

## **Sandy Denslow Westerheide**

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### **EDUCATION**

#### **Northwestern University, Evanston, IL**

Postdoctoral fellow with Dr. Richard Morimoto, 2002–present  
Project: Mechanisms of regulation of the heat shock transcription factor HSF1

#### **University of North Carolina, Chapel Hill, NC**

Postdoctoral fellow with Dr. Albert Baldwin, 1998-2002  
Project: Mechanisms of regulation of the transcription factors NF- $\kappa$ B and Bcl-3

#### **Emory University, Atlanta, GA**

Ph.D., Program in Genetics and Molecular Biology, 1992-1998  
Graduate research with Dr. Jeremy Boss  
Project: Transcriptional regulation of MHC class II genes

#### **Rice University, Houston, TX**

Bachelor of Arts, Biology, 1988-1992  
Undergraduate research with Dr. Michael Stern, 1991-1992  
Project: Restriction fragment length polymorphism mapping of the *Drosophila* inebriated gene

### **AWARDS**

- National Institute of Health Postdoctoral Training Grant, Northwestern University, 2002-2004
- American Cancer Society Postdoctoral Fellowship, 1999-2002
- National Institute of Health Postdoctoral Fellowship, 1999 (declined)
- National Institute of Health Postdoctoral Training Grant, University of North Carolina, 1998-1999
- National Institute of Health Predoctoral Training Grant, Emory University, 1993-1995
- National Merit Scholarship, 1988-1992

## PUBLICATIONS

- Sandy D. Westerheide**\*, Julius Anckar\*, Stanley Stevens, Lea Sistonen and Richard I. Morimoto. Stress-Inducible Regulation of Heat Shock Factor 1 by the Deacetylase SIRT1. *Science*, in press.
- Richard I. Morimoto and **Sandy D. Westerheide**. The heat shock response and the stress of misfolded proteins in the *Handbook of Cell Signaling*. Ralph Bradshaw and Edward Dennis, editors (Elsevier, Inc., San Diego, California), in press.
- Amy Trott, James D. West, Lada Klavic, **Sandy D. Westerheide**, Richard B. Silverman, Richard I. Morimoto and Kevin A. Morano. Simultaneous activation of heat shock and oxidative stress pathways by celastrol. *Mol Biol Cell*, **2008**. 19(3):1104
- Sandy D. Westerheide**\*, Tiara L. Kawahara\*, Kai Orton and Richard I. Morimoto. Triptolide, an inhibitor of the human heat shock response that enhances stress-induced cell death. *J Biol Chem*, **2006**. 281(30):21575
- Sandy D. Westerheide** and Richard I. Morimoto. Heat shock modulators as therapeutic tools for diseases of protein conformation. *J Biol Chem*, **2005**. 280(39):33097
- Sandy D. Westerheide**, Joshua D. Bosman, Bessie N. A. Mbadugha, Tiara L. A. Kawahara, Gen Matsumoto, Soojin Kim, Wenxin Gu, John P. Devlin, Richard B. Silverman, and Richard I. Morimoto. Celastrols as inducers of the heat shock response and cytoprotection. *J Biol Chem*, **2004**. 279(53):56053
- Marty W. Mayo, Lee V. Madrid, **Sandy D. Westerheide**, David R. Jones, Xiu-Juan Yuan, Albert S. Baldwin, Jr. and Young E. Whang. PTEN blocks TNF-induced NF- $\kappa$ B-dependent transcription by inhibiting the transactivation potential of the p65 subunit. *J Biol Chem*, **2002**. 277(13):11116
- Sandy D. Westerheide**, Marty W. Mayo, Vasiliki Anest, Julie L. Hanson and Albert S. Baldwin, Jr. The putative oncoprotein Bcl-3 induces cyclin D1 to stimulate G1 transition. *Mol Cell Biol*, **2001**. 21(24):8428
- Sam J. Gobin, M. van Zutphen, **Sandy D. Westerheide**, Jeremy M. Boss, Peter J. van Den Elsen. The MHC-specific enhanceosome and its role in MHC Class I and beta(2)-microglobulin gene transactivation. *J Immunol*, **2001**. 167(9):5175
- Brian P. Ashburner, **Sandy D. Westerheide**, Albert S. Baldwin, Jr. The p65 (RelA) subunit of NF- $\kappa$ B interacts with the histone deacetylase (HDAC) corepressors HDAC1 and HDAC2 to negatively regulate gene expression. *Mol Cell Biol*, **2001**. 21(20):7065
- Dan Wang, **Sandy D. Westerheide**, Julie L. Hanson, Albert S. Baldwin, Jr. Tumor necrosis factor alpha-induced phosphorylation of RelA/p65 on Ser529 is controlled by casein kinase II. *J Biol Chem*, **2000**. 275(42):32592-7.

