

2008 Southeastern Regional Yeast Meeting

Gatlinburg, TN
March 8 - 9, 2008

Department of Microbiology
University of Tennessee
Knoxville, Tennessee

Sponsored by:

Sunrise Science Products
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**2008 Southeastern Regional Yeast Meeting
Program Schedule**

Friday, March 7, 2008

5:00 pm – 7:00 pm Reception & Registration
Highlander Room, Glenstone Lodge

Saturday, March 8, 2008

7:45 am – 8:45 am Registration
Azalea Entryway, Glenstone Lodge

7:45 am – 8:45 am Breakfast
Patio 2, Glenstone Lodge

8:45 am – 9:00 am Welcome & Opening Remarks
Todd Reynolds, University of Tennessee, Knoxville
Azalea Room, Glenstone Lodge

9:00 am – 10:00 am **Keynote Address**
Azalea Room, Glenstone Lodge
*“Interactions Between the Translational Apparatus
and the Actin Cytoskeleton in Yeast”*
Dr. Charles Boone
Professor, University of Toronto

10:00 am – 10:15 am Coffee Break
Dogwood Room 1

10:15 am – 12:00 pm **Platform Session:** Nuclear Pores and Telomeres
Chair: Kathy Friedman, Vanderbilt University
Azalea Room

12:00 pm – 1:15 pm Lunch
Patio 2

1:15 pm – 3:00 pm **Platform Session:** Protein Trafficking and folding
/ proteases and peptidases
Chair: David Bedwell, University of Alabama at
Birmingham
Azalea Room

3:00 pm – 3:15 pm Coffee Break
Dogwood Room 1

3:15 pm – 4:30 pm **Platform Session:** DNA repair, RNA processing
and Transcription
Chair: Paul Doetsch, Emory University
Azalea Room

4:30 pm – 6:30 pm Poster Session
Dogwood Room 1

7:00 pm – 9:00 pm Dinner
The Park Grill

Sunday, March 9, 2008

8:00 am – 9:15 am

Breakfast
Patio 2

9:15 am – 10:30 am

Platform Session: Signal Transduction
Chair: George Santangelo, University of Southern
Mississippi
Azalea Room

10:30 am – 11:30 am

Coffee Break and Poster Session
Dogwood Room 1

12:00 pm

Awards
Azalea Room

**2008 Southeastern Regional Yeast Meeting
Platform Sessions**

Saturday, March 8

10:15 am – 12:00 pm

Nuclear Pores and Telomeres

Chair: Kathy Freidman, Vanderbilt University

- 1. Genetic Interactions Between The Nuclear Pore-Associated Mlp1-Mlp2 Complex and DNA Repair Components Indicate A Role For The Mlps in Monitoring DNA Integrity.** Milo B. Fasken 1, Vlad Golgotiu¹, Harrison Gimbell¹, Kristine A. Willis² and Anita H. Corbett¹. ¹Dept. of Biochemistry, Emory Univ. School of Medicine, Atlanta, GA, 30322. ²Dept. of Biological Sciences, Univ. of Southern Mississippi, Hattiesburg, MS.
- 2. Biochemical and Genetic Analysis of the Nab2 RNA binding domain.** 1Seth M. Kelly, ¹Sara W. Leung, ²Elizabeth Tran, Anna Bramley, ¹Jeffrey Price, ²Susan R. Wentz, and ¹Anita H. Corbett. ¹Department of Biochemistry, Emory University School of Medicine, Atlanta, GA. ²Department of Cell Biology, Vanderbilt University Medical Center, Nashville, TN.
- 3. Genetic Interactions Between the SAGA Complex and the Nuclear Pore Complex.** Shana C. Kerr 1, Milo B. Fasken¹, Kristine A. Willis, and Anita H. Corbett¹ ¹Department of Biochemistry, Emory University School of Medicine, Atlanta, GA 30322 and ²Mississippi Functional Genomics Network, The University of Southern Mississippi, Hattiesburg, MS.
- 4. Genetic requirements for recombinational telomere elongation in the yeast Kluyveromyces lactis.** Evelina Basenko, Greg O'Connell, Rahila Chaudhry, and Michael McEachern, The University of Georgia, Athens, GA.
- 5. The APC targets the telomerase regulatory protein Est1p for degradation in G1 phase.** Jenifer Ferguson and Katherine Friedman-Vanderbilt University, Dept. of Biological Sciences, Nashville, TN.
- 6. Sumoylation of DNA Repair Enzymes and Re-orchestration of Base Excision Repair in Response to Oxidative Stress.** Lyra M. Griffiths, Dan Swartzlander, Anita H. Corbett, Paul W. Doetsch, Emory University, Atlanta, GA.
- 7. The transcriptional activator Gal4 functions via a reverse recruitment mechanism.** George Santangelo, David Buford, Nayan Sarma, Terry Haley, Kellie Barbara and Kristine Willis, University of Southern Mississippi, Hattiesburg, MS.

