



National Space Biomedical Research Institute Society of Fellows

Quarterly Newsletter

Information for First Award Fellows

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Winter 2014

Applying for a Tenure-Track Faculty Position

Helpful tips for starting your job search and preparing your application.

Many of us are beginning to think about the “next steps” in our research careers. It is not a simple task, as postdocs commonly face many different career options including academia or industry, tenured or non-tenured faculty positions, government lab or research institution scientist positions, and many more. In a world of competitive and limited funding, it can be intimidating to pursue a tenure-track faculty position. This article will provide you with some tips for your job search and preparing your application materials.

It is important that you know what you want *before* you start your job search. There are several important things to consider, including how much time you want to devote to research and/or



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Success Stories

Alumnus receives faculty position at Wake University School of Medicine

2007 First Award Fellow Jeffrey Willey, currently an Assistant Professor at Wake Forest School of Medicine, answered our questions regarding his recent faculty job search.

QN: What resources did you use to find faculty positions? **JW:** I learned about open faculty positions both online and from directly being contacted by faculty at those schools. There are several websites that feature academic job opening, including sites managed by the Chronicle of Higher Education, ScienceCareers, and HigherEdJobs.com. But it was through my collaborations and contacts from conferences and performing reviews that really helped me with the job search. **QN:** What is your advice for writing a successful application? What is the most important part of a competitive application? **JW:** Let your enthusiasm be evident in all aspects of your application— your cover letter, research statement, CV, and philosophy of education (if relevant).

You must use these documents to convince the hiring institution that you are a great investment in the following manners: 1) your research is novel; 2) your research will not only advance a scientific field, but also has strong potential for both gaining extramural funding and for technology development; 3) you are strong manager of a laboratory and research team, and 4) you can effectively train, educate, and mentor students and residents. To achieve these objectives in a clear and effective manner, you really should have a mentor assist you with the preparation of your first applications. **QN:** What did you learn during the interview process? Any tips for a successful interview? **JW:** I really enjoyed my first interview. I followed the advice of several mentors and learned as much as I could about each faculty member in the department in which I was interviewing. When I met each one, I could then easily talk with them about their research, which I believe showed them that I was interested in both the position and their personal laboratory. For several faculty members, I presented some ideas for collaboration between our labs should I join the institution. I feel this was an effective strategy. **QN:** How did you prepare to negotiate your offer? Any advice? **JW:** I approached several department chairs within my institution and asked them the following question: if you were going to recruit a person from outside this institution for a faculty position within your department, what would you consider offering them in terms of salary, start-up, lab space, etc.

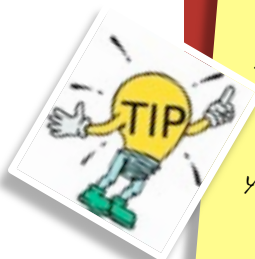
2007
Fellow



Jeffrey Willey, Ph.D.

