

June 2014

Name: William Margolin

Present Title: Professor

Address: Department of Microbiology and Molecular Genetics.
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E-mail: William.Margolin@uth.tmc.edu

Citizenship: USA

Undergraduate education: Massachusetts Institute of Technology 1977-1981
S.B., Biology, June 1981

Graduate education: University of Wisconsin-Madison 1982-1989
Ph.D., Molecular Biology, May 1989

Postdoctoral training: Postdoctoral Fellow, Department of Biological Sciences, Stanford University, 1989-1993

Academic appointments: Department of Microbiology and Molecular Genetics, University of Texas Medical School-Houston, Assistant Professor, 1993-2000; Associate Professor, 2000-2005; Professor, 2005-present.
Director, Microbiology & Molecular Genetics Graduate Program, 2009-2013

Professional organizations: ASM (American Society for Microbiology)
AAAS (Amer. Soc. for the Advancement of Science)

Honors and awards:

- National Merit Finalist, 1977
- NSF Predoctoral Fellowship, 1983-1986
- NIH Postdoctoral Fellowship (declined)
- NSF Postdoctoral Fellowship in Plant Biology, 1990-1993
- UTHSC Nominee for NSF Presidential Faculty Award, 1995
- James A. Shannon Director's Award, NIH, 1996
- Commendation for Service to Graduate Education, UT GSBS, 1997
- Nominee for the Eli Lilly & Co. Award for Microbiology, 1998
- Dean's Excellence Award, UT GSBS, 1999
- UTHSC Nominee for Howard Hughes Medical Institute Assistant Investigator Award, 1999

- Chair, Division I, American Society for Microbiology, 2000-2001
- Dean's Teaching Excellence Award, UT Medical School, 2002, 2011
- Highest Commendation (top 2% of all faculty) for Service to Graduate Education, UT GSBS, 2007
- Nominee for McGovern Outstanding Teaching Award, UT GSBS, 2010
- American Society for Microbiology Lecturer, Division J, 2012
- American Society for Microbiology Distinguished Lecturer, 2014-2015

Editorial positions:

- Editorial Board, Journal of Bacteriology, 2000-2011
- Minireview Editor, Journal of Bacteriology, 2011-2016
- Editor, FEMS Microbiology Reviews, 2008-present
- Editorial Board, Archaea, 2006-2011
- Editorial Advisory Board, Molecular Microbiology, 2003-2006, 2008-2013
- Associate Editor, Microbiology, 2001-2008
- Member, Faculty of 1000 (Microbial growth and development), 2003-present
- Regular ad hoc reviewer for Nature, Science, Cell, Mol. Cell, Dev. Cell, Nat. Cell Biol., Genes Dev., EMBO J., PNAS, Curr. Biol., PLoS Biology, PLoS Pathogens, MBio, J. Biol. Chem., EMBO Rep., J. Mol. Biol., Biophys. J., Phys. Biol., MMBR, Biochem J., and numerous others

Service on National Grant Review Panels, Study Sections, Committees:

- Outside reviewer, USDA Competitive Grants, 1994-1997
- Outside reviewer, NSF Grants, 1996-2011
- Outside reviewer, Wellcome Trust (United Kingdom), 1999, 2002, 2010, 2011
- Outside reviewer, Medical Research Council (United Kingdom), 2008
- Outside reviewer, Biotechnology and Biological Sciences Research Council (U.K.) 2004, 2010, 2012
- Outside reviewer, Natural Sciences and Engineering Research Council (Canada), 1999, 2005
- Outside reviewer, Hospital for Sick Children Foundation (Canada), 2000
- Outside reviewer, Israel Science Foundation, 2002, 2004
- Outside reviewer, Human Frontier Science Program, 2003, 2005, 2007, 2008
- Outside reviewer, Enterprise Ireland Commercialisation Fund, 2004
- Outside reviewer, the Austria Science Fund, 2004
- Outside reviewer for Duquesne University Biology Graduate Program, 9/06
- Outside reviewer for Graduate Women in Science Fellowship, 2010
- Outside reviewer European Research Council, 2012
- Ph.D. thesis reviewer, Indian Institute of Science, Bangalore, India, 2002; University of Sydney, Sydney, Australia 2005; Indian Institute of Technology, Bombay, India, 2006
- Consultant for numerous tenure/promotion decisions for U.S. and foreign universities
- Ad hoc member, NIH study section (MBC-1), 2/04
- Ad hoc member, NIH study section (PCMB), 6/05
- Ad hoc member, NIH study section (MBRS), 7/07
- Ad hoc member, NIH study section (ZRG-F13-C), 3/12
- Ad hoc member, AAAS Research Competitiveness Program study section 10/13

