

Chapman, Matthew

Name: **Matthew R. Chapman**

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A. Education and Professional Experience

Research and Professional:

Professor—MCDB, University of Michigan, Ann Arbor	2017-
Associate Professor- MCDB, University of Michigan, Ann Arbor	2009-2017
Associate Professor and Associate Chair for Curriculum- MCDB, U. Michigan	2011-2015
Assistant Professor- University of Michigan, Ann Arbor	2003-2009
Post doc- Laboratory of Dr. Scott Hultgren, Washington University in St. Louis	1999-2003

Education:

Indiana University	PhD, Microbiology	1993-98
University of Nebraska at Omaha	B.S., Microbiology	1989-93

B. Service and Awards

Editorial Board for *mBio* (3 year appointment starting in 2016)

Reviews Editor for *Frontiers in Molecular Biosciences* 2014-

Associate Editor for *Journal of Bacteriology* 2012-

Associate Editor for the *Journal of Alzheimer's Disease* 2007-2011

Ad-hoc reviewer for *PNAS*, *Science*, *Cell*, *Molecular Microbiology*, *Molecular Cell*, *Nature*, *Journal Molecular Biology*, *Journal Biological Chemistry*, *Journal of Bacteriology*, *Applied and Environmental Microbiology*, etc.

Ad-hoc grant reviewer for NSF, NIH, Swedish Research Council, Belgium and Italy Research Foundations, etc.

- 2015 Chair and Organizer of the FASEB Meeting on “Molecular Mechanisms and Physiological Consequences of Protein Aggregation” in Palm Beach, FL.
- 2013 Symposium Chair at FASEB meeting on “Molecular Mechanisms and Physiological Consequences of Protein Aggregation” in Big Sky, MT
- 2011 Co-Chair of the Bacterial Surfaces Symposium for the American Society of Microbiology Meeting in New Orleans, LA
- 2010 Chair of the Microbial Extracellular Structures Session for the American Society of Microbiology Meeting in San Diego California.
- 2006 Chair of the Functional Amyloid Session for a Keystone Meeting in Breckenridge, Colorado.

MCDB Service at the University of Michigan:

2017-2019 Co-chair of Graduate Admissions

2017- Faculty Mentor for Anthony Vecchiarelli

2015-2016 Faculty Search Committee

2015-2017 Curriculum committee

2015-2017 Faculty Mentor for Kimberly Seed

2011-2015 Associate Chair for Curriculum

2011-2015 MCDB Executive Committee

2009-2014 Faculty Mentor for Blaise Boles

2009-2010 Faculty Search Committee Co-chair

2007-2009 Microbiology Faculty Search Committee

2005-2007 MCDB Executive Committee

2005 PIBS Admissions Committee

2004 Committee on 100 and 200 level courses in the Biology Concentration

University Service:

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2015-2018 Member of the IBC Review Committee
2013-current Member of the ITiMs Training Grant Steering Committee
2010-Current Microbiology Steering Committee
2009, 2010 and 2012 LSA Nominating Committee
2006-2007 Faculty Mentor for the U of M Peer Mentorship Program.

Awards:

2009 Class of 1923 Memorial Teaching Award from the University of Michigan
2004-2006 NIH Career Development Award K22
2003 Patent WSHU 2059 "Bacterial Model for Amyloid Formation"
2001-2003 NIH Post-doctoral Fellowship F32 AI10502-02
2000-2001 Alzheimer's Disease Research Fellowship
1999 Keck Fellowship
1994-1998 Floyd Bacteriology Fellowship
1997 Konetzka Outstanding Graduate Student Award at Indiana University

C. Trainees in my Lab

Undergraduate:

