

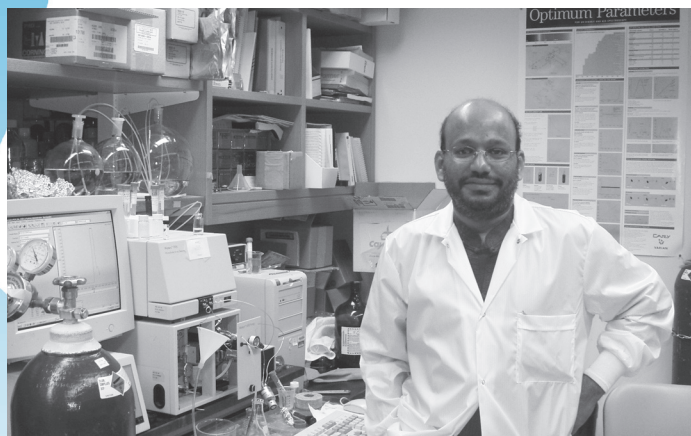
Inside:

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Cooking with Chemistry

The face on the front of the Baltimore Sun's inside section February 27 certainly seemed familiar, but it wasn't until many of us got to work that Tim Hughes pointed out that the face belonged to Dr. Sukumaran Muralidharan, a Research Associate in Dr. Joe Kao's laboratory. The quiet chemist has been with Dr. Kao for nearly 10 years, but rarely ventures far from the second floor labs. So it was certainly a surprise to find out that he was an author of a vegetarian cook book! The self-published book, entitled "A Short Course in Culinary Experiments: Vegetarian Indian Cuisine for Innovative Non-Experts," has been getting rave reviews from Contra

Costa County near
San Francisco, Peoria



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NIST Meeting Gets Rave Reviews

Dr. Willie May of the National Institute for Standards and Technology (NIST) visited the MBC on January 10, 2008. The visit was arranged after the new Memorandum of Understanding between UMBI and NIST was signed last August (*Inside MBC*, Vol. 10, No. 4). NIST is interested in expanding into biological areas, especially those with nanotechnology applications or biosensing. Drs. W. Jonathan Lederer, Joseph Kao, and Chris Geddes presented their work. Dr. Geddes' work elicited significant interest. Indeed, the meeting was so successful that a planned tour and photo shoot had to be cancelled for lack of time.

In addition to Dr. May, NIST participants included: Dr. James Turner, Acting Director and Deputy Director; Dr. Jason Boehm, program and Planning Office; Dr. Eric Amis, Director, Materials Science Laboratory; and engineering; Dr. Mike Amos, Chemical Science and technology Laboratory; and Dr. Gerald Fraser Physics Laboratory. UMBI VP Ted Roumel was also present, as well as MBC's Assistant Director Tim Hughes.



HR Task Force Organized

UMBI's Office of Human Resources (HR), headed by Kathy DeShong, has organized a task force to look at streamlining the hiring process using a web based system. The committee includes representatives from the Centers and from various offices within Central Administration. After extensive preliminary work by HR's Zahira Meyers, Kathy DeShong and Karen Stukes, the task force outlined the functionality needed by any online system. HR then applied the functionality to the available software packages, focusing on customizing potential. The task force then discussed which packages would be best to demo. After three demos, the task force met on February 11 to discuss the results and unanimously agreed on a package which would then be purchased. Once the package is purchased, the task force will advise HR on the customization.

MBC is represented by Jami Kasco, Dannielle Watkins and Pamela Wright. Other members include Dr. Marian Jackson and Dr. John Trant from the Office of Academic Affairs, Dr. Rose Jagus and Tonya Queen from COMB, and Greg Silsbee, Rita Varela and Christian Presley from CARB.

UMBI Annual Report

UMBI's Annual Report was released February 12, 2008. The report can be found at <http://www.umbi.umd.edu/about/images/annual-report-07.pdf>.

Annual UMBI Testimony

UMBI President Jennie Hunter-Cevera and the rest of the senior management team including Center Directors were in Annapolis February 6 and 7 for their annual appearance in front of the subcommittees responsible for overseeing UMBI's state funding. MBC was represented by Assistant Director Timothy Hughes and Associate Director Dr. Joseph Kao.

Congratulations!

Precious Lim, a graduate student in Dr. Mervyn Monteiro's laboratory, successfully defined her thesis entitled "Functional studies of ubiquilin *Caenorhabditis elegans*: Evidence that ubiquilin functions in ER stress response," on February 21, 2008. The newly minted Dr. Lim will remain in Dr. Monteiro's laboratory for the time being.

Congratulations are over due to Dr. Theresa Gallagher in Dr. Les Baillie's laboratory. She actually defended last November 28, but never told anyone! Dr. Gallagher graduated from the University of Brighton, School of Pharmacy and Biomolecular Sciences, in the UK. Her thesis was entitled "Application of Photoactivated Disinfection".

