

# BIOCHEMISTRY & MOLECULAR BIOLOGY TODAY

APRIL 2008 NO. 234



## Chair's Message

**BMB**  
Biochemistry & Molecular Biology

April brings the National Student Research Forum on April 24 and 25. This annual event, bringing students from medical schools from all over the country, has enticed more than one outstanding young person to enroll in one of our graduate or medical school programs. This year, there is a preponderance of students presenting their research in the area of biochemistry and molecular biology. I would urge you to attend the event if possible. It presents a wonderful opportunity to recruit the best and brightest to our graduate and M.D./Ph.D. programs and to help preserve an endangered species – the clinical researcher. Our Department participates at various levels from reviewing submitted abstracts to chairing oral sessions and sponsoring two awards (one for a poster and one for an oral presentation) in biochemistry and molecular biology.

Our recruitment of new faculty for positions in the area of DNA damage and repair processes now progresses to the next phase as two candidates return for second visits. Please contact Margie if you wish to take part in this crucial second visit. She can provide a tentative itinerary and C.V. We are also bringing in for second visits candidates in the area of bioinformatics and for first visits in the area of microRNA this month and next month. Finally, a search committee is being formed to recruit a senior faculty

member with expertise in the application of mass spectrometry. This recruitment will be a joint effort with other departments and centers and is being chaired by Allan Brasier. If you have suggestions for names to be considered please contact him or Margie Wronski, who is coordinating the recruitment effort.

We are happy to announce that Dr. Rovshan Sadygov, currently with ThermoFisher Scientific, has accepted a tenure-track position in our Department and will also be a member of the Sealy Center for Molecular Medicine. He will fill one of our bioinformatics faculty positions.

As we have announced in earlier newsletters, commencement exercises are soon upon us. This year Ping Liu will be awarded the Ph.D. Plan to attend on May 3 if possible and join us in wishing him the best in the future. Also, Kashop Choksi and Courtney Lockhart, two of our M.D./Ph.D. students, have successfully completed all requirements for the Ph.D.; their degrees will be awarded later upon their completion of the M.D. portion of the dual-degree program.

Over the next couple of months, we will be negotiating our budget for next year with the School of Medicine. If you foresee any changes in your funding status or anticipate a need to use funds from your "designated" accounts, or if you are aware of other needs that

will impact the Departmental budget, please arrange to meet with Marianne Miller before May 1. This will allow for an orderly budgetary process to the benefit of all of us.

Now that we have successfully recruited several new faculty members and will be adding a few more over the next several months, I thought that it would be a good idea to have a symposium type of event in the fall featuring our new colleagues as presenters. The details are currently being worked out. If you have suggestions, please send them to me. For example, we could also have presentations from postdocs or senior graduate students from the more established research groups. Another possibility would be a retreat-style event although I favor a campus wide symposium to foster more collaborative ventures. Please let me know what you think.

Now that the "mentoring" meetings with all of our new faculty have taken place, I am glad to share that they are all making great progress in their efforts to establish their research and teaching programs. Kudos to the new faculty and thanks to the participating mentors. During these difficult funding circumstances, we must do all we can to ensure that all of our colleagues have every chance to succeed. Again, suggestions are welcome.

-regino

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### Special Items of Interest

- Faculty Focus—Secondary BMB Faculty
- [Dr. Konkel's Research Coordinator's Columns Online](#)

## Graduate Program News

Our students are to be commended for their recent fellowship awards:

Robert Malmstrom, of Dr. Stan Watowich's lab, has received a renewal for the Keck Center's Pharmacoinformatics fellowship.

Paul Evans, of Dr. Chunming Liu's laboratory, has been renewed for the Sealy Center for Cancer Cell Biology Multidisciplinary Training in Cancer Research fellowship.

Sai Gandham, of Dr. David Gorenstein's lab, has received a fellowship from the Keck Pharmacoinformatics Training Grant.

Since the inception of the BSCB Educational Track, approximately 30% of BSCB students have received fellowships from Gulf Coast Consortium-sponsored Training Grants. Our students compete very well in GCC competition for fellowships for which they are eligible, and we are proud of all their accomplishments.

Our Alumni have been quite busy as well. Scott Larson, of Dr. Vincent Hilser's laboratory, will graduate from medical school at UT San Antonio this May and will begin his residency at the Mayo Clinic in Minnesota.

Venkat Mathura, of Dr. Werner Braun's laboratory, has been working at the Roskamp Institute (a non-profit research organization) as a Scientist since 2003. His work involves Genomics and Proteomics data analysis, LIMS design for in house drug discovery pipeline and provision of statistical/computing support. The main area of his research is understanding molecular pathways in Alzheimer's disease and drug addiction.

