

DACHENG REN, Ph.D.

Department of Biomedical and Chemical Engineering
Syracuse University
121 Link Hall
Syracuse, NY 13244
USA

Phone: 001-315 443-4409
Fax: 001-315 443-9175
Email: dren@syr.edu

EDUCATION

Ph.D. Chemical Engineering, University of Connecticut, Storrs, CT. 10/2003
M.E. Chemical Engineering, Tianjin University, Tianjin, P. R. China. 03/1999
B.E. Applied Chemistry (major), Shanghai Jiao Tong University, P. R. China. 07/1996
B.E. Electronic Engineering (minor), Shanghai Jiao Tong University, P. R. China. 07/1996

EXPERIENCE

Associate Professor, Syracuse University 05/2012-present
Department of Biomedical and Chemical Engineering,
Director of Chemical Engineering Graduate Program
Department of Civil and Environmental Engineering (Courtesy appointment)
Department of Biology (Courtesy appointment)
Assistant Professor, Syracuse University 01/2006-05/2012
Director, Syracuse University Flow Cytometry and Cell Sorting Core Facility 01/2014-present
Postdoctoral Associate, Cornell University 11/2003-01/2006
Advisor: Prof. Kelvin H. Lee
Research assistant, University of Connecticut 01/2000 – 10/2003
Advisor: Prof. Thomas K. Wood
Research assistant, Tianjin University, Tianjin, P. R. China. 07/1997 - 03/1998
Advisor: Prof. Jingkang Wang

HONORS

- Syracuse University LCS Faculty Excellence Award, 2014
- NSF CAREER Award, 2011-2016
- College Technology Educator of the Year by the Technology Alliance of Central New York (TACNY), 2010.
- Early Career Translational Research Awards in Biomedical Engineering, Wallace H. Coulter Foundation, 2009
- Doctoral dissertation fellowship, University of Connecticut, 2003
- Travel Grant, University of Connecticut, 2002
- Travel Grant, American Society of Microbiology, 2001

PROFESSIONAL AFFILIATIONS

- American Society for Microbiology (ASM)
- American Institute of Chemical Engineers (AIChE)
- American Chemical Society (ACS)

