

# 2010 Midwest Stress Response and Molecular Chaperone Meeting

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**Saturday, January 16, 2010**

James L. Allen Center  
Northwestern University  
2169 Campus Drive, Evanston, IL

Brian Freeman  
University of Illinois  
*Program Co-Chair*

Jason Gestwicki  
University of Michigan  
*Program Co-Chair*

Richard I. Morimoto  
Northwestern University  
The Daniel F. and Ada L. Rice Institute for Biomedical Research  
*Meeting Organizer*

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- 7:30–8:55 AM Continental Breakfast  
1st Floor EMP Lounge (located behind the Tribune Auditorium)
- 9:00-9:05 AM Opening remarks: Richard I. Morimoto, Northwestern University  
McCormick Tribune Auditorium (*all talks will take place in the McCormick Tribune Auditorium*)

## **Hsp90**

Session Chair: Marc Cox, University of Texas at El Paso

- 9:05-9:25 AM **Hsp90 Nuclear Accumulation in Quiescence Is Linked to Chaperone Function and Spore Development in Yeast**  
Hugo Tapia and Kevin A. Morano  
Department of Microbiology and Molecular Genetics, University of Texas Medical School at Houston, Houston, TX 77030
- 9:25-9:45 AM **Heterozygous Yeast Deletion Collection Screens Aimed at Revealing Essential Hsp90 Substrates and Functions**  
Amie McClellan<sup>3</sup>, Eric Franzosa<sup>1</sup>, Yu Xia<sup>1,2</sup>, and Judith Frydman<sup>4</sup>  
Department of Bioinformatics<sup>1</sup> and Department of Chemistry<sup>1,2</sup>, Boston University, Boston MA  
Division of Natural Sciences and Mathematics, Bennington College<sup>3</sup>, Bennington, VT  
Biology Department and Bio-X Program, Stanford University<sup>4</sup>, Stanford, CA
- 9:45-10:05 AM **Celastrol Inhibits Hsp90 Chaperoning of Steroid Receptors By Inducing Fibrilization of the Co-Chaperone p23**  
Ahmed Chadli<sup>1</sup>, Sara J. Felts<sup>2</sup>, Qin Wang<sup>1</sup>, William P. Sullivan<sup>2</sup>, Maria Victoria Botuyan<sup>2</sup>, Abdul Fauq<sup>3</sup>, Marina Ramirez-Alvarado<sup>2</sup>, and Georges Mer<sup>2</sup>  
<sup>1</sup>Center for Molecular Chaperone Radiobiology and Cancer Virology, Medical College of Georgia, Augusta, GA  
<sup>2</sup>Department of Biochemistry and Molecular Biology, Mayo Clinic College of Medicine, Rochester, MN  
<sup>3</sup>Organic Chemistry Laboratory, Mayo Clinic College of Medicine, Jacksonville, FL
- 10:05-10:25 AM Coffee Break  
1st Floor EMP Lounge (located behind the Tribune Auditorium)

## Hsp70

Session Chair: Erik Zuiderweg, University of Michigan

### 10:30-10:50 AM **Akt Clearance Through Hsp70 Regulation**

John Koren III<sup>1</sup>, Umesh K. Jinwal<sup>1</sup>, Ying Jin<sup>1</sup>, John O'Leary<sup>1</sup>, Jeff R. Jones<sup>1</sup>, Amelia G. Johnson<sup>1</sup>, Laura J. Blair<sup>1</sup>, Jose F. Abisambra<sup>1</sup>, Lyra Chang<sup>2</sup>, Yoshinari Miyata<sup>2</sup>, Anna M. Cheng<sup>1,4</sup>, Jianping Guo<sup>4</sup>, Jin Q. Cheng<sup>4</sup>, Jason E. Gestwicki<sup>2,3</sup> and Chad A. Dickey<sup>1</sup>

<sup>1</sup>Department of Molecular Medicine, University of South Florida, Tampa, FL 33613, the <sup>2</sup>Department of Pathology and the <sup>3</sup>Department of Biological Chemistry, Life Sciences Institute, University of Michigan, Ann Arbor, MI, 48109, and the <sup>4</sup>Department of Molecular Oncology, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL 33612

