

# THE $\Phi$ $\Psi$



**ROBERT WOOD JOHNSON  
MEDICAL SCHOOL**  
University of Medicine & Dentistry of New Jersey

*UMDNJ-Robert Wood Johnson Medical School / Rutgers, The State University of New Jersey / Princeton University MD/PhD Program*

## MD/PhD colloquia meetings

- Wed. Jan 24 **12:30 C-207**  
*Marie Trontell, MD, RWJMS Associate Dean for Graduate Medical Education Residency Program FAQs and Insights*
- Wed. Feb. 21 **12:30 DCR**  
*Jean Schwartzbauer, PhD Princeton University*
- Wed. March 21 **12:30 DCR**  
*James H. Millonig, PhD, CABM and RWJMS*
- Wed. April 18 **12:30 C-208**  
*Gyan Bhanot, PhD Rutgers University*
- Wed. June 20 **12:30 DCR**  
*Terri Goss Kinzy, PhD MD/PhD Program Director. Negotiation skills for today and the future.*

*MD PhD Symposium  
Thursday August 2,  
2007  
At Rutgers University,  
Piscataway*

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## Fun for all: Recruitment 06-07

This year's recruitment was the 2<sup>nd</sup> year of being student run. In order to recruit potential MD-PhD's, special activities were organized by the recruitment committee in order to facilitate faculty and student interactions. Potential students arrived at the Hyatt, took a tour of New Brunswick, and dined with faculty and students. Afterwards, a student-only activity was held in order for applicants and students to chat in a more relaxed atmosphere. Interviews were Friday, including a tour of the Piscataway campus.

Among the events included eating at the local Ethiopian Restaurant, Makeda's with our bare hands. Despite mild protest at the lack of utensils (though one student did make a covert attempt to keep their utensils) the students were all stuffed in the end, many forgoing dessert. And of course, the night was still young so many of us joined in on the fun at Har-

vest Moon. (Just remember to put it on Barlow's tab.)

Furthermore, this year was particularly memorable due to surprise guest appearances. Just to make sure she really wasn't related to him, Dean Amenta made a special request to meet one our applicants. And of course, how can we forget the time that Issa was delayed at the Cancer Institute when Bart Kamen MD PhD stopped the tour of the New Brunswick campus in order to give everyone a ride on his Segway?



**Shridar Ganesen, MD, PhD (center left) hosts dinner for interviewing candidates for the MD PhD program at Makeda Ethiopian Restaurant in New Brunswick.**

The student members of the committee: Issa Bagayogo, Brian Barlow, and Bonnie Hall, thank those who participated in making recruitment such an enjoyable experience.

-Bonnie Hall PhD3

## International Health Electives

In October of 2006 I took an individual elective trip to one of the poorest countries in the world. Mozambique, Africa is a country full of warm and inviting people, a people whose life expectancy is only 41 years and most of whom live daily without clean drinking water, electricity and basic medical care. My trip to an orphanage medical clinic was both heartbreaking and life renewing. I saw medicine in its

rawest and most basic form. I saw people just fighting to provide for their families who were thankful and welcoming to anyone willing to listen

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**Denise Livingston M3(2nd from left) on her elective in Mozambique with her host Yonnie (left) and visitors to their clinic.**

## International Health Electives (cont.)

and love. Some patients we were able to treat, others, we could only extend our love and compassion. I saw some medical conditions that I will probably never again see in my medical career, others, like the sight of a child covered in painful impetigo sores, I hope to never have to see again (but, sadly, I know that I will). My trip to Africa was both life and career changing. I would recommend this type of elective to all medical students. I think it is important for us to see and understand how a significant portion of the world lives, and to under-

stand that we, as doctors, have a great gift and ability to relieve human suffering like few can. I hope this is the first of many trips that I will make in my career to Africa and other third world countries and I encourage everyone who is able to go and see life and medicine outside of our comfortable New Jersey bubble – you won't regret it!

-Denise Livingston M3



Denise working with a young patient at the clinic.

## National MD PhD Student Meeting

Manny Gabriel, JP Abboud and Marcelo Rocha attended the 21st Annual MD/PhD Student Conference in Keystone, Colorado July 2006.

The National MD/PhD Student Conference is unique in that the focus is on (1) research being done by other students like you and (2) the many different career pathways specific to MD/PhD's. The meeting provides

exclusive contact with MD/PhD graduates whose experiences can have a positive impact on your research and your own career decisions.

