

Biochemistry and MOLECULAR BIOLOGY

NOTES

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Recent Publications

Gharehbaghi K, Kubin A, Grusch M, Gharehbagh-Schnell E, Wierrani F, **Jayaram HN**, Grunberger W, Szekeres T. Photodynamic action of meta-tetrahydroxyphenylchlorin (mTHPC) on an ovarian cancer cell line. *Anticancer Res.* 2000 Jul-Aug;20(4):2647-52.

Franchetti P, Marchetti S, Cappellacci L, **Jayaram HN**, **Yalowitz JA**, Goldstein BM, Barascut JL, Dukhan D, Imbach JL, Grifantini M. Synthesis, Conformational Analysis, and Biological Activity of C-Thioribonucleosides Related to Tiazofurin. *J Med Chem.* 2000 Apr 6;43(7):1264-1270.

Yalowitz JA, Jayaram HN. Molecular targets of guanine nucleotides in differentiation, proliferation and apoptosis. *Anticancer Res.* 2000 Jul-Aug; 20(4):2329-38.

Hansen WK, Kelley MR. Review of Mammalian DNA Repair and Translational Implications. *J Pharmacol Exp Ther* 2000 Oct 1;295(1):1-9

Sanghani, Paresh S., Stone, Carol L., Bosron, William F., Kinetic Mechanism of Human Glutathione-Dependent Formaldehyde Dehydrogenase, *Biochemistry*, **39**, 10720.

Xin Zhi, Edward M. Chan, and Howard J. Edenberg, Tissue-specific Regulatory Elements in the Human Alcohol Dehydrogenase 6 Gene, *DNA and Cell Biology*, **19**, 2000, 487-497.

Dziarski, R, Viriyakosol, TN, Kirkland, S, and **Gupta, D.** 2000. Soluble CD14 enhances membrane CD14-mediated responses to peptidoglycan: structural requirements from those for responses to lipopolysaccharide. *Infection and Immunity*, **68**:5254-5260.

Bowman Award Competition Announced

Papers due October 24
Banquet set for November 3
See page 5 for details.

Congratulations!

Congratulations to **Jin-Sam (Teddy)** and his wife **Jung-Soon You** on the birth of their daughter, Grace L. You. She was born on Monday, September 11 at 11:06 a.m. weighing in at 8 pounds, 7 ounces. Teddy is a post-doc in Suk-Hee Lee's lab.

Congratulations to **Krishna and Janaki Vattem** on the birth of their daughter, Swati. She was born on Saturday, September 2, 2000. She weighed 7 pounds, 1½ ounces and was 20½ inches long.

Congratulations to **Samantha Parmley**, Biophysics grad student in Tom Hurley's lab, who was married on June 24th to Anthony Perez-Miller!

New Faces in Biochemistry

Kathy Song, new work-study in Dr. Jayaram's lab

Anita Rieman, new Research Technician in Dr. Lee's lab

October Seminars

Biochemistry Seminars Mondays 4 pm, MS 326

10/2 Dr. James R. Broach, Professor, Molecular Biology, Princeton University, Princeton, NJ.; “Integration of RAS and TOR signaling pathways in yeast”

10/9 Dr. Thomas Seng-Lai Tan, Senior Scientist, Infectious Diseases Research, Eli Lilly and Company, Indianapolis, IN; “NS5A nonstructural protein as an anti-HCV therapeutic target: Mission Impossible”

10/16 Dr. J. Denis McGarry, Professor of Internal Medicine and Biochemistry, Clifton and Betsy Robinson Chair in Biomedical Research, University of Texas Southwestern Medical Center, Dallas, TX; “Fatty acids, insulin resistance and insulin action”

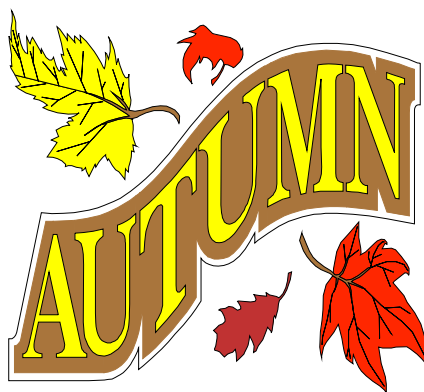
10/23 Shannon Hawkins, Graduate Student, Biochemistry and Molecular Biology, Indiana University School of Medicine, Indianapolis, IN; “SATB1 Binds to Multiple Sites in the gp91phox Promoter and Represses Gene Expression”, **1:00 p.m.**, MS B26

10/23 Dr. Barbara B. Kahn, Chief, Diabetes Unit and Associate Professor of Medicine, Department of Medicine, Harvard Medical School and Beth Israel Deaconess Medical Center, Boston, MA; “Molecular Mechanisms for Insulin Resistance in Obesity and Diabetes”

10/30 David Clawson, Graduate Student, Biochemistry and Molecular Biology, Indiana University School of Medicine, Indianapolis, IN; “The Three Dimensional Structure of the Harvey-Ras G12V V45E Mutant Complexed with Guanosine Diphosphate and the Nonhydrolyzable Analog of Guanosine Triphosphate, Guanylylimido Diphosphate” at **8:00 a.m.** in MS, **Room B26**