- Ad hoc member, NIH ZRG1 CB-R(40) Boulder P41 site visit, 11/13
- Panelist, NSF Cellular Organization grant proposal review, 10/05, 5/06, 5/08
- Panelist, NSF Cytoskeleton grant proposal review, 10/10
- Panelist, NSF Cellular Dynamics and Function grant proposal review, 5/13

Service on the University of Texas-Houston Health Science Center Committees:

- Scientific Review Committee, 1997-1999

Service on Graduate School Committees:

- GSBS Academic Standards Committee, 1995-1998, 2001-2004, 2009-2012
- GSBS Program Coordinating Committee, 2009-2013
- Chair, MMG program Steering Committee, 2009-2013

Service on Departmental Committees:

- Graduate Program Admissions Committee, 1994-2009
- MMG Seminar Program Coordinator, 1995-1996, 2001-2002
- Faculty Search Committees, 2007 (Chair), 2008-2010, 2012-2013.
- Faculty Peer Review Committee, 2009-present
- Director, Microbiology & Molecular Genetics Graduate Program, 2009-2013

Service to the Medical School:

- Interviewer for M.D. applicants, 1994-2001 (over 50 applicants interviewed)
- Judge, Webber Award for Medical Student Summer Research, 1994, 2006, 2007, 2009, 2011
- Proctor for USMLE licensing examinations, 1994, 2009-2013
- Departmental Representative, UT-Houston Summer Undergraduate Research Program, 1997-2013
- Faculty Senate member, 1998-2000
- Judge for Graduate Student Education Committee poster competition, UT Med School, 2005, 2011, 2012
- Ad hoc member of Faculty Appointments, Promotions & Tenure Committee, 2007-2009
- Graduate Student Education Committee, 2009-present; Vice Chair 2012-2013; Chair 2013-2014
- Microbiology Department Chair Search Committee, 2010-2011

Other Service to the Community:

- Judge, GSBS Graduate Student Poster Forum, 1995, 1996, 2005
- Judge, Rice University Undergraduate Student Poster Forum, 1996
- Lecture in AP Biology, Carnegie Vanguard High School, 2011

Current grant support:

Title: Targeting and assembly of *E. coli* cell division proteins

Principal Investigator: William Margolin

Source: National Institute of General Medical Sciences 1 R01 GM61074

Entire period of support: 5/09-4/14

Total Direct Costs: \$900,000

Total Costs: \$1,340,000

Title: Regulation of Z-ring polymerization by MinC: lipids as targeting signals

Principal Investigator: Itzhak Fishov

Source: US-Israel Binational Science Foundation
Entire period of support: 2007-2010
Total Direct Costs (Margolin): \$4000 (for travel)
Total Costs (Margolin): \$4000

Title: Synthetic biology of cell division: Reconstructing the bacterial cell division machinery in the test tube
Principal Investigator: Miguel Vicente
Source: , Human Frontier Science Program RGP0050/2010
Entire period of support: 10/10-9/13
Total Direct Costs (Margolin): \$360,000
Total Costs (Margolin): \$400,000

Title: Bacterial cell division and the dynamics of the Z-ring
Principal Investigator: Sean X. Sun
Source: National Institute of General Medical Sciences, 2 R01 GM075305
Entire period of support: 8/1/11-4/30/15
Total Direct Costs (Margolin): \$284,000

Past grant support:

