

June 2007



Office of Education, Division of Intramural Research National Heart, Lung, and Blood Institute **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

The primary purpose for being a fellow here at NHLBI, at whatever level (summer, post-bacc, graduate student, postdoctoral or clinical), is to obtain the training that you need to get you to the next level of your career. One prerequisite for achieving your goal is to actually a) identify what you need to move ahead and b) figure out how to get the training that you need. Thus, while research skills are an essential feature, other skills may be equally (or more) important depending upon your career goal.

For example, communicating in English is essential, both written and orally as parts of casual conversation or professional talks. Improvement in English communication can be achieved both by formal and informal means. Informal exercises would include talking about science in the laboratory; while more formal means could be making lab or journal club presentations. You could even take one of the classes in spoken English or English writing. My office can arrange classes for any fellow that feels they need such help.

Another essential skill is networking, both for scientific and professional advancement. Networking experience is achieved by attending seminars and interest group meetings, and attending the NHLBI retreat and other scientific meetings. Supervisory and mentoring skills are also key to success in many different careers. There are many opportunities for fellows at all levels to obtain these. Likewise, for those of you interested in a teaching career, we can help you obtain teaching experience.

The key to obtaining these skills is that you recognize that you alone have the ability to decide what skills you need. There are formal assessment tools on the OE web site that can help you make these choices. Once you do identify your needs, our office is always available to assist you in filling them.

Interview with 2007 Lenfant Award Winners

By
Jessica Llewellyn

Congratulations to Drs. Robert Burton and Ye Che, who are the most recent recipients of the NHLBI Lenfant Award. This award, named in honor of the former Director of NHLBI, is given to NHLBI fellows in recognition of
(cont'd on p.2)

Meet Virginia: Reflections of the 2007 Post-bacc Poster Day

By
Virginia Liu

The Spring Post-baccalaureate Poster Festival was a great opportunity to meet fellow pre-IRTAs and share our research progress in our respective labs. There were over 200 boards being set up for our posters
(cont'd on p.3)

The Lenfant Award - Decoded

Thank you to Dr. Julie Donaldson, chair of the Lenfant Fellowship Selection Committee, for this description of the Lenfant Award process, as provided in last year's June edition of the Fellows Newsletter.

What are the Lenfant Awards? "Lenfant Fellowships are competitive awards given to outstanding postdoctoral fellows in the NHLBI Division of Intramural Research (DIR). The fellowship was named after Dr. Claude Lenfant, a former Director of NHLBI (1982-2003) who was a strong supporter of excellence in the NHLBI research program. The intent of this program is to recognize those fellows who have demonstrated an ability to perform outstanding research, and have a breadth and depth of understanding that indicates their likely success in a research career."

What are the benefits to winning a Lenfant Fellowship? "The recipient of the Lenfant Fellowship receives an increase in

salary support (10%). Lenfant Fellows are also honored by presenting their research findings to DIR Investigators and Fellows."

What is the process for applying for a Lenfant Fellowship? "Nominations for the Lenfant Fellowship are initiated by the Principal Investigators who submit a memo describing the research accomplishments and role played by the fellow. Also submitted are the fellow's C.V., statement of research accomplishments and future goals and a reprint (as a pdf) of a high-quality, peer reviewed publication. The Lenfant Fellowship Selection Committee (Drs. Julie Donaldson, Jay Chung, Herbert Geller, Rodney Levine, Vince Manganiello, and James Sellers) interviews each candidate to probe for depth of understanding of the candidate in their present and future research areas."

When are applications reviewed?

Applications are reviewed twice a year (May 1 and November 1). "

permeable molecules may have applications as cellular probes and chemical therapeutics, such as drugs."

This third year visiting fellow from China, is the 4th winner in Dr. Bernard Brooks' Computational Biology group to receive this award. He follows the winning lab tradition behind Drs. George Stan, Lee Woodcock, and Wenjun Zheng. Dr. Che received his Ph.D. from Washington University in Molecular Biophysics and hopes that this award will help him to find a tenure track position – although he, too, is keeping his options open. He someday aspires to make a career out of the knowledge he has learned from both his post-doc experiences at NIH and his doctoral research.



2007 Lenfant Award Winners
Dr. Robert Burton and Ye Che.

(*Lenfant Winners, cont'd*) their research achievements early in their career. The winners were selected by a committee of NHLBI Faculty chaired by Dr. Julie Donaldson (see column above).

Dr. Burton's winning research focuses on the development and application of nuclear magnetic resonance (NMR) to understanding the physiology of the blood clotting protein fibrinogen. [This research has] shown that the alphaC domain of fibrinogen is structured and plays a prominent role in the coagulation process most likely through oligomerization.

