

Medical Writing/ Science Publishing:

Written by: Ben Blehm & Priyanka Shah

Felcom's Career Development seminar on Medical Writing/Science Publishing gave NIH fellows and graduate students an opportunity to hear from several accomplished speakers on how to improve their resumes for medical writing during their time in academia and how to build a network in order to find jobs and freelance work. A major point made by the panelists was the necessity of networking in finding jobs, changing positions, and otherwise transitioning within or between career paths. Several speakers had built up networks while working for various companies and were able to move into freelance work based on the strength of their networks. Others received fellowships that turned into permanent positions based on networks they had built during fellowships or while they were post-docs.

The panel began with **Heather Gorby**, who is currently a freelance medical writer. Dr. Gorby has a PhD in neuroscience and was recently a post-doctoral fellow at the NIH, in the NIMH. By the time she started her post-doc, she already knew that she did not want to be an academic. This led her to start volunteering and do a lot of informational interviews (interviews aimed at exploring other career paths, not necessarily obtaining a job). She strongly suggested joining the NIH fellows writing group and to volunteer to write for various NIH newsletters, as they usually need someone to write up content. She also suggested joining the American Medical Writers Association (www.amwa.org). As part of the AMWA, one can obtain skill certifications and attend conferences to meet other medical writers. Her career in medical writing began as a staff scientist/writer at a small company (Life Sciences Research, now closed). She then moved to SAIC Frederick, to a full medical writer position. After these experiences as a medical writer, with a network of contacts built up from her previous positions, she began her current career as a freelance medical writer. As a medical writer, her responsibilities include editing manuscripts, writing literature reviews, and creating physician educational products. A typical day involves 1 hour talking to clients, 1 hour on conference calls, and 6 hours of writing and literature searches. She recommends medical writing to anyone with good communication and writing skills, who loves science and can pay attention to detail. In addition, good research skills and the ability to learn new things quickly are essential.

The second speaker was **Judith Orvos**, who mainly views herself as an editor. Ms. Orvos comes from a non-scientific background, with a BA in English, and experience in the news, health insurance and medical publishing industry. She now owns her own company (Orvos Communications). She mentioned that there are several types of editing, and that she does not do copy editing or proof reading (where one looks for basic errors or alters an article to fit it to the journal's standards). Her job is to restructure others' articles and writing for a specific audience and present the main points with clarity and concision. Editors need tact in dealing with others, must deal well with constructive criticism, and be able to multitask. It is important to realize

that editors have to balance multiple inputs: the writing agency they work for, the client that hired them, and the authors. While applying for jobs in the medical writing field, do not expect to get paid more for a PhD, expect to be asked for writing samples, know how clinical research is done, and make sure to publish and write as much as possible. In addition to the AMWA, she also suggested the Council of Science Editors and the Board of Editors in the Life Sciences as useful groups to join.

Our third speaker, **Nicole Schultheis**, is a Certified Federal Job Search Consultant, resume writer, and trainer. She helps professional level applicants compete successfully for jobs, working with bench scientists, clinicians, health policy experts and other specialists across the U.S. government and internationally. Ms. Schultheis' career support for scientists is based on her past work with expert witnesses in national drug and device litigation, while serving as a trial lawyer in Baltimore for 20 years. She is an accomplished technical and science writer, having served under contract with DHS's Chemical Security Analysis Center (CSAC) and NIH's Center for Scientific Review. As a freelance editor, she has polished research proposals, underwritten reports, and written articles for publication in peer-reviewed journals. She was the last President of the Maryland Writers' Association. She gave a very knowledgeable step-by-step guide to applying for medical-writing-related federal job positions. At USAjobs.gov, these types of federal jobs fall under two categories: 600s (medical/hospital/ dental/public health jobs) and 1000s (positions that administer/ supervise/perform). She instructed potential candidates to carefully specify their job search criteria and to focus on exact job descriptions. Hits for specific searches can be sent to your inbox on a daily basis. She suggested targeting institutes like CDC, SAIC, NIH, FDA, and the Department of Homeland Security (DHS) for medical writing-related federal jobs. She emphasized the importance of "thinking creatively" to cash in on fields which might require medical writers. The salary grade for PhDs (if only based on education) is GS-11 for medical writer jobs and GS-9 for those with a Master's degree. Always read job announcements carefully and focus on core competencies and special requirements to efficiently filter potential jobs. Experience as a medical writer is important; hence, start early in your career if you want to go down that path, and volunteer to write as often as you can. She emphasized customizing resumes to fit job requirements. Resumes should be up to date and clearly state how you fulfill the job's requirements. It is important to note that federal and electronic resumes are unique and generally much longer than those for private corporations, so it is useful to create a second version of your resume for federal contract positions. Kelly Government Solutions is an important government contractor and its job vacancies should not be overlooked. Nicole ended with a light note about how she assists scientists in converting their resumes into HR friendly form.