- Deborah Botting

**National Student Research Forum**

**April 24 and 25, 2008**

**Abreu Memorial Keynote Speaker:**

**Deborah L. Birx, M.D.**

**Division Director Designate, Global AIDS  
Program, National Center for HIV, STD, and TB  
Prevention**

## Awards and Announcements

Dr. Junji Iwahara was awarded a Welch Foundation grant. He was 1 of 8 investigators at UTMB to be funded by the Foundation. Congratulations to Dr. Iwahara on his first award to be funded at UTMB!

Dr. Elena Frolova received an NIAID Award entitled "Sindbis nonstructural protein nsP2: Interaction with cellular proteins". April 1, 2008 - March 31, 2013.



### IT Briefs - Lisa Pipper

Many of you have asked, so I know many have not, just what is that Citrix Password Manager window that comes up every time I turn my computer on?

This is a piece of software purchased by UTMB IS as a password self-reset application that will be deployed campus wide over the next 3 months

This handy application will allow end users to unlock their domain account independently (utmb-users-m), and will allow them to reset their password when they have forgotten their current password. It is similar in function to many credit card and bank account management web sites; you register some secret questions and answers, thus allowing you to reset your password in the future, without support. So once you have registered your questions, you will no longer be prompted by the welcoming screen at startup. IS hopes to significantly decrease the volume of password resets and unlocks utilizing this software, to allow them to concentrate their support in more critical areas.



**American Cancer Society  
Galveston Island Relay for  
Life**



**April 25-26, 2008  
Moody Gardens**

## Faculty Focus—BMB Secondary Appointments

A total of 28 UTMB faculty members hold secondary appointments in the Department of Biochemistry and Molecular Biology. Of that number, 23 have primary faculty appointments in a clinical department, including: Surgery – 6; Pediatrics – 6; Neurology – 4; Internal Medicine – 3; Otolaryngology – 2; Radiation Oncology – 1; and Psychiatry/Behavioral Science – 1. Four have primary appointments in Neuroscience and Cell Biology and one in Pharmacology/Toxicology.

Jack B. Alperin, M.D.,	Professor	Department of Internal Medicine
Gregory K. Asimakis, Jr., Ph.D.	Associate Professor	Department of Surgery
Jose Barral, Ph.D.,	Assistant Professor	Department of Neuroscience & Cell Biology
Allan R. Brasier, M.D.	Professor	Department of Internal Medicine
Michael N. Cornforth, Ph.D.	Professor	Department of Radiation Oncology
Kelly T. Dineley, Ph.D.	Assistant Professor	Department of Neurology
Ella Englander, Ph.D.	Associate Professor	Department of Surgery
Henry F. Epstein, M.D.	Professor	Department of Neuroscience & Cell Biology
B. Mark Evers, M.D.,	Professor	Department of Surgery
Scott R. Gilbertson, Ph.D.	Professor	Department of Pharmacology & Toxicology
Randall M. Goldblum, M.D.	Professor	Department of Pediatrics
Marc Jeschke, M.D., Ph.D.	Assistant Professor	Department of Surgery
Raj Kumar, Ph.D.	Associate Professor	Department of Internal Medicine
Danxia Liu, Ph.D.	Professor	Department of Neurology
Lillian Lockhart, M.D.	Professor	Department of Pediatrics
Luis Martinez, Ph.D.	Assistant Professor	Department of Otolaryngology
Reuben Matalon, M.D., Ph.D.	Professor	Department of Pediatrics
Walter J. Meyer III, M.D.	Professor	Department of Psychiatry/Behavioral Science
Terumi Midoro-Horiuti, M.D.	Associate Professor	Department of Pediatrics
Andres Oberhauser, Ph.D.	Associate Professor	Department of Neuroscience & Cell Biology
Kathleen O'Conner, Ph.D.	Associate Professor	Department of Surgery
David Rassin, Ph.D.	Professor	Department of Pediatric Neonatology
Vicente A. Resto, M.D., Ph.D.	Assistant Professor	Department of Otolaryngology
Hiroshi Saito, Ph.D.	Assistant Professor	Department of Surgery
Frank Schmalstieg, M.D., Ph.D.	Professor	Department of Pediatrics
Pomila Singh, Ph.D.	Professor	Department of Neuroscience & Cell Biology
Claudio Soto-Jara, Ph.D.	Professor	Department of Neurology
Maki Wakamiya, Ph.D.	Assistant Professor	Department of Neurology

## **Administrator's Notes**

### **Temporary Additional Conference Room**

Following the suggestion of Dr. Cheryl Watson and Dr. Darrell Carney, we have placed surplus tables and chairs in Room 527 Basic Science Building (formerly the research staff office for the Awasthi Lab.) The space can now be used by all Department members for small meetings of up to about eight people. There is no projector or computer available for assignment to the room, so users would have to bring along any required equipment. The schedule for use of the space will be maintained in the BMB Public Folders. Time can be reserved by calling Rosemary Roque (22207), Betty Sordahl (22779), or Margie Wronski (22271). Because renovation plans are being developed for the 5<sup>th</sup> floor, this additional conference room will exist only for a limited time, but Department members are welcome to take advantage of it while the opportunity lasts.

