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Center for Biomedical Engineering and Technology - University of Maryland School of Medicine
in conjunction with the Fischell Department of Bioengineering, School of Engineering, University of Maryland, College Park

Back to Class



*A previous
Bioinformatics class*

September is back to school month and BioMET faculty members began heading back to the classroom as well. While UMB is not an undergraduate institution but a graduate school, teaching is still important and formal classes are the norm for the first two years of the Graduate Program in the Life Sciences (GPLS) and the School of Medicine, the two programs in which BioMET faculty members participate. For the fall semester six BioMET faculty members will have over 60 contact hours of lectures or small group meetings. The courses range from the introductory (GPLS 601 and first-year medical school courses) to advanced courses such as Molecular genetics Genomics (GPLS 717). In fact, BioMET faculty teach in 10 different courses in the Fall semester. One of the more interesting is a course in the Responsible Conduct in Research where Dr. Mervyn Monteiro is a group leader.

BioMET faculty include old hands at teaching like Professor Joseph Kao, a former UMB Teacher of the Year, and relatively new hands at teaching like assistant professors, Mariusz Karbowski and Benjamin Prosser. This is actually Dr. Prosser's first ever semester teaching. He is giving six lectures in GPLS 645, Cell and Systems Physiology.

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BIOMET SCIENTIFIC PROGRAMS

LABORATORY OF
MOLECULAR CARDIOLOGY

LABORATORY OF
NANOBIOLGY

LABORATORY FOR
NEURODEGENERATIVE DISEASES

LABORATORY FOR
PRION DISEASES

PROGRAM IN
CANCER BIOLOGY

PROGRAM IN
CELL STRUCTURE AND
DEVELOPMENT

PROGRAM IN
MITOCHONDRIAL DYNAMICS

Small World

Academia does tend to create connections but this fall has proven this in a more unusual way. Last Spring, Janet Ugolino from Dr. Mervyn Monteiro's laboratory graduated and headed off to a postdoctoral fellowship in the Department of Biochemistry at the Johns Hopkins Bloomberg School of Public Health. This fall, Brian Roelofs graduated from that same department but headed here for a postdoctoral fellowship with Dr. Mariusz Karbowski. This unofficial exchange program is accidental. It is not that the research area is the same—Dr. Ugolino will continue her work on neurodegenerative diseases and ERAD (endoplasmic reticulum associated degradation) and Dr. Roelofs will be studying mitochondrial dynamics. In addition to the exchange of postdoctoral fellows, BioMET has another connection to the Bloomberg

School's Department of Biochemistry. *BioMET* Now editor Pamela Wright's husband is head of the Division of Reproductive Biology in that department. It is definitely a small world!



UNIVERSITY of MARYLAND
SCHOOL OF MEDICINE

Congratulations to Drs. William Blattner and Robert Redfield, Jr., former UMBI colleagues, for being named the University's Entrepreneurs of the Year. The partnership has developed an extremely successful model for combating AIDS world-wide, with particular emphasis on Africa.

The Annual Fischell Festival was held October 18, 2012. This year's festival was shortened to half a day, but was still a successful event. Because of the ongoing moving issues, BioMET faculty could not participate as they had hoped. Maybe next year.

Moving Update and Other Fun Stuff

Much progress has been made on finalizing the plans for the first part of the move. Faculty members who are moving to the Pharmacy Building have been going over plans in fine detail. Everything from light switches to cooling units has to be on the final construction drawings. This means that there are numerous drawings to go over, to make sure errors have been corrected or needed changes have been made. Assistant Director Brian Hockenberry and Facilities Manager Mike McCrea have spent hours pouring over these plans room by room to make sure everything is accurate. The work is tedious, but Brian and Mike have some creative ways to relieve the tension.

As the numerous printouts of architectural drawings began piling up in Brian's office, he decided to redecorate Mike's office. With the help of persons unnamed (Pamela Wright was never there), he papered Mike's office with the old printouts, and added string links between them. It was quite a sight! Since Mike is the first one in the building (he arrives at 6 am), no one was there to see his immediate reaction to the state of his office. However, he did pose briefly in the middle of trying to re-arrange things to find his desk.

For the faculty not moving to Pharmacy but moving to the General Research Building (GRB, formerly the Medical Examiners Building on Penn St.), BioMET has begun working with DCI, an architectural firm. This project is very different from the Pharmacy project, since the building will be gutted and then built to specifications. BioMET will have the first and third floors of the GRB, with a new animal holding facility on the second floor. Drs. Lederer, Kao, Monteiro and Karbowski will be moving to the Pharmacy Building. Drs. Baskakov, Fang and Vogel, along with all the administrative staff, will be moving to the GRB.