Serge Albarian	MCDB 300 17'
Mathew Tyl	MCDB 300 17'
Katie O'Keefe	MCDB 300 16-17'
Maya Deshmukh	MCDB 300 and 400 16-17'
Brennan McMichael*	Honors Thesis MCDB 200, 300 and 400 14-16'
Jesse Kelley	MCDB 300 14 and 15'
Matthew Benoit	MCDB 300 13'
Michael Sesi	MCDB 300 13'
Vinay Sagar	MCDB 300 and 400 13' and 14'
Sarah Kang*	Honors Thesis MCDB 300 and 400 12', 13', 14'
Phil Robinson	MCDB 300 13'
Bryan Leong	MCDB 300 and 400 12'
David Warshaw	MCDB 300 Spring/Summer 11'
Jamie Haase	MCDB 300 Winter 11'
David Croad	UROP Summer 11'
Matt McGuffie	MCDB 300 Fall 10'
Abhishek Rao	MCDB 300 and 400 Winter Spring Fall 10'
Anisha Chadha	MCDB 300 and 400 Winter Spring Fall 10' and Winter 11'
Lo-Hua Yuan	MCDB 300 and MCDB400 Fall and Winter and Spring 08' and 09'
Gayana DeSilva	MCDB 300 09'
Mike O'Conner	UROP student Winter and Spring and Fall 08' and 09'
Chris Ware	MCDB 300 and 400 Winter and Spring 08' (Research Assistant at Columbia)
Margeaux Anahid*	MCDB 300 and 400 Winter and Fall 08' (U. Michigan Medical School)
Bryan McGuffie*	Honors Thesis MCDB 300 and 400 06'-08' (Ph.D. Program at Harvard)
Jaclyn Lynem*	Honors Thesis 06' (Research Scientist at the Van Andel Cancer Institute)
Justin Chamberlain	MCDB 300 Spring 07' (Michigan Medical School)
Ingrid Zylinski	MCDB 300 Fall and Spring 06'-07'
Christina Nisonger*	Honors Thesis 06' (Medical school at the University of North Carolina)
JJ Ren*	Honors Thesis 06' (Medical school at Wayne State)
Seema Jeswani	MCDB 300 Fall and Spring 05'-06' (Medical School at Wayne State)
Jonathan Jones	MCDB 400 Fall 04' (Earned his PhD at Stanford and is now a patent consultant)

PhD students with graduation year:

Sujeet Bhoite
Janet Price
Adnan Syed (Co-chair) PhD 2015
Dave Hufnagel, PhD 2015

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Maggie Evans, PhD 2015
Kelly Schwartz, PhD (Co-Chair) 2014
Will DePas, PhD April 2014
Yizhou Zhou, PhD 2012
Dan Smith, PhD 2010
Neal Hammer, PhD in 2009
Elisabeth Ashman, PhD in 2008
Xuan Wang, PhD in 2008

Master's students:

Chi-Chi Ukachukwu—May 17'
John Lee, Masters, August 14'
Fei Li, Masters, Graduated in 09' (Earned a PhD student at Yale)
Jens Schmidt, Diploma student from Germany, Graduated in 07' (Earned PhD at MIT)
Rashad Farha, Masters, Graduated in 08'
Soon Gang, Masters, Graduated in 06' (Earned a PhD student at Mount Sinai)

Post Doctoral Researchers:

Maggie Evans 16'-
Neha Jain 14'-
Emma Andersson- 10'-14' (paid for by Linnaeus Foundation UCMR program)
Luz Blanco, 10'-11'
Michelle Barnhart, 04'-07' Currently lead scientist at Novozyme in Davis, CA.
Matthew Badtke, 08'-10' Currently an instructor at Albion College