**2008 Southeastern Regional Yeast Meeting
Platform Sessions**

Saturday, March 8

1:15 pm – 3:00 pm

Protein trafficking and folding/ proteases and peptidases

Chair: David Bedwell, University of Alabama at Birmingham

8. **Regulation of HSP104 – Mediated Protein Disaggregation in *Saccharomyces Cerevisiae*.** Snober S Mir, David Fiedler & Anil G Cashikar* Medical College of Georgia, Augusta, GA.
9. **Regulation of the Drs2p-dependent Flippase Activity in Golgi Membranes by Phosphatidylinositol 4-Phosphate.** Paramasivam Natarajan : Postdoctoral fellow, Todd R Graham : Professor, Department of Biological Sciences, Vanderbilt University, Nashville, TN,
10. **Characterizing M16A Peptidases in Yeast.** Benjamin J. Alper, Walter K. Schmidt, University of Georgia, Athens, GA.
11. **Towards the discovery of Ras-converting enzyme inhibitors – a novel anti-cancer target.** Sarah R. Breevoort, Steven B. Porter, Surya P. Manandhar, Anne-Marie R. Dechert, Ned W. Hembree, Timothy M. Dore, and Walter K. Schmidt, Department of Biochemistry and Molecular Biology, Department of Chemistry, University of Georgia, Athens, GA.
12. **Evaluation of the *Trypanosoma brucei* CaaX Proteases.** David Z. Mokry, Kristen A. Chicola, Surya Manandhar, and Walter K. Schmidt University of Georgia, Department of Biochemistry and Molecular Biology, Athens, GA.
13. **Sterol homeostasis is a major determinant of the ER-autophagy axis and contributes to lifespan extension.** Fusheng Tang, Dexter Fairweather, Andras Boeszoermyeni. Stephen Grace Department of Biology, University of Arkansas, Little Rock, AR.
14. **Purification and Characterization of a Potential Yeast Flippase Drs2p.** Xiaoming Zhou and Todd R. Graham, Department of Biological Sciences, Vanderbilt University, Nashville, TN.

**2008 Southeastern Regional Yeast Meeting
Platform Sessions**

Saturday, March 8

3:15 pm – 4:30 pm

DNA repair, RNA Processing and Transcription

Chair: Paul Doetsch, Emory University

15. **Oxidative stress and assembly of P-bodies in yeast.** Michael Gordon, Steve Ellis, Kenneth Ramos and Vilius Stribinskis, University of Louisville, Louisville, KY.
16. **Shwachman Diamond Syndrome and Diamond Blackfan Anemia: 60S Ribosomal Subunit Defects Leading to Distinct Features in Clinical Presentation.** Joseph B. Moore IV and Steven R. Ellis University of Louisville, Louisville, KY.
17. **The Topography of Oxidative DNA Damage Repair Within the *Saccharomyces cerevisiae* Genome, (Poster) Mapping the Localization of DNA Repair Enzymes in the Genome of *Saccharomyces cerevisiae*.** Lydia P. Morris (1,2) Natasha Degtyareva (1), Paul W. Doetsch (1,3); 1= Department of Biochemistry 2= Program in Genetics and Molecular Biology 3=Division of Cancer Biology and Department of Radiation Oncology, Emory University School of Medicine, Atlanta, GA.
18. **Biochemical Analysis of Tdp1: A protein that functions in the repair of multiple DNA lesions.** Karin C. Nitiss (Department of Molecular Pharmacology), Xiaoping He (Department of Structural Biology), Stephen W. White (Department of Structural Biology), and John L. Nitiss (Department of Molecular Pharmacology) St. Jude Children's Research Hospital, Memphis, TN.
19. **Increased Levels of Reactive Oxygen Species: A General Genotoxic Stress Response in *Saccharomyces cerevisiae*.** Lori A Rowe, Natalya Degtyareva, and Paul W Doetsch, Emory University, Atlanta, GA.
20. **Modifying the Yeast deletion collection to enhance drug accumulation: Identifying genes conferring hypersensitivity to a Top2 targeting agent.** Alexander G. Stepanov, John Nitiss Department of Molecular Pharmacology. St. Jude Children's Research Hospital, Memphis, TN.
21. **RNA-templated DNA repair.** Francesca Storici¹, Katarzyna Bebenek², Thomas A. Kunkel², Dmitry A. Gordenin² and Michael A. Resnick² ---¹School of Biology, Georgia Institute of Technology, Atlanta, GA; ²Laboratory of Molecular Genetics, National Institute of Environmental Health Sciences, NIH, Research Triangle Park, NC.