Title: Targeting and assembly of *E. coli* cell division proteins
Principal Investigator: William Margolin
Source: National Institute of General Medical Sciences 1 R01 GM61074
Entire period of support: 9/00-8/09
Total Direct Costs: \$750,000
Total Costs: \$1,108,219

Title: The molecular basis for metabolic and energetic diversity
Principal Investigator: Timothy Donohue (University of Wisconsin)
Source: U.S. Department of Energy
Entire period of support: 10/01-9/04
Total Direct Costs (to Dr. Margolin): \$170,105

Title: Cell division in a model archaeon
Principal Investigator: William Margolin
Source: National Science Foundation
Entire period of support: 3/01-2/05
Total Direct Costs: \$280,000

Title: Development of new assays for broad-spectrum anti-microbial drugs against cell division proteins
Principal Investigator: William Margolin
Source: Texas Advanced Technology Program grant 011618-0231-1999
Entire period of support: 1/00-8/02
Total Direct Costs: \$118,000

Title: In vivo localization of bacterial cell cycle proteins
Principal Investigator: William Margolin

Source: National Science Foundation, MCB-9513521
Entire period of support: 7/96-12/00
Total Direct Costs: \$237,661

Title: Using fluorescent tags to identify targeting domains in the prokaryotic cell division protein FtsZ
Principal Investigator: William Margolin
Source: Texas Advanced Research Program grant 011618-016
Entire period of support: 1/96-12/98
Total Direct Costs: \$82,451

Title: Cell division control during *Rhizobium* differentiation
Principal Investigator: William Margolin
Source: NIGMS, James A. Shannon Director's Award
Entire period of support: 9/96-9/98
Total Direct Costs: \$100,000

Title: Regulation of cell division in *Rhizobium meliloti*
Principal Investigator: William Margolin
Source: U.S. Department of Agriculture grant 94-0056
Entire period of support: 9/94-8/97
Total Direct Costs: \$90,000

Title: Regulation of the *Rhizobium meliloti* cell cycle
Principal Investigator: William Margolin
Source: National Science Foundation MCB9410840 (starter grant)
Total Direct Costs: \$53,075

Invited Presentations since 1994:

- 1994 Baylor College of Medicine
- 1994 Texas Branch of the American Society for Microbiology
- 1995 Texas A&M University, College Station
- 1995 Dept. of Pharmacology, UT-Houston
- 1995 LSU Medical Center, Shreveport
- 1995 Lost Pines Molecular Biology Conference, Smithville, TX
- 1996 Pfizer, Groton, CT
- 1996 University of Texas-Austin
- 1996 M.D. Anderson Cancer Center
- 1997 American Society for Microbiology General Meeting, Miami Beach
- 1997 Bristol Myers-Squibb Pharmaceutical Research Institute, Wallingford, CT
- 1997 SmithKline Beecham Inc., Collegeville, PA
- 1997 Rice University

1997 Lilly Research Laboratories, Indianapolis
1998 University of Houston
1998 Procter and Gamble Pharmaceuticals, Mason, OH
1998 University of Illinois, Urbana-Champaign
1998 University of Georgia, Athens
1998 University of Nevada, Reno
1998 University of California, Davis
1999 New York University
1999 2nd International Symposium on Green Fluorescent Protein, San Diego
1999 SmithKline Beecham Pharmaceuticals, Collegeville, PA
1999 International Society for Analytical Cytology, Samuel Latt Conference, Australia
1999 University of New South Wales, Sydney, Australia
1999 University of Tennessee, Memphis
1999 Baylor College of Medicine
1999 University of Connecticut, Storrs
1999 Texas Branch of the American Society for Microbiology, Fort Worth
1999 Gilead Sciences, Foster City, CA,
2000 Trinity University, San Antonio
2000 Session Convener, American Society for Microbiology General Meeting, Los Angeles,
2000 Swarthmore College
2000 EMBO Workshop: Bacterial cell cycle & nucleoid organization, The Netherlands
2000 Texas A&M University, College Station
2001 First Annual South Coast Regional Dictyostelium Meeting, Houston
2001 3rd Fujihara International Seminar, "Bacterial Cell Cycle 2001", Osaka
2001 Duquesne University, Pittsburgh
2001 American Society for Microbiology, Texas Branch, San Antonio
2001 University of Wisconsin, Madison
2002 Oklahoma Medical Research Foundation, Oklahoma City
2002 Prairie View A&M University, Prairie View, TX
2002 Duke University Medical Center
2002 Bacterial cell division workshop, Institute Juan March, Madrid
2003 Oak Ridge National Laboratories GTL Facility III Workshop, Atlanta
2003 Harvard Medical School (invited by the graduate students)
2004 Baylor College of Medicine
2004 Invited session chair, Bacteria and Phages Meeting, Cold Spring Harbor
2004 University of Texas-Austin
2004 Center for Medical Sciences, Wadsworth Center, Albany, NY

