

Curriculum Vitae
Douglas Benjamin Weibel

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PROFESSIONAL

Professor of Chemistry, Biochemistry, and Biomedical Engineering, University of Wisconsin, Madison, WI	2016 – present
Associate Professor of Chemistry, Biochemistry, and Biomedical Engineering, University of Wisconsin, Madison, WI	2013 – 2016
Visiting Professor of Physics University of Washington, Seattle	2014 – 2015
Assistant Professor of Biochemistry and Biomedical Engineering University of Wisconsin, Madison, WI	2008 – 2013
Assistant Professor of Biochemistry University of Wisconsin, Madison, WI	2006 – 2013

EDUCATION AND TRAINING

Postdoctoral Fellow (NIH Postdoctoral Fellowship) Harvard University, Cambridge, MA Advisor: Professor George M. Whitesides	2002 – 2006
Ph.D., Chemistry (NIH Predoctoral fellowship) Cornell University, Ithaca, NY Advisor: Professor Jerrold Meinwald	1997 – 2002
B.S., Chemistry University of Utah, Salt Lake City, UT Advisor: Professor C. Dale Poulter	1993 – 1996

ADDITIONAL PROFESSIONAL EXPERIENCE

Amazon.com, Inc. (Seattle, WA) Principal Scientist	2016 – present
Amazon.com, Inc. (Seattle, WA) Principal Scientist	2014 – 2015
Google[x] (Mountain View, CA) Visiting Faculty Researcher	2013 – 2014
Orchid Cellmark Inc. (Princeton, NJ) Visiting Scientist	Summer 2001

Max Planck Institute for Chemical Ecology (Jena, Germany) Summer 1999
Visiting Scientist

Tohoku University (Sendai, Japan) 1996 – 1997
Fulbright Fellow: Organometallic chemistry

AWARDS AND HONORS

Scialog Fellow, Research Corporation and Gordon & Betty Moore Foundation 2015
Class of 1955 Distinguished Teaching Award, UW-Madison 2014
Defense Science Study Group Member, Institute for Defense Analyses 2014 – 2015
Pound Research Award, CALS, UW-Madison 2014
Early Career Life Scientist Award, American Society for Cell Biology 2013
Vilas Associate Award, UW-Madison 2013 – 2014
NIH Director's New Innovator Award 2011
Basil O'Connor Award, March of Dimes Foundation 2011
Japan Society for the Promotion of Science BRIDGE Fellow 2010
DuPont Young Professor 2010
Alfred P. Sloan Research Fellow in Chemistry, Alfred P. Sloan Foundation 2010
DARPA Young Faculty Award, Department of Defense 2009
Research-Service Grant Award, University of Wisconsin-Madison 2009
3M Non-Tenured Faculty Award 2009
Searle Scholar Award, Kinship Foundation 2008
ICAAC Young Investigator Award, American Society for Microbiology 2008
Japan Society for the Promotion of Science Fellow 2006
Ruth L. Kirschstein National Research Service Award Research Training Grant 2003 – 2005
National Institutes of Health Chemistry and Biology Interface Training Grant 1999 – 2001
Russell Teaching Award, College of Arts and Sciences, Cornell University 1999
DuPont Teaching Award, Cornell University 1998
Fulbright Fellow (Japan), US Department of State 1996 – 1997
Pfizer Summer Undergraduate Fellowship in Synthetic Organic Chemistry 1995

NAMED LECTURESHIPS

Nov. 2012 GlaxoSmithKline Distinguished Lecture, Colorado State University, Fort Collins, CO

CONSULTING

Amazon.com, Inc., Seattle, WA 2015 – 2016
Cubist Pharmaceuticals, Lexington, MA 2014
Platypus Technologies LLC, Fitchburg, WI 2013
Google[x], Mountain View, CA 2013 – 2014
Gerson Lehrman Group 2013 – present
FDA, General and Plastic Surgery Devices Advisory Panel 2012 – present
Kirkland & Ellis, LLP 2011
L.E.K. Consulting, Boston, MA 2011 – 2013
Nano Terra Inc., Brighton, MA 2005 – present
Center for Nanoscale Systems, Harvard University, MA 2005 – 2006

COMMERCIALIZATION

BluDiagnostics Inc. (Madison, WI) 2015 – present
Co-founder

Agri Diagnostics Inc. (Madison, WI)
Co-founder

2014 – present

PROFESSIONAL AFFILIATIONS

American Chemical Society	1996–present
American Society for Microbiology	2004–present
Materials Research Society	2005–present
American Society for Cell Biology	2005–present
American Society for Biochemistry and Molecular Biology	2006–present
American Association for the Advancement of Science	2008–present
Biophysical Society	

PUBLICATIONS

1. T. M. A. Santos, M. G. Lammers, M. Zhou, I. Sparks, D. Fang, M. Rajendran, C. L. Y. De Jesus, G. F. R. Carneiro, K. A. Hurley, Q. Cui, D. B. Weibel. "Iron Starvation Inhibits Late Stages of Bacterial Cytokinesis," **2016**, *manuscript submitted*.
2. E. R. Rojas, G. Billings, G. Auer, D. B. Weibel, J. A. Theriot, K. C. Huang. "The Outer Membrane is an Essential Load-bearing Element in Gram-negative Bacteria," **2016**, *manuscript submitted*.
3. F. Wong, L. D. Renner, J. Paulose, D. B. Weibel, J. W. Hutchinson, A. Amir. "Shape recovery in rod-like bacteria," **2016**, *manuscript submitted*.
4. M. D. Stilwell, J. F. Nepper, E. D. Clawson, V. Blair, T. Tangen, D. B. Weibel. "Exploring Predatory Nematode Chemotaxis Using Low-cost and Easy-to-use Microfluidics," **2016**, *manuscript submitted*.
5. E. D. Clawson, V. Blair, J. F. Nepper, M. D. Stilwell, T. Tangen, D. B. Weibel. "Accessible Classroom Microfluidics for Investigating Laminar Flow," **2016**, *manuscript submitted*.
6. K. C. Faulkner, K. A. Hurley, D. B. Weibel. "5-alkyloxyptamines are Membrane-Targeting, Broad-Spectrum Antibiotics," **2016**, *Bioorganic and Medicinal Chemistry Letters*, 26, 5539-5544.
7. L. D. Renner, J. Zan, L. I. Hu, P. J. Resto, A. C. Siegel, C. Torres, S. Hall, T. R. Slezak, T. Ngyuen, D. B. Weibel. "Detection of ESKAPE Bacterial Pathogens Using a Portable, Isothermal De-Gas Driven Diagnostic System," **2016**, *Applied and Environmental Microbiology*, *in press*.
8. P. C. Mushenheim, J. S. Pendery, D. B. Weibel, S. E. Spagnolie, N. L. Abbott. "Straining Soft Colloids in Aqueous Nematic Liquid Crystals," **2016**, *Proceedings of the National Academy of Sciences* 133, 5564-5569.
9. G. K. Auer, D. B. Weibel. "Bacterial Cell Mechanics," **2016**, *manuscript submitted*.
10. L. Zhang, M. Rajendram, D. B. Weibel, A. Yethiraj, Q. Cui. "Ionic Hydrogen Bonds and Lipid Packing Defects Determine the Binding Orientation and Insertion Depth of RecA on Multi-component Lipid Bilayers," **2016**, *Journal of Physical Chemistry B* 33, 8424-8437.
11. M. Rajendram, L. I. Hu, B. Reynolds, D. B. Weibel. "The Major Prokaryotic Anionic Phospholipid Synthase is Regulated by the SOS response in *Escherichia coli*," **2016**, *manuscript submitted*.