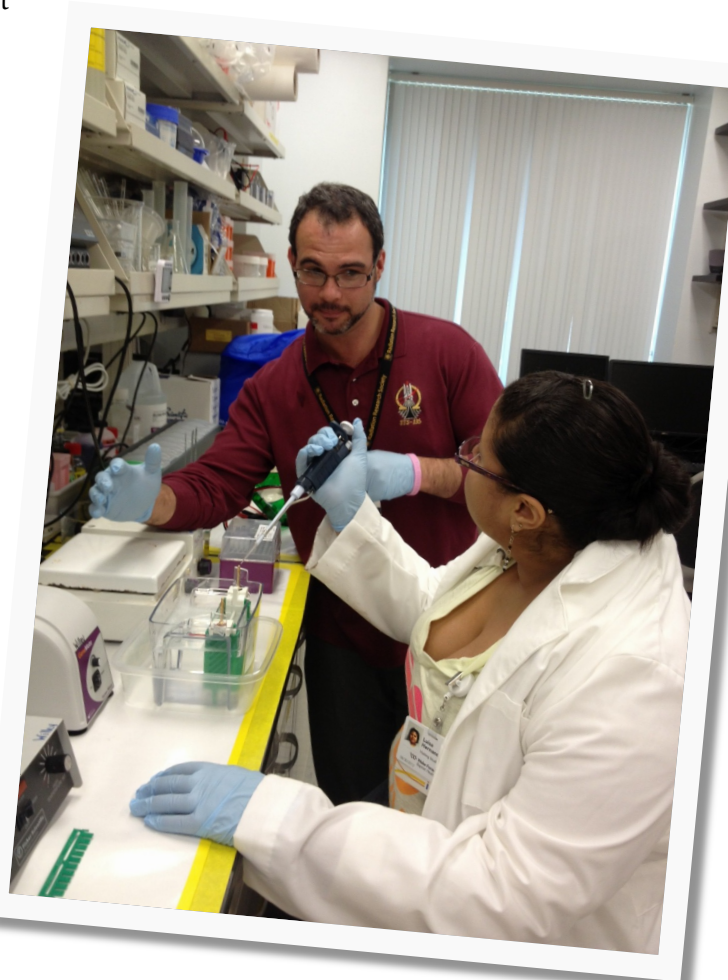
Assistant Professor, Departments of
Radiation Oncology and Orthopaedic
Surgery, Wake Forest School of Medicine

Mentor: Ted Bateman, Ph.D.
Team: Musculoskeletal Alterations



*In my opinion, the most important
part of the application is the
cover letter. You need to convey
your interest, your qualifications,
and your research intent and
potential in a short space.
So be creative but succinct. ~JW*

Once I had those values for guidance, I asked my post-doctoral mentor to sit down with me and develop a package that would give me the best chance for success. My advice is do not be timid with this process and know that if you do not ask for something, it will not necessarily be provided. **QN:** What has been the most challenging thing about becoming a faculty member? **JW:** As a postdoctoral fellow, we may manage some students while helping write grants and, of course, performing research. But the responsibilities of a PI are both mostly hidden and very different from the tasks of a research fellow. Thus I don't feel I truly appreciated or even understood this position until I became a PI. Running a laboratory is very similar to managing a business, and we are responsible for all aspects of success. Our daily tasks are vast and varied, with the following being an incomplete lists of such responsibilities: managing research priorities; managing multiple research projects and teams; managing staff; managing collaborations; preparing manuscripts and proposals; performing committee work; developing and delivering teaching and scholarly lectures; attending seminars; developing and managing budgets; and "putting out fires" (daily). While I had helped write scientific proposals, I had never developed a budget, considered indirect costs, dealt with subcontracts, etc. And certainly I was not prepared for the politics of academic work. But I love this job and my laboratory. And I have fantastic mentors to whom I listen. **QN:** How did the NSBRI postdoctoral fellowship help you prepare for this job? **JW:** The experience was very helpful. The NSBRI postdoctoral fellowship was really the first time I developed and managed my own independent study, which is a major component of my current position. Also, NSBRI facilitated my entrance into the "Space Life Science" community of researchers and administrators. This experience helped me realize that we must embrace collaboration in order to be successful, and the only way we can gain collaborators is to actively get to know researchers with shared interests then be appreciative of their efforts. **QN:**



Jeff and one of his students working in the lab

Any specific advice you can give senior postdocs looking into applying for a faculty job? **JW:** I have two pieces of advice: 1. Start developing your desired package now, including start-up, salary, and laboratory expectations/requirements. 2. Pick up the phone. The NSBRI postdoctoral fellowship will give you the opportunity to make connections at meetings or through research collaborations.