This dual location is not optimal, but given the lack of available and suitable space on campus at the moment, it is the best that could be done. BioMET faculty members are looking forward to their new space, despite the inconvenience of the moves. Most research activity will be disrupted for weeks, and some of the more complex moves, for example the bioimaging systems, will take even longer.

Given the stress that moving entails, a little laughter, albeit at Mike's expense, makes a big difference. Luckily, Mike is a good sport, though Brian is keeping his eyes open for possible retaliation. Just remember, Pamela had nothing to do with it ;-).



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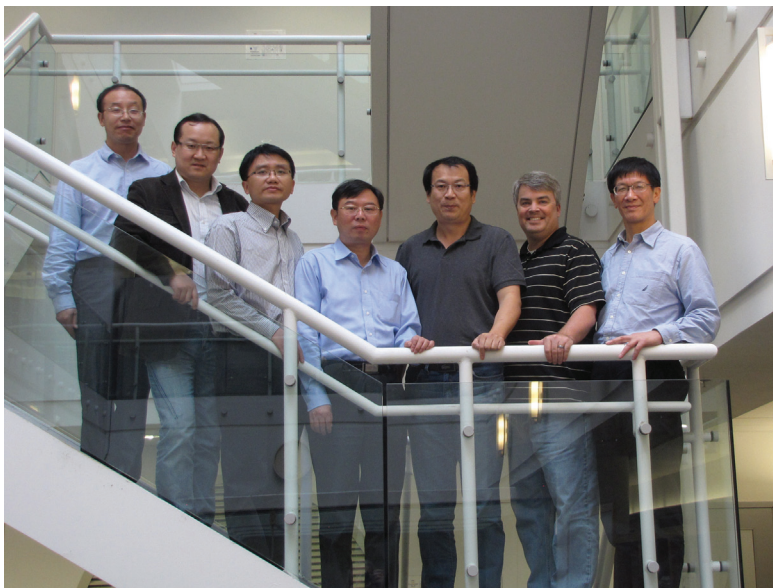
Distinguished Visitors

Many of our faculty have long term collaborations. Some have strong ties to home countries and the institutions from which they graduated or worked. Associate Professor Shengyun Fang has maintained such ties with Anhui Medical University, where he is a visiting professor. These international relationships add a great deal to the impact of our faculty's research.

This September, dignitaries from Anhui Medical University toured BioMET facilities, hosted by Dr. Fang. The group included Dr. Zhiwu Chen, Professor of pharmacology and Vice Dean of School of Basic Medicine; Dr. Linjie Zhang, Professor of immunology and Chair of Immunology Department; Dr. Quanli Li, Professor of odontology; Dr. Ye Zhang, Professor of anesthesiology and Chair of Anesthesiology Department; and Dr. Xiaohui Huang, Professor of pharmacology.

The Chinese are rapidly expanding their research capabilities, and tours such as this give university officials a first hand look at state-of-the-art research facilities.

Left to right: Dr. Chen, Dr. L. Zhang, Dr. Li, Dr. Y. Zhang, Dr. Fang, BioMET Assistant Director Brian Hockenberry, and Dr. Huang.



Congratulations

Dr. W. Jonathan Lederer gave the 2012 Lamport Lecture at the University of Washington. His talk was entitled: "New signaling pathway in muscle: X-ROS."

Retirement Announced

Mike McCrea, Facilities Manager, announced his retirement. His last day will be December 31. Mike started with MBC (BioMET's former incarnation) before the current building was built. Indeed, he was involved in its design and construction. Mike has been with the university for over 30 years.

BIOMET HAPPENINGS

Comings and Goings

Dr. Elizaveta Katorcha joined Dr. Ilia Baskakov's laboratory as a postdoctoral Fellow. Dr. Brian Roelofs is a new postdoctoral Fellow with Dr. Mariusz Karbowski.

Publications

Muriel JM, Dong C, Vogel BE. Distinct regions within fibulin-1D modulate interactions with hemicentin. *Exp Cell Res*. 2012 Dec 10;318(20):2543-7. Epub 2012 Sep 7.

Grants and Contracts

Awards

Dr. Mariusz Karbowski, 9/1/2012, NIH-NIGMS, "The Role of Mitochondria-associated RING finger Proteins in Mitochondria Quality," \$ 270,000 yr 5 of 5.