D. Invited Speaker (08'-current)

2017 FASEB Protein Aggregation Meeting in Breckinridge, CO
2017 Temple University, Philadelphia, PA "Putting the Function in Functional Amyloids"
2017 University of Arizona, Tucson, AR "Protein Misfolding Done Right: Bacterial Amyloids"
2016 Keynote Speaker at Indiana University Microbiology Retreat, Bloomington, IN
2015 Wyss Institute at Harvard, Boston, MA "Putting the Function in Functional Amyloids"
2015 Gordon Conference on Proteins, Holderness, NH "Putting the Function in Functional Amyloids"
2015 Organizer of the FASEB Conference on Protein Aggregation in Palm Beach, FL. June 22-26
2015 Stanford University, Palo Alto, CA, "Protein Misfolding Done Right: Bacterial Amyloids"
2015 Washington University, St. Louis, MO "Protein Misfolding Done Right: Bacterial Amyloids"
2015 Protein Engineering Conference in Tampa, Florida, "Protein Misfolding Done Right: Bacterial Amyloids"
2014 Parks Distinguished Lecture at North Carolina State University, Raleigh, NC. *Protein Misfolding Done Right: Bacterial Amyloids*
2014 Washington University, St. Louis, MO. Lockheed Martin Lecture. *Protein Misfolding Done Right: Bacterial Amyloids*
2014 Microbial Interactions meeting in Umeå Sweden "Molecular Mechanisms and Physiological Consequences of Protein Aggregation"
2014 Protein Society Meeting in San Diego California "Molecular Mechanisms and Physiological Consequences of Protein Aggregation"
2014 Gordon Conference on Bacterial Pathogenesis in New Hampshire "Building a Better Biofilm"
2014 Louisiana State University, Baton Rouge, LA "Keeping Functional Amyloid Formation on Track"
2013 FASEB Meeting "Molecular Mechanisms and Physiological Consequences of Protein Aggregation"
Session Chair and speaker, Big Sky, MT
2013 Grand Valley State University, Grand Valley, MI "Protein Misfolding Done Right"
2012 Ohio State University, Columbus, OH. *The Ins, Outs and In-Betweens of Functional Amyloid Biogenesis*
2012 Gordon Conference on Peptides, Ventura, CA. *The Ins, Outs and In-Betweens of Functional Amyloid Biogenesis*
2012 University of Louisville, Louisville KY. *What can microbial amyloid formation tell us about Alzheimer's?*
2012 ASM Biofilms Meeting, Miami, FL. *The Ins, Outs and In-Betweens of Functional Amyloid Biogenesis*
2011 Iowa State University, Ames, Iowa, *Protein Misfolding Done Right: Bacterial Amyloids*