- 2005 University of Louisiana, Lafayette, LA
- 2005 University of Georgia, Athens
- 2005 XIIIth Int'l Congress of Bacteriology and Applied Microbiology, San Francisco
- 2005 Aspen Center for Physics, Aspen, CO
- 2005 Temasek Life Sciences Laboratory, Singapore
- 2006 Gordon Research Conference "Sensory Transduction in Microorganisms", Ventura
- 2006 Texas A&M University
- 2006 Invited colloquium convener, ASM General Meeting, Orlando
- 2006 Gordon Research Conference "Bacterial Cell Surfaces", New London, NH
- 2006 FEMS Microbiology Congress, Madrid
- 2006 Centro Nacional de Biotecnologia, Universidad Autonoma de Madrid
- 2006 UT-San Antonio
- 2006 Int'l Symposium "Membrane Proteins and Cellular Dynamics", Osnabrück
- 2007 Uppsala University, Uppsala
- 2007 ASM General Meeting, Toronto
- 2008 Pathology and Laboratory Medicine, UT-Houston
- 2008 Ohio State University
- 2008 Symposium convener and speaker, ASM General Meeting, Boston
- 2008 Invited session chair, Gordon Research Conference "Bacterial Cell Surfaces"
- 2009 Yale University
- 2009 Sam Houston State University, Huntsville, TX
- 2009 Dresden Technical University, Dresden
- 2009 EMBO Workshop, Frontiers of Prokaryotic Cell Biology, Oxford University, UK
- 2010 Johns Hopkins University
- 2010 Gordon Research Conference "Plant and Microbial Cytoskeleton", Andover, NH
- 2010 NCI-Frederick, Frederick, MD
- 2010 University of Arkansas for Medical Sciences, Little Rock
- 2011 University of Wisconsin, Madison (Distinguished Lectures in Microbiology)
- 2012 Workshop, Environmental & Molecular Sciences Lab (EMSL), Richland WA
- 2012 Division J lecture, ASM General Meeting, San Francisco
- 2012 Plenary Speaker, EMSL User meeting, Richland WA
- 2012 EMBO Workshop, "Reconstructing the essential bacterial cell cycle machinery", Segovia, Spain
- 2012 Exciting Biologies: Forces in Biology, Dublin, Ireland (IPSEN foundation)
- 2012 Texas A&M University, Biology Dept.
- 2013 Goldschmidt Lecture, Texas Branch ASM meeting, New Braunfels, TX

- 2013 Gordon Research Conference “Microbial Adhesion and Signal Transduction”,
Newport, RI
- 2013 Rice University, Center for Theoretical Biological Physics
- 2014 University of California-San Francisco, Microbial Pathogenesis seminar series
- 2014 Novartis Institutes for Biomedical Research, Emeryville CA
- 2014 [HFSP-CNB workshop: Cell division reconstruction, Madrid, Spain](#)
- 2014 [Indiana University, Biology Dept.](#)
- 2014 [Colloquium convener, ASM General Meeting, Boston MA](#)

Publications:

Mulligan, J. T., Margolin, W., Heilig Krueger, J., and Walker, G. C.. Mutations affecting regulation of methionine biosynthetic genes isolated by use of *met-lac* fusions. *J. Bacteriol.* 151: 609-619, 1982.

