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Office of Education, Division of Intramural Research
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FELLOWS NEWSLETTER

The Fellows Newsletter is published monthly by the Office of Education, Division of Intramural Research, National Heart, Lung, and Blood Institute and distributed to NHLBI DIR members to promote the interest of DIR Fellows.

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From the Director of the Office of Education

On page 2 of this issue, we congratulate Dr. Takeshi Sakamoto on his receiving a Pathways to Independence Award (K99/R00). He is the first NHLBI Intramural Fellow to receive this prestigious award, and I hope he is not the last. The K99 is only one of several grant transition mechanisms available to senior NHLBI fellows to start their own laboratories outside of NIH. NHLBI has a K22 award, with similar goals to the K99, and several NIH fellows have left NHLBI with K22 funding. Similarly, NIH fellows have received startup funds from the American Heart Association through their Scientist Development Grant mechanism. Finally, fellows from developing countries have received GRIP grants, which provides funds to return home. More information on each of these grant mechanisms is provided on the Office of Education web site.

In his interview, Take stresses two important needs in grant writing: 1) preliminary data and publications and 2) advance preparation. The next deadline for the K99 and K22 grants is October 12th, and the next deadline for the AHA grant is in January. It is not too early to begin to meet these deadlines. The first step is to attend a presentation on the Fundamentals of Grant Writing. After that, you should participate in the intensive grant writing workshop that results in the preparation and submission of your application. The next presentation is scheduled for **August 2nd**. I look forward to your participation.

Life After NHLBI: Aarif Khakoo, MD, MBA

Interviewed by
Jessica Llewellyn, MBA

This month's interview comes from Dr. Aarif Khakoo, a former clinical fellow in Dr. Toren Finkel's lab. This former Hematology Branch fellow now works as a physician scientist at the University of Texas MD Anderson Cancer Center.

JL: *So what do you do at the MD Anderson Cancer Center?*

AK: I wear two hats: I have my own lab and still see patients. I would say that about 20% of my time is spent seeing patients with cancer and heart disease. We actually get to see a very skewed patient population- those with both cancer and heart disease.

In the lab, my lab research is focused on how certain cancer drugs cause heart problems. Molecularly

(cont'd p.2)

Takeshi Sakamoto Awarded Pathway to Independence (K99/R00) Grant

Congratulations to **Take Sakamoto**, a Research Fellow in Dr. Jim Sellers' lab, who has been awarded a K99/R00 Pathway to Independence NIH Grant. This grant will allow Take 1-2 years of additional training in NHLBI, and then will provide him with 3 years of funding to start up his independent laboratory outside of NIH.

In an interview, Dr. Sakamoto gives his impression of the grant writing process and where he plans to go from here.

JL: *What key issues/ challenges did you face with this grant?*
TS: Two things: First, problems with the English language (both writing and speaking). Second, I've never written a grant in English before. The structure is different. Dr. Geller really helped a lot in determining what goes where.

JL: *How long did the process take?*
TS: I started thinking about writing this for a year. I began in my 5th year of fellowship (it was my last chance). I read a lot of papers and tried to get a lot of preliminary data to figure out what to do. When I finally decided to start writing, it took about 8 months to complete. I think a lot of that was because of my problems with English.

JL: *What research did you focus on and why did you choose to pursue/ publish this kind of research?*
TS: My research is on in vitro single molecule motility. I chose to focus on it because I have a real advantage in fluorescence techniques for single molecule imaging. I published more than 10 articles on it. Also, it was difficult to get a lot of preliminary data for the other fields I was looking into (cell biology, etc).

JL: *What kind of job will you try to get now that you have this grant?*
TS: I want an academic position and have my own lab in a US university. I really want to be independent and "swim the big sea". I think this grant will really help me with that.

JL: *What advice do you have to give other fellows wanting to get this kind of grant?*
TS: Get an exciting understanding of preliminary data and set up your specific aims. I would definitely say to start writing earlier. Also, make sure that you have a strong team of grant advisors. NIH has many well established scientists to help review your grant – like Drs. Geller, Adelstein, and Sellers. But you also have to be sure to have non-NIH reviewers to give a different perspective. You can always ask your mentor for advice on people outside of NIH who would be right for you.

JL: *So, what's next?*
TS: Hmm. The grant process is hard – but maybe I'll try again for another one…

(Interview cont'd)

targeted cancer drugs that also adversely effect the heart can reveal to us new functions of molecules whose function in cardiac biology have been heretofore unappreciated. Understanding the role of these molecules may be helpful to develop strategies to prevent chemotherapy and other forms of human heart disease.

JL: *What was the hardest thing about transitioning from being a fellow to a physician scientist?*
AK: Trying to balance all the different demands, such as clinical, administrative, and lab demands and figuring out how much responsibility to take in each different arena.

JL: *What advice do you have for fellows wanting to transition into being a physician scientist?*
AK: You definitely want to be in a position where you're going to be in a supportive environment - both with research and financially. Having protected time to do research and really get off the ground will be critical to your success, especially as a young scientist.

