Stephanie C. Weber

Adjunct Lecturer
Department of Biology
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Education

Ph.D. Biochemistry, Stanford University — 2011

B.S. Biology, B.S. Chemistry, *summa cum laude*, Duke University — 2006

Research Experience

Postdoctoral fellow with Cliff Brangwynne, Princeton University — 2011-2015
An intracellular phase transition couples nucleolar size with cell size in early C. elegans *embryos*

Graduate student with Julie Theriot, Stanford University — 2007-2011
Macromolecular motion in vivo: *anomalous diffusion through an "active" viscoelastic medium*

Undergraduate student with Arno Greenleaf, Duke University — 2005-2006
FF Domains and the binding of PCAPs to the carboxy terminal domain of RNA polymerase II

Summer student with Kerry O'Banion, University of Rochester — 2004
The use of RNA interference to elucidate the role of mPGES-1 in PGE2 biosynthesis

Undergraduate student with Steve Haase, Duke University — 2003-2005
The effect of CLB6 on population doubling time in Saccharomyces cerevisiae

Honors, Awards and Fellowships

Damon Runyon Postdoctoral Fellowship — 2012-2015

Jane Coffin Childs Memorial Fund Postdoctoral Fellowship (declined) — 2012

Life Sciences Research Foundation Postdoctoral Fellowship (declined) — 2012

Bioengineering Outstanding Teaching Assistant Award — 2011

Harold M. Weintraub Graduate Student Award — 2011
National award recognizing outstanding achievement in graduate studies in the biological sciences

NSF Graduate Research Fellowship	2008-2011
Graduation with Distinction in Biology, Chemistry	2006
Faculty Scholar Award *Highest honor bestowed upon a Duke undergraduate recognizing intellectual leadership and scholarly accomplishment*	2005
Phi Beta Kappa	2005
Deans' Summer Research Fellowship	2005
GEBS/NSF REU Summer Scholars Program	2004
Howard Hughes Research Fellows Program	2003

Publications

Berry, J. M.*, **Weber, S. C.***, Vaidya, N., Haataja, M. and Brangwynne, C. P. (2015) RNA transcription modulates phase transition-driven nuclear body assembly, *Proceedings of the National Academy of Sciences*, 112, E5237. *Co-first authors.

Weber, S. C., and Brangwynne, C. P. (2015) Inverse size scaling of the nucleolus by a concentration-dependent phase transition, *Current Biology*, 25, 641.

Weber, S. C., and Brangwynne, C. P. (2012) Getting RNA and protein in phase, *Cell*, 149, 1188.

Weber, S. C., Thompson, M. A., Moerner, W. E., Spakowitz, A. J. and Theriot, J. A. (2012) Analytical tools to distinguish the effects of localization error, confinement and medium elasticity on the velocity autocorrelation function, *Biophysical Journal*, 102, 2443.

Weber, S. C., Spakowitz, A. J. and Theriot, J. A. (2012) Nonthermal ATP-dependent fluctuations contribute to the *in vivo* motion of chromosomal loci, *Proceedings of the National Academy of Sciences*, 109, 7338.

Weber, S. C., Theriot, J. A. and Spakowitz, A. J. (2010) Subdiffusive motion of a polymer composed of subdiffusive monomers, *Physical Review E* 82, 011913.

Weber, S. C. and Theriot, J. A. (2010) Mu gets in the loop, *Molecular Cell* 39, 1.

Weber, S. C., Spakowitz, A. J. and Theriot, J. A. (2010) Bacterial chromosomal loci move subdiffusively through a viscoelastic cytoplasm, *Physical Review Letters* 104, 238102.

Invited Talks

Weber, S. C., Berry, J. M., Vaidya, N., Haataja, M. and Brangwynne, C. P. (2015) RNA transcription modulates phase transition-driven nucleolar assembly, *American Society for Cell Biology*, Annual Meeting.

Weber, S. C. and Brangwynne, C. P. (2014) Nucleolar assembly and growth are governed by a concentration-dependent phase transition, *American Society for Cell Biology*, Annual Meeting.

Weber, S. C. and Brangwynne, C. P. (2014) Inverse size scaling of the nucleolus by a concentration-dependent phase transition, *Biophysical Society*, Disordered Motifs and Domains in Cell Control.

Weber, S. C. and Brangwynne, C. P. (2014) Nucleolar size and assembly is governed by a concentration-dependent phase transition, *Gordon Research Conference*, Post-Transcriptional Gene Regulation.

Weber, S. C., Spakowitz, A. J. and Theriot, J. A. (2010) ATP-dependent fluctuations drive macromolecular motion *in vivo*, *American Society for Cell Biology*, Annual Meeting.

Teaching/Mentoring Experience

Adjunct Lecturer, Department of Biology, Santa Clara University 2015-present

Pedagogical training through the Teaching Transcript Program,
The McGraw Center, Princeton University 2013-2015

Guest Lecturer, CBE433 Mechanics and Dynamics of Soft Living Matter,
Princeton University 2012, 2014

Mentor for high school, undergraduate, senior thesis and graduate students,
Princeton University 2011-2015

Teaching Assistant, BIOE41 Physical Biology of Macromolecules,
Stanford University 2010

Teaching Assistant, Physiology Course, Marine Biological Laboratory,
Woods Hole, MA 2008

Teaching Assistant, BIO109 The Human Genome and Disease,
Stanford University 2008

Service

Women in Cell Biology 2015
Served as a table leader for a Career Discussion Roundtable at the American Society for Cell Biology's Annual Meeting.

Princeton Postdoc Council 2013-2015
Served as liaison between postdocs and administration; Organized professional development and social events for the postdoctoral community at Princeton

Mentoring Program 2013-2015
Coordinated mentoring relationships between postdocs and graduate students, in collaboration with Graduate Women in Science and Engineering (GWISE)

Outreach 2012-2015
Designed and delivered lectures and lab activities for middle school students at Stuart Country Day School in Princeton, NJ and Kilmer Elementary School in Trenton, NJ

References

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Chemical and Biological Engineering
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