Hattman, S., Ives, J., Margolin, W., and Howe, M. M. Regulation and expression of the bacteriophage Mu *mom* gene: mapping of the trans-activation (Dad) function to the *C* region. *Gene* 39: 71-76, 1985.

Margolin, W., and Howe, M. M.: Localization and DNA sequence analysis of the *C* gene of bacteriophage Mu, the positive regulator of Mu late transcription. *Nucl. Acids. Res.* 14: 4881-4897, 1986.

Margolin, W., Rao, G., and Howe, M. M.: Bacteriophage Mu late promoters: four late transcripts initiate near a conserved sequence. *J. Bacteriol.* 171: 2003-2018, 1989.

Margolin, W., and Howe, M. M.: Activation of the bacteriophage Mu *lys* promoter by Mu C protein requires the σ^{70} subunit of *Escherichia coli* RNA polymerase. *J. Bacteriol.* 172: 1424-1429, 1990.

Margolin, W., Corbo, J. C., and Long, S. R.: Cloning and characterization of a *Rhizobium meliloti* homolog of the *Escherichia coli* cell division gene *ftsZ*. *J. Bacteriol.* 173: 5822-5830, 1991.

Margolin, W., and Long, S. R.: Isolation and characterization of a DNA replication origin from the 1700-kilobase-pair symbiotic megaplasmid pSym-b of *Rhizobium meliloti*. *J. Bacteriol.* 175: 6553-6561, 1993.

Margolin, W., and Long, S. R.: *Rhizobium meliloti* contains a novel second homolog of the cell division gene *ftsZ*. *J. Bacteriol.* 176: 2033-2043, 1994.

Margolin, W., Bramhill, D., and Long, S. R.: The *dnaA* gene of *Rhizobium meliloti* lies within an unusual gene arrangement. *J. Bacteriol.* 177: 2892-2900, 1995.

- Margolin, W., Wang, R., and Kumar, M.: Isolation of an *ftsZ* homolog from the archaeobacterium *Halobacterium salinarium*: implications for the evolution of FtsZ and tubulin. *J. Bacteriol.* 178:1320-1327, 1996.
- Ma, X., Ehrhardt, D.W., and Margolin, W.: Colocalization of cell division proteins FtsZ and FtsA to cytoskeletal structures in living *Escherichia coli* cells by using green fluorescent protein. *Proc. Natl. Acad. Sci. USA* 93: 12998-13003, 1996.
• (>200 citations) The classic 3D images of the Z ring from this paper are in several widely read textbooks, including Alberts' *Molecular Biology of the Cell* and Lewin's *Genes*.
- Latch, J.N., and Margolin, W.: Generation of buds, swellings and branches instead of filaments after blocking the cell cycle of *Rhizobium meliloti*. *J. Bacteriol.* 179: 2373-2381, 1997.
- Yu, X.-C., and Margolin, W.: Ca²⁺ mediated GTP-dependent dynamic assembly of bacterial cell division protein FtsZ into asters and polymer networks in vitro. *EMBO J.* 16: 5455-5463, 1997.
- Ma, X., Sun, Q., Wang, R., Singh, G., Jonietz, E.L., and Margolin, W.: Interactions between heterologous FtsA and FtsZ proteins at the FtsZ ring. *J. Bacteriol.* 179: 6788-6797, 1997.
- Britton, R.A., Powell, B.S., Dasgupta, S., Sun, Q., Margolin, W., Lupski, J.R., and Court, D.L.: Cell cycle arrest in Era GTPase mutants: a potential growth rate regulated cell cycle checkpoint in *Escherichia coli*. *Mol. Microbiol.* 27: 739-750, 1998.
- Yu, X.-C., Tran, A.H., Sun, Q., and Margolin, W.: Localization of cell division protein FtsK to the *Escherichia coli* septum and identification of a potential N-terminal targeting domain. *J. Bacteriol.* 180: 1296-1304, 1998.
- Sun, Q., and Margolin, W.: FtsZ dynamics during the cell division cycle of live *Escherichia coli*. *J. Bacteriol.* 180: 2050-2056, 1998.
- Yu, X.-C., and Margolin, W.: Inhibition of assembly of bacterial cell division protein FtsZ by the hydrophobic dye 5,5'-bis-(8-anilino-1-naphthalenesulfonate). *J. Biol. Chem.* 273: 10216-10222, 1998.
- Sun, Q., Yu, X.-C., and Margolin, W.: Assembly of the FtsZ ring at the central division site in the absence of the chromosome. *Mol. Microbiol.* 29: 491-504, 1998.
- Mileykovskaya, E., Sun, Q., Margolin, W., and Dowhan, W.: Localization and function of cell division proteins in filamentous *Escherichia coli* cells lacking phosphatidylethanolamine. *J. Bacteriol.* 180:4252-4257, 1998.
- Yu, X.-C., Weihe, E.K., and Margolin, W.: Role of the C terminus of FtsK in *Escherichia coli* chromosome segregation. *J. Bacteriol.* 180:6424-6428, 1998.
- Yu, X.-C., and Margolin, W.: FtsZ ring clusters in *min* and partition mutants: role of both the Min system and the nucleoid in regulating FtsZ ring localization. *Mol. Microbiol.* 32:315-326, 1999.