Editor and Designer: Pamela B. Wright
Assistant Editor: Tim Hughes

Publisher: W. Jonathan Lederer, Director MBC
Assistant Publisher: Joseph Kao, Assoc. Director MBC

Contact us at: wrightp@umbi.umd.edu
or 1-410-706-8181

Medical Biotechnology Center
725 West Lombard Street
Baltimore, MD 21201 USA

Back issues of *Inside MBC* are available on the web at:
<http://www.umbi.umd.edu/~mbc>

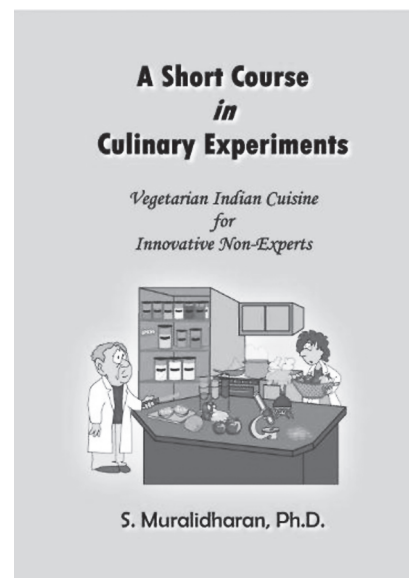
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and Springfield in Illinois and finally his home town of Baltimore.

Dr. Muralidharan is an expert in organic photochemistry, but had not published anything like this before. He has been working on the book off and on for nearly 7 years, but says most of the real work was done about 2 years ago. His decision to self-publish was really made to fit into his laboratory schedule. He says the book is a non-standard format and he did not have the time to convince a publisher that it was the best way to organize a cook book! Though arranging for printing and distribution was not easy, the web site he set up is far more flexible to maintain while working full time in the lab.

The book is unusual in that it is really a primer on basic Indian vegetarian cooking designed to encourage experimentation. It introduces the novice to Indian spices and taps into a cook's intuition on how to mix and match flavors. While there are recipes in the book, they are very simple and easily modified. As one reviewer put it, "The recipes are written like lab experiments...." Exactly what you would expect from a research chemist!

For those of you interested, Dr. Muralidharan's book can be found on his appropriately named web site, www.simpleistasty.com, along with the review articles.



Revisiting the Nest?

The speaker on February 29 was no stranger to the MBC. Keith Dilly had spent nearly 6 years here finishing his Ph.D. thesis under the direction of Dr. W. Jonathan Lederer (*Inside MBC*, Vol. 5 No. 3). From here he went on to postdoctoral fellowships at Columbia University and the University of Washington. He is now a Tenure Track Independent Research Fellow at the Institute of Membrane and Systems Biology, University of Leeds, back in his country of origin, the United Kingdom.

Dr. Dilly essentially brought his former coworkers and mentor up-to-date on what he had been doing since leaving the MBC. His seminar entitled "NFAT control of transmembrane potassium channel expression in the heart" was a slight departure from his thesis work on calcium channels. He may have thought he was back in school, as most of his thesis committee attended his talk!

The MBC lecture was part of an extended US tour that included the Annual Biophysical Society Meeting and a longer stay at the University of Washington to finish up some collaborative work with his former postdoctoral mentor, Dr. L. Fernando Santana, another former student of Dr. Lederer.



Dr. Dilly next to the poster announcing his seminar.

MBC Happenings

Comings and Goings

Dr. Joanna Patterson has left Dr. Bruce Vogel's laboratory. Anthony Glover, after a brief stint as a postdoctoral fellow following his graduation from Dr. Kao's group, has also moved on. Kevin Trachina finished his rotation in Dr. Monteiro's laboratory. Moradeke A. Bamgboye has chosen to do her graduate thesis in Dr. Lederer's laboratory.

Grants and Contracts

Dr. Chris Geddes, UMB-MARCE (NIH) Supplemental Funding, Anthrax Detection in Clinical Samples in 30 Seconds - Supplemental for Equipment, 1/1/2008, \$65,175, yr 1 of 1.

Dr. Chris Geddes, UMB-MARCE (NIH) Supplemental Funding, Anthrax Detection in Clinical Samples in 30 Seconds - Supplemental for Student Intern, 1/1/2008, \$16,087, yr 1 of 1.

Dr. Mervyn Monteiro, NIH, Functional Studies of Calmyrin, 2/1/2008, \$288,651, yr 4 of 5.

Publications

Ward CW, Rodney GG. Does a lack of RyR3 make mammalian skeletal muscle EC coupling a 'spark-less' affair? *J. Physiol.* 2008 Jan 15;586(Pt 2):313-4. (Dr. Rodney was a faculty member at the time this was written.)