12. T. -Y. Lin, D. B. Weibel. "Organization and Function of Anionic Phospholipids in Bacteria," **2016**, *Applied Microbiology and Biotechnology*, 100, 4255-4267.
13. K. A. Hurley, T. M. A. Santos, M. R. Fensterwald, M. Rajendran, J. T. Moore, E. I. Balmond, B. J. Blahnik, K. C. Faulkner, M. H. Foss, V. A. Heinrich, M. G. Lammers, L. C. Moore, G. D. Reynolds, G. P. Shearn-Nance, Z. W. Yao, B. A. Stearns, J. T. Shaw, D. B. Weibel. "Targeting Quinolone and Aminocoumarin-Resistant Bacteria with New Gyramide Analogs that Inhibit DNA Gyrase," **2016**, *manuscript submitted*.
14. G. K. Auer, P. M. Oliver, M. Rajendram, Q. Yao, G. J. Jensen, D. B. Weibel. "Altered Cell Mechanics Increases the Susceptibility of *Proteus mirabilis* and *Vibrio parahaemolyticus* Swarmer Cells to β -Lactam Antibiotics," **2016**, *manuscript submitted*.
15. N. Mahajan, B. Hoover, M. Rajendram, K. Kawasaki, D. B. Weibel, M. Zhang. "Maspin Binds to Cardiolipin in Mitochondria and Triggers Apoptosis," **2016**, *manuscript submitted*.
16. Y. S. Dufour, S. Gillet, N.W. Frankel, D. B. Weibel, T. Emonet. "Direct Correlation Between Motile Behavior and Protein Abundance in Single Cells," **2016**, *PLoS Computational Biology*, 12, e1005041.
17. K. A. Hurley, T. M. A. Santos, G. M. Nepomuceno, V. Huynh, J. T. Shaw, D. B. Weibel. "Targeting the Bacterial Division Protein FtsZ," **2016**, *Journal of Medicinal Chemistry*, 59, 6975-6998.
18. G. K. Auer, T. Lee, M. Rajendram, K. C. Huang, D. B. Weibel. "Mechanical Genomics Identifies Diverse Modulators of Bacterial Cell Stiffness," **2016**, *Cell Systems*, 2, 402-411.
19. R. R. Trivedi, R. Maeda, S. E. Spagnolie, N. L. Abbott, D. B. Weibel. "Bacterial Transport of Colloids in Liquid Crystalline Environments," **2015**, *Soft Matter* 11, 8404-8408.
20. T. -Y. Lin, T. M. A. Santos, W. S. Kontur, T. J. Donohue, D. B. Weibel. "A Cardiolipin-deficient Mutant of *Rhodobacter sphaeroides* has an Altered Cell Shape and is Impaired in Biofilm Formation," **2015**, *Journal of Bacteriology* 197, 3446-3455.
21. P. C. Mushenheim, R. R. Trivedi, S. S. Roy, M. S. Arnold, D. B. Weibel, N. L. Abbott. "Effects of Confinement, Surface-Induced Orientations and Strain on Dynamical Behaviors of Bacteria in Thin Liquid Crystalline Films," **2015**, *Soft Matter* 11, 6821-6831.
22. M. Rajendram, L. Zhang, H. H. Tuson, G. K. Auer, B. J. Reynolds, K. N. Ngo, M. M. Cox, A. Yethiraj, Q. Cui, D. B. Weibel. "Anionic Phospholipids Interact Stabilize RecA Filament Bundles in *Escherichia coli*," **2015**, *Molecular Cell*, 60, 374-384.
23. J. A. Crooks, M. D. Stilwell, P. M. Oliver, Z. Zhong, D. B. Weibel. "Decoding the Chemical Language of Motile Bacteria by Using High-Throughput Microfluidic Assays," **2015**, *ChemBioChem*, 16, 2151-2155.
24. A. Liljander, M. Yu, E. O'Brien, M. Heller, J. Nepper, D.B. Weibel, I. Gluecks, M. Younan, J. Frey, L. Falquet, J. Jores. "Field-Applicable Recombinase Polymerase Amplification Assay for Rapid Detection of *Mycoplasma capricolum* subsp. *capripneumoniae*," **2015**, *Journal of Clinical Microbiology*, 53, 2810-2815.
25. R. Derda, J. Gitaka, C. M. Klapperich, C. R. Mace, A. A. Kumar, M. Lieberman, J.C. Linnes, J. Nasimolo, J. Ndung'u, E. Taracha, A. Weaver, D. B. Weibel, T. M. Kariuki, P. Yager. "Enabling the Development and Deployment of Next Generation Point-of-Care Diagnostics," **2015**, *PLoS Neglected Tropical Diseases* 9, e0003676.

26. K. A. Hurley, V. Heinrich, J. Hershfield, S. Demons, D. B. Weibel. "Membrane-Targeting DCAP Analogues with Broad-Spectrum Activity Against Pathogenic Bacteria," **2015**, *ACS Medicinal Chemistry Letters* 6, 466-471.
27. N. Yin, M. D. Stilwell, H. Wang, D. B. Weibel. "Agarose Particle-Templated Porous Bacterial Cellulose and its Application in Cartilage Growth in Vitro," **2015**, *Acta Biomaterialia* 12, 129-138.
28. P. M. Oliver, J. A. Crooks, M. Leidl, E. J. Yoon, A. Saghatelian, D. B. Weibel. "Localization of Anionic Phospholipids in *Escherichia coli* Cells," *Journal of Bacteriology* **2014**, 196, 3386-3398.
29. P. C. Mushenheim, R. R. Trivedi, D. B. Weibel, N. L. Abbott. "Using Liquid Crystals to Reveal How Mechanical Anisotropy Changes Interfacial Behaviors of Motile Bacteria," *Biophysical Journal* **2014**, 107, 255-265.
30. T. M. A. Santos, T.-Y. Lin, M. Rajendran, Samantha Anderson, D. B. Weibel. "Polar Localization of *Escherichia coli* chemoreceptors requires an intact Tol-Pal Complex," *Molecular Microbiology* **2014**, 92, 985-1004.
31. M. Rajendram, K. A. Hurley, M. H. Foss, K. M. Thornton, J. T. Moore, J. T. Shaw, D. B. Weibel "Gyramides Prevent Bacterial Growth by Inhibiting DNA Gyrase and Altering Chromosome Topology," *ACS Chemical Biology* **2014**, 9, 1312-1319.
32. N. Yin, T. M. A. Santos, G. K. Auer, J. A. Crooks, P. M. Oliver, D. B. Weibel. "Bacterial Cellulose as a Substrate for Microbial Cell Culture," *Applied and Environmental Microbiology* **2014**, 80, 1926-1932.
33. M. Hemling, J. A. Crooks, P. M. Oliver, K. Brenner, J. Gilbertson, G. C. Lisensky, D. B. Weibel. "Microfluidics for High School Chemistry Students," *Journal of Chemical Education* **2014**, 91, 112-115.
34. P. C. Mushenheim, R. R. Trivedi, H. H. Tuson, D. B. Weibel, N. L. Abbott. "Dynamic Self-Assembly of Motile Bacteria in Liquid Crystals," *Soft Matter* **2014**, 10, 88-95.
35. D. B. Weibel. "A Chemist Building Paths to Cell Biology" *Molecular Biology of the Cell* **2013**, 24, 3264-3266
36. J. M. Swiecicki, O. Sliusarenko, D. B. Weibel. "From Swimming to Swarming: *Escherichia coli* Motility in Two-Dimensions," *Integrative Biology* **2013**, 5, 1490-1494.
37. L. D. Renner, P. E. Moorthy, K. Ramamurthi, D. B. Weibel. "Studying Biomolecule Localization by Engineering Bacterial Cell Wall Curvature," *PLoS One* **2013**, 8, e84143.
38. M. Zhou, Y. -J. Eun, D. B. Weibel. "Structure-Activity Studies of Divin: an Inhibitor of Bacterial Cell Division," *ACS Medicinal Chemistry Letters* **2013**, 4, 880-885.
39. Y. -J. Eun, D. Kiekebusch, M. Zhou, S. Schlimpert, R. R. Trivedi, S. Bakshi, T. A. Wahlig, M. Thanbichler, D. B. Weibel. "Divin: a Small Molecule Inhibitor of Bacterial Divisome Assembly," *Journal of the American Chemical Society* **2013**, 135, 9768-9776.
40. S. Jakiela, T. S. Kaminski, O. Cybulski, D. B. Weibel, P. Garstecki. "Bacterial Growth and Adaptation in Microdroplet Chemostats," *Angewandte Chemie International Ed.* **2013**, 52, 8908-8911.
41. H. H. Tuson, D. B. Weibel. "Bacteria-Surface Interactions," *Soft Matter* **2013**, 9, 4368-4380.