JOURNAL PUBLICATIONS

46. Tagbo H. R. Niepa, Laura M. Snepenger, Hao Wang, Shiril Sivan, Jeremy L. Gilbert, Marcus B. Jones, **Dacheng Ren**. "Sensitizing *Pseudomonas aeruginosa* cells to antibiotics by electrochemical disruption of membrane functions". *Biomaterials*. Accepted (2015).
45. Ali Adem Bahar, Zhigang Liu, Meagan Garafalo, Neville R Kallenbach, **Dacheng Ren**. "Controlling persister and biofilm cells of Gram-negative bacteria with a new 1,3,5-triazine derivative". *Pharmaceuticals*. Accepted (2015).
44. Bendy Estime, **Dacheng Ren**, Radhakrishna Sureshkumar. "Effects of plasmonic film filters on microalgal growth and biomass composition". *Algal Research*. 11: 85-89 (2015).
43. Fangchao Song, Hyun Koo, **Dacheng Ren**. "Effects of material properties on bacterial adhesion and biofilm formation" (Invited Critical Review). *Journal of Dental Research*. 94: 1027-1034 (2015).
42. Ali Adem Bahar, Zhigang Liu, Filbert Totsingan, Carlos Buitrago, Neville Kallenbach, **Dacheng Ren**. "Synthetic Dendrimeric Peptide Active against Biofilm and Persister Cells of *Pseudomonas aeruginosa*". *Applied Microbiology and Biotechnology*. 99: 8125-8135 (2015).
41. Stephen C. DeSalvo, Yating Liu, Geetika Sanjay Choudhary, **Dacheng Ren**, Shikha Nangia, and Radhakrishna Sureshkumar. "Signaling Factor Interactions with Polysaccharide Aggregates of Bacterial Biofilms". *Langmuir*. 31: 1958–1966 (2015).
40. Fangchao Song and **Dacheng Ren**, "Stiffness of cross-linked poly(dimethylsiloxane) affects bacterial adhesion and antibiotic susceptibility of attached cells". *Langmuir*. 30: 10354-10362 (2014).
39. Chen Chen, Shuyu Hou, **Dacheng Ren**, Mingming Ren and Qi Wang. "3-D spatial–temporal structures of biofilms in a water channel". *Mathematical Methods in the Applied Sciences*. Accepted (2014).
38. Huan Gu and **Dacheng Ren**, "Material and surface engineering to control bacterial adhesion and biofilm formation: a review of recent advances". *Frontiers of Chemical Science & Engineering (Invited Review)*. 8: 20-33 (2014).
37. Ali Adem Bahar and **Dacheng Ren**, "Antimicrobial peptides". *Pharmaceuticals (Invited Review)*. 6: 1543-1575 (2013).
36. Jiachuan Pan and **Dacheng Ren**. "Structural effects on persister control by brominated furanones". *Bioorganic & Medicinal Chemistry Letters*. 23: 6559-6562 (2013).
35. Jiachuan Pan, Xin Xie, Wang Tian, Ali Adem Bahar, Nan Lin, Fangchao Song, Jing An and **Dacheng Ren**. "(Z)-4-bromo-5-(bromomethylene)-3-methylfuran-2(5H)-one sensitizes *Escherichia coli* persister cells to antibiotics". *Applied Microbiology and Biotechnology*. 97: 9145-9154 (2013).
34. Huan Gu, Shuyu Hou, Chanokpon Yongyat, Suzanne De Tore and **Dacheng Ren**. "Patterned biofilm formation reveals a mechanism for structural heterogeneity in bacterial biofilms". *Langmuir*. 29: 11145-11153 (2013).
33. Jiachuan Pan, Fangchao Song, and **Dacheng Ren**. "Controlling persister cells of *Pseudomonas aeruginosa* PDO300 by (Z)-4-bromo-5-(bromomethylene)-3-methylfuran-2(5H)-one". *Bioorganic & Medicinal Chemistry Letters*. 23:4648-4651 (2013).
32. Jiachuan Pan, Ali Adem Bahar, Haseeba Syed, and **Dacheng Ren**. "Reverting antibiotic tolerance of *Pseudomonas aeruginosa* PAO1 persister cells by (Z)-4-bromo-5-(bromomethylene)-3-methylfuran-2(5H)-one". *PLoS ONE*. 7(9): e45778. doi:10.1371/journal.pone.0045778 (2012).

