



Inside MBC

"...molecular medicine through biotechnology"

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UMBI Holiday Party

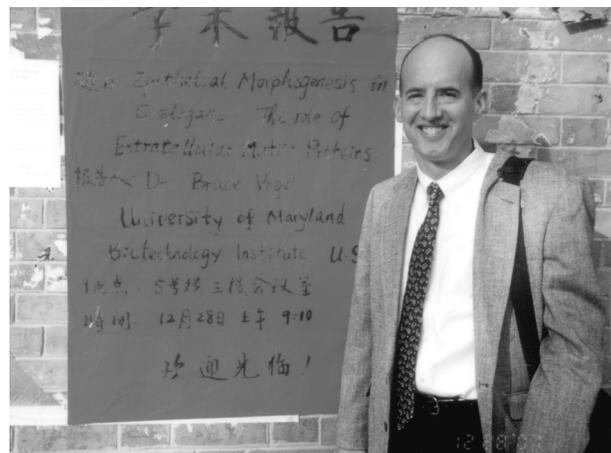
Dr. Jennie Hunter-Cevera hosted her first holiday party for all UMBI faculty and staff on December 14, 2001. Held at the Sheraton Columbia, it included dinner and dancing. The festivities started at 7 and were in full swing by 8. The menu was eclectic, featuring chicken fajitas, carved meats, and many other scrumptious offerings. While there is probably an official count someplace, there had to be at least 200 people, representing all of the five centers. MBC was there in full force, led by Dr. Lederer and his wife, Tim Hughes and his wife, several other faculty members and their guests and most of the staff, as well. Venus Windmiller, MBC's Human Resources Associate, won one of the door prizes.

It had been sometime since the entire UMBI celebrated the holidays together, but from the enthusiastic response to this effort it is clear that it was much appreciated. A committee with representative from all the centers, organized by Dan Reznikov, Vice President, Operations and Finance and others in Central Administration, did an excellent job. Everyone is looking forward to next year's party.



MBC Goes to China

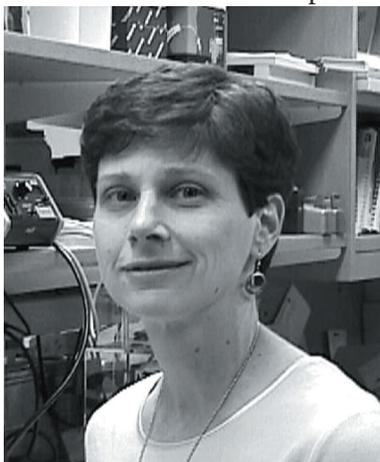
Dr. Bruce Vogel extended MBC's reach to the Far East this winter, traveling to the People's Republic of China. Arranged in part by his Chinese post-doctoral fellow, Chun Dong, who accompanied him, Dr. Vogel gave two seminars. The first hosted by Dr. Li Huaping, Chair of the Department of Plant Pathology, South China Agricultural University in Guangzhou and the second at Shanghai Jiao Tong University, hosted by Dr. Liping Zhao, Director of the Laboratory of Molecular Microbial Ecology and Genomics and Chair of the Department of Biotechnology. Dr. Vogel, who spoke on "Epithelial Morphogenesis in *C. elegans*: The role of Extracellular Matrix Proteins," was warmly received at both of these excellent Chinese institutions. He was very impressed by the quality of the questions and discussion, finding no overwhelming language difficulties, making the trip scientifically "very worthwhile." The trip was also a personally worthwhile experience, starting with a day in Hong Kong, before



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Jackson New UMBI VP

Dr. Marian Jackson is back in the news this issue. As of December 1, she is the new Associate Vice President of Academic Affairs. While most of her time will be spent at her new office in the Columbus Center or on the road going between the Centers, she will keep her office and retain her faculty affiliation at MBC.