42. M. H. Foss, Y. -J. Eun, C. Grove, D. A. Pauw, N. A. Sorto, J. W. Rensvold, D. J. Pagliarini, J. T. Shaw, D. B. Weibel. "Inhibitors of Bacterial Tubulin Target Bacterial Membranes in Vivo," *Medicinal Chemistry Communications* **2013**, *4*, 112-119.
43. H. H. Tuson, M. F. Copeland, S. Carey, R. Sacotte, D. B. Weibel. "Flagellum Density Regulates *Proteus mirabilis* Swarmer Cell Motility in Viscous Environments," *Journal of Bacteriology* **2013**, *195*, 368-377.
44. A. N. Shkoporov, B. A. Efimov, E. V. Khokhlova, A. V. Chaplin, L. I. Kafarskaya, A. S. Durkin, J. McCorrison, M. Torralba, M. Gillis, G. Sutton, D. B. Weibel, K. E. Nelson, V. V. Smeianov. "Draft genome sequences of two pairs of human intestinal bifidobacterium longum subsp. longum strains, 44B and 1-6B and 35B and 2-2B, consecutively isolated from two children after a 5-year time period," *Genome Announcements* **2013**, *16*, e00234-e00313.
45. L. D. Renner, D. B. Weibel. "MinD and MinE Interact with Anionic Phospholipids and Regulate Bacterial Division Plane Formation in *Escherichia coli*," *Journal of Biological Chemistry* **2012**, *287*, 38835-38844.
46. M. B. Kim, T. O'Brien, J. T. Moore, D. E. Anderson, M. H. Foss, D. B. Weibel, J. B. Ames, J. T. Shaw. "The Synthesis and Antimicrobial Activity of Heterocyclic Derivatives of Totarol," *ACS Medicinal Chemistry Letters* **2012**, *3*, 818-822.
47. Y. -J. Eun, M. H. Foss, D. Kiekebusch, D. A. Pauw, M. Thanbichler, W. M. Westler, D. B. Weibel. "DCAP: A Broad-Spectrum Antibiotic that Targets the Cytoplasmic Membrane of Bacteria," *Journal of the American Chemical Society* **2012**, *134*, 11322-11325.
48. J. Y. Ho, N. J. Cira, J. Crooks, D. B. Weibel. "Rapid Identification of Bacterial Pathogens in an Autonomous Microfluidic Device," *PLoS One* **2012**, *7*, e41245.
49. H. H. Tuson, G. K. Auer, L. D. Renner, M. Hasebe, M. Salick, W. C. Crone, A. Gopinathan, K. C. Huang, D. B. Weibel. "Measuring the Stiffness of Bacterial Cells from Growth Rates in Hydrogels of Tunable Elasticity," *Molecular Microbiology* **2012**, *84*, 874-891.
50. S. Hou, S. A. Wieczorek, T. S. Kaminski, N. Ziebacz, M. Tabaka, N. A. Sorto, M. H. Foss, J. T. Shaw, M. Thanbichler, D. B. Weibel, K. Nieznanski, R. Holyst, P. Garstecki. "Characterization of *Caulobacter crescentus* FtsZ Using Dynamic Light Scattering," *Journal of Biological Chemistry* **2012**, *287*, 23878-23886.
51. K. Churski, T. S. Kaminski, S. Jakiela, W. Kamysz, D. B. Weibel, P. Garstecki. "Rapid Screening of Antibiotic Toxicity in an Automated Microdroplet System," *Lab on a Chip* **2012**, *12*, 1629-1637.
52. N. J. Cira, J. Y. Ho, M. E. Dueck, D. B. Weibel. "A Self-Loading Microfluidic Device for Determining the Minimum Inhibitory Concentration of Antibiotics," *Lab on a Chip* **2012**, *12*, 1052-1059.
53. H. H. Tuson, L. D. Renner, D. B. Weibel. "Polyacrylamide Hydrogels as Substrates for Studying Bacteria," *Chemical Communications* **2012**, *48*, 1595-1597.
54. M. H. Foss, Y. -J. Eun, D. B. Weibel. "Chemical-Biological Studies of Subcellular Organization in Bacteria," *Biochemistry* **2011**, *50*, 7719-7734.
55. L. D. Renner, D. B. Weibel. "Physicochemical Regulation of Biofilm Formation," *Materials Research Society Bulletin* **2011**, *36*, 347-355.

56. S. T. Flickinger, M. F. Copeland, E. M. Downes, A. T. Braasch, H. H. Tuson, Y. -J. Eun, D. B. Weibel. "Quorum Sensing Between *Pseudomonas aeruginosa* Biofilms Accelerates Biofilm Development," *Journal of the American Chemical Society* **2011**, *133*, 5966-5975.
57. L. D. Renner, D. B. Weibel. "Cardiolipin Microdomains Localize to Negatively Curved Regions of *Escherichia coli* Membranes," *Proceedings of the National Academy of Sciences USA* **2011**, *108*, 6264-6269.
58. M. H. Foss, K. A. Hurley, L. L. Lackner, N. Sorto, K. Thornton, J. T. Shaw, D. B. Weibel. "N-benzyl-3-sulfonamidopyrrolidines are a New Class of Bacterial DNA Gyrase Inhibitors," *ACS Medicinal Chemistry Letters* **2011**, *2*, 289-292.
59. Y. -J. Eun, A. S. Utada, M. F. Copeland, S. Takeuchi, D. B. Weibel. "Encapsulating Bacteria in Agarose Microparticles Using Microfluidics for High-Throughput Cell Analysis and Isolation," *ACS Chemical Biology* **2011**, *6*, 260-266.
60. M. H. Foss, D. B. Weibel. "Oligochlorophens are Potent Inhibitors of *Bacillus anthracis*," *Antimicrobial Agents and Chemotherapy* **2010**, *54*, 3988-3990.
61. M. F. Copeland, S. T. Flickinger, H. H. Tuson, D. B. Weibel. "Studying the Dynamics of Flagella in Multicellular Communities of *Escherichia coli* by Using Biarsenical Dyes," *Applied and Environment Microbiology* **2010**, *76*, 1241-1250.
62. G. J. Bean, S. Flickinger, M. McCully, W. M. Westler, D. Sept, D. B. Weibel, K. J. Amann. "A22 Disrupts the Bacterial Actin Cytoskeleton by Directly Binding and Inducing a Low-Affinity State in MreB," *Biochemistry* **2009**, *48*, 4852-4857.
63. Y. -J. Eun, D. B. Weibel. "Fabrication of Biofilm Arrays by Geometric Control of Cell Adhesion," *Langmuir* **2009**, *25*, 4643-4654.
64. A. Moralimohan, Y. -J. Eun, B. Bhattacharyya, D. B. Weibel. "Dissecting Bacteria Using Materials Science," *Trends in Microbiology* **2009**, *17*, 100-108.
65. M. F. Copeland, D. B. Weibel. "Bacterial Swarming: A Model System for Studying Dynamic Self-Assembly," *Soft Matter* **2009**, *5*, 1174-1187.
66. M. T. Cabeen, G. Charbon, W. Vollmer, P. Born, N. Ausmees, D. B. Weibel, C. Jacobs-Wagner. "Bacterial Cell Curvature Via Mechanical Control of Cell Growth," *EMBO Journal* **2009**, *28*, 1208-1219.
67. D. B. Weibel. "Building Communities One Bacterium at a Time," *Proceedings of the National Academy of Sciences USA* **2008**, *99*, 18075-18076.
68. V. M. Krishnamurthy, G. K. Kaufman, A. R. Urbach, I. Gitlin, K. L. Gudiksen, D. B. Weibel, G. M. Whitesides. "Carbonic Anhydrase as a Model for Biophysical and Physical-Organic Studies of Protein and Protein-Ligand Binding," *Chemical Reviews* **2008**, *108*, 946-1051.
69. E. C. Garner, C. Campbell, D. B. Weibel, R. D. Mullins. "Reconstitution of DNA Segregation from Purified Components: A Three Component Plasmid Spindle," *Science* **2007**, *315*, 1270-1274.
70. D. B. Weibel, W. R. DiLuzio, G. M. Whitesides. "Microfabrication Meets Microbiology," *Nature Reviews Microbiology* **2007**, *5*, 209-218. (Weibel and Whitesides are co-corresponding authors)

