

September 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.

Office of Education, DIR, NHLBI  
Herbert M. Geller, Ph.D., Director  
Jessica M. Llewellyn, MBA, Coord.  
Building 10, Room 2N242  
[DIREDucation@nhlbi.nih.gov](mailto:DIREDucation@nhlbi.nih.gov)  
Tel: 301-451-9440

### Fellows Advisory Committee

Rodrigo Calado, HB  
Leticia Cano, VMB  
Kang Chen, LBC  
Lee Ann Cohen, LCB  
Felipe Lisboa, LMI  
Hongjun Liu, CB  
Mark McDermott, LKEM  
Liyang Pang, CB  
Smita Sampath, LCE  
Amar Sethi, VMB  
Sruti Shiva, VMB  
Yelena Shmist, LMC  
Yasuharu Takagi, LMP  
Gabriela Viteri, LB  
Katherine Wood, VMB  
Steven Yee, LMI  
Heesuk Zang, LDB  
Jing Zhang, PCCMB

### ***From the Director of the Office of Education***

While the weather continues to trick us into thinking it's August, schools are back in session, Fall will be here in just one week, and the new fiscal year begins shortly thereafter. The Office of Education has a full lineup of events scheduled for the coming year, and we hope to see you at many of them.

Our Career Development Seminar series continues to bring in outstanding individuals who have chosen to pursue their scientific careers in different, sometimes non-traditional ways. The first one in September will feature the topic of Community College Teaching, while later speakers will talk about careers as a technical services representative, as an overseer of pharmaceutical standards, and in bioethics. These are all held at noon on the third Thursday of each month.

The Fellows retreat will be held in downtown Annapolis, Maryland, on March 13-14, 2008. The program will be somewhat different this year, emphasizing scientific achievements, with two poster sessions. Our after dinner speaker will be Dr. Nina Federoff, who has just taken the position of Science Advisor to the Secretary of State. Dr. Federoff has had a long-standing interest in career development and science policy. We will have three major scientific talks as well. In addition, we plan to a tour of Annapolis, the state capital, which is home to the United States Naval Academy as well as the current capital building, which was in use at the time of George Washington becoming the first American President. As usual, winners of the poster presentation awards will receive a significant increase in their stipends.

We look forward to seeing you at these events, but also encourage you to drop by for an informal chat about your career issues and also to make suggestions as how we can improve the quality of life for NHLBI fellows.

---

### ***How Long Should a Postdoctoral Fellowship Last?***

By  
Herbert M. Geller, Ph.D.

**T**his question is asked repeatedly in chat rooms, with several different possible answers. The simplest answer is based on the purpose of the Postdoctoral Fellowship: to allow you to further develop your scientific skills in a supervised environment. At the NHLBI, this entails intense mentored research *training*. The key word here is "*training*".

While skills acquisition is a lifelong endeavor, the postdoctoral period should be a temporary one designed to give you adequate training for your next step, but not become simply a vehicle to provide you with a steady paycheck while you publish papers.

Often, pressure from both the Fellow and the Advisor combine to extend the postdoctoral period beyond the training period. Because the NIH provides an ideal research environment, Fellows become very comfortable in their laboratories and enjoy the freedom to pursue research ideas. The need for high-quality publications to get a

## Jessica's Corner

**H**ello Fellows! Happy September! Now I know I always tell you things that I am still working on myself, but that's because I feel like we're all in this together. As humans, we're constantly growing and changing; teaching and learning; succeeding and failing. The only way we really and truly get through the mess is through each other. Fellows of all levels, including post-docs and post-baccs, come to Dr. Geller and me with questions, concerns, doubts and fears all the time. And though we are FAR from perfect, we're definitely able to see the situation from a different vantage point and provide a different opinion that said fellow never thought about. I feel truly lucky to be in a position to provide advice like that to people who need it.

But as awesome as it is to be able to give advice to people in need, it's also amazing to know that I have my own support network. I, too, need those dissenting opinions and harsh criticisms at times. I need that outlet or person or resource to tell me not to give up and to try my best no matter how rough things can get.

My greatest wish for you is to accept your role in both positions. Remember that you're not always going to be that person to dole out the advice – sometimes, you have hear reality from someone else. You've got to be BOTH a leader and a follower – a friend and a confidant. Let's face it people – sometimes we just have to shut up and get out of our own way...