Our fourth panelist, **Jonathan Mallet** obtained his PhD from the University of Bristol, UK. Later, he went on to work at NIST (National Institute of Standards and Technology), in Gaithersburg, MD, and then carried out research projects for Seagate, which is a leading American data storage company. After that, he worked at

the University of Virginia. This experience led him to secure an assistant editor position at the American Physical Society (APS), which is the world's second-largest organization for Physicists. It publishes dozens of scientific journals, the most popular being Physical Review and Physical Review Letters, and organizes >20 scientific meetings annually. He mentioned that 90% of his work involved organizing the peer review process and 10% involved ethics reviews. In 2012, he took a managing editor position at the American Chemical Society. His role there is concerned with handling peer reviews and coordinating the marketing and production departments. He is also in charge of outreach, informing the media about chemical and engineering news, highlighting journal content and strategizing for potential new journals. Operating a Twitter account for publicity is a part of his responsibility (using the latest technology for outreach). He mentioned a rise in plagiarism cases that need to be weeded out by editors. He said this was a good time for new people to join the medical writing field for two main reasons. First, the business of science journals is growing more than ever. There is a new journal every 2-3 months. Second, job flexibility is high in this field, as it does not require an office setting and can be accomplished anywhere with an internet connection. Today, medical writing has become a global industry, with journals and publications coming approximately 30% from Asia, 20% from Europe and 50% from America. Also, in regard to research budget cuts, the international reach of scientific journals softens the impact of cuts in specific countries. He insisted that it is a dynamic time for the industry. Open access journals, video-embedded journals, and complete user access all add momentum to the field. A major challenge he faced transitioning from academia to medical writing was overanalyzing research. This is an issue, as multitasking, time management and organization are key for a medical writer. In particular, learning to prioritize one project over another is crucial from a business angle. He ended his talk by encouraging people to consider scientific writing if they enjoy science but want to transition away from the bench.

Last but not the least, our final panelist for the afternoon was **Melissa McCartney**. Dr. McCartney is a part of the editorial staff of Science magazine, AAAS (American Association for Advancement of Science). She works directly with the Editor-in-Chief on the development of educational content and outreach for "Science" Magazine. She is a project manager for Science Educational Prizes and [the](#) NSF-funded "Science in the Classroom," a project aimed at making primary research articles more accessible to undergraduate and high school students. After obtaining a PhD in Neuroscience (2006), Dr. McCartney completed a post-doctoral position at the Children's Hospital of Philadelphia, although she knew upon starting her post-doc that academic research was not for her. This prompted her to apply to the Christine Mirzayan Science and Technology Policy Graduate Fellowship Program, a short-3 month program at the National Academies, which provided impetus toward transitioning into scientific writing. The fellowship is a 12-week, stipend/grant program for graduate students and post-doctoral scholars. It is open to international students on F-1/J-1 visas and accepts applications twice a year (Winter/Fall). Upon entering the program, fellows are assigned a mentor and a committee at the National Academies. Fellows learn about the interactions between science, policy,

technology and government, and get exposed to the inner workings of the committees. Fellows organize public seminars on policy issues and visit think tanks, organizations, and professional societies, as well as enjoying many fun events. The fellowship is particularly useful for networking as it forces you to meet and interact with many people. She stressed the absolute vitality of networking. Networking helped her obtain the Science Magazine (AAAS) Fellowship, during which she was initially hired to launch several programs as a part of science made easy for classroom education. That work was later extended into a full-time position. She mentioned wspa@listserv.aaas.org is the ideal way to monitor activities at AAAS. Her involvement with AAAS is primarily concerned with scienceintheclassroom.org, which annotates Science papers to improve comprehension for high school and undergraduate students. This occupies 70% of her time and the rest involves organizing Science Education prizes, bringing out education special issues, editing, finding reviewers and looking for conflicts of interest in neuroscience and education papers. She ended with an interesting note that her solid science background helped her perform her chief duties as a Science editor. She encouraged people not to be afraid to leave the bench if they wish for a different career, and mentioned that spinning and customizing your resume is crucial for job searches. Always cultivate a habit of networking in life. You never know where the path might lead you next!

Take-home points:

1. Everyone suggested getting in touch with a professional society to volunteer to write for their newsletter, website, or anything else available. NIH institutes also have newsletters for which you can volunteer to write. This is extremely important to build up experience, generate writing samples, and network.
2. The editorial freelancers association has rate sheets to help understand standard rates for contract work, how to make and understand contracts for freelance work, and other important things.
3. For science journals, most people will need a PhD at a minimum, potentially with post-doctoral experience, to get hired.
4. Medical writing is great for those with families, as the schedule is generally flexible, and one can read and write when and where it is convenient.
5. Freelancing work is generally obtained through previous contacts (co-workers, friends, employers... network, network, network!). However, you can find jobs online at places like Kelly Government Solutions, Craigslist, etc.). In addition, freelance work allows one to sample many types of writing. One can find government jobs on USAjobs, and there is a special "pathways" program that helps recent grads and post-docs get into the federal workforce.
6. The Society for American Medical Writer's Association is an active hub for networking, which has different chapters all over the country. A good way to start is to join this society, network and then start freelancing.