71. D. B. Weibel, A. C. Siegel, A. Lee, A. H. George, G. M. Whitesides. "Pumping Fluids in Microfluidic Systems Using the Elastic Deformation of Poly(dimethylsiloxane)," *Lab on a Chip* **2007**, *7*, 1832-1836. (Weibel and Whitesides are co-corresponding authors)
72. A. Siegel, D. Bruzewicz, D. B. Weibel, G. M. Whitesides. "Microsolidics: Fabrication of Three-Dimensional Metallic Structures Using Microfluidics," *Advanced Materials* **2007**, *57*, 727-733.
73. P. Garstecki, P. Tierno, D. B. Weibel, F. Sagues, G. M. Whitesides. "Propulsion of Flexible Polymer Structures in a Rotating Magnetic Field," *Journal of Physics: Condensed Matter* **2006**, *21*, 204107.
74. D. B. Weibel, G. M. Whitesides. "Applications of Microfluidics in Chemical Biology," *Current Opinion in Chemical Biology* **2006**, *10*, 584-591.
75. A. Winkleman, L. S. McCarty, T. Zhu, D. B. Weibel, Z. Suo, G. M. Whitesides. "Templated Self-Assembly Over Patterned Electrodes by an Applied Electric Field: Geometric Constraints and Diversity of Materials," *Journal of Microelectromechanical Systems* **2006**, *17*, 900-910.
76. D. B. Weibel, P. Garstecki, G. M. Whitesides. "Combining Microscience and Neurobiology," *Current Opinion in Neurobiology* **2005**, *15*, 560-567.
77. A. C. Siegel, S. Shevkoplyas, D. B. Weibel, D. Bruzewicz, A. Martinez, G. M. Whitesides. "Cofabrication of Electromagnets and Microfluidic Systems in Poly(dimethylsiloxane)," *Angewandte Chemie International Edition* **2006**, *45*, 6877-6882.
78. S. Takeuchi, W. R. DiLuzio, D. B. Weibel, G. M. Whitesides. "Controlling the Shape of Filamentous Cells of *E. coli*," *Nano Letters* **2005**, *5*, 1819-1823.
79. D. B. Weibel, R. Boulatov, A. Lee, R. Ferrigno, G. M. Whitesides. "Modeling the Anodic Half-Cell of a Low-Temperature Coal Fuel Cell," *Angewandte Chemie International Edition* **2005**, *44*, 5682-5686.
80. M. M. Stevens, M. Mayer, D. G. Anderson, D. B. Weibel, G. M. Whitesides, R. Langer. "Direct Patterning of Mammalian Cells onto Porous Tissue Engineering Substrates Using Agarose Stamps," *Biomaterials* **2005**, *26*, 7636-7641.
81. D. B. Weibel, P. Garstecki, D. Ryan, W. R. DiLuzio, J. E. Seto, M. Mayer, G. M. Whitesides. "Microoxen: Microorganisms to Move Microscale Loads," *Proceedings of the National Academy of Sciences USA* **2005**, *102*, 11963-11967.
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83. W. R. DiLuzio, L. Stern, M. Mayer, P. Garstecki, D. B. Weibel, H. C. Berg, G. M. Whitesides. *Escherichia coli* Swim on the Right-Hand Side," *Nature* **2005**, *435*, 1271-1274.
84. D. B. Weibel, A. Lee, M. Mayer, S. F. Brady, D. Bruzewicz, J. Yang, W. R. DiLuzio, J. Clardy, G. M. Whitesides. "A Bacterial Printing Press that Regenerates its Ink: Contact Printing Bacteria Using Hydrogel Stamps," *Langmuir* **2015**, *21*, 6436-6442.
85. S. Takeuchi, P. Garstecki, D. B. Weibel, G. M. Whitesides. "An Axisymmetric Flow-Focusing Microfluidic Device," *Advanced Materials* **2005**, *17*, 1067-1072.
86. S. Xu, Z. Nie, P. Lewis, E. Kumacheva, P. Garstecki, D. B. Weibel, I. Gitlin, H. Stone, G. M. Whitesides. "Generation of Monodisperse Particles Using Microfluidics: Control over Size, Shape, and Composition," *Angewandte Chemie International Edition* **2005**, *44*, 724-728.
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93. D. B. Weibel, N. Oldham, B. Feld, G. Glombitza, K. Dettner, W. Boland. "Iridoid Biosynthesis in Staphylinid Rove Beetles," *Insect Biochemistry and Molecular Biology* **2000**, *31*, 583-591.
94. D. B. Weibel. "Oxidodiperoxymolybdenum(pyridine)(hexamethylphosphoric)triamide," *Synlett* **2000**, *7*, 1076.
95. D. B. Weibel, A. B. Attygalle, L. E. Shevy, J. Meinwald. "Cycloalkene Budding: Competitive and Multiple Cycloalkene Extrusion from Doubly Unsaturated *N,N*-dimethylhydrazones," *Rapid Communications in Mass Spectrometry* **2000**, *14*, 1105-1109.
96. D. B. Weibel, V. Gevorgyan, Y. Yamamoto. "Synthesis of Polyether Exomethylene Paracyclophanes via an Intramolecular Palladium Catalyzed Benzannulation Protocol," *Journal of Organic Chemistry* **1998**, *63*, 1217-1220.
97. D. B. Weibel, Y. Yamamoto. "Ruthenium-Catalyzed Cyclization of Dienylalkynes via Vinylidene Intermediates: Scope and Limitations," *Chemtracts: Organic Chemistry* **1997**, *10*, 1034-1038.

PATENTS (20 filed, pending, issued)

1. J. T. Shaw, J. T. Moore, M. R. Fensterwald, D. B. Weibel, K. A. Hurley. "Inhibitors of Bacterial DNA Gyrase with Efficacy Against Gram-negative Bacteria," US2015/030,638 (filed: May 13, 2015).
2. Z. Liu, D. B. Weibel. "Method and System for Measuring Retinal," 9,101,309.
3. D. B. Weibel, B. Parviz. "Contact Lens for Measuring Intraocular Pressure," 9,289,123.
4. K. Brenner, D. B. Weibel. "A Test Device for Detecting an Analyte in a Saliva Sample and Method of Use," PTC/US16/26049.
5. D. B. Weibel, P. J. Resto, A. C. Siegel. "Optical Detection System for Portable Diagnostic Assays," 62/274,402 (filed: February 1, 2016).
6. D. B. Weibel, K. A. Hurley, K. C. Faulkner. "Antimicrobial Compounds, Compositions and Methods of Use Thereof" 9,440,920.
7. Y.-J. Eun, M. Zhou, D. B. Weibel. "Antimicrobial Compositions and Methods of Use Thereof," 9,282,738.
8. D. B. Weibel, Y.-J. Eun, K. A. Hurley, M. H. Foss. "Antimicrobial Compounds, Compositions and Methods of Use Thereof," 20130331424 (filed June 10, 2013).
9. N. J. Cira, D. B. Weibel. "Self-loading Microfluidic Device and Methods of Use," US 9,050,593.
10. D. B. Weibel, A. Lee, S. Potenta, A. Siegel, M. Kruithof, G. M. Weibel. "Valves and Reservoirs for Microfluidic Systems," 8,985,547.
11. D. A. Bruzewicz, M. Boncheva-Bettex, G. M. Whitesides, A. Siegel, D. B. Weibel, S. Shevkoplyas, A. Martinez. "Fabrication of Conductive Pathways, Microcircuits and Microstructures in Microfluidic Networks," 8,486,833.

+ 8 additional patents filed with Google in 2013 – 2014 (NDA restricts sharing submission information before publication by USPTO)

+ 1 additional patent file with Amazon.com in 2015 (NDA restricts sharing submission information before publication by USPTO)

INVITED PRESENTATIONS (entries in italics are upcoming)

2016

Nov 17	Marshfield Clinic	Marshfield, WI
Oct 6	Microswimmers International Conference 2016	Bonn, Germany
Jun 23	International Institute of Tropical Agriculture (IITA)	Ibadan, Nigeria
Jun 16	ASM Annual Meeting, Clinical & Public Health Microbiol. Symposium	Boston, MA
May 23	Swarming Dynamics and Collective Behavior in Cellular Systems Conference	Israel
Apr 19	Purdue University, Department of Physics	West Lafayette, IN
Feb 19	Memorial High School Chemistry Club	Madison, WI
Jan 21	Gordon Research Conf. on Sensory Transduction in Microorganisms	Ventura, CA
Jan 12	Hong Kong Univ. of Science and Technology, Dept. of Chemistry	Hong Kong
Jan 11	City University Hong Kong, Department of Physics	Hong Kong
Jan 7	University of Tokyo, Institute of Industrial Science	Tokyo, Japan

2015

Nov 16	Re-entering Antibacterial Drug Development Summit	Boston, MA
Nov 13	UW-Madison Medical School, Medical Microbiology and Immunol.	Madison, WI
Oct 27	Johns Hopkins University, Biological Chemistry	Baltimore, MD
Oct 12	New Approaches and Concepts in Microbiology Conference	Heidelberg, Germany
Oct 8	MIT, Department of Biological Engineering	Cambridge, MA
Jun 24	Max Planck Institute for Molecular Cell Biology and Genetics	Dresden, Germany
Jun 23	European Molecular Biology Laboratory, EMBL	Heidelberg, Germany
Apr 3	Oregon State University, Department of Biochemistry and Biophysics	Portland, OR
Mar 23	American Chemical Society, Harry Gray Symposium (for E. Weiss)	Denver, CO
Mar 13	University of Washington, Seattle, KBac seminar	Seattle, WA
Mar 4	University of Wisconsin-Madison, MRSEC EAB meeting	Madison, WI
Jan 20	First Annual Bio-Z Conference	Maui, HI

2014

Oct 31	University of California, Berkeley, Department of Bioengineering	Berkeley, CA
Oct 28	University of Akron, Department of Chemistry	Akron, OH
Oct 21	University of Puerto Rico Mayaguez, Chemical Engineering	Mayaguez, PR
Sep 23	Rice University, Center for Theoretical Biophysics	Houston, TX
Aug 13	Gordon Research Conference on Plant and Microbial Cytoskeletons	Andover, NH
Jul 18	Physiology Course, Marine Biological Laboratories	Woods Hole, MA
Jun 5	37th Steenbock Symposium: The Future of Chemical Biology	Madison, WI
May 30	DuPont Central Research, Horizons Seminar	Wilmington, DE
May 19	American Society for Microbiology Annual Meeting	Boston, MA
May 16	Harvard University, Applied Physics	Cambridge, MA
Apr 15	University of Wisconsin-Madison, Department of Chemistry	Madison, WI
Mar 14	University of Greenwich, Dept. of Agriculture, Health, and Env.	Greenwich, UK
Feb 17	International Potato Center (CIP)	Lima, Peru

