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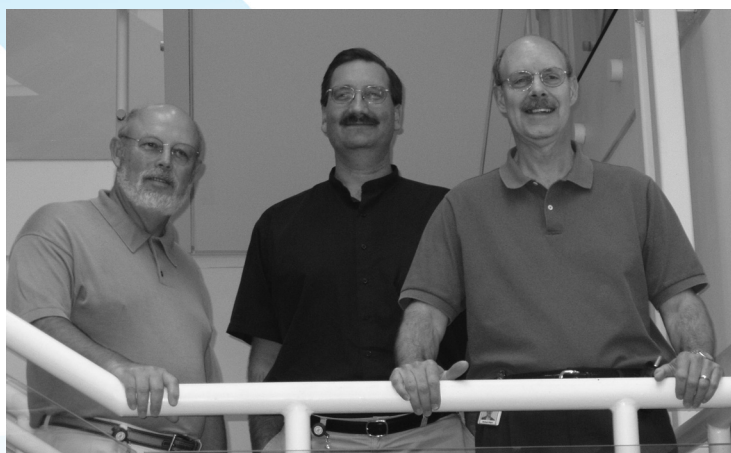
R&D VP Visits MBC

The ongoing state budget crisis has led to many changes within UMBI (*Inside MBC*, Vol. 6 No. 2 & No. 4), but one of the more positive effects has been the reorganization of several smaller units into the Office of Research and Development (ORD). Dr. Claude Nash, the new Vice President for Research and Development, was the guest speaker at the faculty meeting on October 7, 2003. Bringing along Dean Drake (*Inside MBC* Vol. 6 No. 1), Director of Research and Development (formerly Director of Sponsored Programs), and Dr. Richard Gilpin, the new Research Compliance Coordinator, he discussed the reorganization and its impact on faculty research programs.

Before the creation of ORD, there was an Office of Business Development. This was entirely devoted to technology transfer. The new Office continues to oversee technology transfer but has added sponsored programs and biosafety compliance to its responsibilities. Sponsored programs had been administered by the Office of Academic Affairs and there was no central coordination of biosafety before the reorganization.

The reorganization unites two activities that are undeniably linked: research support and research application. After all, one of the main missions of UMBI is to do research that could lead to real applications for the private sector. Putting sponsored programs and technology transfer together just makes sense. Including regulatory compliance in this office ensures that the documentation required for grant awards is readily available and consistent. In addition, the basic health and safety of all workers is better protected.

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Dr. Claude Nash, Mr. Dean Drake and Dr. Richard Gilpin visiting the Medical Biotechnology Center.

Patent Review Board

When Dr. Jennie Hunter-Cevera, President of UMBI, introduced the reorganized Office of Research and Development (see page one of this issue) in an email to faculty dated September 12, 2003, she said: "We also sustained the layoff of multiple employees throughout Central administration.... Nevertheless, we must continue to provide the infrastructure to support our core activity, research and commercial development." She went on to list some of the new objectives for the office. These include the creation of a Patent Review Board, which will be responsible for determining the commercial value and patent priorities for UMBI.

Dr. Mervyn Monteiro has agreed to be MBC's representative on this board. It is hoped that the board will be able to identify the best invention disclosures for patent prosecution and licensing efforts. The patent application process is both complicated and expensive. UMBI cannot afford to pursue all possible patents. It will be the board's responsibility to choose those which seem most likely to lead to licensing and products. Being the first of its kind at UMBI will mean substantial effort by all its members. Thanks to Dr. Monteiro for agreeing to represent MBC in this important process.

UMBI VP Ailing

Dr. James Lovelace, Vice President for Academic Affairs, has had to reduce his work load after being diagnosed with cancer. This is not the first time Dr. Lovelace has had to battle this disease. As he proceeds through treatment, he will still try to come in as much as possible. In the interim, Dr. Marian Jackson, Associate Vice President, will manage day to day operations. All members of the UMBI community are encouraged to send their best wishes for a speedy recovery to Dr. Lovelace.

CARB II Ground Breaking

The Center for Advanced Research in Biotechnology held the long awaited ground breaking for a new building on September 25, 2003. MBC Director, Dr. W. Jonathan Lederer, and Assistant Director, Mr. Timothy Hughes, represented MBC at this event hosted by UMBI President Hunter-Cevera and supported by Governor Robert Ehrlich and USM Chancellor William Kirwan.

