

# Biochemistry and Molecular Biology



# NOTES



Volume 15, No, 11

February, 2003

## Purdue Proteomics Symposium

**February 21, 2003**

8:30 am – 5:00 pm, Stewart Center, Room 218  
Purdue University, West Lafayette, IN 47907

The Bindley Bioscience Center in Discovery Park at Purdue University invites you to participate in the Purdue Proteomics Symposium on February 21, 2003. This symposium will highlight advances in proteomic core technologies and applications relevant to human health. The full day program includes sessions addressing advances in the proteomic core technologies and applications relevant to human health.

**The symposium is open to all interested persons, free of charge.**

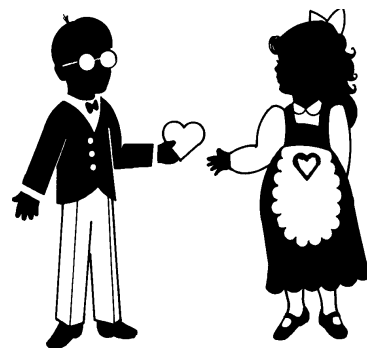
**However, please indicate your intention to attend** by email to: [ctanner@purdue.edu](mailto:ctanner@purdue.edu)

**Call for Abstracts:** The day will include a poster session/reception open to all attendees. All participants, *especially students*, are encouraged to submit abstracts for *proteomics-related* poster presentations. Abstracts should include Title, Authors, & Affiliations in RTF format, 250 words maximum. Posters should be no larger than 24 inches wide by 36 inches tall. Abstract deadline is February 10, 2003. **Submit abstracts electronically** to C. Tanner at [ctanner@purdue.edu](mailto:ctanner@purdue.edu).

Morning and afternoon coffee breaks will be provided. Lunch will not be provided but is available to attendees in the Purdue Memorial Union and nearby restaurants.

## Important Dates

- 2/1 NIH New Research
- 3/1 NIH Competing Continuation and Revised Grants
- 4/18 Campus Holiday
- 5/26 Memorial Day
- 6/1 NIH New Research
- 7/1 NIH Competing Continuation and Revised Grants
- 7/4 Independence Day
- 9/1 Labor Day
- 10/1 NIH New Research
- 11/1 NIH Competing Continuation and Revised Grants
- 11/27 Thanksgiving
- 11/28 Friday after Thanksgiving
- 12.25 Christmas
- 1/1/04 Happy New Year!



## Happy Valentine's Day!

# February Seminars

## Biochemistry Seminars Mondays 4 pm, MS 326

**2/3 Dr. Robert A. Hromas**, Professor of Internal Medicine and Biochemistry and Molecular Biology, IUSM. "Transcriptional Regulation of Development"

**2/10 Dr. Jeffrey S. Patrick**, Senior Scientist, BioProduct Characterization Facility, Eli Lilly & Company, "Tools and Techniques in Industrial BioPolymer Characterization and Analysis: Mass Spectrometry and Separations Sciences"

**2/12 Dr. Ariel Fernandez**, Professor & Principal Investigator, National Research Council of Argentina, Visiting Scholar, Institute for Biophysical Dynamics, The University of Chicago, Chicago, IL. "Insufficient Wrapping of Protein Structure as a Signal for Complexation or Molecular Disease" at **2:00 P.M. on Wednesday, February 12, 2003 in Emerson Hall, Room 304**

**2/17 Dr. John Anderson**, Professor of Biology, Purdue University, West Lafayette, IN. "TBA"

**2/24 Dr. Geoffrey J. Clark**, Investigator, Cell and Cancer Biology Department, National Institutes of Health/National Cancer Institute, Rockville, Maryland. Topic: "Ras - A Two-Faced Oncogene"

## Biochemistry and Molecular Biology Research Seminar Series Every other Thursday, 12:00 noon MS 311 A/B

**2/13 Heather Larson**, Graduate Student, Department of Biochemistry and Molecular Biology, IUSM. "Dominance and Cooperativity in Aldehyde Dehydrogenase: Structural Studies"

**2/17 Dr. Hui-Ju Chen**, Postdoctoral Fellow, Department of Biochemistry and Molecular Biology, IUSM, "Identification of cis-acting elements that regulate human alcohol dehydrogenase (ADH) gene expression"



## IUSOM Combined Seminar Series Wednesdays, 4:00 pm, Cancer Research (R4) Auditorium 101

Ozone (O<sub>3</sub>) Production by Neutrophils: A New Potential Effector Molecule in Host Defense and Inflammation. **Bernie Babior, M.D., Ph.D.**, Dept. of Molecular and Experimental Medicine, Div. of Biochemistry; Scripps Research Institute.