2013

Dec 16	American Society for Cell Biology Conference	New Orleans, LA
Dec 5	Federal University of Viçosa	Viçosa, Brazil
Nov 4	Augustana College, Department of Chemistry	Sioux Falls, SD
Oct 30	University of Chicago, Department of Microbiology	Chicago, IL
Oct 22	University of Iowa, Department of Microbiology	Iowa City, IA
Oct 9	Polish Academy of Sciences	Warsaw, Poland
Sep 9	NYU Abu-Dhabi	Abu Dhabi, United Arab Emirates
Aug 18	J. Craig Venter Institute	Rockville, MD
Aug 16	Loyola Medical School, LUREC	Chicago, IL
Jun 19	Aspen Center for Physics, Workshop on "Physics of Functional Biological Assemblies"	Aspen, CO

May 30	US Army Medical Research Unit Kenya (USAMRU-K)	Kisumu, Kenya
May 29	International Livestock Research Institute	Nairobi, Kenya
May 20	University of Colorado-Boulder, Dept. of Chemistry and Biochem	Boulder, CO
May 17	Bill and Melinda Gates Foundation	Seattle, WA
May 6	Pediatric Academic Societies Annual Meeting	Washington DC
Mar 8	University of Wisconsin-La Crosse, Microbiology	La Crosse, WI
Feb 26	Cornell University, Dept. of Chemical and Biomolecular Engineering	Ithaca, NY
Feb 11	Princeton University, Biophysics	Princeton, NJ
Feb 1	UW-Madison, Department of Biochemistry	Madison, WI
Jan 26	International Livestock Research Institute	Addis Ababa, Ethiopia
Jan 11	Makerere University, Medical School	Kampala, Uganda

2012

Nov 29	University of Bayreuth, Department of Physical Chemistry	Bayreuth, Germany
Nov 27	University of Leipzig, Department of Bioengineering	Leipzig, Germany
Nov 26	AMOLF Institute, Amsterdam	Amsterdam, Netherlands
Nov 13	Nagoya University, Cell Biology	Nagoya, Japan
Nov 13	Japan Society for the Promotion of Science Conference	Nagoya, Japan
Nov 9	University of Wisconsin-Madison, Applied and Computational Math	Madison, WI
Nov 5	Colorado State University, Department of Chemistry	Fort Collins, CO
Nov 2	Google, Google[X] labs	Mountain View, CA
Oct 31	American Institute for Chemical Eng., Bio-fluid Dynamics Session	Pittsburgh, PA
Oct 30	Brandeis University, Department of Physics	Waltham, MA
Oct 26	DuPont, Central Research	Wilmington, DE
Oct 23	University of Alberta, Department of Chemistry	Alberta, CA
Oct 22	Univ. of British Columbia, Biochemistry & Michael Smith Labs	BC, Canada
Oct 10	University of Washington, Seattle, Department of Biochemistry	Seattle, WA
Oct 4	University of California San Diego, Department of Biochemistry	San Diego, CA
Oct 1	American Society for Microbiology Biofilms Meeting	Miami, FL
Sep 27	DePauw University, Department of Chemistry	Greencastle, IN
Sep 26	Butler University, Department of Chemistry	Indianapolis, IN
Sep 7	University of California, Merced, Quantitative and Systems Biology	Merced, CA
Aug 1	University of Wisconsin-Madison, EvoSysBio Meeting	Madison, WI
Jul 30	39 th International Conference on the Biology of Myxobacteria	Chicago, IL
Jun 27	Institute of Primate Research	Nairobi, Kenya
Jun 17	American Society for Microbiology Annual Meeting	San Francisco, CA
Jun 14	Aspen Center for Physics, Workshop on "Physics of Behavior"	Aspen, CO
Jun 12	Argonne National Labs Workshop; Physics of Bacterial Communities	Chicago, IL
May 31	Ulsan National Institute of Science and Technology, Engineering	Ulsan, Korea
May 29	Seoul National University, College of Engineering	Seoul, Korea
May 29	Seoul National University, School of Biological Sciences	Seoul, Korea
Apr 12	University of Illinois Urbana Champaign, Dept. of Chem.	Urbana Champaign, IL
Apr 2	Cornell University, Dept. of Chemical and Biomolecular Engineering	Ithaca, NY
Mar 25	ACS Chemical Biology Award Symposium (for Carolyn Bertozzi)	San Diego, CA
Mar 2	Wayne State University, Biochemistry Colloquium	Detroit, MI
Feb 21	IUPAC Conference, Trends in Science and Technology Relevant to the Chemical Weapons Convention, Spiez, Switzerland (Organization for the Prohibition of Chemical Weapons)	Spiez, Switzerland
Feb 13	Keystone Conference, Chemical Biology	Santa Fe, NM
Jan 19	Gordon Conference, Signal Transduction in Microorganisms	Ventura, CA
Jan 4	Aspen Center for Physics, Workshop on "Growth & Form: Pattern Formation in Biology"	Aspen, CO

2011

Dec 19	Brown University, School of Engineering	Providence, RI
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Dec 16	DuPont, Central Research	Wilmington, DE
Dec 14	University of Wisconsin-Madison, Genetics Colloquium	Madison, WI
Dec 13	McMaster University, Department of Biochemistry	Ontario, Canada
Dec 8	Northwestern University, Chemistry of Living Processes Institute	Evanston, IL
Dec 1	University of Houston, Dept. of Microbiology and Molecular Genetics	Houston, TX
Nov 15	Polish Academy of Sciences	Warsaw, Poland
Nov 2	West Virginia University, Department of Chemistry	Morganstown, WV
Oct 11	Indiana University, Department of Biology	Bloomington, IN
Sep 29	Scripps Research Institute, Florida	Jupiter, FL
Sep 16	UW-Madison, Integrated Program in Biochemistry Retreat	Madison, WI
Sep 15	Caltech, Division of Bioengineering	Pasadena, CA
Jul 29	Cubist Pharmaceuticals	Lexington, MA
Jul 21	UW-Madison Chemical Biology Training Program Symposium	Madison, WI
Jul 13	NIH, Center for Cancer Research	Bethesda, MD
Jun 23	Howard Hughes Medical Institute, Janelia Farms campus	Janelia Farms, VA
Jun 9	Ontario-on-a-Chip Meeting	Ontario, Canada
May 9	Delft University of Technology, Kavli Institute of Nanoscience	Delft, Netherlands
Apr 20	Keynote lecture; Biotechnology Institute, University of Minnesota, Synthetic Ecology Symposium	St. Paul, MN
Apr 11	Searle Scholars Meeting	Chicago, IL
Mar 29	University of Chicago, Institute for Biophysical Dynamics	Chicago, IL
Mar 31	Loyola University, Microbiology and Immunology	
Mar 25	DFG-NSF Research Conference; "Bioinspired Design and Engineering of Novel Functional Materials"	New York, NY
Mar 9	Institute of Photonic Sciences	Barcelona, Spain
Mar 10	Lund University, Department of Biology	Lund, Sweden
Jan 25	Univ. of Illinois at Urbana-Champaign, Dept. of Mechanical Eng.	Champaign, IL
Jan 12	Osaka University, Institute of Scientific and Industrial Research	Osaka, Japan
Jan 13	University of Tokyo, BioNano Seminar, Institute of Industrial Science	Tokyo, Japan
2010		
Dec 15	American Society for Cell Biology Conference, Nanoscale Biology	Philadelphia, PA
Dec 6	University of Tokyo, Hongo Campus	Tokyo, Japan
Dec 3	DuPont, Central Research	Wilmington, DE
Dec 2	National Institutes of Health, Lambda Lunch	Bethesda, MD
Nov 11	Yale University, Department of Chemistry	New Haven, CT
Oct 21	Michigan State Univ., Dept. of Biochemistry and Molecular Biology	Lansing, MI
Oct 7	UW-Madison Advanced Materials Industrial Consortium Meeting	Madison, WI
Sep 17	Caltech, Biochemistry Division	Pasadena, CA
Sep 8	Gordon Research Conference on Biointerface Science	Les Diablerets, Switzerland
Sep 3	University of Gdansk, Department of Biotechnology	Gdansk, Poland
Aug 30	Polish Academy of Sciences	Warsaw, Poland
Aug 24	American Chemical Society Meeting, Young Investigators Session	Boston, MA
Jul 16	LDS Life Sciences Symposium	Park City, UT
Jun 30	Gordon Conference on Bacterial Cell Surfaces	New London, NH
Jun 14	Gordon Conference on Bioorganic Chemistry	Andover, NH
Apr 9	Stanford University, Department of Bioengineering	Palo Alto, CA
Feb 4	Phillips (Caltech)/Quake (Stanford) Physical Biol. of the Cell retreat	Kauai, Hawaii
2009		
Dec 18	Tohoku University, Advanced Institute for Materials Research	Sendai, Japan
Dec 15	Tokyo University of Agriculture and Technology, Dept. of Chemistry	Tokyo, Japan
Dec 1	Brigham Young University, Department of Chemistry and Biochemistry	Provo, UT
Nov 9	University of Michigan, Biological Physics/Complex Systems	Ann Arbor, MI