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- 2011 ASM General Meeting, New Orleans, LA. Co-organizer of the *Bacterial Cell Surfaces Symposium*
- 2011 MIMs Meeting in Umeå, Sweden: *The Ins, Outs and In-betweens of Functional Microbial Amyloid Biogenesis*
- 2011 FASEB The Molecular & Cellular Origins & the Biomedical Consequences of Protein Aggregation Meeting in Snowmass, CO. *The Ins, Outs and In-betweens of Functional Microbial Amyloid Biogenesis*
- 2011 Gordon Conference on Proteins at Holderness School in New Hampshire. *The Ins, Outs and In-betweens of Functional Microbial Amyloid Biogenesis*
- 2011 Stower's Institute in Kansas City, MO. *Protein Misfolding Done Right: The Biogenesis of Functional Amyloids*
- 2011 Colorado Protein Stability Conference in Breckenridge, CO. *The Ins, Outs and In-betweens of Functional Microbial Amyloid Biogenesis*
- 2011 UPenn, Philadelphia, Pennsylvania. *The Ins, Outs and In-Betweens of Functional Amyloid Biogenesis*
- 2011 University of Colorado, Boulder, CO. *The Ins, Outs and In-Betweens of Functional Amyloid Biogenesis*
- 2010 Harvard, Cambridge, MA. *Tough Economic Times: The Foundation of a Cheap Biofilm*
- 2010 Michigan State, Lansing, MI. *Building an Economical Biofilm.*
- 2010 UTMB, San Antonio, TX. *Tough Economic Times: The Foundation of a Cheap Biofilm*
- 2010 University of Florida, Gainesville FL. *Protein Economics and Community Behavior*
- 2010 ASM General Meeting, San Diego CA. *Functional Amyloid Utilization by Microbes*
- 2010 Banff Microbial Pathogenesis Meeting, Banff British Columbia, *Tough Economic Times: The Foundation of a Cheap Biofilm*
- 2010 Canadian Society of Microbiology Meeting, McMaster University, *Tough Economic Times: The Foundation of a Cheap Biofilm*
- 2010 FASEB Protein Misfolding Meeting, Saxton's River, VT. *Protein Misfolding Done Right: The Biogenesis of Bacterial Amyloids*
- 2010 SGM Autumn Conference, Nottingham, UK, *Protein Misfolding Done Right: The Biogenesis of Bacterial Amyloids*
- 2010 Aarhus University, Aarhus Denmark, *Protein Misfolding Done Right: Bacterial Amyloids*
- 2010 Birmingham University, Birmingham, UK, *Protein Misfolding Done Right: Bacterial Amyloids*
- 2010 Umeå University, Sweden, *Protein Misfolding Done Right: Bacterial Amyloids*
- 2009 Blast Meeting, Caracas, Mexico. *Tough Economic Times: Building a Cheap Biofilm*
- 2009 University of Texas, Houston Texas. Keynote Speaker for Departmental Retreat. *Bacterial Amyloidogenesis Provides the Template*
- 2009 Microbial Pathogenesis Meeting, Umea Sweden. *Curli Provide the Template for Understanding Amyloidogenesis*
- 2009 FASEB Meeting on Amyloid Fibrils and Protein Misfolding, Snowmass CO. *Controlling the Uncontrolled: Bacterial Amyloid Formation*
- 2009 American Chemical Society International Meeting, Washington DC. *Bacterial Amyloid Formation is Governed by Conserved Gatekeeper Residues*
- 2009 Benzon Foundation Meeting, Copenhagen, Denmark. *Controlling the Uncontrolled: Bacterial Amyloid Formation Provides the Template*
- 2008 University of Utah, Salt Lake City, Utah. *The Bacterial Handbook of Amyloid Formation*
- 2008 Washington University School of Medicine, St. Louis, MO. *Protein Misfolding Done Right: The Biogenesis of Bacterial Amyloid Fibers.*
- 2008 Stony Brook University, NY. *Polymerizing the Fiber Between Host Cells and Bacteria: Amyloids*
- 2008 Midwest Protein Folding and Aggregation Conference, South Bend, IN. *Protein Misfolding Done Right: The Biogenesis of Bacterial Amyloid*
- 2008 Gordon Conference on Bacterial Cell Surfaces, New Hampshire. *The Function and Biogenesis of Bacterial Amyloid Fibers*
- 2008 FASEB Research Conference, Protein Folding in the Cell, Vermont. *Bacteria Provide the Template for Understanding Amyloid Formation*
- 2008 University of Southern Illinois, Carbondale, Il. *Bacteria Provide the Template for Understanding Amyloid Formation.*
- 2008 Wayne State Medical School, Detroit, MI. *Protein Misfolding Done Right*
- 2008 Harvard University, Boston, MA. *Bacteria Provide the Template for Understanding Amyloid Polymerization*
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2008 Indiana University, Bloomington, IN. *Protein Misfolding Done Right*

E. Publications (<https://scholar.google.com/citations?user=mNqVTp4AAAAJ&hl=en&authuser=1>)

Jain N, Åden J, Nagamatsu K, Evans ML, Li X, McMichael B, Ivanova MI, Almquist F, Buxbaum JN and Chapman MR. Inhibition of Curli Assembly and *E. coli* Biofilm Formation by the Human Systemic Amyloid Precursor Transthyretin. In revision at *PNAS*.

Jain N, Hammer ND, Wang X, McGuffie BA and Chapman MR. "Amyloid: Friend and Foe" (2017). *Handbook of Infection and Alzheimer's disease J. Miklossy (Ed.) IOS Press*, (5) 297-311.