Center for Diabetes Research Seminar, Alternate Tuesdays, 4:00 pm, MS 326

10/10 Dr. Christopher Hardin, Associate Professor, Department of Physiology, University of Missouri, Columbia, MO. “*Cellular Metabolism: Learning New Tricks From Old Dogs*”



Biochemistry Student Seminars Wednesdays, 12 Noon, MS A506

10/4 Brian Gibbons
10/11 Joel Yalowitz
10/18 Zejin Sun
10/25 Bolan Linghu

Other Seminars of Interest

10/4 2:30 p.m. Phospholipid Flippases: Regulators of Membrane Lipid Organization. **Dr. David L. Daleke**, Dept. of Biochemistry/Molecular Biology, Medical Sciences, Bloomington Center for Medical Education, IUSM. Methodist Research Institute, Wile Hall Auditorium, WG33.

10/4 4:00 p.m. The EphA2 Receptor Tyrosine Kinase: A New Target for Cancer Diagnosis and Treatment. **Dr. Michael Kinch**, Dept. of Basic Medical Sciences, Purdue University; West Lafayette, IN. Cancer Research Building [R4] Auditorium, Room 101.

10/5 4:00 p.m. Is There Anything in Common Between Cell Growth Control and Translation Initiation Factor eIF3? **Dr. Jian-Ting Zhang**, Dept. of Pharmacology/Toxicology, IU Cancer Center and Walther Oncology Center, IUSM. Medical Science 326.

10/11 12:00 noon Smooth Muscle Cell Migration and Angiogenesis. **Dr. George Boguslawski**, Associate Director, Experimental Cell Research Laboratory, Methodist Research Institute; Methodist Hospital. Medical Science 326.

Other Seminars of Interest, continued from p2

10/11 4:00 p.m. The Roles of Coactivators, Histone Modification, and Chromatin Remodeling in Gene Regulation by Steroid Hormones and Their Receptors. **Dr. Michael Stalcup**, Dept. of Pathology, University of Southern California; Los Angeles, CA. Cancer Research Building [R4] Auditorium, Room 101.

10/12 4:00 p.m. Modulation of DNA Repair in Cancer Chemotherapy. **Dr. Emiko Kreklau**, Postdoctoral Fellow, Dept. of Pharmacology/Toxicology, IUSM. Medical Science 326.

10/17 12:00 noon Transgenic Models of Hereditary Kidney Disease. **Dr. Carrie L. Phillips**, Dept. of Pathology/Laboratory Medicine, IUSM. Medical Science 311A/B.

10/18 12:00 noon Membrane Traffic and Control of Epithelial Pi-Transport. **Dr. Heini Murer**, Professor and Chairman, Institute of Physiology, University of Zurich-Irchel; Zurich, Switzerland. Medical Science 326.

10/18 4:00 p.m. Roles for Calpain Proteases in Cell Motility and Differentiation. **Dr. David A. Potter**, Dept. of Medicine, IUSM. Cancer Research Building [R4] Auditorium, Room 101.

10/19 4:00 p.m. Chemokine-Induced Hematopoietic Stem Cell Mobilization: New Paradigms for Transplantation. **Dr. Louis M. Pelus**, Associate Director, Walther Oncology Center, and Dept. of Microbiology/Immunology, IUSM. MS326.

10/25 4:00 p.m. Structure/Function Analysis of the Mutagenic DNA Replication Apparatus of Human Breast Cancer Cells. **Dr. Linda Malkas**, University of Maryland School of Medicine; Baltimore, MD. Cancer Research Building [R4] Auditorium, Room 101.

10/26 4:00 p.m. Regulating Mast Cell Inflammatory Responses with Th2 Cytokines: A New Kind of Immune Homeostasis? **Dr. John J. Ryan**, Dept. of Biology, Virginia Commonwealth University; Richmond, VA. Medical Science Building, Room 326.

10/26 4:00 p.m. Role of Spatial Compartmentalization in the Activation of Glycogen Synthase by Insulin. **Dr. Mathew Brady**, Senior Scientist, Department of Cell Biology, Pfizer Global Research & Development, Ann Arbor, MI. Medical Science Building, Room 326.