Margolin W.: The bacterial cell division machine: fluorescence techniques for examining intact cells and mutant studies provide insights into bacterial cell division. American Society for Microbiology (ASM) News 65:137-143, 1999.

Yu, X.-C., Margolin, W., Gonzalez-Garay, M.L., and Cabral, F.: Vinblastine induces an interaction between FtsZ and tubulin in mammalian cells. J. Cell Sci. 112:2301-2311, 1999.

Wang, W.-F., Margolin, W., and Molineux, I.J.: Synthesis of an *Escherichia coli* membrane protein suppresses F exclusion of bacteriophage T7. J. Mol. Biol. 292:501-512, 1999.

Ma, X., and Margolin, W.: Genetic and functional analysis of the conserved C-terminal core domain of *Escherichia coli* FtsZ. J. Bacteriol. 181, 7531-7544, 1999.

Margolin, W.: Green fluorescent protein as a reporter for macromolecular localization in bacterial cells. Methods 20:62-72, 2000.

Margolin, W.: Differentiation of *Rhizobium* bacteroids. In "Prokaryotic Development", L. Shimkets and Y. Brun, eds., ASM Press, Washington DC, 2000.

Margolin, W.: Organelle division: self-assembling GTPases caught in the middle. Curr. Biol. 10:328-330, 2000.

Yu, X.-C., and Margolin, W.: Deletion of the *min* operon results in increased thermosensitivity of an *ftsZ84* mutant and abnormal FtsZ ring assembly, placement, and disassembly. J. Bacteriol. 182: 6203-6213, 2000.

Margolin, W.: Themes and variations in prokaryotic cell division. FEMS Microbiol. Rev. 24:531-548, 2000.

Gage, D.J., and Margolin, W.: Hanging by a thread: invasion of legume plants by rhizobia. Curr. Opin. Microbiol. 3: 613-617, 2000.

Sun, Q., and Margolin, W.: Effects of the nucleoid on placement of FtsZ and MinE rings in *Escherichia coli*. J. Bacteriol. 183:1413-1422, 2001.

Yu, X.-C., Sun, Q., and Margolin, W.: FtsZ rings in *mukB* mutants with or without the Min system. Biochimie 83:125-129, 2001.

Margolin, W.: Bacterial cell division: A moving MinE sweeper boggles the MinD. Curr. Biol. 11:395-398, 2001.

Margolin, W.: Spatial regulation of cytokinesis in bacteria. Curr. Opin. Microbiol. 4, 647-652, 2001.

Alexandre, S., Colé, G., Coutard, S., Monnier, C., Norris, V., Margolin, W., Yu, X., and Valleton, J.M. Interaction of FtsZ protein with a DPPE Langmuir film. Coll. Surf. B:23:391-395, 2002.