Hufnagel DA, Price JE, Stephson RE, Kelley J, Benoit MF, and Chapman MR (2017) Thiol Starvation induces redox-mediated dysregulation of *Escherichia coli* biofilm components *J. Bacteriol. In press*

Hufnagel DA, Evans ML, Greene SE, Pinkner JS, Hultgren SJ and **Chapman MR** (2016) CRP-cAMP regulates *csgD* and biofilm formation by uropathogenic *Escherichia coli* *J. Bacteriol.* 198(24) 3329-3334

Horowitz S, Koepnick B, Martin R, Tymieniecki A, Winburn AA, Cooper S, Flatten J, Rogawski DS, Koropatkin NM, Hailu TT, Jain N, Koldewey P, Ahlstrom LS, **Chapman MR** et al. and Bardwell JC (2016). Determining crystal structures through crowdsourcing and coursework. *Nat Commun.* 7, 12549.

Cremers CM, Knoefler D, Gates S, Martin N, Dahl JU, Lempart J, Xie L, **Chapman MR**, Galvan V, Southworth DR et al. and Jakob U (2016). Polyphosphate: A Conserved Modifier of Amyloidogenic Processes. *Mol Cell.* 63, 768-780.

Floyd KA, Mitchell C, Eberly AR, Colling S, Zhang EW, DePas W, **Chapman MR**, Conover M, Rogers BR, Hultgren SJ and Hadjifrangiskou M (2016). The Ubil (VisC) aerobic ubiquinone synthase is required for expression of type 1 pili, biofilm formation, and pathogenesis in uropathogenic *Escherichia coli*. *J. Bacteriology. In press.*

Taylor JD, Hawthorne WJ, Lo J, Dear A, Jain N, Meisl G, Andreasen M, Fletcher C, Koch M, Darvill N, Scull N, Escalera-Maurer A, Sefer L, Wenman R, Lambert S, Jean J, Xu Y, Turner B, Kazarian SG, **Chapman MR**, Bubeck D, de Simone A, Knowles TP, Matthews SJ (2016) Electrostatically-guided inhibition of Curli amyloid nucleation by the CsgC-like family of chaperones. *Sci Rep*, **6**: 24656

Hufnagel DA, Depas WH, **Chapman MR** (2015) The Biology of the *Escherichia coli* Extracellular Matrix. *Microbiol Spectr*, **3**: [PMID: 26185090](#)

Evans ML, Chorell E, Taylor JD, Åden J, Götheson A, Li F, Koch M, Sefer L, Matthews SJ, Wittung-Stafshede P, Almquist F, **Chapman MR** (2015) The bacterial curli system possesses a potent and selective inhibitor of amyloid formation. *Mol Cell*, **57**: 445–455 [PMID: 25620560](#) (cover image)

Spaulding CN, Dodson KW, **Chapman MR**, Hultgren SJ (2015) Fueling the Fire with Fibers: Bacterial Amyloids Promote Inflammatory Disorders. *Cell Host Microbe*, **18**: 1–2

Chorell E, Andersson E, Evans ML, Jain N, Götheson A, Åden J, **Chapman MR**, Almquist F, Wittung-Stafshede P (2015) Bacterial Chaperones CsgE and CsgC Differentially Modulate Human α -Synuclein Amyloid Formation via Transient Contacts. *PLoS One*, **10**: e0140194 [PMID: 26465894](#)

Hufnagel DA, DePas WH, **Chapman MR** (2014) The disulfide bonding system suppresses CsgD-independent cellulose production in *Escherichia coli*. *J Bacteriol*, **196**: 3690–3699 [PMID: 25112475](#) (cover image)

Goyal P, Krasteva PV, Van Gerven N, Gubellini F, Van den Broeck I, Troupiotis-Tsailaki A, Jonckheere W, Péhau-Arnaudet G, Pinkner JS, **Chapman MR**, Hultgren SJ, Howorka S, Fronzes R, Remaut H (2014)

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Structural and mechanistic insights into the bacterial amyloid secretion channel CsgG. *Nature*, **516**: 250–253
[PMID: 25219853](#)

Evans ML, **Chapman MR** (2014) Curli biogenesis: order out of disorder. *Biochim Biophys Acta*, **1843**: 1551–1558 [PMID: 24080089](#)