Dr. Mariusz Karbowski, 9/1/2012, NIH-NIGMS, "Control of mitochondrial proteostasis by AAA-ATPase p97," \$ 291,650 yr 1 of 5.

Dr. W. Jonathan Lederer, 10/1/2012, Georg-August University (European Commission), "Identification and therapeutic targeting of common arrhythmia trigger mechanisms," \$ 139,671, yr 4 of 5.

Submissions

Dr. Mervyn Monteiro, 10/5/2012, NIH, "Studies of ubiquilin-2 mutations that cause ALS," Total Request: \$1,918,750.

Talks and Travels

Dr. W. Jonathan Lederer, Lamport Lecture, "New signaling pathway in muscle: X-ROS," Department of Physiology and Biophysics at the University of Washington, Seattle, WA, October 2, 2012.

MPower Update

Editor's Note: While BioMET may not participate in all activities relating to the new initiative, the success of the entire enterprise benefits everyone. Thus, all activities of the new initiative will be highlighted in BioMET Now. As before, all members of the BioMET community are encouraged to look at the MPower web site at mpowermaryland.com for current information.

In one of the first major outcomes from the new initiative between UMB and UMCP, a collaborative school of public health, announced September 25. Previously, UMCP had its own school and UMB had a Masters in Public Health program. An earlier attempt at a separate school of public health at UMB was not successful. The joint program expects to integrate already existing courses and expertise, giving students at both institutions greater exposure to a broader range of public health issues. While the degree requirements will not change in the near future, if the program is successful, there is likely to be an emphasis on taking courses from both institutions. It will be interesting seeing how this new collaboration will blossom. Public Health education is dominated by the Johns Hopkins Bloomberg School, the first public health school in the country, though it is less than a 100 years old. The University of Maryland collaborative school is much broader programmatically and will undoubtedly give the Bloomberg School some competition.

More information and video of the announcement can be found at <http://www.umaryland.edu/offices/communications/news/?ViewStatus=FullArticle&articleDetail=19136> or <http://mpowermaryland.com/news/umb-and-umcp-announce-collaborative-school-of-public-health/>

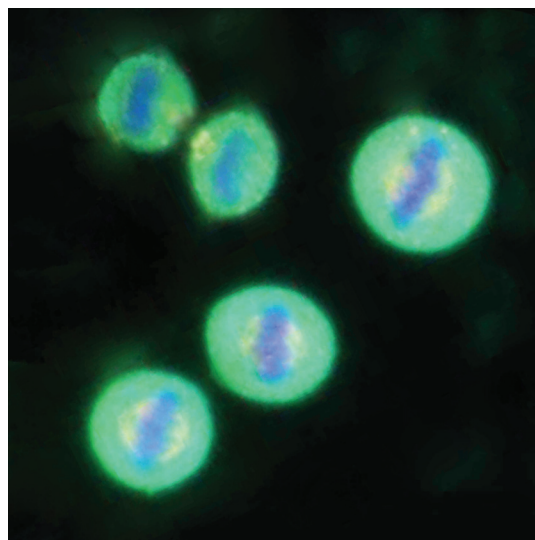
Another collaborative effort was announced on October 16. NIH has awarded a \$2 million grant to a research team composed faculty member from both UMCP and UMB to develop a new robot for minimally invasive brain surgery. The innovative approach uses real-time MRI to guide the robot. More information can be found at <http://mpowermaryland.com/news/new-nih-grant-to-advance-joint-umcp-umb-brain-surgery-robot-development/>

These exciting new collaborations are direct evidence that MPowering is working to bring new enthusiasm and a new vision to maximizing the strengths of two of Maryland's greatest institutions while maintaining their unique places in Maryland's intellectual environment.

Science as Art

Dividing Cells.

Photomicrograph by Dr. Mervyn Monteiro. The dark blue lines in the center are chromosomes; the yellow lines are the spindles. The pair of cells in the upper left corner have just finished dividing.



CLASS CONTINUED

In addition to courses, BioMET faculty have participated in the organization of specific programs. Currently Mervyn Monteiro is on the Neuroscience Graduate Program Steering Committee and just got off of the MD/PhD Program Steering Committee. These types of committees help recruit students and develop the program, including suggesting new courses.

Since graduate students will eventually have to choose a mentor for their thesis research, the classroom is often the first introduction that many students have to faculty members who might make suitable mentors. These students will also rotate through several laboratories before deciding on one laboratory for their thesis research. Since this decision will affect their research career from then on, it is an important one and one that both the students and the faculty take very seriously.