Originally from Idaho, Dr. Burton is presently a second year post-doc in Dr. Nico Tjandra's lab. He received his Ph.D. from Purdue University in Biochemistry and Biophysics and also holds an M.S. in Organic Chemistry. This award winner

says that he is "looking forward to continuing these really exciting projects and would like to someday continue them in a faculty position." He encourages fellows who are trying to win this award to work hard and focus on what [they] are doing, but reminds everyone to "keep your mind open to other possibilities." Robert currently lives in Chevy Chase with his 5 year old cat, "Rusty."

The winning research for our next awardee, Dr. Che, "uses computing and chemical synthesis to explore fundamental problems in recognition and catalysis inspired by the biological world. For example, [he has] designed small molecules capable of mimicking protein surfaces recognized by other macromolecules, active sites of native enzymes, and transition-state of enzymatic reactions. These cell-

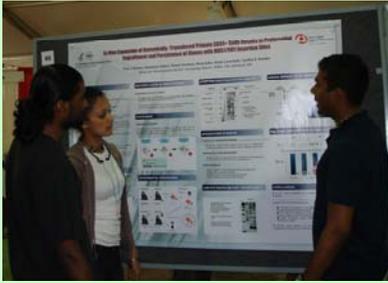
Welcome 2007 Summer Interns!

They're here! Join the Office of Education in welcoming all of our summer students in 007 - the year of James Bond. This year, we have over 70 students from all over the country and even a few international summer volunteers. These students have come to us by way of the BRPTUG, BESIP, ORWH, and veterinary medicine programs. We hope that you take the time to greet them, guide them, and really encourage their passion and commitment to the field of science.

A complete list of summer interns can be found on the OE main page at:

dir.nhlbi.nih.gov/oe/summer2007

Post Baccalaureate Research Festival



Post Baccs Ajay Thomas and Kosha Soneji admiring Theo Gomes' poster.

On May 9th, 8 of our NHLBI post-baccs presented their work at the post-bacc research festival. Cheers to the following pre-IRTAs for presenting:

Leah Carpenter, (LMI) *The Role of Regulatory T Cells in Acetaminophen-induced Liver Injury.*

Colleen Donovan, (LMI) *Expression of B Lymphocyte-induced Maturation Protein 1 in T Cells.*

Theotonius Gomes (HB) *Ex Vivo Expansion of Retrovirally-transduced Primate CD34+ Cells Results in Preferential Engraftment and Persistence of Clones with MDS1/EV11 Insertion Sites*

Nwakaego Inyamah, (LB) *Structural Analysis of Selenium Binding Protein (Sbp) from Methanococcus vannielii*

Elinor Lee (HB), *The Effect of Rituximab and Fludarabine on CLL cells.*

Jonathan Lin, (LCE) *Characterizing Thigh Muscle Dynamics in Knee Flexion-Extension Using Real-time Tagging MRI.*

Virginia Liu, (VMB) *Anesthetic Effects on Nitric Oxide Synthase Activity and Hemodynamics*

Helena Mora-Jensen, (HB) *Inducing Resistance to BZM in Mantle Cell Lymphoma Cell Lines.*

(Post-Bacc Festival, cont'd) on the day of registration. Everything came alive the next day when the vendors, the presenters and their posters, and the greater NIH community all came together for several hours under the big tents to participate in the event. Although I had the opportunity to attend the NHLBI Fellows Retreat earlier this year, the post-bacc festival was unique in that it brought together all institutes and encouraged post-baccs to share "in-progress" research.

My poster, entitled "Circulating blood cell versus vascular endothelial cell contributions to intravascular eNOS-derived NO•", was a product of serendipity in science. I had originally registered to present on anesthetic effects on NOS. But as the poster day neared, I found that I had little data I felt worth presenting so I actually called in to cancel my registration. However, when Ms. Debbie Cohen (the event's coordinator) heard my reason for wanting to back out, she encouraged me consider presenting whatever in-progress work I might have. I was still dubious, but as luck would have it, my second project picked up, allowing me to have a poster I was excited to present.

I was amazed by the diversity of presenters and research topics. While, I graduated from UCLA and moved out to begin my fellowship in translational research, I found that other IRTAs were from different universities nationwide and various backgrounds.

Manning my poster, I was approached with interesting questions. A neonatologist came by at one point and told me he was curious about our research with NO because he was using NO inhalation therapy for babies. This offered me perspective on how my bench research could be potentially translated to bedside application. As an aspiring pediatrician, this offered a sense of gratification. Listening to other

presenters share their research, I also found myself asking others questions about their work. I even became friends with a girl who was presenting a poster with an elfish-looking person on it. She explained that the "elf" was actually a progeria patient whose strange appearance was because of premature aging. Friendship initiated by scientific questions? Only at the NIH!

I've learned that communication is key for successful research. In fact, I presume the very purpose of localizing all these institutes of the NIH into one area is to facilitate discussion and sharing of research to enhance progress. The poster festival was an ideal environment for this, integrating fun into scientific discussion. Being lab rats (metaphorically), it is easy to fall victim to symptoms of lab hermitage i.e. long work hours, more socializing with mice than people, forgetting the outdoors exist etc. But events like the Poster Festival provide us an opportunity to reach out, communicate and thus get the full research experience as a post-bacc and at any level of fellowship.