DePas WH, Syed AK, Sifuentes M, Lee JS, Warshaw D, Saggari V, Csankovszki G, Boles BR, **Chapman MR** (2014) Biofilm formation protects *Escherichia coli* against killing by *Caenorhabditis elegans* and *Myxococcus xanthus*. *Appl Environ Microbiol*, **80**: 7079–7087 [PMID: 25192998](#)

Andersson EK, Chapman M (2013) Small molecule disruption of *B. subtilis* biofilms by targeting the amyloid matrix. *Chem Biol*, **20**: 5–7 [PMID: 23352134](#)

Andersson EK, Bengtsson C, Evans ML, Chorell E, Sellstedt M, Lindgren AE, Hufnagel DA, Bhattacharya M, Tessier PM, Wittung-Stafshede P, Almqvist F, **Chapman MR** (2013) Modulation of curli assembly and pellicle biofilm formation by chemical and protein chaperones. *Chem Biol*, **20**: 1245–1254 [PMID: 24035282](#)

DePas WH, Hufnagel DA, Lee JS, Blanco LP, Bernstein HC, Fisher ST, James GA, Stewart PS, **Chapman MR** (2013) Iron induces bimodal population development by *Escherichia coli*. *Proc Natl Acad Sci U S A*, **110**: 2629–2634 [PMID: 23359678](#)

Zhou Y, Smith DR, Hufnagel DA, **Chapman MR** (2013) Experimental manipulation of the microbial functional amyloid called curli. *Methods Mol Biol*, **966**: 53–75 [PMID: 23299728](#)

Hung C, Zhou Y, Pinkner JS, Dodson KW, Crowley JR, Heuser J, **Chapman MR**, Hadjifrangiskou M, Henderson JP, Hultgren SJ (2013) *Escherichia coli* biofilms have an organized and complex extracellular matrix structure. *MBio*, **4**: e00645–13 [PMID: 24023384](#)

Hufnagel DA, Tükel C, **Chapman MR** (2013) Disease to dirt: the biology of microbial amyloids. *PLoS Pathog*, **9**: e1003740 [PMID: 24278013](#)

Hartman K, Brender JR, Monde K, Ono A, Evans ML, Popovych N, **Chapman MR**, Ramamoorthy A (2013) Bacterial curli protein promotes the conversion of PAP248-286 into the amyloid SEVI: cross-seeding of dissimilar amyloid sequences. *PeerJ*, **1**: e5

Hammer ND, McGuffie BA, Zhou Y, Badtke MP, Reinke AA, Brännström K, Gestwicki JE, Olofsson A, Almqvist F, **Chapman MR** (2012) The C-terminal repeating units of CsgB direct bacterial functional amyloid nucleation. *J Mol Biol*, **422**: 376–389 [PMID: 22684146](#)

Zhou Y, Smith D, Leong BJ, Brännström K, Almqvist F, **Chapman MR** (2012) Promiscuous cross-seeding between bacterial amyloids promotes interspecies biofilms. *J Biol Chem*, **287**: 35092–35103 [PMID: 22891247](#)

DePas WH, **Chapman MR** (2012) Microbial manipulation of the amyloid fold. *Res Microbiol*, **163**: 592–606 [PMID: 23108148](#)

Horvath I, Weise CF, Andersson EK, Chorell E, Sellstedt M, Bengtsson C, Olofsson A, Hultgren SJ, **Chapman MR**, Wolf-Watz M, Almqvist F, Wittung-Stafshede P (2012) Mechanisms of protein oligomerization: inhibitor of functional amyloids templates α -synuclein fibrillation. *J Am Chem Soc*, **134**: 3439–3444 [PMID: 22260746](#)

Lam KL, Wang H, Siaw TA, **Chapman MR**, Waring AJ, Kindt JT, Lee KY (2012) Mechanism of structural transformations induced by antimicrobial peptides in lipid membranes. *Biochim Biophys Acta*, **1818**: 194–204

Blanco LP, Evans ML, Smith DR, Badtke MP, **Chapman MR** (2012) Diversity, biogenesis and function of microbial amyloids. *Trends Microbiol*, **20**: 66–73 [PMID: 22197327](#)