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teaching, where you might want to live or what area of the country (or world!) appeals to you, and what kind of institution could help you reach your professional goals and career objectives: do you see yourself at a top-rated medical institution or would you be happier at a smaller university or college? There are many resources for faculty job searches, including web sites of specific academic institutions, job announcements sent to and posted by your current department, mentors and collaborators, links to announcements in scientific journals, society websites, or other publications associated with academia. For example, numerous academic job opportunities are posted in Science (sciencecareers.sciencemag.org) and The Chronicle of Higher Education (chronicle.com/jobs). Best of luck in your search! ■

The Faculty Job Application

Remember, there are hundreds of people like you applying for the same job. Make a good first impression! Be concise, know what the search committee is looking for, and make sure there are no grammatical errors in your application materials.



Cover Letter

Your chance to impress the faculty search committee!

Your letter should be specific for the job to which you are applying; this means you will need to write more than one letter if you are applying for several different jobs. Read the job announcement carefully and understand the qualifications for which the committee is searching. The letter should begin with a brief introduction and statement specifying the position. Next, include details regarding your research accomplishments and future research plans; include teaching experience, if the job has a teaching component, and any relevant additional skills.

Also include: reprints, letters of recommendation, and a teaching statement or philosophy. Each announcement should specify whether or not it requires these documents. Read it carefully!

CV

Your CV should summarize your career experiences and accomplishments. For positions where teaching is a large part of the job, your teaching experience needs to be prominently displayed. For positions that are primarily research-based, your research accomplishments, including publications, should be listed. Organize your CV so that all necessary information is easy to find. Use headings, bulleted lists, or bold font to highlight specific accomplishments.

Research Statement

Here you will describe your research plans to individuals of varying scientific backgrounds. Include information about the problem you are targeting, your work to-date (including postdoctoral experience), and your future research goals. Include any possible department members with whom you could collaborate.

Thoughts from the Top

Learning to prioritize your academic responsibilities to build your CV

Rachael D. Seidler, Ph.D.

Throughout my career, I have struggled with the reality that the job is never done when one is an academic! I have learned to balance my various teaching, research, and service roles by following the two simple goals below.

The first is to achieve what I have to get done by set deadlines. This requires a good understanding of how one will be evaluated—what should my postdoctoral CV look like in order to be competitive on the job market? Roughly how many publications and grants should I have to attain tenure?

The second goal is to prioritize my research questions so that I am answering the questions that I find to be the most interesting. Research success typically depends on persistence and dedication, and if one is conducting research that they are passionate about then it makes staying focused much easier. I believe that academics should approach their professional activities with the same planning and focus. For example, if mentoring undergraduate students in your laboratory excites you, then volunteer for the senior honors program committee. Don't wait to be asked! While service is an expected part of academic life, it can be rich and fulfilling. It can energize you, it can provide new networking opportunities, and it can lead to new approaches for problem solving. Just don't over commit yourself.... Remember to keep in mind the first goal that I outlined above. And if you are someone that has difficulty saying no when they are asked to do too many things, you can always say, "my mentor told me that I need to say no". ☺



Dr. Seidler's two girls.



control and skill acquisition, in addition to the interaction between structural and functional brain changes with age and motor performance.

Dr. Seidler is an Associate Professor in the Department of Psychology and School of Kinesiology and is the Associate Director of the Neuroscience Graduate Program at the University of Michigan. She is also the Team Leader for NSBRI's Sensorimotor Adaptation Team.

Her research areas include the cognitive neuroscience of motor

Thoughts from the Top

This section is a quarterly column written by mid-career and senior-level scientists containing advice and tips for post-docs and early career scientists.

Have an idea for a discussion topic? Want to hear from a certain senior scientist?

Send your suggestions to hackler@bcm.edu.



Fellow Spotlight



Michael Lee, Ph.D. 2012 First Award Fellow

Project Title:
Assessing the impact of chronic sleep restriction on sleep and performance-associated regional brain activation using near infrared spectroscopy

Harvard Medical School and Brigham and Women's Hospital
Division of Sleep Medicine

Human Factors and Performance Team

Mentors: Elizabeth Klerman, M.D., Ph.D. and Gary Strangman, Ph.D.