### 10:50-11:10 AM **Ube2w and Ataxin-3 Regulate the CHIP Ubiquitination Cycle**

K. Matthew Scaglione, Eszter Zavodszky, Sokol Todi, Edgar Rodriguez, Sarah Swears, and Henry Paulson

Department of Neurology, University of Michigan, Ann Arbor, MI

### 11:10-11:30 AM **Systematic Analysis of Factors Underlying the Refolding Activity of DnaK**

Lyra Chang<sup>1</sup>, Andrea D. Thompson<sup>1</sup>, Peter Ung<sup>2</sup>, Heather Carlson<sup>2</sup>, Jason E. Gestwicki<sup>1</sup>

<sup>1</sup>Department of Pathology and the Life Science Institute, University of Michigan, <sup>2</sup>Medicinal Chemistry, University of Michigan

### 11:30-11:50 AM **Structure and Allostery in the Hsp70 Chaperone System**

Eric Bertelsen, Akash Bhattacharya, Ramsey McDonald, Atta Ahmad, Erik Zuiderweg  
Department of Biological Chemistry, The University of Michigan

### 11:50AM-12:10 PM Coffee Break

1st Floor EMP Lounge (located behind the Tribune Auditorium)

### 12:15-12:55 PM **Plenary Talk**

#### **Specialized Hsp70 machines: what do they tell us about chaperone function?**

Elizabeth Craig

Department of Biochemistry, University of Wisconsin-Madison

1:00-2:00 PM

Lunch

2:00-3:15 PM

#### **Poster Session**

Pancoe Café on the 2nd floor of the Pancoe-ENH Life Sciences Pavilion  
(Looking out the front door of the Allen Center, the Pavilion is to the right, across the road and just a few seconds away.)

## Transcription

Session Chair: Amie McClellan, Bennington College

3:20-3:40 PM

### **Cdc37 Controls Transcription and Genome Stability Through Its Effects on Cac1 and Sir2 Chromatin Remodeling Enzymes**

Maria A. Theodoraki and Avrom J. Caplan

Department of Biology, The City College of New York, NY 10031

3:40-4:00 PM

### **Dynamics of Transcriptional Regulation**

Elena Zelin and Brian Freeman

Department of Cell and Molecular Biology, University of Illinois at Urbana-Champaign, Urbana, IL

## ERAD

Session Chair: Amie McClellan, Bennington College

4:00-4:20 PM **The Role of Protein Disulfide Isomerases (PDIs) in the Endoplasmic Reticulum – Associated Degradation (ERAD) of Apolipoprotein B (ApoB)**

Sarah Grubb<sup>1</sup>, Christopher Bahur<sup>1</sup>, Edward Fisher<sup>2</sup> and Jeffrey Brodsky<sup>1</sup>

<sup>1</sup>Department of Biological Sciences, University of Pittsburgh, Pittsburgh, PA, <sup>2</sup>Department of Medicine (Cardiology) and Cell Biology, New York University School of Medicine, New York, NY

4:20-4:40 PM **Autophagy as a Survival Response to Sigma1 Receptor Antagonist- Induced Endoplasmic Reticulum Stress**

Felix J. Kim, Stacy M. Stabler, Joel M. Schrock, Gavril W. Pasternak

Molecular Pharmacology and Chemistry Program, Sloan-Kettering Institute, Memorial Sloan-Kettering Cancer Center, New York, NY

4:40-4:55 PM Coffee Break

1st Floor EMP Lounge (located behind the Tribune Auditorium)

## Neurodegeneration

Session Chair: Kevin Morano, University of Texas Medical School at Houston

5:00-5:20 PM **The Impact of Flanking Protein Sequence on PolyQ Aggregation/Toxicity**

Elise Kikis<sup>1</sup>, Anamika Dwivedi<sup>1</sup>, Andreia Castro<sup>2</sup> and Richard I. Morimoto<sup>1</sup>

<sup>1</sup>Department of Biochemistry, Molecular Biology and Cell Biology and The Daniel F. and Ada L. Rice Institute for Biomedical Research, Northwestern University, Evanston, IL; <sup>2</sup>Life and Health Sciences Research Institute (ICVS), School of Health Sciences University of Minho

5:20-5:40 PM **Engineering the Cellular Folding Quality Control System for Therapeutic Applications**

Laura Segatori

Department of Chemical and Biomolecular Engineering, Rice University, Houston, Texas

5:40-6:00 PM **Conformationally Distinct Aggregation of HET-S is Associated with Prion Related Toxicity in Yeast**

Vidhu Mathur and Susan W. Liebman

Department of Biological Sciences, University of Illinois at Chicago, IL

6:00 PM Closing Remarks

6:05-7:30 PM Wine and Hors D'oeuvre Reception

1st Floor EMP Lounge (located behind the Tribune Auditorium)