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Zhou Y, Blanco LP, Smith DR, **Chapman MR** (2012) Bacterial amyloids. *Methods Mol Biol*, **849**: 303–320
PMID: 22528099

Brandl MT, Carter MQ, Parker CT, **Chapman MR**, Huynh S, Zhou Y (2011) Salmonella biofilm formation on *Aspergillus niger* involves cellulose--chitin interactions. *PLoS One*, **6**: e25553

Dueholm MS, Nielsen SB, Hein KL, Nissen P, **Chapman MR**, Christiansen G, Nielsen PH, Otzen DE (2011) Fibrillation of the major curli subunit CsgA under a wide range of conditions implies a robust design of aggregation. *Biochemistry*, **50**: 8281–8290

Evans ML, Schmidt JC, Ilbert M, Doyle SM, Quan S, Bardwell JC, Jakob U, Wickner S, **Chapman MR** (2011) *Escherichia coli* chaperones DnaK, Hsp33 and Spy inhibit bacterial functional amyloid assembly. *Prion*, **5**: 323–334 PMID: 22156728

Nenninger AA, Robinson LS, Hammer ND, Epstein EA, Badtke MP, Hultgren SJ, **Chapman MR** (2011) CsgE is a curli secretion specificity factor that prevents amyloid fibre aggregation. *Mol Microbiol*, **81**: 486–499 PMID: 21645131

Taylor JD, Zhou Y, Salgado PS, Patwardhan A, McGuffie M, Pape T, Grabe G, Ashman E, Constable SC, Simpson PJ, Lee WC, Cota E, **Chapman MR***, Matthews SJ* (2011) Atomic resolution insights into curli fiber biogenesis. *Structure*, **19**: 1307–1316 PMID: 21893289 *co-corresponding authors

Kai-Larsen Y, Lüthje P, Chromek M, Peters V, Wang X, Holm A, Kádas L, Hedlund KO, Johansson J, **Chapman MR**, Jacobson SH, Römling U, Agerberth B, Brauner A (2010) Uropathogenic *Escherichia coli* modulates immune responses and its curli fimbriae interact with the antimicrobial peptide LL-37. *PLoS Pathog*, **6**: e1001010 PMID: 20661475

Wang X, Zhou Y, Ren JJ, Hammer ND, **Chapman MR** (2010) Gatekeeper residues in the major curlin subunit modulate bacterial amyloid fiber biogenesis. *Proc Natl Acad Sci U S A*, **107**: 163–168 PMID: 19966296

Smith DR, **Chapman MR** (2010) Economical evolution: microbes reduce the synthetic cost of extracellular proteins. *MBio*, **1**: 1–10 PMID: 20824102

Weiss-Muszkat M, Shakh D, Zhou Y, Pinto R, Belausov E, **Chapman MR**, Sela S (2010) Biofilm formation by and multicellular behavior of *Escherichia coli* O55:H7, an atypical enteropathogenic strain. *Appl Environ Microbiol*, **76**: 1545–1554 PMID: 20080991

Epstein EA, Reizian MA, **Chapman MR** (2009) Spatial clustering of the curlin secretion lipoprotein requires curli fiber assembly. *J Bacteriol*, **191**: 608–615 PMID: 19011034

Cegelski L, Pinkner JS, Hammer ND, Cusumano CK, Hung CS, Chorell E, Aberg V, Walker JN, Seed PC, Almqvist F, **Chapman MR***, Hultgren SJ* (2009) Small-molecule inhibitors target *Escherichia coli* amyloid biogenesis and biofilm formation. *Nat Chem Biol*, **5**: 913–919 PMID: 19915538 *co-corresponding authors

Badtke MP, Hammer ND, **Chapman MR** (2009) Functional amyloids signal their arrival. *Sci Signal*, **2**: pe43 PMID: 19622831