31. Tagbo H. R., Niepa, Jeremy L. Gilbert and **Dacheng Ren**. "Controlling *Pseudomonas aeruginosa* persister cells by weak electrochemical currents and synergistic effects with tobramycin". *Biomaterials*. 33: 7356–7365 (2012).
30. Robert Szkotak, Tagbo H R Niepa, Nikhil Jawrani, Jeremy L Gilbert, Marcus B Jones and **Dacheng Ren**. "Differential gene expression to investigate the effects of low-level electrochemical currents on *Bacillus subtilis*". *AMB Express*. 1:39 (2011).
29. Xi Chen, Mi Zhang, Chunhui Zhou, Neville R. Kallenbach and **Dacheng Ren**, "Control of bacterial persister cells by Trp/Arg antimicrobial peptides". *Applied and Environmental Microbiology*. 77: 4878-4885 (2011).
28. Wen-Hsuan Huang, Zhiqiang Wang, Geetika Choudhary, Beverly Guo, Jianshun Zhang and **Dacheng Ren**, "Characterization of microbial species in a regenerative bio-filter system for VOC removal". 2011. *HVAC&R Research*. 18:169-178 (2012).
27. Shuyu Hou†, Huan Gu†, Cassandra Smith and **Dacheng Ren**, "Microtopographic patterns affect *Escherichia coli* biofilm formation on polydimethylsiloxane surfaces". *Langmuir*. 27: 2686-2691 (2011). †These authors contributed equally.
26. Jensen Zhang, Zhiqiang Wang and **Dacheng Ren**, "Botanical air filtration for improving IAQ: myths and facts." *ASHRAE Journal*. 2010, Dec.:138-140 (2010).
25. Shuyu Hou, Zhigang Liu, Anne Young, Sheron Mark, Neville Kallenbach and **Dacheng Ren**, "Structural effects on inhibition of planktonic growth and biofilm formation of *Escherichia coli* by Trp/Arg containing antimicrobial peptides." *Applied and Environmental Microbiology*. 76: 1967-1974 (2010).
24. Marcus B. Jones, Scott N. Peterson, Rosslyn Benn, John C. Braisted, Behnam Jarrahi, Kenneth Shatzkes, **Dacheng Ren**, Thomas K. Wood and Martin J. Blaser, "Role of *luxS* in *Bacillus anthracis* growth and virulence factor expression". *Virulence*. 1: 72-83 (2010).
23. Tianzhu Zang, Bobby W.K. Lee, Lisa M. Cannon, Kathryn A. Ritter, Shujia Dai, **Dacheng Ren**, Thomas K. Wood, and Zhaohui Sunny Zhou, "A naturally occurring brominated furanone covalently modifies and inactivates LuxS". *Bioorganic & Medicinal Chemistry Letters*. 19:6200-6204 (2009).
22. Shuyu Hou, Chunhui Zhou, Zhigang Liu, Anne W. Young, Zhengshuang Shi, **Dacheng Ren** and Neville R. Kallenbach, "Antimicrobial dendrimer active against *Escherichia coli* biofilms". *Bioorganic & Medicinal Chemistry Letters*. 19: 5478-5481 (2009).
21. Jiachuan Pan and **Dacheng Ren**, "Quorum sensing inhibitors: a patent overview". *Expert Opinion On Therapeutic Patents (Invited Review)*. 19:1581-1601 (2009).
20. Miao Duo, Mi Zhang, Yan-Yeung Luk and **Dacheng Ren**, "Inhibition of *Candida albicans* growth by brominated furanones". *Applied Microbiology and Biotechnology*. 84:1551-1563 (2009).
19. Jian Wu†, Shuyu Hou†, **Dacheng Ren** and Patrick T. Mather, "Antimicrobial properties of nanostructured hydrogel webs containing silver". *Biomacromolecules*. 10: 2686-2693 (2009). †These authors contributed equally.
18. Shuyu Hou, Erik A. Button, Ricky Lei Wu, Yan-Yeung Luk and **Dacheng Ren**, "Prolonged control of patterned biofilm formation by bio-inert surface chemistry". *Chemical Communication*. 2009: 1207-1209 (2009).
17. Erik A. Burton, Karen A. Simon, Shuyu Hou, **Dacheng Ren**, and Yan-Yeung Luk, "Molecular gradients of bio-inertness reveal mechanistic difference between mammalian cell adhesion and bacterial biofilm formation". *Langmuir*. 25: 1547-1553 (2009).