QN: Can you describe your NSBRI-funded research? **ML:** I study the impact of chronic sleep restriction and acute sleep deprivation on sleep and performance-associated regional brain activation using near infrared spectroscopy. Astronauts and supporting ground crew are at elevated risk for sleepiness-related accidents as a consequence of acute and chronic sleep loss and circadian misalignment from their extended work hours and shifting work schedules. A potential approach to reduce this risk is use of objective, non-invasive monitoring technology. Near-Infrared Spectroscopy (NIRS) is a relatively new technology that quantifies hemodynamic changes in oxygenated and deoxygenated blood within the brain that reflect alterations in regional brain activity. Sleep deprivation reduces activation in the prefrontal cortex (PFC), a brain region important for cognitive performance and executive function. We are testing whether ambulatory NIRS monitoring of PFC activation would be an effective monitoring tool for decreased objective performance and/or focused wakefulness. Preliminary assessment of the block-averaged hemodynamic response to PVT trial presentations reveals a rise in oxygenated hemoglobin followed by a subsequent return to baseline, while deoxygenated blood shows an inverse response. Analyses of the effects of circadian timing and sleep loss on PFC hemodynamic response to PVT and KDT tasks are ongoing. Monitoring PFC activity with NIRS may be an objective, non-invasive and cost-effective method for monitoring and detecting decreased alertness. The ambulatory NIRS approach may be applicable in shift-working populations at risk of sleepiness-related accidents including firefighters, pilots, health care providers, truck drivers and military personnel. **QN:** What are your future plans and career goals? **ML:** I aspire to be an academic researcher with a faculty appointment. **QN:** Any fun facts about your research? **ML:** The study I was working on was featured on ABC Nightline News, World News Tonight with Diane Sawyer, and the Rachael Ray Show. (**QN:** You can see Michael in action at these links: <http://abcn.ws/leeud1D> and <http://abcn.ws/leeumC6>) **QN:** Can you share some advice for current or future postdocs about your experience thus far? **ML:** For current postdocs, take advantage of the opportunity to network and learn from the

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Fellow Spotlight



Brandon Macias, Ph.D. 2012 First Award Fellow

Project Title:
Altered ocular structure/function
and mitigation of peri-optic nerve
edema during simulated
microgravity

University of California, San Diego
UCSD Medical Center
Orthopaedic Surgery
Cardiovascular Alterations Team
Mentor: Alan R. Hargens, Ph.D.



QN: Can you describe your NSBRI-funded research? **BM:** My current research is to measure eye and brain pressures (translaminar pressure) during simulated microgravity and determine the impact of the head-ward fluid shift on ocular structure and function. Additionally, we work to determine the efficacy of lower body negative pressure to counter these simulated head-ward fluid shifts and associated changes in intracranial pressure (ICP), intraocular pressure (IOP), and ocular structures and function. Our recent data demonstrate that short duration exposures to HDT increase IOP and ICP significantly and further, that LBNP counteracts these elevations in IOP and ICP.

Therefore, spaceflight countermeasures that simulate hydrostatic pressure gradients may mitigate vision problems.

QN: What are your future plans and career goals? **BM:** My long-term career goal is to hold a professorship at UCSD and support the University's mission of academic excellence, equity, diversity, and inclusion. **QN:** Any recent recognition for your work? **BM:** We recently had a manuscript published and we have two others currently *in press*. I also received the American Physiological Societies Minority Travel Award to attend the Annual

Experimental Biology Meeting in April. **QN:** Can you share some advice for current or future postdocs about your experience thus far? **BM:** Determine those PIs currently conducting space life science research and identify possible mentors early. Consider identifying a co-mentor, especially if your primary mentor's field is not space life science research. Try and visit the lab and speak with students about current projects and lab productivity. Develop a strong educational outreach and professional development plan. You can discuss specific aspects of the application with current and former fellows by requesting a phone interview with them. **QN:** When you're not in the lab studying ICP and IOP, what occupies your time? **BM:** I enjoy hiking and surfing. ■



