your dream job. Valentine Panel, Ph.D. is one such fellow who knew upon her arrival at the NIH that she did not want a bench career. However, she never thought her transition would come so fast. I recently had the opportunity to ask Dr. Panel about her background and the path she followed to obtain her current position.

At first glance, Dr. Panel has a classic curriculum vitae (CV). She graduated from University of Francois Rabelais (Tours, France) in Molecular and Cellular Biology with a focus in lung cancer. She then joined the laboratory of Dr. Elisabetta Mueller in the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) as a visiting fellow in 2007 and studied the transcriptional and signaling pathways involved in adipogenesis. While Dr. Panel expanded her research capabilities upon joining the NIH, her experience was not limited there. Her time at the NIH opened new career opportunities, resulting in her leaving the NIH in 2010 to become a Technology Transfer Officer and Business Unit Manager for *Floralis* (www.floralis.fr), a subsidiary of the Grenoble University (France).

How did she manage this transition? When Dr. Panel joined the NIH, she was informed about the opportunity to register for FAES classes. In their catalog, she was particularly interested in the program called “Advanced Studies in Technology

Transfer.” The goal of these evening classes is to gain expertise and experience in patenting, licensing, and other intellectual property transactions. However, Dr. Panel waited one year before registering, giving her time to become familiar with her research project and to improve her English. To complete this two-year technology transfer certificate, Dr. Panel followed the required courses (Introduction to Technology Transfer - TECH 513 and Biomedical Business Development for Scientists - TECH 565). Then, she chose two elective courses out of a possible twenty-three: Tools for Technology Transfer -TECH 321 and Biotechnology Business Leadership and Management Strategies - TECH 366. Taking courses along with conducting experiments can be quite challenging, so with another fellow, Dr. Panel reorganized her schedule to accomplish her final independent project (required by one of the FAES classes) before and after her laboratory work. Dr. Panel warned that the success of this task depends on a good relationship with your classmates and a full commitment.

It is important to note that a successful transition from the bench requires networking and support. Dr. Panel met many people with different backgrounds (e.g., a biologist and a lawyer), contributing to a rich and active exchange with her classmates and professors. Dr. Simchowicz, Director of the Office of Fellow Recruitment and Career Development at the NIDDK, helped Dr. Panel find a part-time position at the NIDDK Technology Transfer Office. This job was an unprecedented opportunity to practice what she had learned during these two years and to validate her certificate. Importantly, it also helped build a unique CV. During this experience, she also found support from her mentor Dr. Lyles, who was a Technology Development Specialist for the government, including the NIH. They worked together for 4-6 months. Last but not least, Lori Conlan, Director of the Office of Postdoctoral Services (OPS) and Director of the Career Services Center at OITE, helped Dr. Panel build a solid CV to apply for private and industrial positions in technology transfer offices in France and in the United States. The constant support from her coworkers in the laboratory and her other NIH

colleagues helped Dr. Panel during her three years as a visiting fellow (2007-2010) to achieve a successful transition from research scientist to Technology Transfer Officer.

In Dr. Panel’s words, “The NIH was a chance for me. The training system established [at the NIH gave] me the opportunity to develop my career in a way that I did not imagine initially. The enthusiasm of people around you is rising up. Do not be afraid to speak with your NIH colleagues and OITE persons about your professional project, because you will necessarily learn something, receive, feedback, and increase your networking that will be helpful for your career. Today, when I am thinking about my experience at the NIH, I think about all these persons who helped me, and I am grateful.”

The contents of this article were approved by Dr. Valentine Panel.

Culture Corner

New Opportunities and Challenges in Shanghai

Perspectives from My Summer at Home

By Ping Chen, MD, PhD

I last visited my hometown, Shanghai, China, three years ago – although you would never know it because I talk about Shanghai almost every day. I have so many unforgettable memories of Shanghai, and this summer I had the opportunity to go home and visit my family and friends.

When I landed in Shanghai my first impression was feeling overwhelmed by the buildings, people, and fashion everywhere. I was eager to quickly re-orient myself to Shanghai. Unfortunately, it seemed that the city had changed more than I realized. I could not find a seat on the metro - even though I was in the front of the line - because people grabbed up all of the seats in a second. I was scared whenever I took a taxi because it seemed impossible to navigate such crowded

streets, but somehow it worked! It was clear to me that I needed some time to reconnect with the city.

Fortunately, the close relationships that I have with my family, PhD mentor, and friends were unchanged. They are the main reasons that I miss home. During my trip I had many invitations for lunches and dinners, and I felt that I ate enough delicious Chinese food to last me the whole year! I had dinner with my extended family. My uncle is the head of the community school in a small town where they just built a large new school building with a library and a big plaza. One of my cousins returned to Shanghai from Canada after finishing his undergraduate degree to run a successful business with his father. Another cousin lives in Canada but travels to China frequently to conduct business in the local markets. My father received two new apartments as compensation when the government decided to build a new community where his old house was located. My aunt has a big, new house with 7 bathrooms! My family was fortunate to be in the right places at the right time, and they are doing well because of the booming economic development in China.