16. Miao Duo, Shuyu Hou, and **Dacheng Ren**, "Identifying *Escherichia coli* genes involved in intrinsic multidrug resistance" *Applied Microbiology and Biotechnology*. 81: 731-741 (2008).
15. Yongbin Han, Shuyu Hou, Karen A. Simon, **Dacheng Ren**, and Yan-Yeung Luk "Identifying the important structural elements of brominated furanones for inhibiting biofilm formation by *Escherichia coli*" *Bioorganic & Medicinal Chemistry Letters*. 18: 1006-1010 (2008).
14. Shuyu Hou, Erik A. Burton, Karen A. Simon, Dustin Blodgett, Yan-Yeung Luk, **Dacheng Ren**, "Inhibiting *Escherichia coli* biofilm formation by self-assembled monolayers of functional alkanethiols on gold." *Applied and Environmental Microbiology*. 73: 4300-4307 (2007).
13. Andres Gonzalez, Rongju Zuo, **Dacheng Ren**, and T. K. Wood, "Hha, YbaJ, and OmpA Regulate *Escherichia coli* K12 biofilm formation and conjugation plasmids abolish motility," *Biotechnology and Bioengineering*, 93: 188-200, (2006).
12. Jinpian Diao, **Dacheng Ren**, James R. Engstrom, and Kelvin H. Lee "A surface modification strategy on silicon nitride for developing biosensors made of giant magnetoresistive materials". *Analytical Biochemistry*, 343: 322-328 (2005).
11. **Dacheng Ren**, Rongjun Zuo, Laura A. Bedzyk, Rick W. Ye, Gary Eldridge, Mark Pasmore, and Thomas K. Wood "Differential gene expression to investigate *Escherichia coli* biofilm inhibition by plant extract ursolic acid". *Applied and Environmental Microbiology*, 71: 4022-4034 (2005).
10. Marcus B. Jones, Rachana Jani, **Dacheng Ren**, Thomas K. Wood, and Martin J. Blaser "Inhibition of *Bacillus anthracis* growth and virulence gene expression by inhibitors of quorum-sensing". *Journal of Infectious Diseases*, 191: 1881-1888 (2005).
9. **Dacheng Ren**, Rongjun Zuo, and Thomas K. Wood "Quorum-sensing antagonist (5Z)-4-bromo-5-(bromomethylene)-3-butyl-2(5H)-furanone influences siderophore biosynthesis in *Pseudomonas putida* and *Pseudomonas aeruginosa*". *Applied Microbiology and Biotechnology*, 66(6): 689-695 (2005).
8. **Dacheng Ren** and Thomas K. Wood "(5Z)-4-Bromo-5-(Bromomethylene)-3-butyl-2(5H)-furanone reduces corrosion from *Desulfotomaculum orientis*". *Environmental Microbiology*, 6(5): 535-540 (2004).
7. **Dacheng Ren**, Laura A. Bedzyk, Rick W. Ye, Stuart M. Thomas, and Thomas K. Wood "Stationary-phase signals affect autoinducer-2 and gene expression in *Escherichia coli*". *Applied and Environmental Microbiology*, 70(4): 2038-2043 (2004).
6. **Dacheng Ren**, Laura A. Bedzyk, Peter Setlow, Dacre F. England, Staffan Kjelleberg, Stuart M. Thomas, Rick W. Ye, and Thomas K. Wood "Differential gene expression to investigate the effect of (5Z)-4-Bromo-5-(bromomethylene)-3-butyl-2(5H)-furanone on *Bacillus subtilis*". *Applied and Environmental Microbiology*, 70(8): 4941-4949 (2004).
5. **Dacheng Ren**, Laura A. Bedzyk, Rick Ye, Stuart M. Thomas, and Thomas K. Wood "Differential gene expression shows natural brominated furanones interfere with the autoinducer-2 bacterial signaling system of *Escherichia coli*". *Biotechnology and Bioengineering*, 88(5):630-642 (2004).
4. **Dacheng Ren**, Laura A. Bedzyk, Rick Ye, Stuart M. Thomas, and Thomas K. Wood "Gene expression in *Escherichia coli* biofilms". *Applied Microbiology and Biotechnology*, 64(4):515-524 (2004).
3. **Dacheng Ren**, Laura A. Bedzyk, Peter Setlow, Stuart M. Thomas, Rick W. Ye, and Thomas K. Wood "Gene expression in *Bacillus subtilis* surface biofilms with and without sporulation and the importance of *yveR* for biofilm maintenance". *Biotechnology and Bioengineering*, 86(3): 344-364 (2004).

2. **Dacheng Ren**, James J. Sims, and Thomas K. Wood. Inhibition of biofilm formation and swarming of *Bacillus subtilis* by (5Z)-4-Bromo-5-(bromomethylene)-3-butyl-2(5H)-furanone. *Letters in Applied Microbiology*, 34: 293-299 (2002).
1. **Dacheng Ren**, James J. Sims, and Thomas K. Wood. Inhibition of biofilm formation and swarming of *Escherichia coli* by (5Z)-4-Bromo-5-(bromomethylene)-3-butyl-2(5H)-furanone. *Environmental Microbiology*, 3(11): 731-736 (2001).

PROCEEDING PAPERS

1. Shuyu Hou, Miao Duo, Yongbin Han, Yan-Yeung Luk, and **Dacheng Ren**. “Inhibiting microbial biofilms formation by brominated furanones”. *Proceedings of Materials and Processes for Medical Devices Conference*, ASM International (2009).
2. **Dacheng Ren**, Qi Wang and Yan-Yeung Luk. “Collaborative Research: Investigating Bacteria-Surface Interactions by Surface Engineering and Mathematical Modeling”. *NSF Engineering Research and Innovation Conference* (2009).