JL: *So how does one get this type of supportive environment in their first position outside of post-doc?*
AK: Don't leave the lab too early. Make sure you have the things that people want to look at and make you a more marketable and believable candidate. Papers and grants will definitely help you do this. Try to have at least one to two good papers before your fellowship ends as this will prove that you are a person who can produce. In addition, you'll want to start looking into what types of grants

you can secure at the very beginning of your fellowship. If you are looking into academic medicine, you'll want to look into the AHA grants right away - even if you don't have a lot of preliminary data - they really don't require it. Lastly, I would say to make sure you have a mentor who understands your career goals and is willing to push you in the right direction.

JL: *What was the best thing about your fellowship at NIH?*
AK: My mentor was awesome. I learned a tremendous amount from him. He set very high standards for himself, which translated to everyone else in the lab. He really taught me a ton about research and even about how to think. Sometimes I sit and think: what would Toren think about this? To this day, he is still completely supportive of me.

JL: *What skills did you need to successfully perform at your present job that you wish you had acquired during your training years?*
AK: Budgeting. It's something that you really don't really think that much about at NIH, but when you leave, it can be kind of a rude awakening. It all ties back into getting grants. Remember that running a lab is like running a small business - just with a different bottom line.

JL: *What gets you through the day?*
AK: Remembering my patients - especially when things aren't going so well. I remember that there is a reason for all of this. That the end product is to develop things that will help people. I know that there is a higher goal - and that's what gets me through the day.

You can contact Dr. Khakoo at aykhakoo@mdanderson.org.

New NHLBI Fellows

Joshua Anzinger, Ph.D. recently joined the Cardiology Branch as a postdoctoral fellow under the mentorship of Howard Kruth. He received his Ph.D. in Immunology and Microbiology from Rush University Medical Center in Chicago, Illinois. While at NHLBI he will be working on cholesterol metabolism.

Francisco Leyva, M.D., Ph.D. is a Visiting Fellow in the Cardiology Branch under the mentorship of Dr. Howard Kruth. He received his MD from the University of Peru and his Ph.D. in Toxicology from the University of Montana. While at the NHLBI, Dr. Leyva will be looking at pathways for cholesterol metabolism.

Colin Berry, M.D., Ph.D. is a visiting fellow in the Cardiology Branch under the supervision of Dr. Robert Lederman. He received his MD at the University of Glasgow and his Ph.D. in Basic Vascular Science from the University of Glasgow (Scotland, UK). While at the NHLBI he will be working on MRI-guided approaches for cardiac interventions and MRI evaluation of ischemic myocardial injury (edema, collaterals in pre-clinical and clinical settings.)

Zhen Zhang, M.D., Ph.D. is a Visiting Fellow in the Laboratory of Developmental Biology under the supervision of Dr. Cecilia Lo. He received his M.D. from Shanghai Medical University and his Ph.D. from Baylor College of Medicine. While at the NHLBI, Dr. Zhang will be working on cardiac development and ENU mitogenesis techniques.

Kee Kwang Kim, Ph.D. is a new visiting fellow in the Laboratory of Molecular Cardiology under the mentorship of Dr. Robert Adelstein. He received is Ph.D. in Biochemistry from Chungnam National University in Korea. While at the NHLBI Dr. Kim will be working on the function of non-muscle myosins.

Career Development Seminars taking a summer break

There will be no career development seminars in July and August. The programs will resume in September on the 3rd Tuesday of every month at noon. The career development seminar planning committee has been working on an interesting line- up, so get ready!

2007 Fellows Retreat Pictures now online!

Visit the **OE Website** under **"NHLBI Fellows Retreat"** to view snapshots of the scientifically good time had by all.

Recent Publications by NHLBI Fellows

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Zhang, F., Yim, Y. I., Scarselletta, S., Norton, M., Eisenberg, E., & Greene, L. E. (2007). Clathrin adaptor GGA1 polymerizes clathrin into tubules. J. Biol. Chem. 282, 13282-13289.

Jessica's Corner

Hello Science Fans and readers of all other types! Earlier this month, my friends and I took an impromptu trip to Ocean City, Maryland - my first time ever going. We had a great time amidst the sun, sand and surf. It's been a while since I've actually swam in the ocean and enjoyed the beauty of the powerful waves. I have to say - it was quite intimidating. At first, I was pretty freaked out - I panicked at the sight of those huge waves and found myself stalwarted in fear or running way from them. When I tried to stay in place, I found the waves would crash upon me and drag me back to shore - kicking and gasping for air all the way. I later got tired of this and learned to jump over the waves as they came - but still there was that fear of that megawave. My friends encouraged me to shed my fear of the wave by not running away or letting it wash over me - but by going through it. Timid at first, I looked that monster wave right in its eye (or well... You know..) and dove right in. What I found was calming and powerful - not fear by any means :) It was TOTALLY AWESOME!

Being the inspiration junkie that I am, I of course found this to be a great metaphor for life. My theory is that in life you have many choices. You can remain afraid and static and let the world crash upon you, dragging you back to the start. OR you can choose to do something about it. You can rise above and float on top - or you can find a way to get through it. What you'll have in the end is the courage and the knowledge that you were able to take something scary and work through it. That is one of the best tools you can give yourself.

So that's my little lesson of the month. I hope you remember a little piece of this while you're at the beach this summer. Oh and Happy belated 4th of July!