**2008 Southeastern Regional Yeast Meeting
Platform Sessions**

Sunday, March 9

9:15 am – 10:30 am

Signal Transduction

Chair: George Santangelo, University of Southern Mississippi

22. **The inositol regulon controls viability in the pathogenic yeast *Candida glabrata*.** Emily Bethea and Todd B. Reynolds, Department of Microbiology, University of Tennessee, Knoxville, TN.
23. **Phosphatidylserine synthase (CaCho1p) is required for virulence and cell wall integrity in *Candida albicans*.** Ying-Lien Chen¹, Sarah Kauffman², Todd B. Reynolds¹ Department of Microbiology, University of Tennessee, Knoxville, TN.
24. **Improved incorporation of an unnatural amino acid into a GPCR expressed in yeast using the peptide transport system.** Li-Yin Huang¹, Fred Naider², and Jeffrey M. Becker¹. ¹Department of Microbiology, University of Tennessee, Knoxville, TN, and ²Department of Chemistry, College of Staten Island, City University of New York, Staten Island, NY.
25. **The Phospholipase B Homolog, Plb1, and the cAMP•Protein Kinase A Pathway Function Cooperatively to Regulate an Osmotic Stress-Induced Growth Control System in Fission Yeast.** Brittney McInnis, Yasuhiro Matsuo, and Stevan Marcus. Dept. of Biological Sciences, The University of Alabama, Tuscaloosa, AL.
26. **Mass Spectrometric Analysis and Ligand Capture using Ste2p of *S. cerevisiae* carrying an unnatural amino acid replacement.** George Umanah¹, Nathan Verberkmoes², Fred Naider³, and Jeffrey M. Becker¹ ¹Department of Microbiology, University of Tennessee, Knoxville, TN ²Chemical Science Division, Oak Ridge National Lab, Oak Ridge, TN, ³Department of Chemistry, College of Staten Island, CUNY, New York, NY.

**2008 Southeastern Regional Yeast Meeting
Poster Sessions**

- 27A Investigation of the BRAP2-BRCA1 Interaction and Physiological Role of BRAP2.** Zhanetta Astakhova, Keith Wilkinson, Emory University, Atlanta, GA.
- 28A Tdp1p is a fidelity factor for non-homologous end-joining reactions in yeast.** Karim Bahmed, Karin C. Nitiss, Aman Seth and John L. Nitiss, Mol. Pharmacology Dept., St Jude Children's Research Hospital, Memphis, TN.
- 29A Generation of sequence heterogeneity in yeast telomeres.** Robin C. Bairley, Charlene Hawkins, Hong Ji, and Katherine L. Friedman, Department of Biological Sciences, Vanderbilt University, Nashville, TN.
- 30A The contribution of EST2 to variation in average telomere length among closely related yeast species.** Bethany R. Cartwright and Katherine L. Friedman, Department of Biological Sciences, Vanderbilt University, Nashville, TN.
- 31A Development of a Genetic System for the Functional Investigations of the CaaX Proteases in Trypanosoma brucei.** Kristen Chicola, David Z. Mokry, Walter K. Schmidt, University of Georgia, Athens, GA.
- 32A Determining the role of pseudouridylation of rRNA in IRES-mediated translation.** Alison M. Dean(UAB), Sunnie R. Thompson. University of Alabama at Birmingham, Birmingham., AL.
- 33A TGN sorting signals that localize the human furin cytosolic tail to the late Golgi in yeast may involve a PACS-1-like molecule.** Kathryn L. Bruce, Matthew C. Furgerson, Mark F. Law, and Michael L. Gleason. Biological & Environmental Sciences, Georgia College & State University, Milledgeville, GA.
- 34A Genetic factors modulating polyQ toxicity in yeast .** He Gong, Nina Romanova, Kavita Gokhale, Kim Allen, Gary Newnam and Yury O. Chernoff. School of Biology and Institute for Bioengineering and Bioscience, Georgia Institute of Technology, Atlanta, GA.
- 35A THI73 dependent function of the G1 Cyclin Cln3 in S. cerevisiae.** Jacquelyn G. Hancock and Mary E. Miller; Department of Biology; Rhodes College; Memphis TN.
- 36A A Yeast Two Hybrid Screen to Identify Proteins that Interact with a Tissue-specific Isoform of the Human Zinc Finger mRNA Binding Protein, ZC3H14.** Robert S. Heller, Jacinth Mitchell, Anita H. Corbett, and Sara W. Leung, Department of Biochemistry, Emory University School of Medicine, Atlanta, GA..
- 37A Determining Binding Partners for Yeast Tpa1p.** Shane Kelly¹ and David Bedwell^{1,2}, Department of ¹Microbiology and ²Physiology and Biophysics, University of Alabama at Birmingham, Birmingham, AL.

