



The BMB Weekly Vol. 41, No. 14, March 31 – April 4, 2008

Please send submissions to: Katie Gallagher at galla134@msu.edu or 302B Biochemistry (Mailbox on 2nd floor)

Calendar

Monday, March 31

Blood drive sponsored by the BMB Undergraduate Club, 10 a.m. – 4 p.m., MSU Union. Walk-ins welcome. To reserved an appointment time, see sheet outside of Mary Villarreal's office, 105A Biochemistry Bldg.

Chemistry Seminar – Organic: Heterocycles in natural product synthesis. Professor Yoshihisa Kobayashi, University of California, San Diego, 3 p.m., 136 Chemistry Bldg.

Plant Biology and Plant Research Laboratory Seminar: New activities at the plant nuclear pore. Dr. Iris Meier, Ohio State University, 4:10 p.m., Room 101 Biochemistry Bldg.

Tuesday, April 1

3M Interest Group – Metabolism, Membranes, and Metalloenzymology – Special Seminar: Jerry Hazelbauer, University of Missouri-Columbia, Biochemistry Department, 12 noon, 1400 Biomedical & Physical Sciences Bldg.

Applications for College of Natural Science Summer Undergraduate Research Support Scholarships and Grants due in the Natural Science Dean's Office by 5 p.m. For details and application process, see: http://www.naturalscience.msu.edu/students/undergraduate/enhance_your_experience/undergraduate_research/support.html

Center For Research On College Science Teaching And Learning Seminar: Robin Wright, Assoc. Dean of Biological Sciences, University of Minnesota, 3 p.m., 1420 Biomedical & Physical Sciences Bldg.

Chemistry Seminar – Physical: NMR analysis of conformational dynamics in RNA. Charles Hoogstraten, Michigan State University, 4:10, 136 Chemistry Bldg.

High Energy Physics Seminar: The sources of the highest energy cosmic rays: Some answers, more questions. Corbin Covault, Case Western Reserve, 2:00 p.m., 1400 Biomedical & Physical Sciences Building.

Microbiology & Molecular Genetics Seminar: Influenza: virus assembly and anti-innate immunity, Feng Li, South Dakota State University, 4:10 p.m., 1415 Biomedical and Physical Sciences Building.

Plant Biology Seminar: Identification of trans-acting factors involved in cold-induced CBF2 expression in Arabidopsis. Chin Mei Lee (Thomashow), 12 noon, 168 Plant Biology.

Statistics and Probability Seminar: What's missing? Looking for multidimensional holes, undiscovered species and new gogglewhacks. Woollcott Smith, Temple University, 10:20 a.m., A405 Wells Hall.

Calendar continued

Wednesday, April 2

BMB Graduate Research Forum: David Achila, Britton Lab, 4:30 p.m., 208 Biochemistry Bldg.

Ecology, Evolutionary Biology, and Behavior Seminar: Climate and resource-mediated metabolism of northern wildlife. Murray Humphries, Department of Natural Resource Sciences, McGill University
Wednesday, 3:30 p.m., 247 Plant Biology Bldg.

Food Science and Human Nutrition, G. Malcom Trout Visiting Scholar Seminar: Dietary guidelines: from science to practice. Dr. Theresa Nicklas, Children's Nutrition Research Center, Baylor College of Medicine, Department of Pediatrics, 4:00 p.m., 1135 S. Anthony Hall.

Thursday, April 3

Biochemistry and Molecular Biology Seminar: Mechanism, assembly and composition of the pre-mRNA processing machinery. Scott Stevens, University of Texas - Austin, 11:30 a.m., 101 Biochemistry Bldg.

Biochemistry and Molecular Biology Special Seminar: A first look at ARFome: dual-coding genes in mammalian genomes. Anton Nekrutenko, Department of Biochemistry and Molecular Biology, Center for Comparative Genomics and BioInformatics, Pennsylvania State University, 9:00 a.m. – 10:00 am., 1400 Biomedical & Physical Sciences Bldg.

Chemistry Seminar: Fast 2DLC for chemical analysis: the promises and the challenges. Peter Carr, University of Minnesota, 4:10 p.m., 136 Chemistry Bldg.