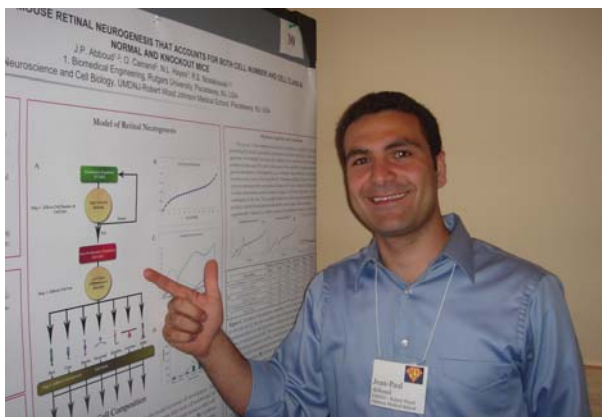
RWJMS Asst. Professor John Glod MD PhD, participated on one of the career panels. Dr. Glob is a program faculty member and co-mentor to Kevin Anton, PhD1 student.

-Manny Gabriel PhD3

Mark your calendars, the 2007 meeting will be held July 27-29 2007 in Keystone, Colorado.

<http://www.uchsc.edu/sm/mstp/conference.html>

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JP Abboud (M2/PhD1) presents his poster at the MD PhD student meeting in Keystone.



Marcelo Rocha (PhD 3, left) and Manny Gabriel (PhD3, right), enjoy some time interacting with other MD PhD students.

## NIH Reauthorization Update

On January 15, 2007, President Bush signed the National Institutes of Health Reform Act of 2006. Approved in the final hours of the 109<sup>th</sup> Congress, the Act contains three components relevant to NIH activities: 1) It authorizes appropriations for the NIH through FY 2009; 2) It prevents NIH restructuring its Institutes or Centers prior to Congressional review; 3) It secures the continued existence of a "Common Fund" to promote cross-disciplinary research.

The final form of the Act increases the authorization levels for NIH spending to \$30.3 billion in FY 2007 and \$32.8 billion in FY 2008, representing annual increases of 7.0% and 8.2% respectively, and authorizes "such sums as may be necessary" for FY 2009. In its original form as passed by the House, the bill authorized only 5.0% budget increases for fiscal years 2007 and 2008. The Act also eliminates the requirement that half of all new dollars for NIH be reserved for the Common Fund. Instead, the Common Fund is to be funded through a new reserve account that will be funded to at least the same level as in FY 2006.

Since 2003, the NIH budget has not kept pace with the Biomedical Research and Development Price Index (BRDPI) – the science-related inflationary index indicating the amount by which the NIH budget must change to maintain purchasing power. FY 2004 and 2005 allocations grew only 2.9% and 2.6% respectively compared to BRDPI increases of 3.7% and 3.8% in those same years. The funding levels for 2007-2009 recently signed into law represent an increase over traditional funding changes since 2003, and

are more in line with the 8-9% annual increases experts believe would be required to maintain the momentum of the nation's biomedical research.

The current funding environment is extremely difficult for medical scientists. A number of factors have combined to create a "perfect storm" from a research funding stand point: limited growth in NIH appropriations since 2003; the unexpected budgetary impact of hurricane Katrina; increased defense spending; the effects of inflation; a continued increase in numbers of new applications; and a backlog of prior commitments. While NIH currently awards more in research grants than ever before, over 80% of its budget is committed to ongoing projects. The only resources available for new grants each year are those recycled from projects started 4-5 years prior and for which funding has expired, plus any new increase in the overall budget.

The deficit in NIH funding is having a significant effect on the American scientific landscape. As young scientists watch their mentors and peers struggle for funding, many choose simply to change careers rather than enter such an uncertain environment. While the overall success rate for NIH grants is around 20%, fewer than 10% of un-amended R01 applications (a grant meant to help young researchers establish independent careers) are funded on their first try. In 2002 the likelihood of receiving NIH grants for investigators under the age of 35 was less than 4.0%. Furthermore, limited funding levels have greatly increased the length of the grant review cycle. For young researchers without additional sources of funding, these long

delays can force qualified research groups to break up during the intervals between funding.

Elias Zerhouni, director of the NIH, has stated that he believes the core reason for the current funding shortage is the sharp increase in the number of new applicants. In 1998 the NIH received only 24,151 applications, while it is expecting to receive 49,000 in 2007. The principal cause of this growth in demand for NIH money is the nationwide expansion in research capacity that occurred from 1999 to 2003, during the NIH budget-doubling era. During this time Congress called for more research on emerging health issues, and academic institutions responded by expanding the scientific infrastructure and workforce. The AAMC projects that \$15 billion have been committed to new research facilities between 1998 and 2007, compared to the \$3.2 billion committed between 1990 and 1997. This rapid expansion has enabled massive acceleration in the pace of research and innovation across biological and health related fields, but it has also created an imbalance in the supply of scientists and the supply of NIH funding.