In her new position, Dr. Jackson will be primarily responsible for faculty affairs, including program development and support for faculty by the central administration. The position is designed to improve day-to-day communication between Central Administration and the faculty of all five centers. Her first duties include helping coordinate the promotion and tenure

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China Trip continued.

taking the train to Guangzhou (formerly Canton) where he gave the first lecture. Dr. Dong was originally from the University there before coming to MBC to work with Dr. Vogel. His family was still in Guangzhou at the time of this visit. They then flew on to Beijing to take in the sights--the Summer Palace/Imperial Gardens, the Forbidden City and a Chinese opera. Dr. Vogel's favorite place was the Great Wall of China. He says that its size and "tremendous historical significance" made greatest impression on him. From Beijing, they flew to Nanjing, visiting the Nanjing Agricultural University, to meet with colleagues of Dr. Dong, who got his Ph.D. there. They then headed to Shanghai, where Dr. Vogel gave his second lecture. While Dr. Dong visited with his family in Guangzhou, Dr. Vogel went on to Shenzhen which has a China Cultural Village, "like Disney World" but with more ethnic costumes according to Dr. Vogel. Overall, Dr. Vogel did five cities in two weeks.

It was a lot of traveling in a very short span of time, considering the size of China. It was also a lot of eating, as Dr. Vogel's hosts overwhelmed him with culinary hospitality. He said it was like having three banquets a day! Dr. Vogel also left MBC and UMBI souvenirs with his hosts, cups, pens, and paperweights, which will be permanent reminders of his visit and our institution.

New Faculty Position

MBC is again looking for a new faculty member. The advertisement was sent out to the major journals in December. Almost immediately, applications began coming in. Assistant Director Tim Hughes is coordinating the effort. The Search Committee consists of Drs. Lederer, Kao, Collins, Monteiro, Baskakov and Vogel. If the response from the last search is any indication, they have their work cut out for them. Look for seminar announcements for the top candidates in the early spring. MBC should have a new faculty member named before summer. Good luck to the committee.

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Dr. Lederer Honored

Dr. W. Jonathan Lederer, Director of MBC, has been elected a Fellow of the Biophysical Society. He is one of seventeen named in the November-December issue of the Biophysical Society Newsletter. This award, designed to honor the Society's distinguished members who have demonstrated excellence in science and to the expansion of the field of biophysics, was presented to Dr. Lederer "for revolutionizing our understanding of Ca²⁺ signaling in cells." The formal presentation will be made at the annual meeting of the Biophysical Society in February.

Jackson continued.

process already underway when she was appointed.

One of her goals for the near future is to meet one on one with every faculty member in UMBI. This will give her a better sense of what expertise, both scientific and technical, is available throughout UMBI to facilitate cross-center and private sector collaborations. She estimates that it will take at least a year to talk to everyone. Of course she is fitting in faculty interviews in between taking on her other duties and just settling in to a new office. In addition, she is still coordinating and teaching the bioinformatics course, obligations she had made before being promoted. When asked if she would continue teaching next year, Dr. Jackson said that "it's too soon to tell. We first need to complete and evaluate the first offering of the course."

She says her new position is "fun" and that she hasn't set up a routine yet, in part due to her teaching load. Eventually, she hopes to spend at least one day in the CAB and CARB area, one or two days at MBC and IHV and the rest at COMB and her Columbus Center office. While MBC will miss her leadership, she will certainly be an asset to the entire UMBI community. Because of her promotion, the Faculty/Staff Senate chair is now vacant. Until an election is held, Senate Vice-Chair, Dr. Frank Robb from COMB, will preside.

