

Douglas C. Weiser, Ph.D.

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Education

Ph.D., Pharmacology, Duke University, Durham, NC 2004.

Certificate, Cell and Molecular Biology Training Program.

Advisor Shirish Shenolikar.

Thesis: Regulation of Protein Phosphatase 1.

B.A., Chemistry, Biology Minor, College of Wooster, Wooster, OH, Cum Laude 1999.

Thesis: Expression, Purification and Crystallization of a Small Heat Shock Protein from Maize.

Professional experience

Assistant Professor, Department of Biological Sciences, University of the Pacific, Stockton CA 95211.

August 2009 – current.

Postdoctoral Fellow, Department of Biochemistry, University of Washington, WA 98195. June 2005-
July 2009.

Postdoctoral Fellow, Department of Pharmacology, Duke University Medical Center, Durham, NC
27710. January-May 2005.

Graduate Student, Department of Pharmacology, Duke University Medical Center, Durham, NC
August 1999-December 2004.

Teaching Experience

Elements of Biochemistry. Biology 169/293. University of the Pacific, Fall 2009, Spring 2010.

Principles of Biology. Biology 61. Spring 2010.

Introduction to Biochemistry I. University of Washington Extension, Winter 2008.

Introduction to Biochemistry II. University of Washington Extension, Spring 2008.

Cell, Molecular and Developmental Biology Senior Seminar, “*More than Just Sex: Steroid
Hormones in Reproduction and Disease.*” Department of Biology.
University of Washington, Winter 2007.

Biochemistry I, Human Biology 514. Discussion Section Leader,
University of Washington, School of Medicine, Fall 2008.

Organic Chemistry. Laboratory and Teaching Assistant,
College of Wooster, Spring 1997, Spring 1998.

Research Experience

University of Washington, Postdoctoral Fellow with Dr. David Kimelman Ph.D., 2005-2009. Department of Biochemistry. I study the role of the scaffolding protein Gravin in controlling actin-myosin contractility and cell migration *in vivo* using the zebrafish system and mammalian tissue culture.

Duke University Medical Center, Graduate Student with Dr. Shirish Shenolikar Ph.D., 1999-2005. Department of Pharmacology and Cancer Biology. Regulation of protein synthesis by stress signaling, specifically studying the regulation of protein phosphatase-1-mediated dephosphorylation of eIF2 alpha using *in vitro* biochemistry, yeast genetics, and mammalian tissue culture.

College of Wooster, Undergraduate Thesis, 1998-1999. Advisors: Dr. Virginia Pett Ph.D., and Dr. Robert Bouchard Ph.D. Departments of Chemistry and Biology. Bacterial expression, purification, and crystallization of a small heat shock protein from maize.

Duke University Medical Center, Undergraduate Summer Researcher with Dr. Debra Schwinn M.D. 1998. Department of Medicine. Identification of PKA and PKC phosphorylation sites on the human alpha1 adrenergic receptor.

Ohio State Agricultural Research and Development Center, Undergraduate Summer Researcher with Dr. Larry Phelan Ph.D. 1997. Department of Entomology. Wooster, OH., Identification of novel chemo-attractants for the plum curculio purified from apples using gas and liquid chromatography coupled to mass spectroscopy.

Publications (11)

Douglas C. Weiser, Richard H. Row, David Kimelman. "Rho-regulated Myosin Phosphatase Establishes the Level of Protrusive Activity Required for Cell Movements During Zebrafish Gastrulation." (2009) *Development*. 136: 2375-2384.

Douglas C. Weiser[#], Krystal R. St Julien[#], James S. Lang, David Kimelman. "Cell Shape Regulation by Gravin Requires N-terminal Membrane Effector Domains." (2008) *Biochemical Biophysical Research Communications*, 375: 512-516. (# equal contribution) (undergraduate authors underlined)

Douglas C. Weiser, Ujwal J. Pyati, David Kimelman. "Gravin Regulates Mesodermal Cell Behavior Changes Required for Axis Elongation During Zebrafish Gastrulation." (2007) *Genes and Development*. 21: 1559-71. (**Cover Image**)

Anand Pathak, Federica del Monte, Wen Zhao, Jo-El Schultz, John N. Lorenz, Ilona Bodi, **Doug Weiser**, Harvey Hahn, Andrew Carr, Faisal Syed, Nirmala Mavila, Leena Jha, Jiang Qian, Yehia Marreez, Guoli Chen, Dennis W. McGraw, E. Kevin Heist, J. Luis Guerrero, Anna A. DePaoli-Roach, Roger J. Hajjar and Evangelia G. Kranias. "Enhancement of Cardiac Function and Suppression of Heart Failure Progression by Inhibition of Protein Phosphatase 1." (2005) *Circulation Research* 96:756-66.