Horticulture Seminar: Ecology of rare shrubs for horticultural connoisseurs. Bill Graves, Iowa State University, 4:10 p.m., A149 Plant & Soil Sciences Bldg.

Mini-Symposium – RNPs:Composition and Assembly. Speakers include: Ron Patterson and Kevin Haudek, MSU; Scott Stevens, University of Texas; Jim Patton, Vanderbilt University. See last page for details.

Neuroscience Seminar: Cellular mechanisms establishing sex differences in the brain. Margaret McCarthy, University of Maryland, 12:30 p.m., 230 Psychology Bldg.

Physics & Astronomy Seminar: Scientific achievements and opportunities at Jefferson Lab. Anthony Thomas, Jefferson Laboratory, 4:10 p.m., 1415 Biomedical & Physical Sciences Building.

Friday, April 4

Chemistry Seminar – Analytical: Nathan Verberkmoes (ORNL) 12:40 p.m., 136 Chemistry.

Science at the Edge – Engineering Seminar: The design of nanoscale therapeutics and nanostructured materials. Ravi Kane, Department of Chemical and Biological Engineering, Rensselaer Polytechnic Institute, 11:30 a.m., 1400 Biomedical & Physical Sciences Building

Transcription Journal Club: No meeting this week.

Continued

Announcements

The Graduate School offers a **Career and Professional Development workshop**, "Translating Academic Success into Expanded Career Opportunities in Agencies, Industry, Academia, and Non-Government Organizations" on Saturday, April 5, 2008. For more information see: <http://grad.msu.edu/professional.htm#tas> To register, contact gradwrsp@msu.edu . Please include your name, department, e-mail address, and the name of the workshop.

Howe co-edits Plant Physiology Focus Issue on Plant-Herbivore Interactions



[Gregg Howe](#) and Georg Jander have co-edited Focus Issue on Plant-Herbivore Interactions, the cover story for the March issue of Plant Physiology, <http://www.plantphysiol.org/>

Howe and Jander's editorial, titled, "Plant Interactions with Arthropod Herbivores: State of the Field" is available at: <http://www.plantphysiol.org/cgi/content/full/146/3/801>

Rob Last Chairs iPlant Cyberinfrastructure Collaborative



[Rob Last](#) recently became chair of the Board of Directors and Nominations Committees of the new, NSF- funded iPlant Cyberinfrastructure Collaborative, <http://www.iplantcollaborative.org/home> .

"The Plant Science Cyberinfrastructure Collaborative (PSCIC) will enable multi-disciplinary teams to address grand challenges in plant science, will be an entity that is by, for and of the community, will train the next generation in computational thinking, and is designed to be able to reinvent itself as needs and technologies change."

The first principle of the iPlant Collaborative is that it must be "by, for and of the community". Secondly, "designs must be driven by specific, compelling, and tractable Grand Challenges in the plant sciences." The Collaborative "must also serve the entire breadth of the plant sciences, including ecology, evolution and organismic biology as much as the molecular, cellular and developmental disciplines, and via Grand Challenges integrated across the 'divide', from the molecular to the organismic to ecosystems."

As chair, Dr. Last will lead the community-representative Board of Directors in making major decisions on the allocation of iPC resources to specific Grand Challenges.

(An archive of accomplishments may also be found on our website, "**Publications and News**" link at: <http://www.bmb.msu.edu/cgi-bin/renderarticles.cgi?current>)

Recent Publications

Hoogstraten, C.G. & Johnson, J.E., Jr. (2008) Metabolic Labeling: Taking advantage of bacterial pathways to prepare spectroscopically useful isotope patterns in proteins and nucleic acids. *Concepts Magn. Reson. Ser. A* 32, 34-55.