### **Elevator Problems in BSB and MRB**

Over the past several months, there have been persistent problems with the elevators in both MRB and BSB buildings. The managers in FOAM who are responsible for administering the campus-wide elevator maintenance contract are aware that this is very disruptive and disturbing to building occupants and are taking specific steps to assess the issue and achieve improvement. Please e-mail me any information about elevator problems that Department members encounter, so that we can pass this along to FOAM and also have a record of the impact these problems have on Department operations. We have met with those managers and are working with them to develop plans to increase uptime for the elevators.

-Marianne

## **13<sup>th</sup> Sealy Center for Structural Biology and Molecular Biophysics Symposium**

**The University of Texas Medical Branch**

**May 16-17, 2007**

**Abstract Submission Deadline extended until April 25**

Please visit our website at: [www.scsb.utmb.edu/symposium](http://www.scsb.utmb.edu/symposium)

## Faculty on the Road



**Dr. Cheryl Watson** was invited to give a talk at the University of Louisville, Louisville, KY SOM Biochemistry Dept on March 26-28.

She also was in Philadelphia, PA at the Society for Executive Leadership in Academic Medicine on April 10-13.

She also attended the annual meeting and participate in the Texas Forum on Reproductive Sciences, April 17-18 in Houston, TX.

**Dr. Lillian Chan** traveled to Nankang and Taoyuan, Taiwan March 19-30, 2008 to present seminars at the Institute of Biomedical Sciences, Academia Sinica and Chang Gung University School of Medicine.

**Dr. Satish K. Srivastava** was in San Francisco March 6-12, 2008 to collaborate with Dr. Deepak Srivastva at Gladstone Institute of Cardiovascular Disease.

*To have your travels included in the monthly newsletter, please send the information directly to Lisa Pipper (lkipper@utmb.edu) by the 1st of each month.*

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## BMB Faculty Publications

Cittelly, DM, Nesic-Taylor, O., Perez-Polo JR, Detrimental effects of anti-apoptotic treatments in spinal cord injury. *Experimental Neurology* 210:295-307, 2008 doi:10.1016/J. Exp. Neurology 2007.03.001.

Grafe, MR, Woodworth KN, Noppens K., Perez-Polo JR. Long-term histological outcome after post-hypoxic treatment with 100% or 40% oxygen in a model of perinatal hypoxic-ischemic brain injury. *IJDN* 26: 119-124, 2008

Smith KE, Keeney S, Zhang L, Perez-Polo R, Rassing DK. The association of early blood oxygenation with child development in preterm infants with acute respiratory disorders. *IJDN*, 26:125-131, 2008

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ONLINE Research Coordinator's Corner  
[www.bmb.utmb.edu/department/RCC/](http://www.bmb.utmb.edu/department/RCC/)

**Featured Abstract by BMB Faculty****Detrimental effects of antiapoptotic treatments in spinal cord injury.**

[Cittelly DM](#), [Nesic O](#), [Johnson K](#), [Hulsebosch C](#), [Perez-Polo JR](#).

**Neurosciences and Cell Biology, University of Texas Medical Branch, Galveston, Texas 77555, USA.**

Long-term functional impairments due to spinal cord injury (SCI) in the rat result from secondary apoptotic death regulated, in part, by SCI-induced decreases in protein levels of the antiapoptotic protein Bcl-x(L). We have shown that exogenous administration of Bcl-x(L) spares neurons 24 h after SCI. However, long-term effects of chronic application of Bcl-x(L) have not been characterized. To counteract SCI-induced decreases in Bcl-x(L) and resulting apoptosis, we used the TAT protein transduction domain fused to the Bcl-x(L) protein (Tat-Bcl-x(L)), or its antiapoptotic domain BH4 (Tat-BH4). We used intrathecal delivery of Tat-Bcl-x(L), or Tat-BH4, into injured spinal cords for 24 h or 7 days, and apoptosis, neuronal death and locomotor recovery were assessed up to 2 months after injury. Both, Tat-Bcl-x(L) and Tat-BH4, significantly decreased SCI-induced apoptosis in thoracic segments containing the site of injury (T10) at 24 h or 7 days after SCI. However, the 7-day delivery of Tat-Bcl-x(L), or Tat-BH4, also induced a significant impairment of locomotor recovery that lasted beyond the drug delivery time. We found that the 7-day administration of Tat-Bcl-x(L), or Tat-BH4, significantly increased non-apoptotic neuronal loss and robustly augmented microglia/macrophage activation. These results indicate that the antiapoptotic treatment targeting Bcl-x(L) shifts neuronal apoptosis to necrosis, increases the inflammatory response and impairs locomotor recovery. Our results suggest that a combinatorial treatment consisting of antiapoptotic and anti-inflammatory agents may be necessary to achieve tissue preservation and significant improvement in functional recovery after SCI.