So if you're having a rough patch at the moment, whether it be in relationships or with supervisors, experiments or paper writing, remember to turn to your friends for some solid advice. Alternatively, if you see that friend or lab mate in need, there is ALWAYS something you can do to help them through it. But most importantly, listen to the Spice Girls when they say: "Never give up on the good times; livin' it up is a state of mind. Hey now look around - pick yourself up off the ground."

permanent position, and the increasing requirements of outstanding journals also contributes to a longer time to publication, and a lengthier stay. In addition, postdoctoral stipends for senior fellows in the intramural program are often higher than starting salaries at many academic institutions, such as smaller colleges and universities. In parallel, advisors appreciate that fellows become more productive as they become more senior, and thus promote extended periods for postdoctoral fellowships to generate more laboratory publications. Thus, while both the fellow and the mentor acknowledge that an extended period of postdoctoral fellowship is not the desired one, the confluence of expectations and desires has resulted in average postdoctoral fellowship periods of 5 years and more.

So what can be done to move your career along? The first is to realize that you are here to obtain training, not to get your Advisor's research done. This means that Fellows need to have a clear idea of their goals and aspirations and define their training needs at the time they begin their postdoctoral fellowship. One good way to accomplish this is through the use of an Individual Development Plan (IDP): a document created by the Fellow that clearly defines their goals, presents a formal way of identifying the skills necessary for achieving the goals, and then provides an outline of how to build on existing strengths and correcting weaknesses. An example is if your goal is to obtain a job that requires teaching, an IDP will alert you to the need for teaching experience and prompt you to create a

plan to obtain it before starting your job search.

A second way is to make it clear to your Advisor that you are here to obtain the training that you need to move onto the next step, not simply to conduct a research project of their choosing. Being productive is absolutely necessary for success in a research career. However, you also need to be trained to become independent. Thus, if the project is simply an extension of the laboratory's ongoing research, it probably may not provide you with research training you need to be competitive if you want to have your own lab.

Finally, use your Annual Progress Report! We have designed this form to allow you to share your goals and aspirations, as well as to promote an honest discussion with your advisor about how you can work together to achieve them. In addition, for Fellowship renewals beyond the third year, we now require a statement from you that defines what additional training you need that you did not receive in your first three years, and define specific steps to ensure that you'll have the skills you need when you leave.

If you have any further doubts or questions, remember that our office is always here to assist you in figuring it out. Our goal is to help you succeed.

**Next Career  
Development Seminar**  
**Tuesday, 9/18th @Noon**  
**10/2C116**  
**Community College  
Teaching**  
**Don't miss it!**

## New NHLBI Fellows



**Ignacio Bravo, M.D., Ph.D.** is the most recent member in the Laboratory of Kidney and Electrolyte Metabolism under the supervision of Dr. Maurice Burg. Dr. Bravo received Ph.D. from the Pontificia Universidad Catolica de Chile and his MD from the Universidad de los Andes in Santiago, Chile. While at the NHLBI, he will be working on the role of TONEBP in kidney reponse to hypertension.



**Jason Kovacic, Ph.D.** is a new research fellow in the Cardiology Branch under the mentorship of Dr. Manfred Boehm. He received his Ph.D. from the University of New South Wales in Australia. Dr. Kovacic will be working on stem cells in cardiovascular disease while at the NHLBI.



**Zach McIver, MD** is a recent clinical fellow in the Hematology Branch under the supervision of Dr. Neal Young. He received degree from Ohio University College of Osteopathic Medicine. While at NHLBI, he will be working with clinical applications in Hematology.



**Matthew Olnes, MD, Ph.D.** is a new clinical fellow in the Hematology branch under the mentorship of Dr. Neal Young. He received his PH.D in Pathobiology from Brown University in Providence, Rhode Island and his MD from the Uniformed Services University of Health Sciences in Bethesda, Maryland. While at the NHLBI he will be working on clinical and basic research in hematology.



**Jeremy Pantin, MB BS,** is a recent clinical fellow in the hematology branch under the mentorship of Dr. Neal Young. He received his degree from the University of the West Indies in St. Augustine, Trinidad. He will be working on clinical and basic research in hematology.



**Ana Maria Pasapera Limon, Ph.D.** is a research fellow in the Laboratory of Cell Tissue Metamorphic under the supervision of Dr. Clare Waterman. She received her Ph.D. in Molecular Endocrinology from the National

University of Mexico and will be working on cytoskeletal dynamics while at the NHLBI.



**Sujata Shanbhag, M.D.** is a new clinical fellow in the Laboratory of Cardiac Energetics under the mentorship of Dr. Andrew Arai. She received her MD from St. Louis University School of Medicine in Missouri and will be working on using cardiac MRI and CT angiography to improve cardiac risk stratification at NHLBI.