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Congratulations!

Dr. Joseph Lakowicz has licensed two technologies developed at the Center for Fluorescence Spectroscopy (CFS) to Sequella, Inc. of Rockville, MD. The technologies monitor patient compliance in taking drugs. The MBC is the home of the Center, though Dr. Lakowicz has his primary appointment in the UMB School of Medicine.

The CFS also held its annual Scientific Advisory Board Meeting on September 30, 2003. Dr. Chris Geddes, who is a primary MBC faculty member, discussed several aspects of his collaborative work with the CFS.

Dr. Nash, who has a Ph.D. in microbiology, had previously been in the pharmaceutical industry--as researcher, manager, and executive officer--even founding his own company that he took public. He discussed the reorganization and his plans to make the disclosure process more transparent for faculty members. Disclosure is the first step in determining intellectual property rights for research findings. Academically trained scientists are often unaware of what they need to do to secure their rights before publication. Publication prior to disclosure or other legal measures can limit or eliminate any right to benefit from their discovery. Dr. Nash hopes to make the process less arcane and legalistic. Many of the changes that he has initiated will be apparent on the UMBI web page (www.umbi.umd.edu/rd/index.html).

Dean Drake, a familiar name if not a face, also spoke to the group. He also hopes to expand the services his office provides researchers.

The newest member of the office's leadership team is Dr. Richard Gilpin. His name was probably recognizable to many, as he had been at University of Maryland, Baltimore in Environmental Health and Safety. He has also served in a similar capacity at Johns Hopkins Medical School campus. Today's complex biosafety rules require a more coordinated effort than UMBI has had in the past. While MBC has benefited by contracting with UMB for insuring compliance with state and federal rules, several of the centers must do their own oversight. With the rules on select agents, biohazards, and other potentially hazardous materials changing regularly, having someone centrally located to coordinate our efforts will be a substantial boost for safety and efficiency.

The reorganization of UMBI Central that led to the creation of the Office of Research and Development should be a useful and productive change for all employees of UMBI.

Membrane Biology Retreat

MBC faculty members participate in a number of graduate training programs through secondary affiliations in UMB. One of these is the Integrated Program in Membrane Biology, administered by Dr. Robert Bloch in the Department of Physiology, UMB. The Program held its annual retreat at the historic Hilltop House in Harper's Ferry, WV on October 23-24, 2003. This was an opportunity for students and faculty to exchange ideas and update others on the progress of their research projects. MBC faculty members, W. Jonathan Lederer, Mervyn Monteiro, Vadym Degtyar and Valeriy Lukyanenko were all present.

MBC students who are being trained through this program include Diana Ford, who is in Dr. Monteiro's laboratory, and Andrew Ziman, who works with Dr. Lederer. Ms. Ford presented a poster on her work with Dr. Monteiro entitled "Investigation of the Mechanism of Ubiquilin Interaction with Presenilin-2." This work continues the ground-breaking efforts of the Monteiro laboratory to unravel the mysteries of Alzheimer Disease. Mr. Ziman's poster was entitled "The Effects of Spatial Limitation on the Development of Neonatal Cardiomyocytes." With co-authors Dr. Kevin Parker from Harvard University and Cecilia Frederick and Dr. Lederer at MBC, Mr. Ziman has begun to decipher the initial building steps in the assembly of the contractile mechanism in heart cells. New faculty members are also encouraged to introduce themselves and their work at the poster sessions. New MBC Assistant Professor Vadym Degtyar presented his current work with Dr. Lederer entitled "Elementary Properties of Voltage- and Caffeine-induced Subsarcolemmal Cardiac Ca^{2+} Signals."

In addition to the scientific content of the retreat, both practical and philosophical aspects of science were discussed. Two of the discussions were "Fellowships and How to Apply for Them" and "Two Ethical Problems in Research". These open and frank exchanges remind all the participants that science is more than just collecting data.

