



# Inside MBC

"...molecular medicine through biotechnology"

Volume 5, Number 4

July-August, 2002

Editor's Note: This is our short summer version of the newsletter. The regular format will return in September

## UMBI at Play

Summer is here and UMBI staff and faculty are taking advantage of the weather to get together informally. The 2nd Annual Employee Appreciation Day was held at Centennial Park in Howard County. Though the day was particularly blistering, the event, organized by MBC's Venus Windmiller, was well attended with over a hundred staff and faculty members attending with their families. One of the real advantages of this kind of affair is meeting face to face many individuals with whom one has only had phone or email contact.

## Dr. Marano Speaks

Dr. Nina Marano from the Center for Disease Control, visited the MBC on July 19, 2002. Speaking on "CDC Anthrax Vaccine Research Program," she spoke to us about the research being conducted into modifying the current vaccine regime to reduce the side-effects that have led many to refuse the vaccine altogether. While others have focused on new types of vaccine, the CDC hopes to use the current stocks but reduce the number of shots necessary to obtain immunity. The current regimen is 6 shots over 18 months. Not only is this not acceptable to many individuals, the length of time to reach immunity is too long, considering the state of affairs at this time.

## First Biodefense Symposium Held at Columbus Center

One area of research which had only received scant attention was the threat of bioterrorism. Few outside the military or defense contractors had any interest in it. However, in direct response to the horrendous events of 2001, national priorities have been re-evaluated. UMBI and the MBC were quick to realize that they had the potential to make significant contributions to this area. Beginning with the hiring of MBC's Dr. Les Baillie in February of this year, the UMBI Biodefense Initiative has been actively raising the awareness of the threat of bioterrorism and the unique position in which UMBI and others within USM are to contribute to the national defense. The symposium, was held on July 18, 2002, the first step in introducing the UMBI scientific community to the federal agencies which have resources and responsibilities for the national response to the threat. As the symposium announcement stated: "The purpose...is to bring together program managers



*Dr. W. Jonathan Lederer (right), Director of the MBC, introduces Dr. Les Baillie, the UMBI Biodefense Coordinator, head of MBC's Biodefense Initiative, and organizer of the symposium.*

from the key federal agencies who will describe the changes that their agencies face. The intent...is to stimulate USM scientists to think about biodefense in the context of their own work. The hope is that these ideas will be translated into funded research that will benefit the people of the United

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## Fang Accepts MBC Position



Dr. Shengyun Fang, from the Center for Cancer Research, National Cancer Institute, has accepted a tenure track Assistant Professorship at the MBC. He officially starts September 1, 2002. Dr. Fang studies ubiquitin ligases. These enzymes are essential for the proper targeting of proteins for degradation and he has discovered the human equivalent of several components of the targeting pathway originally found only in yeast. Dr. Fang is looking forward to setting up his own laboratory.

## MBC Happenings

### Comings and Goings

MBC welcomes Steven Lixing Chen, a son born August 30, 2002 to Graduate Student **Jing Liang** and her husband Gang Chen. **Dr. Valeriy Lukyanenko** joined the Faculty as an Assistant Professor on July 1, 2002. **Dr. Chris Geddes** has been appointed to the editorial board of the journal, *Dyes and Pigments*.

### Grants and Contracts

**W. J. Lederer**, NHLBI, NIH, "Calcium Dependent Cardiac Arrhythmias," a subcontract of a Program Project Grant with Dr. Andrew Marks, Columbia University, 7/1/02, \$351,054, year 2 of 5.

**Jeanine Ursitti**, AHA, "Cytoskeletal Networks in Normal and Dystrophic Cardiac Muscle", 7/1/02, \$66,000 year 2 of 2.

**Joseph P.Y. Kao**, NIGMS, NIH, "Caged Probes for Cellular Physiology," \$296, 258, yr 1 of 4.

### Publications

Sobie EA, Dilly KW, Cruz JD, **Lederer WJ**, Jafri MS. Termination of cardiac  $Ca^{2+}$  sparks: An investigative mathematical model of calcium-induced calcium release. *BIOPHYSICAL J* 83 (1): 59-78 JUL 2002

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Demehin AA, Abugo OO, Jayakumar R, **Lakowicz JR**, Rifkind JM. Binding of hemoglobin to red cell membranes with eosin-5-maleimide-labeled band 3: Analysis of centrifugation and fluorescence lifetime data. *BIOCHEM* 41 (27): 8630-8637 JUL 9 2002

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Li JC, Xu HX, Bentley WE, Rao G. Impediments to secretion of green fluorescent protein and its fusion from *Saccharomyces cerevisiae*. *BIOTECH PROG* 18 (4): 831-838 JUL-AUG 2002

Lu CH, Albano CR, Bentley WE, **Rao G**. Differential rates of gene expression monitored by green fluorescent protein. *BIO-TECHN BIOENG* 79 (4): 429-437 AUG 20 2002

Feng HQ, Banville DL, **Guiles RD**. Letter to the editor: Sequence-specific NMR resonance assignments for human interleukin-5. *J BIOMOL NMR* 23 (4): 329-330 AUG 2002

Torres AG, Perna NT, Burland V, Ruknudin A, Blattner FR, **Kaper JB**. Characterization of Cah, a calcium-binding and heat-extractable autotransporter protein of enterohaemorrhagic *Escherichia coli*. *MOL MICROBIO* 45 (4): 951-966 AUG 2002

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Zhang B, Cao GL, Cross A, Domachowske JB, **Rosen GM**. Differential antibacterial activity of nitric oxide from the immunological isozyme of nitric oxide synthase transduced into endothelial cells. *NITRIC OXIDE-BIOL CHEM* 7 (1): 42-49 AUG 2002

**Gryczynski I**, Piszczek G, **Lakowicz JR**, Lagarias JC. Two-photon excitation of a phytofluor protein. *J PHOTOCHEM PHOTOBIO A-CHEM* 150 (1-3): 13-19 JUL 26 2002

### Talks and Travels

**W. J. Lederer**, Invited Speaker, NIH RFA meeting. "Heart Failure and Calcium Signaling." Rockville, MD. July 17, 2002.

**W. J. Lederer**, Invited Speaker, International Society of Heart Research, North American Section 24<sup>th</sup> Annual Meeting, Madison, WI. "Calcium Signaling in Heart failure." July 25, 2002.

**W. J. Lederer**, Invited Speaker, Gordon Research Conference, Cardiac Regulatory Mechanisms. "EC coupling gain and heart disease." July 28-August 1, 2002.

### Biodefense continued States..."

The number of federal agencies participating in the symposium was extensive. Both the Army and Navy was represented. The Defense Applied Research Projects Agency, National Institute of Allergy and Infectious Diseases, Department of Energy, National Science Foundation, Food and Drug Administration and Centers for Disease Control were also here. These are all federal agencies that play a role in biodefense. Although anthrax is one of the agents associated with bioterrorism, there are other candidate organisms about which these agencies are concerned.

This symposium may become an annual event.



Participants at the first Biodefense Symposium listening to Dr. Les Baillie's introduction.

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