NIH has initiated several short- and long-term strategies to alleviate some of the tension caused by the current funding environment. In the short-term, the NIH will likely reduce the size of awards and sharpen its research priorities, while at the same time initiating a number of specific programs to protect truly innovative research areas. For example, the NIH Roadmap for Medical Research introduced in 2003 contains approaches meant to improve cross-disciplinary research and

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*Prepared for the  
AAMC OSR  
legislative affairs  
update by Chris  
Langhammer  
(PhD)*

translation of laboratory discoveries into effective therapies. Similarly, in 2006 NIH announced a new policy to recognize multiple principal investigators in research project grants, which is intended to encourage formation of multidisciplinary research teams across departments and institutions.

NIH has also outlined three strategies to encourage new investigators: 1) NIH Institutes will work to ensure that success rates of new investigators are not disproportionately affected by flat budgets; 2) New investigators will receive critiques within one week of review in order to reduce the length of the application review cycle; 3) The creation of the Pathway to Independence awards program launched in 2006, which are meant to facilitate a more rapid transition from mentored training to independence.

The strategies listed above and the careful management of recycled funds will help stabilize application success rates and stem the loss of junior investigators. However, larger systemic changes need to be made to increase NIH funding and cultivate young scientists in order to maintain research productivity in the long-term.



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MEDICAL SCHOOL**  
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**Princeton University**

THE STATE UNIVERSITY OF NEW JERSEY  
**RUTGERS**



**GRADUATE SCHOOL OF  
BIOMEDICAL SCIENCES**  
University of Medicine & Dentistry of New Jersey

UMDNJ-Robert Wood Johnson Medical School  
675 Hoes Lane  
Piscataway, NJ  
08854-5635

Phone: 732-235-2839  
Fax: 732-235-4720  
E-mail: [domingpr@umdnj.edu](mailto:domingpr@umdnj.edu)

**Terri Goss Kinzy Ph.D., Director**  
**Perry Dominguez, Program Coordinator**

[http://www2.umdnj.edu/gsbpsweb/md\\_phd\\_program/index.htm](http://www2.umdnj.edu/gsbpsweb/md_phd_program/index.htm)

*Today's health care and health sciences environment provides a compelling argument for combining a medical degree with a PhD. The logo reflects a few of the many scientific options available to our students, while also highlighting the integration of the physician role. These many facets of science and medicine center around a representative of the patient and society, as a symbol of service provided by the integration of the two disciplines. Graduates of the MD/PhD program are uniquely prepared to become leaders in biomedical research and academic medicine. The MD/PhD program at UMDNJ Robert Wood Johnson Medical School offers the opportunity for longitudinal integrated studies and interdisciplinary PhD training at any one of the three cooperating institutions: RWJMS, Rutgers, The State University of New Jersey or Princeton University.*



## Milestones and Kudos

- *New papers:*

*Liu, E. Treiser, M. Johnson, P. Patel, P. Rege, A. Kohn, J. and Moghe, P., Quantitative biorelevant profiling of material microstructure within 3-D porous polymer scaffolds via multiphoton fluorescence microscopy, JBMR Part B 2007.*

*Donato LJ\*, Suh JH\*, Noy N. Suppression of mammary carcinoma cell growth by retinoic Acid: the cell cycle control gene *btg2* is a direct target for retinoic Acid receptor signaling. Cancer Res. 2007 67:609-15.*

*Golbe, L.I., Di Iorio, G., Markopoulou, K., Athanassiadou, A., Papapetropoulos, S., Watts, R.L., Vance, J.M., Bonifati, V., Williams, T.A., Spychala, J.R., Stenroos, E.S. Johnson, W. Glutathione S-transferase polymorphisms and onset of age in alpha-synuclein A53T mutant Parkinson's disease. American Journal of Medical Genetics Part B 2007.*

## Perry's Pearls:

Attention students in the Ph.D. phase of the program! In order to be given credit for medical school courses taken during the first two M.D. years, all Ph.D. candidates must complete a "Request to Transfer Credit" form available from their appropriate graduate school (RU, GSBS or PU) office. On it you must list the course name, number of credits and the assigned grade, for each course you are requesting to transfer towards your Ph.D. degree. *Please consult with your graduate program as to which courses are permissible to transfer.* Once completed, this form must be approved by your advisor, graduate program director and the Dean of the graduate school where you are enrolled. The "Request to Transfer Credit" form may be initiated after the first semester of your Ph.D. studies and submitted, along with a copy of your RWJMS transcript, to the graduate school Registrar for processing. Once submitted, we strongly encourage all students to review their graduate school transcript to assured that the transfer of credits has been properly posted.

-Perry Dominguez