MOLECULAR BIOLOGY NOTES

Vol 12, No. 1 April, 1999

TOM HURLEY DIRECTOR OF NEW CENTER

Tom Hurley has been appointed Director of the new Center for Structural Biology by the School. This Center was formed in response to a recommendation of a faculty committee that formulated a five-year plan for research investment at the school.

The Center will focus on three areas: 1) characterizing interactions between biological macromolecules using the recently accquired BIACORE 3000, 2) determining the three-dimensional structure of macromolecules through X-ray crystallography, and 3) monitoring the expression and modification state of proteins through protein sequencing and mass spectrometry. The goal of the Center is to provide resources in the form of shared equipment and faculty support for research aimed at understanding macromolecular function through struvtural analysis.

Tom Hurley, David Timm, and **Jean Hamilton** will serve as Center faculty, while day-to-day operation of the protein sequencing equipment and the fluorometer will be supervised by **Alan Mahrenholz,** the Scientific Director of the center.

Statewide Teaching Meeting
April 17, 1999

IMPORTANT DATES

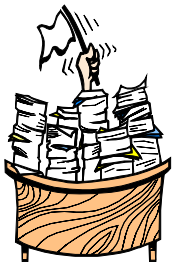
4/2 CAMPUS HOLIDAY
4/17 Statewide Teaching Meeting
4/21 Secratery's Day
5/1 Exams begin
5/7 Semester ends
5/9 Commencement
5/16-20 ASBMB Meeting, San Francisco, CA
5/31 MEMORIAL DAY
6/1 NIH New Research Grants, FIRST and Career Dev. Awards, Program Project & Center Grants
6/15 AHA, all grants
7/1 NIH competing renewals, revised grants
7/5 INDEPENDENCE DAY
9/6 LABOR DAY
10/1 NIH New Research Grants, FIRST and Career Dev. Awards, Program Project & Center Grants
10/2 Biochem Retreat
11/1 NIH competing renewals, revised grants
11/25 THANKSGIVING
12/25 MERRY CHRISTMAS
1/1/00 HAPPY NEW CENTURY!

PETER ROACH HEADS NEW CENTER FOR DIABETES RESEARCH

The Center for Diabetes Research is a new initiative of the School to augment basic science research in the general area of diabetes, obesity, and related metabolic disorders. The Dean has appointed **Peter Roach** as the Director of the new Center.

The mission of the Center is to: (a) Promote diabetes research in the basic sciences by aiding the recruitment of new faculty and the development of new Core resources; (b) Develop collaborative interdepartmental research programs that can lead to the submission of new Program Project and other multi-investigator applications; and (c) Increase the exposure of students and post-doctoral fellows in the basic sciences to diabetes related research, through the development of graduate and post-doctoral programs in diabetes, obesity, and related metabolic disorders.

Happy Secretary's Day April 21, 1999



Published by the Department of Biochemistry and Molecular Biology, Indiana University School of Medicine, Indianapolis, IN 46202-5122, USA for faculty, staff, students, and interested friends of the Department.
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APRIL SEMINARS

Biochemistry Faculty Seminars Mondays, 4:00 pm, MS B326 (unless otherwise indicated)

4/5 **Dr. Amira Klip,** Senior Scientist, Programme in Cell Biology, The Hospital for Sick Children, and Professor of Biochemistry, University of Toronto; **"Insulin stimulation of glucose uptake: A tale of two signals".**

4/12 **Dr. Hidetake Yakura,** Director of Molecular Research Division, Tokyo Metropolitan Institute for Neuroscience, Japan; **"Protein tyrosine phosphatases that determine lymphoycyte fate".**

4/19 **Dr. Anita Hopper**, Professor of Biochemistry and Molecular Biology, Pennsylvania State University College of Medicine, Hershey, PA; **"Nuclear export of tRNA and its coupling to pre-RNA processing".**

4/26 **Dr. Mark Kelley,** Associate Professor of Pediatrics and Biochemistry and Molecular Biology, IUSM; **"Multifunctional DNA repair and redox regulatory protein (APE/ref-1): Relationship to cancer, redox regulation and uses in cancer gene therapy".**

Biochemistry Student Seminars Wednesdays, 12 Noon, MS A506

4/7 **ERQUAN ZHANG/ LIN LI**
4/14 **JING ZHOU**
4/21 **XIAODONG XIE/ PRIANTO MOELJADI**
4/28 **JINGYUAN LIU/ ZEJIN SUN**

Biochemistry & Molecular Biology Research Seminar, Thursdays, 12:00 Noon, MS A506/A518

4/8 **Randy Shen,** "The role of Grap in lymphocyte signaling"

4/22 **Carita Lanner,** "Glycogen metabolism in PPIG targeting subunit (RGL) knockout mice"

Diabetes Seminar, Thursdays, 4:00 pm, MS 311 A/B

4/13 **Anna DePaoli-Roach,** "Insulin regulation of glycogen metabolism in transgenic mice overexpressing or deficient in the muscle specific glycogen associated phosphatase"

4/27 **Jim Walsh**, "Diacylglycerol signaling in diabetic complications".

CONGRATULATIONS!

To **Neal Mathias,** on his appointment to the position of Assistant Scientist in the Department of Biochemistry & Molecular Biology. Neal recently completed a postdoctoral fellowship here; his primary research interest is in cell cycle-dependent protein degradation.