Continued

Recent Publications continued

- Chung HS, Koo AJK, Gao X, Jayanty S, Thines B, **Jones AD, Howe GA** (2008) Regulation and function of Arabidopsis JASMONATE-ZIM domain genes in response to wounding and herbivory. *Plant Physiol.* 146:952-964
- Browse J, **Howe GA** (2008) Update on jasmonate signaling: New weapons and a rapid response against insect attack. *Plant Physiol.* 146: 832-383
- Adán C, Matsushima Y, Hernández-Sierra R, Marco-Ferreres R, Fernández-Moreno MA, González-Vioque E, Calleja M, Aragón JJ, **Kaguni LS**, Garesse R. Mitochondrial transcription factor B2 is essential for metabolic function in *Drosophila melanogaster* development. *J Biol Chem.* 2008 Feb 28; [Epub ahead of print]
- Martínez-Azorín F, Calleja M, Hernández-Sierra R, **Farr CL, Kaguni LS**, Garesse R. Overexpression of the catalytic core of mitochondrial DNA polymerase in the nervous system of *Drosophila melanogaster* reduces median life span by inducing mtDNA depletion. *J Neurochem.* 2007 Nov 12; [Epub ahead of print]
- Fernández-Moreno MA, **Farr CL, Kaguni LS**, 2007. Garesse R. *Drosophila melanogaster* as a model system to study mitochondrial biology. *Methods Mol Biol.* 372:33-49.
- Matsushima Y, Adán C, Garesse R, **Kaguni LS**. 2007. Functional analysis by inducible RNA interference in *Drosophila melanogaster*. *Methods Mol Biol.* 372:207-17.

Position Vacancies (copies of notices are in maroon binder in Room 302A)

MSU's Center for Research in College Science Teaching and Learning is seeking candidates for a one or two-year **Postdoc/Research Associate** position to begin August 15, 2008. Candidates should have a strong commitment to undergraduate science education, interest in working with an interdisciplinary group of scientists and science educators and have completed a doctoral degree in a natural science, or a doctoral degree in education with experience in conducting science research. The position may be full-time in the Center or split with a disciplinary department to permit continuation of scientific research. Women and minorities are strongly encouraged to apply. The salary is commensurate with education and experience.

A complete application package consists of a cover letter, copy of transcripts, two samples of scholarly writing and three letters of reference. The applicant should arrange for the submission of reference letters. Application materials are requested by April 1, 2008, with review to begin immediately and continue until the position is filled. The electronic submission of application materials is preferred. Please submit materials to:

heidema2@msu.edu or mail to:

Dr. Merle K. Heidemann
Michigan State University
118 North Kedzie Lab
East Lansing, MI 48824-1031

This position vacancy # NSC-1413 is advertised through MSU's HR website, www.hr.msu.edu

Quote for the Week



If you have built castles in the air, your work need not be lost.
That is where they should be.
Now put the foundation under them.

— *Henry David Thoreau*

(Image from: http://ancientdragongallery.homestead.com/files/Castle_Air_small.jpg)



MINI-SYMPOSIUM

RNPs: COMPOSITION AND ASSEMBLY

Thursday, April 3, 2008

Nearly all RNAs associate with a specific complement of proteins as ribonucleoprotein complexes (RNPs). The complexity of RNPs range from a single RNA species with a few associated proteins (i.e., snRNPs, microRNPs, pre-mRNP) to large particles containing one RNA (ribosomal subunit) to several RNAs (spliceosome) and many associated proteins. The focus of this minisymposium of 3 seminars is on RNPs involved in pre-messenger RNA splicing.

The schedule is:

<u>location</u>	<u>time</u>	<u>speaker</u>	<u>title</u>
1425 BPS	10 AM	Ron Patterson	Introduction
1425 BPS	10:15	Kevin Haudek	Endogenous complexes containing both snRNPs and galectins
101 BMB	11:30	Scott Stevens Univ. of Texas	Mechanism, assembly and composition of the pre-mRNA processing machinery
1425 BPS	2:00	Jim Patton Vanderbilt Univ.	Constitutive and alternative splicing: two classes of introns?

From 12:45 - 1:45, Scott and Jim will have lunch in 1425 BPS with interested graduate students and postdocs. If you would like to join them, please contact Ron at patter13@msu.edu If you wish to meet with either Scott or Jim, please contact Ron at patter13@msu.edu

PLEASE POST AND TELL COLLEAGUES WHO MIGHT BE INTERESTED