Virginia Liu is a post-bacc fellow in the Vascular Medicine Branch.



**Come to the next
Career Development
Seminar!**

**June 19th @ Noon
10/7S235A**

**Presentation on
"Combining a Teaching
& Research Career"**

New NHLBI Fellows



Dr. Jonathan Lam is a new postdoctoral fellow in PCCMB under the mentorship of Stewart Levine. He received his Ph.D. in Haematology from the Imperial College of London in the UK. While at the NHLBI, Dr. Lam will be working on ARTS I and the regulation of TNF

in vivo.



Dr. Craig Eyster is a new postdoctoral fellow in the Laboratory of Cell Biology. He will be working under the mentorship of Dr. Julie Donaldson. He recently received his Ph.D. from the University of Oklahoma and holds and MS in Biochemistry. Dr. Eyster will be

working on the interaction between ARF and SNARES during his stay at the NHLBI.

Recent Publications by NHLBI Fellows

Graf, S. A., **Calado, R. T.**, & Young, N. S. (2007). PTPN22 620W allele is not associated with aplastic anemia. *Am. J. Hematol.* 82, 291-292.

Islam, A., Shen, X. Y., Hiroi, T., Moss, J., Vaughan, M., & Levine, S. J. (2007). The brefeldin A-inhibited guanine nucleotide-exchange protein, BIG2, regulates the constitutive release of TNFR1 exosome-like vesicles. *J. Biol. Chem.* 282, 9591-9599.

Kempler, K., **Toth, J.**, Yamashita, R., Mapel, G., Robinson, K., Cardasis, H., Stevens, S., Sellers, J. R., & Battelle, B. A. (2007). Loop 2 of Limulus myosin III is phosphorylated by protein kinase A and autophosphorylation. *Biochem.* 46, 4280-4293.

Koizumi, K., Higashida, H., **Yoo, S.**, Islam, M. S., **Ivanov, A. I.**, Guo, V., **Pozzi, P.**, **Yu, S. H.**, Rovescalli, A. C., Tang, D., & Nirenberg, M. (2007). RNA interference screen to identify genes required for Drosophila embryonic nervous system development. *Proc. Natl. Acad. Sci. U. S. A.* 104, 5626-5631.

Lindh, R., Ahmad, F., Resjo, S., James, P., **Yang, J. S.**, Fales, H. M., Manganiello, V., & Degerman, E. (2007). Multisite phosphorylation of adipocyte and hepatocyte phosphodiesterase 3B. *Biochim. Biophys. Acta Cell Res.* 1773, 584-592.

Lundqvist, A., Mccoy, J. P., Samsel, L., & Childs, R. (2007). Reduction of GVHD and enhanced antitumor effects after adoptive infusion of alloreactive Ly49-

mismatched NK cells from MHC-matched donors. *Blood* 109, 3603-3606.

Scheinberg, P., Fischer, S. H., Li, L., Nunez, O., Wu, C. O., Sloand, E. M., Cohen, J. I., Young, N. S., & Barrett, A. J. (2007). Distinct EBV and CNW reactivation patterns following antibody-based immunosuppressive regimens in patients with severe aplastic anemia. *Blood* 109, 3219-3224.

Scheinberg, P., Melenhorst, J. J., Hill, B. J., Keyvanfar, K., Barrett, A. J., Price, D. A., & Douek, D. C. (2007). The clonal composition of human CD4+CD25+Foxp3+ cells determined by a comprehensive DNA-based multiplex PCR for TCRB gene rearrangements. *J. Immunol. Methods* 321, 107-120.

Jessica's Corner

Greetings and salutations my fine fellows and fellowettes... And especially my interns! Welcome aboard! I know that I certainly am glad to have you!

This month was actually a pretty big month for me. I graduated! That's right - your program coordinator is the official holder of an MBA. I want to share with you a part of the speech that I had prepared for the graduation ceremony. Although I wasn't selected to give this presentation, I still feel that many of you and those you know who have graduated can benefit from this. So here goes:

"Throughout my graduate program, students were taught to find the challenges, look for ways to solve them, and predict the opportunities. I will never forget my first grad professor, Dr. George Barbosa. He never liked using the word "problems". Instead, he was often quick to chime in and say: "No, no, we call them challenges. Problems seem hopeless, but challenges can be overcome." This idea has really helped to shape the rest of my MBA program and has helped me to see my world in a different light. Life is one big struggle. You have work, class, family commitments, and more. There are the never-ending bills and obligations. And, as with this university program, at times you just want to quit. You just want to give it all up and hide under your bed.

But when those days come, I ask you to remember what you learned here. Remember that life is just one big challenge ... and it CAN be overcome. You WILL find a way to make it all work and perceive the greatest opportunity of all: Happiness."

Congratulations 2007 Graduates!