Keith Dilly Graduates

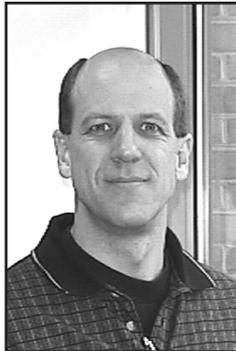
Pre-doctoral student, Keith Dilly, is now post-doctoral, having formally completed his graduation requirements in December. As a member of Dr. W. Jonathan Lederer's laboratory, Keith worked on excitation-contraction coupling the heart, as well as calcium signaling in various models of heart failure. His doctoral thesis is entitled "Calcium Signaling in Heart Failure." He did his undergraduate work at Coventry University in Coventry, England and also has a Master's degree from Liverpool University. He will continue to work with Dr. Lederer, finishing up several experiments, until he finds a suitable fellowship position.

IT Guy On Board

MBC is fortunate to hire Mike Kelly as our Information Technology Coordinator, as of November 27. Mike has not worked in academia before, coming to us from USi, a network support company which became a victim of the “dot.com” madness. However, he has adjusted just fine. Mike said that the private sector had an overwhelming “sense of immediacy” which contributed to a high burnout rate. When asked what he likes about his new position, he says it is the challenging yet “relaxed pace” that is most attractive.

The slower pace allows him to spend time with his wife, Sally, and their two children, Mark, 10, and Katie, 7. It also lets him indulge in his avocation-*a capella* singing. He is a member of two groups, a barber-shop quartet called “Wheelhouse” and a jazz quintet named “High Five.”

In collaboration with UMBI Central’s IT group, Mike is working on a variety of issues and future plans for MBC’s network. The first issue is security, which has been rather neglected. Also, the problems and delays of getting an IP address to be able to add machines to the network will soon be eliminated with the advent of a DHCP server. The infrastructure to take advantage of Internet 2, with its increased bandwidth, is nearly complete, with only upgraded routers yet to be in place. Though it will not noticeably change our current usage, eventually we will be able to handle large multimedia files and even do video conferencing from personal computers. Mike is already at work on these issues, while managing to keep all of our machines happy. Thanks and welcome.



MBC/UMBI Perspectives

By Tim Hughes

September, 1987...MBC appoints its first faculty member...

With two Acting-Directors and an Assistant Director in place, it was time to make MBC’s first faculty hire. Dr. John Collins, a distinguished Professor from Clarkson University in New York, was selected in September 1987 as the first MBC primary faculty member with tenure. His offer letter charged him to “...initiate an independent research program investigating protein structure-function relations...and direct a protein sequencing facility.” This MBC appointment, in partnership with the Department of Biological Chemistry, University of Maryland School of Medicine, created the model for how, at least initially, many appointments were made.

The joint appointment arrangement allowed MBC to contribute institutional and financial resources while a sister USM campus contributed physical space in the form of laboratories and offices. The future UMBI facility, then in its earliest, conceptual stage of development, would not be available for almost ten years. Therefore, joint appointments provided for mutual contributions and benefits and became a requisite component of early MBC appointments. Joint appointment arrangements afforded both parties significant opportunities – new faculty colleagues, an expansion of critical mass in key scientific areas, shared and leveraged resources for both new and existing faculty and a foundation upon which the MBC could develop.

Dr. Collins, well situated at Clarkson, transferred his successful research program, already funded by NIH, two NSF grants, the Muscular Dystrophy Association, and a subcontract with the University of Wisconsin. In addition to existing grant support, Dr. Collins brought with him two colleagues from Clarkson – a Research Associate, Dr. John Lescyk, and a Senior Research Assistant, Ms. Janet Theibert. A major investment in equipment and annual operating funds by the MBC allowed Dr. Collins to establish the MBC Protein Sequencing Core Facility. The availability of this important facility resource and the expertise of Dr. Collins was instrumental in making MBC a visible entity in Baltimore.

Next...618 West Lombard Street and more faculty appointments...

Did you know that the resident MBC faculty brought in over 3 million dollars in grants and contracts for the year 2001 alone?