Yet another cousin will begin studying business at the University this fall after successfully passing the very competitive entrance exam in China. She told me the score for entering medical school is significantly lower than before. Fewer people want to study medicine in China today because they believe it requires a lot of work in a high risk environment, and the salary is not attractive. This trend saddens me personally because I love working as a medical doctor. Doctors are highly respected in USA but not in China nowadays. The reality is that in China there is a poor relationship between doctors and patients because patients lack trust in the services medical doctors provide.

I also had the opportunity to have dinner with my PhD mentor and members of her laboratory. After 5 years of working together, I consider my mentor a close friend. She is now a well-known physician-scientist doing both research and clinical work, and she has received several large research grants and national awards. I was her first student but she has since trained many students. Some of her

trainees are attending physicians in hospitals, some are completing their clinical training, and others are pursuing their PhD. My former laboratory group began an email list for all trainees, past and present, so that new trainees can benefit from the experience those who have moved on to successful clinical and research careers.

The clinical trainees talked about the new residency system and how doctors are paid such a low salary that it only covers rent in a city like Shanghai. Trainees have to rely on the financial support of their families in order to live. Many trainees have the additional responsibility of applying for research grants from the government, which is challenging because they need to split their time between the clinic and the laboratory. For example, one trainee mentioned her regular day begins at 7 am in the laboratory, and moves to the clinic at 8:30 am. She returns to the laboratory at 6 pm, where she works until 10 pm, only returning home to sleep. Another friend told me she sees 200 patients each day and conducts research on the weekends. These are typical schedules for many young doctors in China, and it is common for young doctors to work very hard at the expense of their own health and well-being.

During the course of my four-week vacation, I saw Shanghai in a new light. I did not recognize the county where I was born because so many new buildings have replaced the old familiar ones, and many more new buildings are under construction. Shanghai is full of numerous opportunities as the city develops and evolves at an amazing speed, but these changes also present new and exciting challenges that will have to be overcome!

A Fellow's Life Transitioning from Extramural to Intramural Research Programs

By **Jaya Sarkar, PhD**

I graduated from one of the oldest public universities in the US, one that ranks among the top tier of universities in engineering and the sciences. I am proud to have been a part of such a distinguished program. For my postdoctoral research I joined the largest biomedical research team in the world—the intramural research program at the National Institutes of Health (NIH). The transition was overwhelming in different ways, and here I share a comparative landscape of my thoughts and observations gathered from both worlds.

The expanse of scientific research and collaboration is remarkable in both worlds, albeit with slight differences in focus. In the university setting, I found myself exposed to cutting-edge advancements and discoveries in basic science, engineering and computation. To aid these discoveries, there were numerous centers, such as: (1) supercomputing applications to meet the increasing demands for computing resources in scientific research; (2) genomic biology to bridge research in agriculture, environment, and human health and energy needs; and (3) microanalysis of atomic to macroscopic materials. The advancements aided by these types of centers broaden scientific knowledge while also improving human health and society. At the NIH there is more emphasis on translational research, taking scientific discoveries from the bench to the bedside. For example, the Clinical Center is unique in its ability to conduct clinical trials that would likely not be funded anywhere else because of the cutting-edge nature of the therapies being tested. The National Center for Advancing Translational Sciences (NCATS), along with programs like ‘Therapeutics for Rare and Neglected Diseases,’ ‘Undiagnosed Diseases

Program,’ and ‘NIH Bench-to-Bedside Program’ also facilitate bridging the gap between laboratory biomedical findings and treatments for cancer, acquired immunodeficiency syndrome (AIDS), and cardiovascular and neurodegenerative diseases. Common to both institutions, one can see how the tightening of research budgets has effected both scientific productivity and the careers of current and future scientific leaders.

Training and fellowship opportunities also play a pivotal role in shaping a scientific career. Graduate school instills high expectations for research standards, discipline, and the tenacity to be successful in a highly competitive environment. Once at the NIH, trainees are prepared to succeed at the next level. For example, training physicians at the clinical level and scientists at all levels, from summer students up through postdoctoral fellows. Apart from research, teaching experience is a crucial part of a fellow's training. Many graduate programs require its PhD students to serve as teaching assistants for at least one semester and to mentor new graduate students. Some graduate programs also proved graduate students the opportunity to serve as course instructors, letting them independently design courses and exams for both undergraduate and graduate students. Although there are few opportunities for trainees at the NIH to gain formal teaching experience, there are ample opportunities to mentor summer students and post-baccalaureate fellows.

In my transition from an extramural research institution to an intramural research program, it took time getting used to working at a federally-funded institution. I consider myself fortunate to have experienced both worlds, and I believe my experiences at both types of institutions will continue to play important roles in shaping me as a scientist.