Laser Capture Microdissection and Clonality Analysis in Cancer Research. **Liang Cheng, M.D.**, Director, Anatomic Pathology, Richard L. Roudebush VA Hospital; IUSM.

## Biochemistry Student Seminars Wednesdays, 12 Noon, MS 311

**2/5 Sarah Pinkerton**  
**Mikael Rinne**  
**2/12 Beth Spurlin**  
**2/19 Jing-Yuan Liu**  
**2/26 Keri Varner**

## Other Seminars of Interest

**2/5 4:00 p.m.** Genomic-Bioinformatic Approach to Studying SMC Differentiation. **Joseph Miano, Ph.D.**, Center for Cardiovascular Research, University of Rochester Medical Center; Rochester, NY. **MS 326.**

**2/6 4:00 p.m.** The New Insights Into the Mechanism of Hepatitis C Virus Replication and Pathogenesis. **Michael M.C. Lai, M.D., Ph.D.**, Distinguished Professor and Molecular Microbiology and Immunology Investigator, University of Southern California; Los Angeles, CA. **Cancer Research Institute Auditorium 101.**

**2/12 12:00 noon** A Role for Cortical Actin Remodeling in Insulin Secretion From Pancreatic Beta Cells. **Debbie C. Thurmond, Ph.D.**, Dept. of Biochemistry/Molecular Biology; IUSM. **Fesler Hall 115A.**

**2/12 4:00 p.m.** Dysregulation of Insulin Signaling by Endothelial-Derived Factors. **Andrew Strawbridge, Ph.D.**, Student, Dept. of Cellular/Integrative Physiology; IUSM. Thesis Proposal. **MS 326.**

(Seminars, Cont)

**2/19 4:00 p.m.** The Diverse Biological Roles of the Extracellular Calcium [Nutrient and Salinity]-Sensing Receptor. **Steven Hebert, M.D.**, Professor and Chair, Dept. of Cellular/Molecular Physiology, Yale University School of Medicine; New Haven, CT. **MS 326.**

**2/21 8:30 a.m. – 5:00 p.m.** Purdue Proteomics Symposium. **Mass Spectrometry and Proteomics: Instruments and Models**; R. Graham Cooks, Dept. of Chemistry; Purdue University. **Comparative Proteomics Based on Stable Isotope Coding and Multi-Dimensional Chromatography**; Fred Regnier, Dept. of Chemistry; Purdue University. **'Top Down' Protein Identification by Ion Trap Tandem Mass Spectrometry**; Scott McLuckey, Dept. of Chemistry; Purdue University. **Stewart Center, Room 218, Purdue University; West Lafayette, IN.** [RSVP to C. Tanner at [ctanner@purdue.edu](mailto:ctanner@purdue.edu).]

**2/26 12:00 noon** 2D Gel-Based Proteomics: Applications in Nephrotoxicology. **Frank A. Witzmann, Ph.D.**, Dept. of Cellular/Integrative Physiology; IUSM. **Fesler Hall 115A.**

ISLET BIOLOGY JOURNAL CLUB  
DALY CENTER 122A 4-5 pm

Speaker	Date
Bart Pederson	6-Feb
Mark Deeg	6-Mar
Hiremagalur Jayaram	3-Apr
Lawrence Quilliam	1-May

## Recent Publications

O'Neill, K.D.; Chen, N.X.; **Wang, M.; Cocklin, R.; Zhang, Y.**; Moe, S.M. (2003) Cellular uptake of b2M and AGE-b2M in synovial fibroblasts and macrophages. *Nephrol. Dial. Transplant.* **18**, 46-53.

Vickerman, M.M.; **Wang, M.**; Baker, L.J. (2003) An amino acid change near the carboxyl-terminus of the Streptococcus gordonii regulatory protein, Rgg, affects its abilities to bind DNA and influence expression of the glucosyltransferase gene, gtfG. *Microbiology*, **149**, 399-406.



## Congratulations!

**Rose Fife, MD**, has been appointed to the Indiana Arthritis Initiative's Steering Committee. The IAI has been formed to enable Indiana to begin work on developing a state plan to address the issue of reducing the impact of arthritis and other rheumatic conditions. The appointments were made by Indiana's State Health Commissioner, Gregory Wilson, MD. The funding is provided by the Centers for Disease Control and Prevention's Division of Adult and Community Health Care and Aging Studies Branch.

**Ladd PD, Wilson DM, Kelley MR, Skalnik DG.** (2003) Identification of the human HEX1/hExo1 gene promoter and characterization of elements responsible for promoter activity. *DNA Repair.* Feb 3;2(2):187-98.