W. Jonathan Lederer Productions

With the help of dozens of contributors, Dr. W. Jonathan Lederer gave a multimedia presentation on the occasion of Dr. Mordacai P. Blaustein’s, Chair of the Department of Physiology, receiving of the Association of Chairs of Departments of Physiology Distinguished Service Award for life time achievement in physiology. The presentation at the annual meeting in Los Cabos, Mexico included film clips, still photos, and audio tape contributed by Dr. Blaustein’s current and former faculty, post-docs and students and his family. Dr. Blaustein, who had been kept in the dark about the project, was completely taken by surprise. A film compilation of all the material, used and unused, is being prepared for Dr. Blaustein. But after such overwhelming approval, it cannot be too long before Lederer Productions will be at it again. The entire exercise does have a practical value, the lessons learned are already being applied to image acquisition and manipulation in the Lederer laboratory.

MBC Happenings

Comings and Goings

Ayana Jackson, receptionist, has left; **Tara Pierce** replaced her. **Dr. Long-Sheng Song**, M.D. joined Dr. Lederer's laboratory as a Research Assistant Professor. **Dr. Chris Geddes**, Ph.D. is the new editor of the *Journal of Fluorescence Microscopy* and Research Assistant Professor in Dr. Lakowicz's laboratory. **Mike Kelly** is the new Information Technology Specialist for MBC.

Grants and Contracts

W. Jonathan Lederer NHLBI, NIH, "Calcium Sparks in Heart Muscle" 9/1/01, \$299,395, year 4 of 5.

Publications

Kobayashi T, Kobayashi M, **Collins JH**. "Ca²⁺-dependent, myosin subfragment 1-induced proximity changes between actin and the inhibitory region of troponin I." *BIOCHIM BIOPHYS ACTA-PROT STRUCT MOL ENZYMOL* 1549:148-154 OCT 18 2001.

Wright AC, Powell JL, **Kaper JB**, Morris JG. "Identification of a group 1-like capsular polysaccharide operon for *Vibrio vulnificus*." *INFECT IMMUN* 69:6893-6901 NOV 2001.

Porasuphatana S, Weaver J, Budzichowski TA, Tsai P, **Rosen GM**. Differential effect of buffer on the spin trapping of nitric oxide by iron chelates. *ANAL BIOCHEM* 298:50-56 NOV 1 2001.

Wright AC, Powell JL, **Kaper JB**, Morris JG. Identification of a group 1-like capsular polysaccharide operon for *Vibrio vulnificus*. *INFECT IMMUN* 69:6893-6901 NOV 2001.

DiCesare N, **Lakowicz JR**. New color chemosensors for monosaccharides based on Azo dyes. *ORGANIC LTRS* 3:3891-3893 NOV 29 2001.

Kang JS, **Lakowicz JR**. Fluorescence resonance energy transfer in calf thymus DNA from a long-lifetime metal-ligand complex to Nile blue. *J BIOCHEM MOL BIO* 34:551-558 NOV 30 2001.

Lakowicz JR. Radiative decay engineering: Biophysical and biomedical applications. *ANAL BIOCHEM* 298:1-24 NOV 1 2001.

Murata S, Herman P, **Lakowicz JR**. Texture analysis of fluorescence lifetime images of AT- and GC-rich regions in nuclei. *J HISTOCHEM CYTOCHEM* 49:43-1451 NOV 2001.

Song JM, **Melera PW**. Further characterization of the sixth transmembrane domain of Pgp1 by site-directed mutagenesis. *CANCER CHEMOTHER PHARM* 48:339-346 NOV 2001.

Mah AL, Perry G, Smith MA, **Monteiro MJ**. Identification of ubiquilin, a novel presenilin interactor that increases presenilin protein accumulation. *J CELL BIO* 151:847-862 NOV 13 2000.

Janicki SM, Stabler SM, **Monteiro MJ**. Familial Alzheimer's disease presenilin-1 mutants potentiate cell cycle arrest. *NEURO-BIO AGING* 21:829-836 NOV-DEC 2000.