Science Careers Interested in Medical Writing? Then AMWA May be for You!

Swagata Roychowdhury, PhD

Ask, share, and connect. That is the mantra of AMWA (American Medical Writers Association), the leading professional organization for medical writers and editors. For more than seventy years AMWA has been advancing medical communication internationally, and enhancing members' skills through educational resources and certificate programs. In general, medical communication involves development of medical and healthcare-related materials. According to Dr. Andrea Voth, a medical writer for the National Cancer Institute, this includes a large variety of documents like translational and clinical manuscripts and clinical trial documents.

Dr. Voth elaborated that the main characteristics essential for all medical writers are "critical thinking, because medical writers quite often find themselves working on new projects in subject areas where they are not experts and have to analyze and synthesize new information quickly to communicate it clearly, and of course, an interest in medicine and/or the biological sciences." In other words, one should be able to interpret scientific and medical jargon into language for general audiences. Hence, the ability to multi-task and process a wide range of scientific information within a short amount of time are huge assets in this field. It is a large industry and is comprised of different sectors like government agencies, medical societies, and pharmaceutical companies.

Given the diverse nature of the field, AMWA members come from myriad professional and scientific backgrounds, invariably helping to support the mission of AMWA. Membership opens doors to opportunities such as the development of career networks, educational and certificate programs, workshops, and conferences.

Certificate programs are a great resource for developing new skills, increasing knowledge in basic writing and editing, and learning specialized writing formats for the regulatory and drug development fields. For interested individuals who do not have time to attend workshops, online educational activities are another option. In addition, AMWA publishes a quarterly peer-reviewed journal called *AMWA Journal* that covers various topics pertaining to medical communication.

To get started, postdoctoral fellows at NIH have the unique opportunity to write and edit scientific and clinical documents that help refine skills in both scientific and medical writing. Fellows can get involved with the Fellows Editorial Board at NIH, suggested both Dr. Voth and Dr. Carolyn Peluso, a former postdoctoral fellow at NIH who is currently a Science Writer/Editor at Cell Signaling Technology. Dr. Peluso also suggested that fellows can build expertise by writing for social media outlets, blogs, and society newsletters to get a taste of what this profession has to offer.

Undoubtedly, networking also plays a significant role in medical writing. And what better place to meet and talk to new people than a conference where like-minded professionals meet, gather information and exchange ideas? This year's AMWA conference was held October 8-11 in Memphis, TN. Among the various events, several workshops ranging from clinical writing and investigational new drug (IND) applications to medical journalism were offered. It also gave attendees a chance to learn from other medical writers, and get a glimpse of future possibilities. For students attend the conference, AMWA offers scholarships every year to those looking for a career in science and medical communication. The conference provides an excellent opportunity to learn about this field from accomplished professionals. Significant contributors to medical writing are also acknowledged at this conference with awards and fellowships.

In addition to the annual conference, AMWA hosts several regional chapters, which provide local networking opportunities and regional

conferences. These are just a few of the benefits that come with AMWA membership, provided at a minimal cost based on an individual's professional status. For writers thinking about taking the next step in building your network and job opportunities, AMWA provides services like classified job advertisements and a freelance directory, which posts the resume of the freelancer. Members can access a detailed salary survey of medical writers based on the qualifications of the writer and the job description. This was an added bonus for Dr. Voth, as it helped her to determine the salary expectations based on her background.

With so much to offer to aspiring, and continuing, medical and scientific writers, AMWA provides more than just asking, sharing, and connecting. More information is available at www.amwa.org.

The contents of this article were approved by Drs. Peluso and Voth.

Announcements

- Be on the lookout for two special editions of the VFC Newsletter this fall:

- The International Opportunities Expo 2014 Special Edition
- Immigration 101 Special Edition

- The VFC Newsletter is always looking to add to its talented pool of NIH fellow writers and editors. If you are interested in science writing and editing careers and would like to gain valuable experience, develop transferable skills, and add to your writing portfolio, please submit a 150 word statement of intent to our managing editor, Amie D. Moody (amie.moody@nih.gov). Your statement should highlight your desire to serve in such a capacity, your ability to dedicate the necessary time to this activity, and how this opportunity would fit into your personal career goals. No previous writing or editing experience is necessary.

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Looking for Leadership Opportunities?

Join the NIH Visiting Fellows Committee (VFC), an organization that is:

- dedicated to building community amongst the NIH's diverse fellow population;
- committed to bringing career building resources and events to the fellows of the NIH;

Become a voice regarding issues of importance to visiting fellows.

Help your career as you help your colleagues.

Contact any of the Visiting Fellows Committee officers below to find out about being a part of the VFC.

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WE ARE ON THE WEB

<https://www.training.nih.gov/felcom/visitingfellows2>