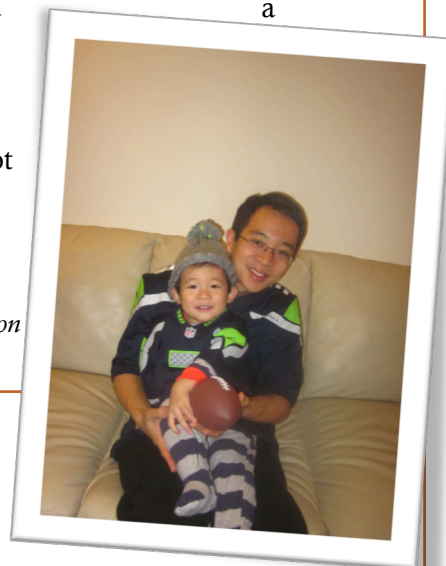
Brandon and HaOne Nieto.



Image from NASA's Spitzer Space Telescope. NASA/JPL-Caltech/ Laboratorio de Astrofísica Espacial y Física Fundamental

Lee cont. from Page 6. NASA and NSBRI community. Time and resource management become increasingly important as a scientist progresses through his career (especially with parenthood on the horizon). There are only so many hours in the day (sleep loss is not a healthy option!), so it is important to define your career goals and prioritize the necessary steps to achieve them. For potential applicants, the first award program is an outstanding opportunity and I strongly encourage interested fellows to apply. Review and understand the NASA gaps; consider a project that is interdisciplinary; find a previous application to review—finding a successful application is even better. Propose a project that can be completed within 2 years, by the end of the fellowship, and ask colleagues to review your application. **QN:** When you're not in the lab, what occupies your time? **ML:** My wife I enjoy traveling with our two-year old son; he has been to Hawaii, Seattle, Boise, and around the Northeast. This spring, we will be visiting Japan. ■

Michael and his son cheering on the Seattle Seahawks!



Willey cont. from Page 3. Both established and young faculty members will want you to move into a faculty position, so contact your connections and inquire about open positions, even if none are posted. Let those people know you are looking for a position, and they will then think of you when opportunities arise. You must be assertive in order to stand out from other applicants. Your job is to show as much interest as possible for every potential position, and taking the time to make a phone call sends a clear message of interest. **QN:** Thanks for the helpful advice, Jeff! Best of luck in your future academic endeavors! ■

Comments, Questions, & Suggestions

This is the second edition of our quarterly newsletter! We intend to publish four editions each year, one in the Winter, Spring, Summer, and Fall. The current NSBRI Frist Award Fellows created this newsletter and participated in editorial duties.

If you have suggestions for future newsletter topics or know a First Award Fellow or other NSBRI researcher who you would like to see featured here, please let us know!

Send any comments, questions, or suggestions via email to Catherine Davis, Newsletter Editor at cdavis91@jhmi.edu or to Amanda Smith Hackler, Ed.D., Head of Career Development and Outreach at hackler@bcm.edu.

Space Fun: What is a Black Hole?

Take an interactive voyage into the mystery of black holes with the scientists who operate the Hubble Space Telescope.



Image: screenshot from the Hubble Telescope site: http://hubblesite.org/explore_astronomy/black_hole

Calendar of Events

February 10-11th 2014

- Unraveling the VIIP Enigma: An Exploratory Symposium held at NSBRI Headquarters, Houston, TX
- Attendance: by invitation only

February 11-13th 2014

- NASA HRP Investigators' Workshop at Moody Gardens Hotel and Convention Center, Galveston, TX
- Behavior, Health, and Performance Working Group meeting (Feb. 11th)
- NASA Space Radiation Investigators' Workshop (Feb. 11-13th)

February 14th 2014

- Abstract submission deadline for the 40th Scientific Assembly of the Committee on Space Radiation (COSPAR) held in Moscow, Russia (Aug. 2nd-10th)