Nov 5	Johns Hopkins University, Department of Chemical Engineering	Baltimore, MD
Oct 9	Univ. of Vermont, Immunology and Infectious Diseases	Burlington, VT
Sep 16	Caltech, Bioengineering: Physical Biology of the Cell Bootcamp	Pasadena, CA
Jun 8	UW-Madison, Genome Sciences Training Program Retreat	Madison, WI
Jun 4	Tokyo Institute of Technology, Organic and Polymeric Materials	Tokyo, Japan
Jun 1	Chonnam National University, College of Engineering	Gwangju, South Korea
May 18	Leibniz Institute of Polymer Research	Dresden, Germany
Apr 22	University of Pennsylvania, Franklin Institute Award in Chemistry (for George Whitesides)	Philadelphia, PA
Apr 2	UW-Madison, Department of Bacteriology	Madison, WI
Mar 31	UW-Madison, of Physics	Madison, WI
Mar 24	American Chemical Society Meeting, "Active and Responsive Surfaces" Symposium	Salt Lake City, UT
Mar 10	UW-Madison, Department of Chemical and Biological Engineering	Madison, WI
Mar 10	UW-Madison, Department of Chemistry	Madison, WI
Feb24	UW-Madison, Computation and Informatics in Biol. and Medicine	Madison, WI
2008		
Nov 4	3M Corporation, Corporate Research	St. Paul, MN
Sep 23	Polish Academy of Sciences, Institute of Physical Chemistry	Warsaw, Poland
Aug 29	UW-Madison, Kenneth B. Raper Symposium (Microbiology)	Madison, WI
Jul 22	University College Dublin, Nanoscale Function Group	Dublin, Ireland
Jul 23	International Conference on Bioengineering and Nanotechnology	Dublin, Ireland
Apr 30	UW-Madison, Department of Genetics	Madison, WI
Apr 28	UW-Madison, Department of Biomedical Engineering	Madison, WI
Feb27	Lehigh University, Department of Chemistry	Bethlehem, PA
Jan 4	Weizmann Institute, Department of Structural Biology,	Rehovot, Israel
2007		
Jul 2	ESF/EMBO Conference on Biological Surfaces and Interfaces	San Feliu, Spain
May 23	Los Alamos National Lab, Center for Nonlinear Studies	Los Alamos, NM
Apr 25	Necker Medical School, TaMaRa	Paris, France
Mar 22	UW-Madison, Materials Science Program	Madison, WI
Jan 22	NSF MRSEC IRG3 (Interface of Nanoscience and Biology)	Madison, WI
2006		
Nov 1	Harvard University, Center for Nanoscale Systems	Cambridge, MA
Aug 24	EMBO: Cell Cycle and Cytoskeletal Elements in Bacteria	Copenhagen, Denmark

RESEARCH FUNDING

On-going Funding:

Gerber Foundation 01/2017 – 12/2019
"Optimizing Intravenous Protein Nutrition in Premature Infants Using Urine Metabolomics"
Role: Co-PI on proposal

Bill and Melinda Gates Foundation (MSN168760) 09/2016 – 08/2019
"NextGen Phytosanitation: Rapid Elimination of Viruses from RTB Plants for Crop Improvement and Seed Systems"
Role: Co-PI on proposal

Gordon and Betty Moore Foundation (5253.04) 08/2016 – 08/2017
"Heteroplasmy: Population Dynamics of Mitochondria in Mammalian Cells"
Role: PI on proposal

United States Department of Agriculture, Hatch (MSN189868) 09/2016 – 08/2021
"Developing 'New' Antibiotics Against 'Old' Drug Targets"
Role: PI on proposal

Bill and Melinda Gates Foundation (MSN168760) 1/2014 – 8/2017
"Diagnostics for the Control and Eradication of Diseases in Plants and Livestock"
Role: PI on proposal

Human Frontiers Science Program (RGY0076/2013) 7/2013 – 6/2017
Title: "Characterizing New Components of the Bacterial Cytoskeleton"
Role: Co-PI on proposal with Zemer Gitai (Princeton), Martin Thanbichler (MPI, Marburg), and Justin Kollman (McGill)

NSF (DMR-1121288) 9/2011 – 8/2017
Title: "UW-Madison MRSEC on Structured Interfaces"
Role: Co-PI on proposal (Nick Abbott, lead PI; multiple co-PIs)

Camille & Henry Dreyfus Foundation (SG-10-032) 7/2010 – 6/2016
Title: "MicroExplorers: Adventures in a Tiny Universe"
Role: PI on proposal

Completed Funding:

NIH, Director's New Innovator Award (1DP2OD008735-01) 9/2011 – 6/2016
Title: "Revisiting the Bacterial Cell Wall as a Target for New Antibiotics"
Role: PI on proposal

National Science Foundation, BIO Directorate (MCB-1120832) 8/2011 – 7/2015
Title: "Studying the Structure and Function of Flagella in the Emergent Properties of Bacterial Communities"
Role: PI on proposal

National Science Foundation, Informal Science Education (MSN153687) 10/2012 – 9/2015
Title: "Sparks of Discovery: Improving Science Education Outside of the Classroom"
Role: PI on proposal

United States Department of Agriculture, Hatch (WIS01594) 10/2011 – 9/2015
Title: "Studying the Mechanisms that Bacteria use to Sense Surfaces and Interfaces"

Role: PI on proposal

Department of Defense (MSN156214) 10/2012 – 9/2014

Title: “PathChip: Portable Protection of Warfare Fighters”

Role: Co-PI on proposal with Dr. Tuan Nguyen (Lawrence Livermore National Laboratory)

Alfred P. Sloan Foundation Fellow (MSN134779) 6/2010 – 5/2014

Title: “Studying Bacterial Biochemistry and Cell Biology”

Role: PI on proposal

Bill and Melinda Gates Foundation (OPP1068092) 11/2012 – 4/2013

Title: “A Rapid and Portable Assay for Detecting Neonatal Sepsis”

Role: PI on proposal

Human Frontiers Science Program (RGY0069/2008-C103) 7/2008–6/2011

Title: “Identifying and Characterizing Bacterial Cytoskeletal Elements and Small Molecules That Target Them”

Role: Co-PI on proposal with Zemer Gitai (Princeton)

Searle Scholar Award, Kinship Foundation (MSN114506) 7/2008–6/2011

Title: “Studying the Intracellular Organization of Bacteria”

Role: PI on proposal

Keck Foundation (NAKFI SB3) 7/2009–6/2010

Title: “Studying Robustness in Bacterial Chemotaxis”

Role: Co-PI on proposal with Thierry Emonet (Yale)

DARPA Young Faculty Award (MSN124993) 10/2009 – 9/2011

Title: “Engineering the Emergent Behavior of Microbial Communities”

Role: PI on proposal

UW–Madison Graduate School Fall Research Competition (MSN118689) 7/2008 – 6/2009

Title: “Dissecting the Intracellular Organization of Bacteria Using Microtools”

Role: PI on proposal

Innovation and Economic Development Research Program (IEDR) (GRAD) 7/2008 – 6/2009

Title: “Nanoparticle-based Techniques for Manipulating the Bacterial Genome”

Role: PI on proposal

UW–Madison Graduate School Fall Research Competition (MSN144297) 7/2011 – 6/2012

Title: “The Role of Membrane Curvature in Protein Localization in Bacterial Cells”

Role: PI on proposal

Draper Technology Innovation Fund Grant (MSN149105) 10/2011 – 6/2012

Title: “Development of Broad-Spectrum Antibiotics that Inhibit Bacterial Cell Division”

Role: PI on proposal

Draper Technology Innovation Fund Grant (MSN153516) 3/2012 – 6/2012

Title: “Development of Point-of-Care Clinical Diagnostic Assays”

Role: PI on proposal

Keck Foundation (NAKFI SB3) 7/2011–6/2012

Title: “Using Layers of Paper to Create Synthetic Microbial Communities”

Role: PI on proposal with Ratmir Derda (Alberta)