Navedo MF, Nieves-Cintrón M, Amberg GC, Yuan C, Votaw VS, Lederer WJ, McKnight GS, Santana LF. AKAP150 is required for stuttering persistent Ca^{2+} sparklets and angiotensin II-induced hypertension. *Circ. Res.* 2008 Feb 1;102(2):e1-e11.

Zhang Y, Aslan K, Previte MJ, Geddes CD. Plasmonic engineering of singlet oxygen generation. *Proc Natl Acad Sci U S A.* 2008 Feb 12;105(6):1798-802.

Aslan K, Previte MJ, Zhang Y, Geddes CD. Microwave-accelerated surface plasmon-coupled directional luminescence 2: A platform technology for ultra fast and sensitive target DNA detection in whole blood. *J Immunol Methods.* 2008 Feb 29;331(1-2):103-113.

Zanna C, Ghelli A, Porcelli AM, Karbowski M, Youle RJ, Schimpf S, Wissinger B, Pinti M, Cossarizza A, Vidoni S, Valentino ML, Rugolo M, Carelli V. OPA1 mutations associated with dominant optic atrophy impair oxidative phosphorylation and mitochondrial fusion. *Brain.* 2008 Feb;131(Pt 2):352-67.

Sun Y, Makarava N, Lee CI, Laksanalamai P, Robb FT, Baskakov IV. Conformational Stability of PrP Amyloid Fibrils Controls Their Smallest Possible Fragment Size. *J Mol Biol.* 2008 Feb 29;376(4):1155-67.

Aslan K, Malyn SN, Geddes CD. Angular-Dependent Metal-Enhanced Fluorescence from Silver Island Films, *Chemical Physics Letters*, 453, 222-228, (2008).

Wu X, Chowdhury MH, Geddes CD, Aslan K, Domszya R, Lakowicz JR, Yang AJ-M. Use of Surface Plasmon-Coupled Emission for Enhancing Light Transmission through Top-Emitting Organic Light Emitting Diodes. *Thin Solid Films* 516, 1977-1983, (2008).

Chowdhury M, Ray K, Geddes CD, Lakowicz JR. Use of silver nanoparticles to enhance surface plasmon-coupled emission (SPCE). *Chemical Physics Letters*, 452, 162-167, (2008).

Talks and Travels

Dr. Joseph Kao, session speaker, SPIE Photonics West meeting, San Jose, CA, "Photostimulation of rat sensory neurons of the

Bits and Pieces

MBC Labs at Biophysical Society Meeting

The Annual Biophysical Society Meeting is so well attended by MBC researchers that two laboratories virtually shut down for the 4 day meeting! Both Dr. W. Jonathan Lederer's and Dr. Chris Geddes' laboratories attend *en masse*, reflected in the number of presentations (one platform and 11 posters, besides Dr. Geddes being a session speaker) at the meeting.

MBC Seminar

Dr. Al Place from the Center of Marine Biotechnology finally gave his seminar entitled "*Karlodinium veneficum*, the little Chesapeake Bay Dinoflagellate with a big bite" on January 24. Dr. Place had been scheduled to be the last speaker at the 2007 MBC Retreat but got stuck in traffic. Dr. Place's work is so far-ranging and his style so engaging that there is already talk of having him come again.

Director of Education and Outreach Visits

Dr. Mary Stapleton, UMBI's new Director of Education and Outreach, visited the MBC on February 19. She, along with UMBI VP John Trant, talked with MBC Director W. J. Lederer and Assistant Director Tim Hughes about possible Sci-Tech and loaner lab projects based on MBC research.

Drs. Kao and Rosen Visit GE

The visit by GE last November (*Inside MBC*, Vol. 10, No. 6) yielded an exchange visit on February 15 by MBC's Associate Director Dr. Joseph Kao and his UMB collaborator and MBC Affiliated Professor, Dr. Gerald Rosen. They traveled to the GE Global Research Center in Niskayuna, NY., where Dr. Kao delivered a talk entitled "*In vivo* imaging by electron paramagnetic resonance (EPR)." Then he and Dr. Rosen answered questions about the possible applications of this novel imaging technique. According to Dr. Rosen, GE is very excited about the possibilities and both sides are exploring ways to collaborate.



vagus nerve," January 21, 2008

Dr. Chris Geddes, session speaker, Biophysical Society Annual Meeting, Long Beach, CA, "Anthrax Detection in < 30 seconds," February 2-6, 2008.

Dr. Joseph Kao, invited speaker, GE Global Research Center, Niskayuna, NY, "*In vivo* imaging by electron paramagnetic resonance (EPR)," February 15, 2008.