Bogliolo M, Cappelli E, D'Osualdo A, Rossi O, Barbieri O, **Kelley MR**, Frosina .(2002) Effect of *S. cerevisiae* APN1 protein on mammalian DNA base excision repair. *Anticancer Res.* **22**:2797-804.

George DW, Foster RS, **Hromas RA**, Robertson KA, Vance GH, Ulbright TM, Gobbett TA, Heiber DJ, Heerema NA, Ramsey HC, Thurston VC, Jung SH, Shen J, Finch DE, **Kelley MR**, Einhorn LH.(2003) Update on late relapse of germ cell tumor: a clinical and molecular analysis. *J Clin Oncol.* **21**:113-22.

## New Faces in Biochemistry



**Karen Gregson** is a new postdoc in Ron Wek's lab.

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## 2003 Advanced Molecular Biology Methods

The "Advanced Molecular Biology Methods" course/workshop, G910, will be offered this year during Summer Session II from July 21 to August 8. This is a three credit course all day Monday through Friday. The course is open to students, postdoctoral fellows, staff and faculty members with some basic experience in molecular biology who wish to expand their knowledge to more sophisticated state-of-the-art and latest techniques, as outlined below. The course consists of lectures, hands-on laboratory and informal discussions. Interested parties should contact Dr. Anna A. DePaoli-Roach by April 15: *Tel.* 274-1585; *Fax.* 274-4686 ; *E-mail:* adepaoli@iupui.edu.

### *Schedule of G910, 2003*

#### WEEK I, July 21-25

- a. Cloning of interacting proteins by Far-Western
- b. Cloning by protein-protein interaction using the two-hybrid system
- c. DNA microarrays
- d. Analyses by real time PCR
- e. Proteomics

#### WEEK II, July 28-August 1

- a. Gene expression in mammalian cells, including use of small interference RNA
- b. Protein production in *E. coli*
- c. Protein Expression in *Pichia Pastoris*
- d. Generation of transgenic and knockout mice
- e. Genome-wide phenotypic analyses in yeast

#### WEEK III, August 4-8

- a. Gel retardation analysis
- b. Analysis of transcription start site
- c. DNaseI footprinting
- d. In situ hybridization
- e. Gene knockdown in zebrafish

## Special Scholarship Competition

The Student Research Program in Academic Medicine committee has completed the evaluation of sixteen medical students who competed for the 2002-03 special scholarships. The competition was based on an abstract from their summer work in 2002, and a ten-minute presentation by the students. Two winners for this year's competition have Biochemistry and Molecular Biology mentors:

**Kristin Breeden** - "Mechanisms of Cardiac Hypertrophy Induced by Overexpression of the Catalytic Subunit of Protein Phosphatase 1" from the lab of Dr. Anna DePaoli-Roach, Biochemistry and Molecular Biology

**Ryan Vickery** - "Effect of Caveolar Dispersion on Signals Regulating GLUT4 Translocation" from the lab of Dr. Jeffrey Elmendorf, Cellular and Integrative Physiology.



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## On the move to the new BRTC Building

During the first week in February, several Biochem investigators and their labs will move to the new Biotechnology Research and Training Center (BRTC) building located at 1345 W. 16th Street, Indianapolis, 46202.

INGEN funding made construction possible for this new 3-story building which will house the new Biotech Training Program (BTP) headed by Bill Bosron and Judy White, the Center for Medical Genomics (CMG) headed by Howard Edenberg, the Proteomics Core headed by Mu Wang and Frank Witzmann, and the Biochemistry Biotechnology Facility headed by John Hawes. The building will also house some of the LARC facilities, investigators from Radiology, Radiochemistry, and Psychology and a cyclotron operated by PetNet, a private company.

The following Biochem personnel will be located at BRTC:

BBF	274-5044	Room 341
Bill Bosron	274-7211	Room 304
Biotech Training Program	274-1090	Room 305
Howard Edenberg	274-2353	Room 224
Matt Grow	274-3399	Room 226
John Hawes	274-6647	Room 314
Gena Lynam (BTP office)	714-6857	Room 302
Paresh Sanghani	278-9741	Room 322
Mu Wang	278-0296	Room 312
Judy White	274-1090	Room 306
Erin Williams (CMG office)	274-1716	Room 222
Frank Witzmann	278-5741	Room 308
Xiaoling Xuei	278-5201	Room 220

The campus shuttle will make stops at the new BRTC building effective Monday, February 10. Between 7 a.m. and 7 p.m. the shuttle will stop there every 10-12 minutes. Between 7 p.m. and 10 p.m. it will stop there every 20 minutes.

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