Wellman GC, Cartin L, Eckman DM, Stevenson AS, Saundry CM, **Lederer WJ**, Nelson MT. Membrane depolarization, elevated Ca²⁺ entry, and gene expression in cerebral arteries of hypertensive rats. *AM J PHYSIOL-HEART CIRCUL PHYSIOL* 281:H2559-H2567 DEC 2001.

DiCesare N, **Lakowicz JR**. Fluorescent probe for monosaccharides based on a functionalized boron-dipyrromethene with a boronic acid group. *TETRAHEDRON LTRS* 42:9105-9108 DEC 24 2001

Wellman GC, Cartin L, Eckman DM, Stevenson AS, Saundry CM, **Lederer WJ**, Nelson MT. Membrane depolarization, ele-

Other New Arrivals

November saw the arrival of two new faculty members. The first is Dr. Long-Sheng Song, an Assistant Professor, non-tenure track, who will be working with Dr. W. Jonathan Lederer. Dr. Song comes to MBC from the Gerontology Research Center, National Institute on Aging, NIH, where he did a postdoctoral fellowship with Dr. Peace Cheng. He got his M.D. at the North China Coal Mining Medical College in the People's Republic of China.

The second new Assistant Professor, non-tenure track, is Dr. Chris Geddes. He is the new editor of the *Journal of Fluorescence*, originally founded and edited by Dr. Joseph Lakowicz, as well as continuing his research on nanotechnology. He is one of the youngest editors of a major journal. Dr. Geddes comes from the University of Strathclyde in Glasgow, having done post-doctoral work with Dr. David Birch in the Department of Physics and Applied Physics. His Ph.D. is from the University of Wales, Swansea in chemistry. One of his first projects will be to enable online submissions to the journal.

Welcome to both.

vated Ca²⁺ entry, and gene expression in cerebral arteries of hypertensive rats. *AM J PHYSIOL-HEART CIRC PHYSIOL* 281:H2559-H2567 DEC 2001.

Monteiro MJ, Mah AL, Vallely KM. Dynamics and biochemical effects of ubiquilin-presenilin interaction in cells. *MOL BIO CELL* 11:2088, Suppl. S DEC 2000.

Albano CR, Lu CH, Bentley WE, **Rao G**. High throughput studies of gene expression using green fluorescent protein-oxidative stress promoter probe constructs - The potential for living chips. *J. BIOMOL. SCREENING* 6 (6): 421-428 DEC 2001

Talks and Travels

Dr. W.J. Lederer, Invited Speaker, American Heart Association Scientific Sessions 2001, Nov. 12, Anaheim, CA. "Calcium Signaling in Heart Failure."

Dr. Joseph Lakowicz Nov 12, UM School Med, Dept. Biochem & Mol. Bio, "Radiative Decay Engineering: Principles and Applications."

Dr. W.J. Lederer, Invited Speaker, 10th Annual Puerto Rico Neurosciences Conference, Nov. 30, San Juan, PR, "Multiphoton Confocal Microscopy."

Dr. W.J. Lederer, Invited Speaker, Annual Meeting of the Association of Chairs of Departments of Physiology, Dec. 8, Los Cabos, MX, "Tribute to Dr. Mordecai P. Blaustein."

Dr. Bruce Vogel, Invited Speaker, Shanghai Jiao Tong University and South China Agricultural University, Peoples Republic of China, Dec., "Epithelial Morphogenesis in *C. elegans*: The Role of Extracellular Matrix Proteins."

Patents and Licensing

Dr. Joseph Kao filed a Provisional Patent Application, October 15, 2001 for "Water-Soluble Pro-Drug Activating Transgene Expression Under Ecdysome Promoter Control."

Dr. Mervyn Monteiro filed a Provisional Patent Application, November 26, 2001 for "A Presenilin Interactor Protein and Uses Thereof."