**Mauro Tiso, Ph.D.** is a visiting fellow in the Vascular Medicine Branch under the mentorship of Dr. Mark Gladwin. This Italian native received is Ph.D. in Clinical-Bioanalytical Chemistry from Cleveland State University in Ohio. While at the NHLBI, he will be working on nitric oxide and nitrate reduction of hemoglobin.



**Tamas Virag, Ph.D.** is a Visiting Fellow in the Laboratory of Biochemical Genetics under the mentorship of Dr. Robert Kotin. Dr. Virag is originally from Hungary and received his Ph.D. in Physiology from the University of Tennessee Health Science Center. While at the NHLBI, he will be working on gene therapy.



**Berengere Vire, Ph.D.** is a visiting fellow in the Hematology Branch under the mentorship of Dr. Adrian Wiestner. She received her Ph.D. in Immunology from the University of Aix-Marseille II in France. Dr. Vire will be working with the effects on CLL while at the NHLBI.



**Marc Weniger, Ph.D.** is a Visiting Fellow in the Hematology Branch under the mentorship of Dr. Adrian Wiestner. He received his Ph.D. in biology from the Institute of Pathology, University of Ulm in Germany. While at the NHLBI, Dr. Weniger will be working on CLL projects.



**Hang Zhao, Ph.D.** is a visiting fellow in the Laboratory of Biochemistry under the mentorship of Dr. Rodney Levine. He received his Ph.D. in biochemistry from the University of Yamanashi in Japan. Dr. Zhao will be investigating the role of protein msrA in transgenic mice.