MBC Happenings

Comings and Goings

Dr. Howard Doong has joined the Program in Neurodegenerative Diseases as an Assistant Professor. **Lisa Ostrowski** joined Dr. Monteiro's laboratory as a Senior Research Assistant on a permanent basis. **Dr. Olga Bacharova** is a Research Associate in Dr. Ilia Baskakov's laboratory.

Grants and Contracts

Dr. W. J. Lederer, NIH, "Slip Mode Conductance in Heart," 9/1/03, \$371,250, yr 4 of 5.

Dr. W. J. Lederer, NIH, UMB, "Subcellular Organization and Calcium Signaling in Heart Failure," 9/1/03, \$358,271, yr 2 of 5.

Dr. Ilia Baskakov, NIH, "Self-propagating Mechanism of Prion Disease," 9/30/03, \$309,066, yr 1 of 4.

Dr. Les Baillie, NIH, UMB, "Rational Design of an Anthrax Toxin Neutralizing Vaccine," 9/30/03, \$162,134, yr 1 of 5.

Publications

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Kermis HR, Kostov Y, **Rao G**. Rapid method for the preparation of a robust optical pH sensor. ANALYST 128 (9): 1181-1186 2003

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Badugu R, **Lakowicz JR**, **Geddes CD**. A glucose sensing contact lens: A non-invasive technique for continuous physiological glucose monitoring. J FLUOR 13 (5): 371-374 SEP 2003

Okeke IN, Ojo A, Lamikanra A, **Kaper JB**. Etiology of acute diarrhea in adults in Southwestern Nigeria. J CLIN MICRO 41 (10): 4525-4530 OCT 2003

Graphic Resources

There are a number of resources available to help MBC faculty, staff and students with questions concerning graphic applications. Most of these are specifically for the Adobe products: Photoshop, Illustrator and InDesign. Pamela Wright, Assistant to the Director and editor of the newsletter, has a number of journals, books and CD's that may be useful for graphic design needs.

1. *Photoshop Fundamentals*: This is a bi-monthly journal for Adobe Photoshop. It goes over tools, techniques and tricks to use. Very useful for beginners.

2. *Dynamic Graphics*: This is a bi-monthly journal for design ideas. This tends to be for professional designers and not "how-to".

3. *Adobe Tips*: This is a collection of tips for Photoshop, Illustrator and InDesign that Mrs. Wright receives by email and compiles. Anyone interested in receiving copies of any or all of these should speak to her. Also useful for beginners.

4. Reference Books: *Photoshop 7 Wow!* and others, though they tend to be for older versions. Please see Mrs. Wright if you are interested in borrowing these. They are a good introduction.

5. *Art Explosion ClipArt*. Mrs. Wright has approximately 500,000 pieces of clip art, high resolution photos and other pictures available for Windows users. The artwork can be used on Macintosh machines, but will have to be transferred to compatible media.

Of course, you can still just ask her for help directly.

Rang C, Galen JE, **Kaper JB**, Chao L. Fitness cost of the green fluorescent protein in gastrointestinal bacteria. CANADIAN J MICROBIO 49 (9): 531-537 SEP 2003

Talks and Travels

Dr. Shengyun Fang, Invited Speaker, KPL Inc, Gaithersburg, MD, "Ubiquitin Assays" September 12, 2003.

Dr. Shengyun Fang, Invited Speaker, University of Texas MD Anderson Cancer Center, Houston, TX, "RING finger ubiquitin ligases: Implications for tumorigenesis, metastasis, and as molecular targets for cancer therapy" October 1, 2003.

Dr. Kadir Asian, Invited Speaker, Department of Biochemistry and Molecular Biology, UMB, "Plasmonic Glucose Sensing" October 6, 2003.

Dr. Joseph P.Y. Kao, Invited Speaker, Department of Pharmacological and Physiological Science, St. Louis University, St. Louis, MO, "Probing and Manipulating Physiology with Light Flashes" October 21, 2003.

Dr. Chris Geddes, Invited Speaker, Los Alamos National Laboratories, Los Alamos, NM, "Noble metal nanostructures for metal-enhanced fluorescence: A new analytical concept" October 23, 2003.

Dr. W. Jonathan Lederer, Seminar Speaker, Max Planck Institute, Frankfurt, Germany, "Exquisite Self-Control Keeps Us Alive: The Ca²⁺ Spark in Heart" September 10, 2003