October Birthdays

10/1 Wei Wang
10/9 Art Schulz
10/9 Shannon Hawkins
10/14 Pat Jenkins
10/18 Ron Jerome
10/24 Brian Gibbons
10/28 Tom Hurley

Important dates

10/1 NIH new research
11/1 NIH competing renewals
11/3 Bowman Dinner
11/23 THANKSGIVING
11/24 FRIDAY AFTER THANKSGIVING
12/11 Finals begin
12/25 MERRY CHRISTMAS
1/1/01 HAPPY NEW YEAR
1/8 Classes begin
2/1 NIH new research
3/12 Spring break begins
4/30 Finals begin
5/13 Commencement

Dean's Office Deadlines - Oct

10/4 American Cancer Society
10/20 American Lung Association
10/20 NIH Competing Renewals
11/1 Indiana Heart Assn. Midwest Affiliate
11/1 National Kidney Foundation of Indiana

2000 Biochem Retreat a Success!

Thanks to everyone for making a success of the 2000 Biochemistry and Molecular Biology Retreat on Saturday, Sept. 9! The Indianapolis Art Center north of Broad Ripple was the site for 12 excellent talks by faculty members (Drs. Howard Edenberg, David Daleke, Maureen Harrington, Mark Kelley, David Skalnik, and Lawrence Quilliam), post-docs (Drs. Sonal Sanghani, and Jing Dong Su), and students (Kirk Staschke, Joel Yalowitz, Ying Jiang, and Zhong Wang). PowerPoint presentations were new this year and well received. All of the speakers are to be congratulated on their fine efforts!

Over 100 researchers from all parts of the statewide system attended the event. More than 30 posters from various labs provided stimulating conversation and exchange of ideas as well as providing updates on research work being conducted. Large 4 ft. by 8 ft. easels gave plenty of space for viewing posters in two interior rooms and on the north portico. The weather cooperated beautifully for afternoon volleyball games, and many of us browsed through the art galleries and watched hand-blown glass being crafted in the studio.

Dr. Harris updated us on departmental activities during the past year and plans for the coming year, and the following awards were presented: the Peggy Gibson Award for the best paper by a grad student during the 1999-2000 school year was awarded to Dr. Ruojing Yang, a recent graduate from Dr. Wek's lab, and the Jack Davis Award for the best student seminar in 1999-2000 was awarded to Bruce Diaz. Each award has a \$150 prize. Hats off to the winners and a round of applause to all who competed!

And hats off to Jack Arthur who superbly handled the audio-visual technical specialties; to Gena Lynam, Sandy McClain, and Mary Harden for planning the thousands of details; and to everyone who brought supplies, helped set up and clean up: Nan Zhang, Aijing Zhang, Wei Wang, Xiaodong Xie, Wil Davis, Bolan Linghu, Paula Ladd, Junhai Guo, Zejin Sun, Yong Luo, Yao Wang, Haobo Ma, Joel Yalowitz, Bruce Diaz, Zhong Wang, Heather Breen, and Melissa Bowker-Kinley. A special thanks to Kun Ma, the student representative who organized the students' participation in the event (and who attended a conference in Long Island on the day of the Retreat), to Hui Zong who stepped in for Kun at the Retreat, and to Dr. Mark Goebel, the Grad Student Advisor who provided lots of muscle as well as planning and organization.

We appreciate everyone's participation and look forward to next year's event!



REMINDER

NIH has recently announced a new requirement that research using human subjects demonstrate the completion of education in the protection of human research participants.

Any Principal Investigator, Co-Principal Investigator or key personnel that has involvement with human subjects on an NIH grant and will have funding after October 1, 2000 needs to be able to pass a test on the Protection of Human Subjects.

Dr. Sharon Moe is offering a Faculty Clinical Research Training Seminar on Monday, September 25, 2000 starting at 8:00 am. The first 90 minutes of this seminar will cover human subjects. Please note that researchers who complete the 90-minute human subject portion will have the option of taking the test at that time. This will be held live in Myers Auditorium at Wishard Hospital. This room only holds 300 people so you are requested to register at 4-8353. It will also be televised at the same time at Methodist Hospital, Wile Hall.

If you are unable to attend, information can be found at <http://www.research.indiana.edu> and click on human subject certification. This will take you to the information and the test.

Note from Sandy McClain: let me know when you pass the test and I'll do the paperwork needed and have it on file for future funding.

The 2000 Bowman Prize Basic Science Research Award

The 2000 Bowman Award for excellence in research in fundamental biochemistry and molecular biology carried out by a postdoctoral fellow at Indiana University School of Medicine will be awarded at a dinner held on November 3, 2000 at the Oak Hill Mansion in Carmel.

The Bowman award is presented by the Department of Biochemistry and Molecular Biology in honor of Donald E. Bowman, Ph.D., Professor Emeritus and Founding Chairman of the Department of Biochemistry at Indiana University School of Medicine.

Candidates eligible for this award will have held a postdoctoral or residency appointment in a department of IUSM in association with a full time member of the School of Medicine faculty.

Research will be judged by an interdepartmental committee on the basis of its originality and significance. For this purpose candidates should submit a completed manuscript of a paper suitable for publication in an international-class journal, or a reprint of a published paper. This should be accompanied by a note from the faculty sponsor indicating the significance of the research and the role of the candidate in designing and carrying out the experimental program and preparation of the manuscript. The research will have been conducted principally by the applicant during the period beginning July 1, 1998. Doctoral thesis research will not be reviewed.

Areas of research to be judged in this competition will be limited to fundamental biochemistry and molecular biology. While clinical research is not excluded, the contribution to basic biochemistry or molecular biology must be manifest.

Applicants for this award should submit a single manuscript or reprint to the Biochem Office (Attn: Pam Nichols) on or before October 24, 2000.