Corbin, B.D., Yu, X.-C., and Margolin, W.: Exploring intracellular space: Function of the Min system in round-shaped *Escherichia coli*. EMBO J. 21:1998-2008, 2002.

Margolin, W.: Bacterial sporulation: FtsZ rings do the twist. Curr. Biol.12:391-392, 2002.

Ramirez-Arcos, S., Szeto, J., Dillon, J.R., and Margolin, W.: Conservation of dynamic localization among MinD and MinE orthologs: oscillation of *Neisseria gonorrhoeae* proteins in *Escherichia coli*. Mol. Microbiol, 46:493-504, 2002.

Ding, Z., Zhao, Z., Jakubowski, S.J., Krishnamohan, A., Margolin, W., and Christie, P.J. A novel cytology-based two-hybrid screen for bacteria applied to protein-protein interaction studies of a type IV secretion system. J. Bacteriol.184: 5572-5582, 2002.

Margolin, W.: Bacterial division: The fellowship of the ring. Curr. Biol. 13: 16-18, 2003.

Geissler, B., Elraheb, D., and Margolin, W. A gain-of-function mutation in *ftsA* bypasses the requirement for the essential cell division gene *zipA* in *Escherichia coli*. Proc. Natl. Acad. Sci. USA 100:4197-4202, 2003.

- “recommended” by Faculty of 1000

Mileykovskaya, E., Fishov, I., Fu, X., Corbin, B.D., Margolin, W. and Dowhan, W. Effects of phospholipid composition on MinD-membrane interactions *in vitro* and *in vivo*. J. Biol. Chem. 278:22193-22198, 2003.

Margolin, W.: Bacterial shape: growing off this mortal coil. Curr. Biol. 13: 705-707, 2003.

Gilson, P.R., Yu, X.-C., Hereld, D., Barth, C., Savage, A., Kiefel, B., Lay, S., Fisher, P.R., Margolin, W., and Beech, P. L.: Two *Dictyostelium* orthologs of the prokaryotic cell division protein, FtsZ, localize to mitochondria and are required for the maintenance of normal mitochondrial morphology. Eukaryot. Cell, 2: 1315-1326, 2003.

Tan, X.-X., Rose, K., Margolin, W., and Chen, Y. DNA enzyme generated by a novel single-stranded DNA expression vector inhibits expression of the essential bacterial cell division gene *ftsZ*. Biochemistry 43:1111-1117, 2004.

Sun, Q., and Margolin, W.: Effects of perturbing nucleoid structure on nucleoid occlusion-mediated toporegulation of FtsZ ring assembly. J. Bacteriol., 186:3951-3959, 2004.

- “recommended” by Faculty of 1000

Thanedar, S., and Margolin, W.: FtsZ exhibits rapid movement and oscillation waves in helix-like patterns in *Escherichia coli*. Curr. Biol. 14:1167-1173, 2004.

Margolin, W.: The assembly of proteins at the cell division site, in “Molecules in Time and Space: Bacterial Shape, Division and Phylogeny”, M. Vicente and J. Mingorance, eds., Kluwer Plenum, 2004.

Margolin, W.: Catching some Zs: A new protein for spatial regulation of bacterial cytokinesis. *Cell* 117:850-851, 2004.

Margolin, W. and Bernander, R.: How do prokaryotic cells cycle? *Curr. Biol.* 14:768-770, 2004.

Corbin, B.D., Geissler, B. Sadasivam, M., and Margolin, W.: Subdomain 1c of FtsA is sufficient to recruit late septation proteins FtsI and FtsN to a protein subassembly independent of the FtsZ ring. *J. Bacteriol.* 186:7736-7744, 2004.

Margolin, W.: Bacterial mitosis: Actin in a new role at the origin. *Curr. Biol.* 15:259-261, 2005.

Margolin, W.: FtsZ and the division of prokaryotic cells and organelles. *Nature Rev. Mol. Cell. Biol.* 6:862-871, 2005.

Geissler, B., and Margolin, W.: Evidence for functional overlap among multiple bacterial cell division proteins: compensating for the loss of FtsK. *Mol. Microbiol.* 58:596-612, 2005.