**Recent Publications by NHLBI Fellows**

- Ahmad, F., Lindh, R., **Tang, Y.**, Weston, M., Degerman, E., & Manganiello, V. C. (2007). Insulin-induced formation of macromolecular complexes involved in activation of cyclic nucleotide phosphodiesterase 3B (PDE3B) and its interaction with PKB. *Biochemical Journal* 404, 257-268.
- Anthi, A., **Machado, R. F.**, Jison, M. L., Taveira-DaSilva, A. M., Rubin, L. J., Hunter, L., Hunter, C. J., Coles, W., Nichols, J., Avila, N. A., Sachdev, V., Chen, C. C., & Gladwin, M. T. (2007). Hemodynamic and functional assessment of patients with sickle cell disease and pulmonary hypertension. *Am. J. Resp. Crit. Care Med.* 175, 1272-1279.
- Bao, J. J., Ma, X. F., Liu, C. Y., & Adelstein, R. S.** (2007). Replacement of nonmuscle myosin II-B with II-A rescues brain but not cardiac defects in mice. *J. Biol. Chem.* 282, 22102-22111.
- Che, Y., Brooks, B. R., & Marshall, G. R.** (2007). Protein recognition motifs: Design of peptidomimetics of helix surfaces. *Biopolymers* 86, 288-297.
- Cheruvanky, A., Zhou, H., **Pisitkun, T.**, Kopp, J. B., Knepper, M. A., Yuen, P. S. T., & Star, R. A. (2007). Rapid isolation of urinary exosomal biomarkers using a nanomembrane ultrafiltration concentrator. *Am. J. Physiol. Renal Physiol.* 292, F1657-F1661.
- Han, X., **Ma, X. F.**, Zhang, T. Y., Zhang, Y. B., Liu, Q. H., & Ito, Y. (2007). Isolation of high-purity casticin from *Artemisia annua* L. by high-speed counter-current chromatography. *J. Chromatog. A* 1151, 180-182.
- Jin, J. K., **Ahn, B. H.**, Na, Y. J., Kim, J. I., Kim, Y. S., Choi, E. K., Ko, Y. G., Chung, K. C., Kozlowski, P. B., & Min, D. S. (2007). Phospholipase D1 is associated with amyloid precursor protein in Alzheimer's disease. *Neurobiology of Aging* 28, 1015-1027.
- Kovacs, M., Thirumurugan, K., Knight, P. J., & Sellers, J. R.** (2007). Load-dependent mechanism of nonmuscle myosin 2. *Proc. Natl. Acad. Sci. U. S. A* 104, 9994-9999.
- Liu, H. J., Fergusson, M. M., Castilho, R. M., Liu, J., Cao, L., Chen, J. H., Malide, D., Rovira, I. I., Schimel, D., Kuo, C. J., Gutkind, J. S., Hwang, P. M., & Finkel, T.** (2007). Augmented Wnt signaling in a mammalian model of accelerated aging. *Science* 317, 803-806.
- Ma, X. F., Bao, J. J., & Adelstein, R. S.** (2007). Loss of cell adhesion causes hydrocephalus in nonmuscle myosin II-B-ablated and mutated mice. *Mol. Biol. Cell* 18, 2305-2312.
- O'Brien, E. P., Dima, R. I., Brooks, B., & Thirumalai, D.** (2007). Interactions between hydrophobic and ionic solutes in aqueous guanidinium chloride and urea solutions: Lessons for protein denaturation mechanism. *J. A. C. S.* 129, 7346-7353.
- Ren, P., **Rosas, I. O., MacDonald, S. D., Wu, H. P., Billings, E. M., & Gochoico, B. R.** (2007). Impairment of alveolar macrophage transcription in idiopathic pulmonary fibrosis. *Am. J. Resp. Crit. Care Med.* 175, 1151-1157.
- Rochman, I., Watanabe, N., Arima, K., Liu, Y. J., & Leonard, W. J.** (2007). Cutting edge: Direct action of thymic stromal lymphopoietin on activated human CD4(+) T cells. *J. Immunol.* 178, 6720-6724.
- Stan, G., Lorimer, G. H., Thirumalai, D., & Brooks, B. R.** (2007). Coupling between allosteric transitions in GroEL and assisted folding of a substrate protein. *Proc. Natl. Acad. Sci. U. S. A* 104, 8803-8808.
- Wiestner, A., Tehrani, M., Chiorazzi, M., Wright, G., **Gibellini, F., Nakayama, K., Liu, H., Rosenwald, A., Muller-Hermelink, H. K., Ott, G., Chan, W. C., Greiner, T. C., Weisenburger, D. D., Vose, J., Armitage, J. O., Gascoyne, R. D., Connors, J. M., Campo, E., Montserrat, E., Bosch, F., Smeland, E. B., Kvaloy, S., Holte, H., Delabie, J., Fisher, R. I., Grogan, T. M., Miller, T. P., Wilson, W. H., Jaffe, E. S., & Staudt, L. M.** (2007). Point mutations and genomic deletions in CCND1 create stable truncated cyclin D1 mRNAs that are associated with increased proliferation rate and shorter survival. *Blood* 109, 4599-4606.
- Woodcock, H. L., Moran, D., Pastor, R. W., MacKerell, A. D., & Brooks, B. R.** (2007). Ab initio modeling of glycosyl torsions and anomeric effects in a model carbohydrate: 2-Ethoxy tetrahydropyran. *Biophys. J.* 93, 1-10.
- Yee, S. B., Bourdi, M., Masson, M. J., & Pohl, L. R.** (2007). Hepatoprotective role of endogenous interleukin-13 in a murine model of acetaminophen-induced liver disease. *Chem. Res. Toxicol.* 20, 734-744.
- Zeng, R., Spolski, R., Casas, E., Zhu, W., Levy, D. E., & Leonard, W. J.** (2007). The molecular basis of IL-21-mediated proliferation. *Blood* 109, 4135-4142.
- Sloand, E. M., Read, E. J., **Scheinberg, P., Tang, Y., More, K., Leitman, S. F., Maciejewski, J., & Young, N. S.** (2007). Mobilization, collection, and immunomagnetic selection of peripheral blood CD34 cells in recovered aplastic anemia patients. *Transfusion* 47, 1250-1253.
- Solomou, E. E., Gibellini, F., Stewart, B., Malide, D., Berg, M., Visconte, V., Green, S., Childs, R., Chanock, S. J., & Young, N. S.** (2007). Perforin gene mutations in patients with acquired aplastic anemia. *Blood* 109, 5234-5237.
- Um, J. H., Yang, S. T., Yamazaki, S., Kang, H., Viollet, B., Foretz, M., & Chung, J. H.** (2007). Activation of 5'-AMP-activated kinase with diabetes drug metformin induces casein kinase I epsilon (CKI epsilon)-dependent degradation of clock protein mPer2. *J. Biol. Chem.* 282, 20794-20798.
- Woodcock, H. L., Hodoscek, M., & Brooks, B. R.** (2007). Exploring SCC-DFTB paths for mapping QM/MM reaction mechanisms. *J. Phys. Chem. A* 111, 5720-5728.
- Wu, W. W., Wang, G., Yu, M. J., Knepper, M. A., & Shen, R. F.** (2007). Identification and quantification of basic and acidic proteins using solution-based two-dimensional protein fractionation and label-free or O-18-labeling mass spectrometry. *J. Proteome Res.* 6, 2447-2459.