Jennifer B. Gibbons, **Douglas C. Weiser**, Shirish Shenolikar. "Importance of a Surface Hydrophobic Pocket on Protein Phosphatase-1 Catalytic Subunit in Recognizing Cellular Regulators." (2005) *Journal of Biological Chemistry*. 280:15903-11.

Douglas C. Weiser, Suzanne Sikes, Shi Li, Shirish Shenolikar. "The Inhibitor-1 C-Terminus Facilitates Hormonal Regulation of Cellular Protein Phosphatase-1: Functional Implications for

Inhibitor-1 Isoforms.” (2004) *Journal of Biological Chemistry*. 279:48904-14.

Seth S. Margolis, Susan Walsh, Douglas C. Weiser, Minoru Yoshida, Shirish Shenolikar, Sally Kornbluth. “PP1 control of M phase entry exerted through 14-3-3-regulated Cdc25 dephosphorylation.” (2003) *EMBO Journal* 22:5734-45.

Matthew H. Brush, Douglas C. Weiser, Shirish Shenolikar. “GADD34 Targets Protein Phosphatase 1 to the Endoplasmic Reticulum to Facilitate the Dephosphorylation of the Eukaryotic Initiation Factor, eIF2 alpha.” (2003) *Molecular and Cellular Biology*. 23:1292-303.

Douglas C. Weiser, Shirish Shenolikar. “Use of Protein Phosphatase Inhibitors.” (2003) *Current Protocols in Protein Science* 13.10, *Current Protocols in Molecular Biology* 18.10.

Ryan Terry-Lorenzo, Elizabeth Elliot, Douglas C. Weiser, David Brautigan, Shirish Shenolikar. “Neurabin I and Neurabin II/Spinophilin Assemble a PP1/I-2 Complex at the Actin Cytoskeleton.” (2002) *Journal of Biological Chemistry*. 277:46535-43.

John H. Connor, Douglas C. Weiser, Shi Li, John Hallenbeck, Shirish Shenolikar. “Growth Arrest and DNA Damage-Inducible Protein GADD34 Assembles a Novel Signaling Complex Containing Protein Phosphatase 1 and Inhibitor 1.” (2001) *Molecular and Cellular Biology*. 21:6841-50.

Ongoing Studies

Megan Landsverk#, **Douglas C. Weiser#**, Mark Hannibal, Philip Chance, David Kimelman. Sept9a is Required for Haematopoietic and Epidermal Development in Zebrafish.” (# equal contribution) In preparation.

Mentoring Experience

Undergraduate Researchers at Pacific

Stephanie Kokka

Nathan Lok

Joseph Rosales

Joshua Rosales

Before Pacific

Wai San. Undergraduate Research, University of Washington, 2008-2009.

Jesaka Davitt. High School Summer Researcher. University of Washington, 2008.

Currently attending Xavier University.

Krystal St. Julien. Undergraduate Research, University of Washington, 2007-2008.

Mary Gates Undergraduate Fellowship. Attending Stanford University with Gilliam Fellowship for Advanced Study from HHMI.

James S. Lang. Undergraduate Research, University of Washington, 2006-2007.

Mary Gates Undergraduate Fellowship. Americorp volunteer, applying to Medical School.

Anshu Jain. Undergraduate Research, Duke University, 2002-2003.

“Role of GADD34 in Stress Signaling” (1 of 2 mentors). Currently attending University of Kentucky Medical School.

Awards and Scholarships

Best Postdoctoral Presentation Award, Northwest Society for Developmental Biology Conference, 2009. Travel Funding for National S.D.B. Meeting.

Postdoctoral Poster Award, Northwest Society for Developmental Biology Conference, 2008.

UW-HHMI Future Faculty Fellows Teaching Apprenticeship, 2006-2007.

College Scholar Scholarship, College of Wooster, 1995-1999.

Science and Math Scholarship, College of Wooster, 1995-1999.

Chemistry Department Honors on Independent Study Thesis, College of Wooster, 1999.

Sisodia-Williams Prize in Biochemistry, College of Wooster, 1999.

Robert E. Wilson Award for Excellence in Chemistry, College of Wooster, 1999.

Fellowships and Funding

Ruth L. Kirschstein National Research Service Award, Postdoctoral F32 (Child Health and Human Development), 2006-2009.