Other Seminars of Interest

4/7 Amplification of Hematopoietic Stem Cells Using DHFR and MDR1 Retroviral Vectors. **Brian Sorrentino, M.D**., Dept. of Biochemistry/Experimental Hematology, St. Jude Children's Research Hospital; Memphis, TN. Cancer Research Institute Auditorium. 4:00 pm

4/16 Control of Apoptosis by the TNF Receptor Superfamily. **Colin S. Duckett, Ph.D**., Metabolism Branch, National Cancer Institute, NIH; Bethesda, MD. Medical Science 326 4:00 p.m.

4/21 Structure Function Studies of Mammalian PTPases Using a Combination of Gene Targeting and Substrate Trapping Approaches. **Michel L. Tremblay, Ph.D.,** Dept. of Biochemistry, McGill University; Quebec, Canada. Cancer Research Institute Auditorium 4:00 p.m.

4/22 Regulation of Papillomavirus Transcription, DNA Replication and Genome Segregation by the E2 Proteins. **Alison Anne McBride, Ph.D.**, National Institute of Allergy and Infectious Diseases, NIH; Bethesda, MD. Medical Science 326 4:00 p.m.

TRAFFIC ALERTS:
MICHIGAN STREET BRIDGE REPAIR, MINI-MARATHON

The Michigan St. bridge is scheduled to close for repairs effective March 29. The construction is scheduled to be completed in September 1999.

Detour Routes: Non-campus traffic will be directed north on Indiana Ave. from Michigan St. and west on 10th St. across the river.

Campus traffic on Michigan St. will be routed south on Porto Allegre (which will be become one way south) to Limestone (which will also become one way south between Porto Allegre and New York) and south to New York. Then west on New York (New York will be made two way from Limestone to White River) across the river.

There will be no parking on either side of Limestone St. between New York and Michigan.

A second traffic alert concerns the Mini-Marathon, which will be held on a Saturday this year. It is expected to cause major traffic problems around the IUPUI campus from approximately 8 a.m. until 1:30 p.m. on May 1, 1999.

If you have any questions please call Lt. Bill Abston at 274-2058.

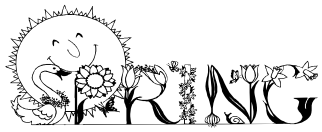
RECENT PUBLICATIONS

Manish G. Kumar, Steven A. Hurwitz, Jenny Cotton, and **Dan F. Spandau** (1999) Subphysiological concentrations of extracellular calcium sensitize normal human keratinocytes to UVB-induced apoptosis. *Arch. Dermatol. Res.* 29:37-46

Christine Kuhn, Steven A. Hurwitz, Manish G. Kumar, Jenny Cotton, and **Dan F. Spandau** (1999) Activation of the insulin-like growth factor-1 receptor promotes the survival of human keratinocytes following ultraviolet B irradiation. *Int. J. Cancer* 80:431-438.

Lisa A. Barber, **Dan F. Spandau,** Sara G. Rathmani, Robert C. Murphy, Christopher A. Johnson, Susan W. Kelley, Steven A. Hurwitz, and Jeffrey B. Travers (1998) Expression of the platelet-activating factor receptor results in enhanced ultraviolet B radiation-induced apoptosis in a human epidermal cell line. J. *Biol. Chem.* 273:18891-18897.

Howard J. Edenberg, Ronald E. Jerome, and **Mei Li** (1999) Polymorphism of the human alcohol dehydrogenase 4 (ADH4) promoter affects gene expression. Pharmacogenetics 9:225-30.



CONGRATULATIONS!

To **Tom Hurley,** whose grant to study "X-Ray Structure of Human Aldehyde Dehydrogenase" was funded by NIH for 5 years.

Gharehbaghi, K., Zhen, W., Fritzer-Szekeres, M., Szekeres, T. and **Jayaram, H.N.** (1999). Studies on the antitumor activity and biochemical actions of cyclopentenyl cytosine against human colon carcinoma HT-29 *in vitro* and *in vivo. Life Sci.,* **64,** 103-112.

Sun, X-L., **Jayaram, H.N.,** Gharehbaghi, K., Li, Q-J., Xiao, X. and Antony, A.K. (1999). Modulation of the cytotoxicity of 3'-azido-3'-deoxythymidine and methotrexate following transduction of folate receptor cDNA into human cervical carcinoma: Identification of a correlation between folate receptor expression and thymidine kinase activity. *Cancer Res.,* **59,** 940-946.

Jayaram, H. N., Cooney, D. A. and Ahluwalia, G. S. Enzyme Applications, Therapeutic. (1999). *Kirk-Othmer Concise Encyclopedia of Chemical Technology*, 4th Ed., John Wiley and Sons, Inc., New York, NY, pp. 751-753.

Diabetes Seminar Series Begins

A new seminar series focusing on diabetes, obesity, and other related metaboblic disorders, was launched on March 30 with a talk by Alain Baron, Director of the Division of Endocrinology in the Department of Medicine.

Seminars are scheduled for alternate Tuesdays at 4:00 pm in MS 311 A/B, and are intended to be an informal, in-house exchange of information. (For this month's speakers and topics, see page 2.)