Wang X, Hammer ND, **Chapman MR** (2008) The molecular basis of functional bacterial amyloid polymerization and nucleation. *J Biol Chem*, **283**: 21530–21539 PMID: 18508760

Wang X, **Chapman MR** (2008) Sequence determinants of bacterial amyloid formation. *J Mol Biol*, **380**: 570–580 PMID: 18565345

Epstein EA, **Chapman MR** (2008) Polymerizing the fibre between bacteria and host cells: the biogenesis of

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functional amyloid fibres. *Cell Microbiol*, **10**: 1413–1420 [PMID: 18373633](#)

Wang X, **Chapman MR** (2008) Curli provide the template for understanding controlled amyloid propagation. *Prion*, **2**: 57–60 [PMID: 19098444](#)

Hammer ND, Wang X, McGuffie BA, **Chapman MR** (2008) Amyloids: Friends or Foe?. *J Alzheimers Dis*, **13**: 407–419 [PMID: 18487849](#)

Hammer ND, Schmidt JC, **Chapman MR** (2007) The curli nucleator protein, CsgB, contains an amyloidogenic domain that directs CsgA polymerization. *Proc Natl Acad Sci U S A*, **104**: 12494–12499 [PMID: 17636121](#)

Wang X, Smith DR, Jones JW, **Chapman MR** (2007) In vitro polymerization of a functional *Escherichia coli* amyloid protein. *J Biol Chem*, **282**: 3713–3719 [PMID: 17164238](#)

Robinson LS, Ashman EM, Hultgren SJ, **Chapman MR** (2006) GlcNAc-6P levels modulate the expression of curli fibers by *Escherichia coli*. *Mol Microbiol*, **59**: 870–881 [PMID: 16420357](#)

Barnhart MM, Lynem J, **Chapman MR** (2006) GlcNAc-6P levels modulate the expression of Curli fibers by *Escherichia coli*. *J Bacteriol*, **188**: 5212–5219 [PMID: 16816193](#)

Barnhart MM, **Chapman MR** (2006) Curli biogenesis and function. *Annu Rev Microbiol*, **60**: 131–147 [PMID: 16704339](#)

Errington JE, Hultgren SJ, Caparon M and **Chapman MR**. (2006) *Prokaryotic Cell Biology*. In: *Cells*. Jones and Bartlett Publishers. 703-761.

Roberts JA, Kaack MB, Baskin G, **Chapman MR**, Hunstad DA, Pinkner JS, Hultgren SJ (2004) Antibody responses and protection from pyelonephritis following vaccination with purified *Escherichia coli* PapDG protein. *J Urol*, **171**: 1682–1685 [PMID: 15017266](#)

Chapman MR, Robinson LS, Hultgren SJ (2003) The *E. coli* How-to Guide for Amyloid Formation. *ASM News*, **69**: 121–126

Chapman MR, Robinson LS, Pinkner JS, Roth R, Heuser J, Hammar M, Normark S, Hultgren SJ (2002) Role of *Escherichia coli* curli operons in directing amyloid fiber formation. *Science*, **295**: 851–855 [PMID: 11823641](#)

Chapman MR, Kao CC (1999) A minimal RNA promoter for minus-strand RNA synthesis by the brome mosaic virus polymerase complex. *J Mol Biol*, **286**: 709–720

Chapman MR, Rao AL, Kao CC (1998) Sequences 5' of the conserved tRNA-like promoter modulate the initiation of minus-strand synthesis by the brome mosaic virus RNA-dependent RNA polymerase. *Virology*, **252**: 458–467

Chapman MR, Kao CC (1998) EpsR modulates production of extracellular polysaccharides in the bacterial wilt pathogen *Ralstonia (Pseudomonas) solanacearum*. *J Bacteriol*, **180**: 27–34

McWilliams R, **Chapman MR**, Kowalczyk KM, Hersberger D, Sun J, Kao CC (1995) Complementation analyses of *Pseudomonas solanacearum* extracellular polysaccharide mutants and identification of genes responsive to EpsR. *Mol Plant Microbe Interact*, **8**: 837–844