US Department of Defense Predoctoral Fellowship, Breast Cancer Research Program, 2001-2004.

Cell and Molecular Biology Program Graduate Training Fellowship, 1999-2001.

Copeland Fund Undergraduate Research Grant, College of Wooster, 1998-1999.

Selected Abstracts, Seminars and Meetings

Selected Seminars:

2009, Society for Developmental Biology Conference, Postdoc Symposium, San Francisco, CA. **Conference Seminar.**

2009, Cardiovascular Breakfast Club at South Lake Union, University of Washington Vascular Biology Program, Seattle, WA. **Invited Seminar.**

2009, Society for Developmental Biology, Northwest Regional Developmental Biology Conference, Friday Harbor, WA. **Conference Seminar. (Presentation Award)**

2008, University of Puget Sound, Thompson Building Science and Mathematics Seminar Series. **Invited Seminar.**

2007, Society for Developmental Biology, Northwest Regional Developmental Biology Conference, Friday Harbor, WA. **Conference Seminar.**

2006, Seattle Developmental Biology Winter Symposium, Fred Hutchinson Cancer Research Center, Seattle WA. **Conference Seminar.**

Selected Abstracts/Poster Presentations:

2008 International Zebrafish Meeting. Madison, WI. **Poster Presentation** "Regulation of Myosin Contractility During Zebrafish Gastrulation." Douglas C Weiser, David Kimelman.

2008 International Zebrafish Meeting. Madison, WI. **Poster Presentation** "Sept9a is Required for

Haematopoietic and Epidermal Development in Zebrafish.” Megan Landsverk, Douglas C Weiser, Mark Hannibal, Philip Chance, David Kimelman.

2008 Northwest Developmental Biology Conference. Friday Harbor, WA.

Poster Presentation “Regulation of Myosin Contractility During Zebrafish Gastrulation.” Douglas C Weiser, Ujwal Pyati, David Kimelman (**Poster Award**)

2008 Keystone Conference on Cell Invasion and Inflammation. Taos, NM

Poster Presentation “Regulation of Cell Movement During Zebrafish Gastrulation.” Douglas C. Weiser, Ujwal Pyati, David Kimelman

2006 Seattle Fall Developmental Biology Retreat,

Poster Presentation “Regulation of the Actin Cytoskeleton by the Scaffolding Protein Gravin during Gastrulation.” Douglas C. Weiser, Ujwal Pyati, David Kimelman

2006 International Zebrafish Meeting, Madison, WI

Poster Presentation “Regulation of the Actin Cytoskeleton by the Scaffolding Protein Gravin during Gastrulation.” Douglas C. Weiser, Ujwal Pyati, David Kimelman

2004 American Society for Cell Biology Meeting, Washington, DC

Poster Presentation “Regulation of stress response signaling by inhibition of eukaryotic initiation factor 2 alpha phosphatase activity.” Douglas C. Weiser

1999 National Conference for Undergraduate Research, University of Rochester, Rochester, NY.

Poster Presentation, “Expression, Purification and Crystallization of a Small Heat Shock Protein from Maize.” Douglas C. Weiser

Presented by Undergraduate advisee:

2007 Annual Biomedical Research Conference for Minority Students, Austin TX, “The Regulation of Subcellular Localization of Gravin: Implications for Development and Cancer.” Krystal St. Julien, Douglas C. Weiser and David Kimelman.

Workshops attended (selected)

UW/HHMI Future Faculty Fellows Workshop, 2006. Two-day workshop on teaching and career development.

UW Live Cell Imaging Course, 2005. Five-day theoretical and practical workshop on fluorescent and confocal microscopy of living cells.

Selected Professional Organizations and Service

Member, American Society for Cell Biology, 2003-present.

Member, Society for Developmental Biology, 2005-present.

Member, Council for Undergraduate Research, 2008-present.

Member, Society for the Study of Reptiles and Amphibians, 2009-present

Member, University of Washington Postdoc Association, 2006-2009.

Panelist, UW Postdoctoral Association, "UWPA Career panel," 2009.

Panelist, UW/HHMI Future Faculty Fellows Workshop, "Getting teaching experience as a Postdoc," 2007.

Volunteer, Reptile and Amphibian Day, North Carolina Natural History Museum, Raleigh NC, "Lizards of North Carolina," 2003.

Volunteer, approximately 1 morning per week with Alvin Braswell, Department of Herpetology, North Carolina Natural History Museum, Raleigh, NC., 2003-2004.