Margolin, W.: Gliding motility: anticipating the next move with a molecular clock. *Curr. Biol.* 16:85-87, 2006.

Margolin, W.: Bacterial division: A new way to box in the ring. *Curr. Biol.* 16:881-884, 2006.

Shiomi, D., and Margolin, W.: The C-terminal domain of MinC inhibits assembly of the Z ring in *Escherichia coli*. *J. Bacteriol.* 189:236-243, 2007.

Geissler, B., Shiomi, D., and Margolin, W.: The *ftsA** gain of function allele of *Escherichia coli* and its effects on the stability and dynamics of the Z ring. *Microbiology* 153:814-825, 2007.

Kruse, K., Howard, M., and Margolin, W.: An experimentalist's guide to modeling of the Min system. *Mol. Microbiol.* 63:1279-1284, 2007.

Corbin, B.D., Wang, Y., Beuria, T.K., and Margolin, W.: Interaction between cell division proteins FtsZ and FtsE. *J. Bacteriol.* 189:3026-3035, 2007.

Bernard, C., Sadasivam, M., Shiomi, D., and Margolin, W.: An altered FtsA can compensate for the loss of essential cell division protein FtsN. *Mol. Microbiol.* 64:1289-1305, 2007.

Margolin, W.: Bacterial cytoskeleton: Not your run-of-the-mill tubulin. *Curr. Biol.* 17:633-626, 2007.

Shiomi, D., and Margolin, W.: A sweet sensor for size-conscious bacteria. *Cell* 130:216-218, 2007.

Shiomi, D., and Margolin, W.: Dimerization or oligomerization of the actin-like FtsA protein enhances the integrity of the cytokinetic Z ring. *Mol. Microbiol.* 66:1396-1415, 2007.

Shiomi, D., and Margolin, W.: Compensation for the loss of the conserved membrane targeting sequence of FtsA provides new insights into its function. *Mol. Microbiol.* 67:558-569, 2008.

Letek, M., Ordonez, E., Vaquera, J., Margolin, W., Flardh, K., Mateos, L.M., and Gil, J. DivIVA is required for polar growth in the MreB-lacking rod-shaped actinomycete *Corynebacterium glutamicum*. *J. Bacteriol.* 190:3283-3292, 2008.

Margolin, W.: What does it take to divide a bacterial cell? *Microbe* 3:329-336, 2008.

Mazor, S., Regev, T., Mileykovskaya, E., Margolin, W., Dowhan, W., and Fishov, I. Mutual effects of MinD-membrane interaction: I. Changes in the membrane properties induced by MinD binding. *Biochim. Biophys. Acta* 1778:2496-2504, 2008.

Mazor, S., Regev, T., Mileykovskaya, E., Margolin, W., Dowhan, W., and Fishov, I. Mutual effects of MinD-membrane interaction: II. Domain structure of the membrane enhances MinD binding. *Biochim. Biophys. Acta* 1778: 2505-2511, 2008.

Beuria, T.K., Mullapudi, S., Mileykovskaya, E., Sadasivam, M., Dowhan, W., and Margolin, W. Adenine nucleotide-dependent regulation of assembly of bacterial tubulin-like FtsZ by a hypermorph of bacterial actin-like FtsA. *J. Biol. Chem.* 284: 14079-14086, 2009.

Margolin, W.: "Cell Morphology; Chemical Composition: Localization, Macromolecular, Intracellular", in *The Encyclopedia of Microbiology*, 3rd Edition, edited by Moselio Schaechter, Elsevier, 2009.

Juarez, J.R., and Margolin, W.: Irresistible curves. *EMBO J.* 28:2147-2148, 2009.

Margolin, W.: Sculpting the bacterial cell. *Curr. Biol.* 19:812-822, 2009. (Invited review for a special issue on the physics of cells).

Margolin, W.: "Imaging the bacterial nucleoid", in *Bacterial Chromatin*, edited by Remus Dame and Charles Dorman, Springer, 2010.

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