\* co-first authors

**Sandy D. Westerheide** and Jeremy M. Boss. Site-specific crosslinking mapping of RFX and X2BP transcription factor subunits of the Major Histocompatibility Complex Class II transcriptional enhancer. *Nucleic Acids Research*, **1999**. 27(7):1635

**Sandy D. Westerheide**, Pascale Louis-Pence, Dongsheng Ping, Xiao Fe He, and Jeremy M. Boss. HLA-DMA and HLA-DMB gene expression functions through the conserved S-X-Y region. *Journal of Immunology*, **1997**. 158:4812

James L. Riley, **Sandy D. Westerheide**, Jennifer A. Price, Jeffrey A. Brown, and Jeremy M. Boss. Activation of Class II MHC genes requires both the X box region and the Class II Transactivator (CIITA). *Immunity*, **1995**. 2:533

Jeffrey A. Brown, Xiao Fe He, **Sandy D. Westerheide**, and Jeremy M. Boss. Characterization of the expressed CIITA allele in the class II MHC transcriptional mutant RJ2.2.5. *Immunogenetics*, **1995**. 43:88

Gino Van Heeke, **Sandy J. Denslow**, Jill R. Watkins, KJ Wilson, and FW Wagner. Cloning and nucleotide sequence of the *Vibrio proteolyticus* aminopeptidase gene. *Biochim Biophys Acta*, **1992**. 1131:337

#### **MEETING PRESENTATIONS**

Stress-Inducible Regulation of Heat Shock Factor 1 by the Deacetylase SIRT1. *Midwest Stress Response and Chaperone Meeting*. Evanston, IL. Poster presentation. **2009**

SIRT1 regulates the activity of human HSF1. *Jacques-Monod Conference: New Ideas for an Old Family: HSFs at Crossroads between Stress, Epigenetics, and Development*. Roscoff, France. Oral presentation. **2008**

SIRT1 regulates the activity of human HSF1. *Biochemistry, Molecular Biology and Cellular Biology Department Retreat*, Northwestern University. Oral presentation. **2008**

SIRT1 regulates the activity of human HSF1. *Midwest Stress Response and Chaperone Meeting*. Evanston, IL. Oral presentation. **2008**

SIRT1 regulates the heat shock transcription factor HSF1. *Gordon Research Conference: Stress Proteins in Growth, Development and Disease*. Oxford, England. Poster presentation. **2007**

Regulation of the mammalian heat shock transcription factor HSF1 by small molecule modulators and post-translational modification. *The University of Florida Department of Physiological Sciences Fall Seminar Series*. Gainesville, FL. Oral presentation. **2006**

The role of acetylation on the hsp70 promoter. *Gordon Research Conference: Stress Proteins in Growth, Development and Disease*. Newport, RI. Oral presentation. **2005**

Triptolide as an inhibitor of the human heat shock response. *Midwest Stress Response and Chaperone Meeting*. Evanston, IL. Poster Presentation. **2005**

Small molecule modulators of the heat shock response. *Midwest Stress Response and Chaperone Meeting*. Evanston, IL. Oral presentation. **2005**

Induction of the heat shock response by celastrol. *Huntington's Disease Society of America Eighth Annual Scientific Meeting*. Cincinnati, OH. Poster presentation. **2004**

Celastrols as inducers of the human heat shock response and cellular cytoprotection. *Cold Spring Harbor Meeting: Molecular Chaperones and the Heat Shock Response*. Cold Spring Harbor, NY. Poster presentation. **2004**

Celastrols as inducers of the human heat shock response and cellular cytoprotection. *Midwest Stress Response and Chaperone Meeting*. Evanston, IL. Poster presentation. **2004**

Small molecule modulators of the heat shock response. *First International Congress on Stress Responses in Biology*. Quebec City, Canada. Oral presentation. **2003**

Heat shock response inducers as therapeutic tools. *Gordon Research Conference: Stress Proteins in Growth, Development and Disease*. Oxford, England. Oral presentation. **2003**

Small molecule modulators of the heat shock response. *Biochemistry, Molecular Biology and Cellular Biology department retreat*, Northwestern University. Oral presentation. **2003**

Celastrol, an activator of the heat shock response, inhibits NF- $\kappa$ B. *Midwest Stress Response and Chaperone Meeting*. Evanston, IL. Poster presentation. **2003**

Bcl-3 regulates apoptosis. *Keystone Meeting: NF- $\kappa$ B: Bench to Bedside*. Keystone, Colorado. Poster presentation. **2002**

The Bcl-3 proto-oncoprotein regulates cell cycle transition and cell survival in breast epithelial cells. *International NF- $\kappa$ B Symposium*, Ghent, Belgium. Poster presentation. **2001**

Bcl-3 regulates the cyclin D1 promoter. *Keystone Meeting. NF- $\kappa$ B: Bench to Bedside*. Tahoe, Nevada. Poster presentation. **2001**

Anatomy of the Major Histocompatibility Complex (MHC) Class II enhancer. *Keystone Meeting: Transcriptional Mechanisms*. Taos, New Mexico. Poster presentation. **1998**

Regulation of the HLA-DM genes. *Cold Spring Harbor Meeting: Mechanisms of Transcription*. Cold Spring Harbor, NY. Poster presentation. **1997**

Functional analysis of the Class II Transactivator CIITA. *9th International Congress of Immunology*. San Francisco, CA. Poster presentation. **1995**