- 38A Residues in TM1 and TM7 Involved in Dimerization of Yeast Ste2p.** Heejung Kim¹, Fred Naider² and Jeffrey M. Becker^{1/2} ¹Department of Microbiology, University of Tennessee, Knoxville TN ²Department of Chemistry, CSI, CUNY, Staten Island, NY.
- 39A Novel role for the CDK-activating kinase Cak1 in actively growing cells.** Su-Hwa Kim, Keerthi Gadiparthi, and Ana A. Kitazono, University of Tennessee, Knoxville, TN.
- 40A Proteolytic maturation of yeast a-factor in the absence of Rce1p and Ste24p.** Ranjith Krishnankutty, Sayali Kukday, Amanda J. Castleberry, Sarah R. Breevoort, and Walter K. Schmidt, University of Georgia, Athens, GA.
- 41A A Genetic System Toward Understanding IRES-Ribosome Interactions in vivo.** Dori M. Landry (UAB), Sunnie R. Thompson University of Alabama at Birmingham, Birmingham, AL.
- 42A Chemical inhibition of CaaX protease activity disrupts yeast Ras localization.** Surya P. Manandhar, William H. Jacobsen, George M. Santangelo, and Walter K. Schmidt, Department of Biochemistry and Molecular Biology, The University of Georgia, Athens, GA , Department of Biological Sciences, The University of Southern Mississippi, Hattiesburg, MS.
- 43A Regulation of Subcellular Localization of the Protein Kinase A Regulatory and Catalytic Subunits in the Fission Yeast, *Schizosaccharomyces pombe*.** Yasuhiro Matsuo, Brittney McInnis, and Stevan Marcus. Dept. of Biological Sciences, The University of Alabama, Tuscaloosa, AL.
- 44A Wastewater effects in catfish and yeast.** Jennifer Barnes, Heather Garcia, Alicia Whatley, and Christi Magrath, Troy University, Troy, AL.
- 45A Understanding M16A Metalloprotease Enzymology.** Jarrad Rowse and Dr. Walter K. Schmidt, University of Georgia, Athens, GA.
- 46A A new prion-like phenomenon detected in the yeast strain lacking prion domain of the translation termination factor Sup35.** Meng Sun, Gary Newnam, Andrey Romanyuk, Buxin Chen and Yury O.Chernoff. School of Biology and Institute for Bioengineering and Bioscience, Georgia Institute of Technology, Atlanta, GA.
- 47A Investigating the role of the telomerase subunit Est3p in *Saccharomyces cerevisiae*.** Jennell Talley and Katherine L. Friedman. Vanderbilt University, Nashville, TN.
- 48A Sumoylation of DNA Repair Enzymes and Re-orchestration of Base Excision Repair in Response to Oxidative Stress.** Lyra M. Griffiths, Dan Swartzlander, Anita H. Corbett, Paul W. Doetsch, Emory University, Atlanta, GA.
- 49A Mapping the Localization of the DNA Repair Enzymes in the Genome of *Saccharomyces Cerevisiae*,** Lydia Morris, Emory University, Atlanta, GA.

- 50A Increased Levels of Reactive Oxygen Species: A General Genotoxic Stress Response in *Saccharomyces cerevisiae*.** Lori A Rowe, Natalya Degtyareva, and Paul W Doetsch, Emory University, Atlanta, GA.
- 51A The Phospholipase B Homolog, Plb1, and the cAMP•Protein Kinase A Pathway Function Cooperatively to Regulate an Osmotic Stress-Induced Growth Control System in Fission Yeast.** Brittney McInnis, Yasuhiro Matsuo, and Stevan Marcus. Dept. of Biological Sciences, The University of Alabama, Tuscaloosa, AL.