STUDENT AND POSTDOCTORAL TRAINING

Current Postdoctoral Fellows

1. Dr. Katie Brenner (Ph.D., Caltech, 2009) 2012 – present
 - Hartwell Family Postdoctoral Fellowship
 - NIH, NRSA Postdoctoral Fellowship
 - L'Oreal USA Fellowship for Women in Science

Current Graduate Students

1. John Crooks (University of California, Davis, 2009) 2011 – present
 - WARF Research Fellowship, UW-Madison, 2014
 - Sullivan Wisconsin Distinguished Graduate Fellowship, UW-Madison, 2015
2. Thiago Santos (Universidade Federal de Vicosa, Brazil, 2008) 2011 – present
 - Louis and Elsa Thomsen Wisconsin Distinguished Fellowship, 2016
3. Julia Nepper (North Carolina State University, 2010) 2012 – present
 - NIH Biophysics Training Grant Fellowship, 2012
 - NSF Graduate Research Fellow
4. Ti-Yu Lin (National Taiwan University, 2005) 2012 – present
 - William and Dorothy E. Sullivan Wisconsin Distinguished Graduate Fellowship, 2016
 - Mao Distinguished Graduate Research Fellowship, UW-Madison, 2015
5. Matthew Stillwell (Colorado School of Mines, 2012) 2012 – present
 - NIH Biophysics Training Grant Fellowship, 2012
6. Rishi Trivedi (Indian Institute of Science Education and Research, 2012) 2012 – present

Current Undergraduate Students

1. Emily Sheely (University of Wisconsin-Madison) 2013 – present
 - CALS Sophomore Research Fellowship, 2015
2. Soren Rozema (University of Wisconsin-Madison) 2016 – present
3. Will Gross (University of Wisconsin-Madison) 2016 – present
4. Landen Nickel (University of Wisconsin-Madison) 2016 – present
5. Stacy Lin (University of Wisconsin-Madison) 2016 – present
6. Ian Sparks (University of Wisconsin-Madison) 2016 – present
7. Sydney Slosar (University of Wisconsin-Madison) 2016 – present

Former Postdoctoral Fellows (*current position/location in italics*)

1. Dr. Linda Hu (Ph.D., Loyola University, 2013) 2013 – 2016
Postdoctoral Fellow, Northwestern University
2. Dr. Kelly Schwartz (Ph.D., University of Michigan, 2014) 2014 – 2016
Postdoctoral Fellow, University of Wisconsin-Madison
3. Dr. Siseon Lee (Ph.D., UNIST, South Korea, 2014) 2015 – 2016
4. Dr. Rina Maeda (Ph.D., Tokyo Institute of Technology, 2013) 2013 – 2015
Assistant Professor, University of Tokyo, Tokyo, Japan
5. Dr. Piercen Oliver (Ph.D., Lehigh University, 2011) 2011 – 2014
Research Scientist, Nano Terra Inc., Brighton, MA
 - National Science Foundation Postdoctoral Fellowship
 - American Heart Association Midwest Affiliate Postdoctoral Fellowship (declined)
6. Dr. Pedro Resto (Ph.D., University of Wisconsin-Madison, 2012) 2012 – 2013
Assistant Professor, University of Puerto Rico-Mayaguez
7. Dr. Maoquan Zhou (Ph.D., West Virginia University, 2007) 2012 – 2013
Research Scientist, PPD, Madison, WI
8. Dr. Adam Siegel (Ph.D., Harvard University, 2009) 2012 – 2013
Principal Scientist, Amazon.com, Inc.
9. Dr. Lars Renner (Ph.D., Leibniz Institute for Polymer Science, 2009) 2009 – 2012; 2013 – 2014
Research Group Leader; Leibniz Institute for Polymer Science

- Boyer Postdoctoral Excellence Award, University of Wisconsin-Madison, 2012
- Deutsche Forschungsgemeinschaft Postdoctoral Fellowship, 2010 – 2012
- 10. Dr. Vladimir Smeianov (Ph.D., Russian State Medical University, 1994) 2009 – 2012
Assistant Professor, Russian National Research Medical University
- 11. Dr. Shane Flickinger (Ph.D., UW-Madison, 2006) 2009 – 2011
US Forest Service, Granby, CO

Former Research Scientists (*current position/location in italics*)

1. Dr. Michael Killoran (Ph.D., University of Wisconsin-Madison, 2008) 2015 – 2016
Senior Scientist, Promega Inc.
2. Kelsey Vesperat (B.S., University of Wisconsin-Madison, 2015) 2016
Engineer, Baxter Biomedical

Former Visiting Postdoctoral Fellows (*current position/location in italics*)

1. Andy Utada (Ph.D., Harvard University, 2007) 2010
Postdoctoral Fellow; University of California Los Angeles

Former Graduate Students (*degree earned and current position in italics*)

1. Brandon Hoover (University of Massachusetts, Amherst, 2011) 2013 – 2016
Currently a graduate student at UW-Madison
 - NIH Biophysics Training Grant Fellowship, 2013
2. Katherine Hurley, Ph.D. (University of California, Davis, 2010) 2010 – 2016
Searching for industrial positions
 - AFPE Fellowship, UW-Madison, 2014–2015
3. George Auer, Ph.D. (University of Wisconsin-Milwaukee, 2008) 2008 – 2016
Research Scientist, Emerald Cloud Lab, San Francisco, CA
4. Manohary Rajendram, Ph.D. (Anna University, 2008) 2008 – 2015
Postdoctoral Fellow, Stanford University, Palo Alto, CA
 - Mao Distinguished Graduate Research Fellowship, UW-Madison, 2014
5. Earl Yoon, M.S. (University of California Los Angeles, 2011) 2011 – 2014
Teaching Instructor, College of Southern Nevada
6. Ye-Jin (Jenna) Eun, Ph.D. (University of Wisconsin-Madison, 2007) 2007 – 2012
Postdoctoral Fellow, Harvard University, Cambridge, MA
 - American Society for Cell Biology, Travel Grant Award, 2011
 - Senator Robert Caldwell Graduate Fellowship, 2011
 - American Society for Cell Biology Travel Award, 2011
 - Vilas Travel Award, 2011
 - Society of General Physiology Scholar, 2010
 - Genentech Graduate Fellowship, 2010
 - William R. & Dorothy E. Sullivan Wisconsin Distinguished Graduate Fellowship, 2009
 - Science and Engineering Visualization Challenge, Honorable Mention, 2008
7. Daniel Pauw (Gonzaga University, 2007) 2010 – 2012
Graduate student in Information Sciences, University of Maryland
8. Jack Ho, M.S. (University of Wisconsin-Madison, 2009) 2009 – 2011
Epic Systems, Middleton, WI
9. Purba Mukerjee, M.S. (Cornell University, 2009) 2009 – 2011
Law school at the University of California, Berkeley
10. Marie Foss, Ph.D. (University of Minnesota, Twin Cities, 2007) 2007 – 2012
Senior Scientist, Neuralexo, Portland, OR
11. Abbey Vangeloff, M.S. (Duke University, 2006) 2007 – 2008
 - NIH Biotechnology Training Grant Fellowship, 2008
12. Abishek Muralimohan, M.S. (Anna University, 2007) 2007 – 2009
Microsoft, Redmond, WA
13. Matthew Copeland, Ph.D. (McDaniel College, 2006) 2006 – 2012
Senior Scientist, Proctor and Gamble, Cincinnati, OH

- Integrated Program in Biochemistry Undergraduate Mentoring Award, 2011
 - WARF Research Assistant Fellowship, 2010
 - NIH Biotechnology Training Grant Fellowship, 2008
 - NSF Graduate Fellowship, Honorable Mention, 2008
14. Hannah Tuson, Ph.D. (Lafayette College, 2006) 2006 – 2012
Postdoctoral Fellow, University of Michigan, Ann Arbor, WI
- Integrated Program in Biochemistry Undergraduate Mentoring Award, 2012
 - NIH Molecular Biosciences Training Grant Fellowship, 2006
15. Corinne E. Lipscomb, Ph.D. (B.S., Manchester College, 2006) 2006 – 2007
Research Scientist, 3M Corporation, St. Paul, MN

Former Visiting Graduate Students

1. Na Yin, Ph.D. (Donghua University, China) 2012 – 2014
2. Sergio Lopez Aristabal (University of San Paulo, Brazil) Summer 2011
3. Jean-Marie Swiecicki, Ph.D. (Ecole Normale Supérieure) 2010
4. Monika Pyzalska (Polish Academy of Sciences) Summer 2010
5. Judyta Wegrzyn (Polish Academy of Sciences) Summer 2010
6. Tomasz Kaminski, Ph.D. (Polish Academy of Sciences) Summer 2009
7. Ignacio Cabrera (University of Chile) 2009
 - Eduardo Neale Silve Memorial Scholarship, UW-Madison

Former Undergraduate Students

1. Crystal De Jesus (University of Puerto Rico) Summer 2016
2. Brice Blahnik (University of Wisconsin-Madison) 2014 – 2016
3. Bradley Maerz (University of Wisconsin-Madison) 2013 – 2016
4. KC Faulkner (University of Wisconsin-Madison) 2013 – 2016
 - Biochemistry Undergraduate Summer Research Scholarship, 2015
5. Kristy Stevlingson (University of Wisconsin-Madison) 2013 – 2016
6. Matt Lammers (University of Wisconsin-Madison)
 - Biochemistry Scholars Program, 2013 2013 – 2016
 - Biochemistry Undergraduate Summer Research Scholarship, 2015
 - Hilldale Undergraduate / Faculty Research Fellowship, 2015
7. Bradley Reynolds (University of Wisconsin-Madison) 2013 – 2016
 - Biochemistry Scholars Program, 2013
 - Biochemistry Undergraduate Summer Research Scholarship, 2015
 - American Society for Microbiology Research Fellowship, 2015
8. Gabriel Carneiro (SUNY Albany) Summer 2015
9. Danielle Kay (University of Wisconsin-Madison) 2014 – 2015
10. Victoria Heinrich (University of Wisconsin-Madison) 2013 – 2016
 - Biochemistry Scholars Program, 2012
 - Hilldale Undergraduate / Faculty Research Fellowship, 2014
11. Lucy Jiang (University of Wisconsin-Madison,) 2014 – 2015
 - Biochemistry Scholars Program, 2013
12. Madhusudan Rajendram (University of Wisconsin-Madison) 2012 – 2015
 - Biochemistry Scholars Program, 2009
13. Peter Vander Velden (University of Wisconsin-Madison) 2009 – 2014
14. Samantha Anderson (DePaul University) Summer 2014
15. Ryan Sacotte (University of Wisconsin-Madison) 2009 – 2013
 - Biochemistry Scholars Program, 2009
 - Hilldale Research Fellowship, 2012
16. Tristan Abbott (University of Wisconsin-Madison) 2012
17. Eva Serem (Minnesota State University, Mankato) Summer 2012
 - NSF Research Experiences for Undergraduates (REU) Intern

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| 18. Endia Blunt (Xavier University) | Summer 2012 |
| • NSF Research Experiences for Undergraduates (REU) Intern | |
| 19. Nate Cira (University of Wisconsin-Madison) | 2011 – 2012 |
| • National Science Foundation Graduate Fellow, 2012 | |
| 20. Zhou Zhong (University of Wisconsin-Madison) | 2010 – 2012 |
| 21. Hannah Sandock (University of Wisconsin-Madison) | 2011 – 2012 |
| 22. Mila Elich (University of Wisconsin-Madison) | 2010 – 2012 |
| 23. Sonia Trevino-Dopatka (University of Wisconsin-Madison) | 2008 – 2012 |
| • Mary Shine Peterson Scholarship, Biochemistry, 2011 | |
| • Hilldale Research Fellowship, 2011 | |
| • American Society for Microbiology Undergraduate Research Fellowship, 2010 | |
| • Barry M. Goldwater Scholarship, 2010 | |
| • NSF Undergraduate Research Mentoring Fellowship, | 2009 – 2012 |
| 24. Kelsey Thornton (University of Wisconsin-Madison) | 2008 – 2012 |
| 25. Tanner Peelen (University of Wisconsin-Madison) | 2008 – 2010 |
| 26. Tae Won Kim (University of Wisconsin-Madison) | 2008 – 2009 |
| 27. Mariko Hasebe (University of Wisconsin-Madison) | 2007 – 2008 |
| • Mary Shine Peterson Scholarship, 2007 | |
| 28. Sean McMaster (University of Wisconsin-Madison) | 2006 – 2010 |
| • Outstanding Senior Award from the College of Agriculture and Life Sciences, 2010 | |
| • Barry M. Goldwater Scholarship, 2009 | |
| • Climate Leadership Challenge Award, 2009 | |
| • Mary Shine Peterson Scholarship, Biochemistry, 2011 | |
| • Hilldale Research Fellowship, 2008 | |
| 29. Joseph Molenda (University of Wisconsin-Madison) | 2006 – 2009 |
| • American Society for Microbiology Research Fellowship, 2008 | |
| • Hilldale Research Fellowship, 2007 | |
| 30. Joseph Burns (University of Wisconsin-Madison) | 2006 – 2009 |
| • Hilldale Research Fellowship, 2008 | |

Former Research Associates

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| 1. Andy Braasch (B.S., University of Wisconsin-Madison, 2009) | 2008 – 2010 |
| 2. So-Yeon Yim (B.S., University of Wisconsin-Madison, 2011) | 2008 – 2009 |
| 3. Basudeb Bhattacharyya (B.S., University of Wisconsin-Madison, 2004) | 2006 – 2008 |

Former High School Research Students

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|---|-------------|
| 1. Jake Pfund (Madison West High School, 2015) | 2014 |
| 2. John Ntambi (Madison West High School, 2011) | 2010 – 2011 |
| 3. Norah Ntambi (Madison West High School, 2011) | 2010 – 2012 |
| 4. Susan Huang (Madison West High School, 2009) | 2008 – 2009 |
| 5. Sarah Schroeder (Cambridge High School, 2009) | 2008 – 2009 |
| 6. Peter Vander Velden (Madison West High School, 2007) | 2006 – 2007 |

Former Teacher Interns (*current position/location in italics*)

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|---|--------------------|
| 1. Noah Edelstein (O'Keefe Middle School)
<i>Seventh grade teacher, O'Keefe Middle School</i> | Summers 2013, 2014 |
| 2. Melissa Hemling (Beaver Dam High School)
<i>Chemistry/biology teacher, Beaver Dam High School</i> | Summers 2011, 2012 |
| 3. Iris Leske (Aldo Leopold Elementary School)
<i>Fourth/Fifth Grade Teacher, Aldo Leopold Elementary School</i> | Summer 2011 |
| 4. Portia Meyer (Glendale Elementary School)
<i>Fourth/Fifth Grade Teacher, Glendale Elementary School</i> | Summers 2010, 2011 |
| 5. Wendy Zucker (Aldo Leopold Elementary School)
<i>First Grade Teacher, Aldo Leopold Elementary School</i> | Summer 2010 |

6. Troy Dassler (Aldo Leopold Elementary School)
School of Education, University of Wisconsin-Madison
- Toyota TAPESTRY Grant, 2010

Summers 2008 – 2011

PROFESSIONAL ACTIVITIES

Recent Service Activities

Departmental

2015 – present	Development Committee
2015 – present	Chair Transition Committee
2015 – present	Chair's Advisory Committee (Chair: Brian Fox)
2013 – 2015	Chair's Advisory Committee (Chair: Betty Craig)
2012 – 2014	Safety Committee
2010 – 2014	Co-chair, Admissions and Recruiting Committee

University

2015 – present	Steering Committee, NIH Biotechnology Training Program
2015 – present	Faculty Advisory Board, UW-Madison Biotechnology Center
2013 – 2014	Steering Committee, Microbiology Doctoral Training Program
2013 – present	Member, CALS International Committee
2012 – present	Mentor, Chancellor's Scholarship Program
2007 – present	Underrepresented Student Recruiting
2012	Panelist, Biosciences Opportunities Preview Program
2012 – present	Executive Committee, NSF Materials Research Science and Engineering Center
2011 – 2014	Steering Committee, Delta Program
2011 – 2013	Admissions Committee, Microbiology Doctoral Training Program
2011 – 2013	Reviewer, Undergraduate Research and Mentoring Program

National

2015 –	Editorial Advisory Board, Nature Publishing Group, <i>Scientific Reports</i>
2015 – 2017	Editorial Advisory Board, American Chemical Society, <i>Central Science</i>
2014	Participant, NIH Big Data to Knowledge (BD2K) Think Tank: Game Developers & Biomedical Researchers
2013 – 2015	Defense Science Study Group, Institute for Defense Analyses
May 2013	Organizer, American Society for Microbiology Meeting, "Chemical Microbiology: Opening New Doors in Microbiology Using Chemistry" Symposium, Denver, CO
2012 – 2015	Member, National Academies of Science Standing Committee on the Department of Defense's Programs to Counter Biological Threats
2007 – present	Grant reviewer (panelist and ad hoc) for: NSF, NSF Graduate Research Fellowships, NIH, NIH K Awards, US-Israel Bi-National Science Foundation, Netherlands Organization for Science Research, European Science Foundation, National Medical Research Council (Singapore), Swiss National Science Foundation, ACS Petroleum Research Fund, Foundation for Fundamental Research on Matter, USDA, Human Frontiers Science Program, American Society for Microbiology Undergraduate Research Fellowships, NSF Graduate Research Fellowships