BOOK CHAPTERS

1. Naomi Balaban, **Dacheng Ren**, Michael Givskov and Thomas Bovbjerg Rasmussen. “Introduction”. In: *Springer Series on Biofilms: Control of Biofilm Infections by Signal Manipulation*, Ed. Naomi Balaban. Springer Berlin Heidelberg, 1-11 (2008).
2. Michael Givskov, Thomas Bovbjerg Rasmussen, **Dacheng Ren** and Naomi Balaban. “Bacterial Cell-to-cell Communication (Quorum Sensing)”. In: *Springer Series on Biofilms: Control of Biofilm Infections by Signal Manipulation*, Ed. Naomi Balaban. Springer Berlin Heidelberg, 13-38 (2008).
3. **Dacheng Ren**, Michael Givskov, Thomas Bovbjerg Rasmussen and Naomi Balaban. “Quorum-Sensing Inhibitory Compounds”. In: *Springer Series on Biofilms: Control of Biofilm Infections by Signal Manipulation*, Ed. Naomi Balaban. Springer Berlin Heidelberg, 51-77 (2008).

PATENTS

1. Martin J. Blaser, Marcus B. Jones, Thomas K. Wood, and **Dacheng Ren** “*B. anthracis* Prevention and Treatment: Mutant *B. anthracis* Lacking *luxS* Activity and Furanone Inhibition of Growth, AI-2 Quorum Sensing, and Toxin Production”. US Patent number: 7,365,184. Issued in 2008.
2. Yan-Yeung Luk, Karen A. Simon, and **Dacheng Ren** “Non-Amphiphile-Based Water-in-Water Emulsion and Uses Thereof”. Patent pending (non-provisional application submitted 2008, Application No. 12/233,337).
3. Patrick T. Mather, Jian Wu, **Dacheng Ren** and Shuyu Hou “Antimicrobial Nanostructured Hydrogel Web Containing Silver”. US patent issued in 2013. Patent number: US 8,431,151.
4. **Dacheng Ren**, Tagbo Herman Roland Niepa, Mi Zhang and Jeremy Gilbert “System and method for controlling bacterial persister cells with weak electric currents”. US patent issued. Patent number: US 08569027.
5. **Dacheng Ren** and Yan-Yeung Luk “Systems and method for controlling growth of microorganisms with brominated furanones”. US patented issued in 2013. Patent number: US 8,530,680.
6. **Dacheng Ren** and Jiachuan Pan “System and Method for Reverting Antibiotic Tolerance of Bacterial Persister Cells”. Non-provisional application submitted in 2011. Application number: 13/206,185.

1. **Dacheng Ren**, Geetika Choudhury, Xiangyu Yao “Controlling bacterial persister cells with host immune factors”. Non-provisional application filed in 2013. Application number: 13/897,842.

PRESENTATIONS

Invited seminars

1. “Genome-Wide Analysis of Bacterial Pathogenesis and Discovery of Natural Biofilm Inhibitors”. Rice University, TX, 2005.
2. “Genome-Wide Analysis of Bacterial Pathogenesis and Discovery of Natural Biofilm Inhibitors”. University of Toronto, Canada, 2005.
3. “Genome-Wide Analysis of Bacterial Pathogenesis and Discovery of Natural Biofilm Inhibitors”. University of Washington, Seattle, WA, 2005.
4. “Inhibiting Bacterial Multicellular Behavior: Challenges and Opportunities”, Department of Physics, Syracuse University, 2006.
5. “Inhibiting Bacterial Multicellular Behavior: Challenges and Strategies”, US Surgical, Inc. New Heaven, CT, 2006.
6. “Bacterial multicellular behaviors as a target for new therapies”, Utica College, Utica, NY, 2007.
7. “Controlling Microbial Biofilm Formation: Challenges and Strategies”, Welch Allyn, Inc., NY, 2007.
8. “Bacterial multicellular behaviors as a target for new therapies”, SUNY Upstate Medical University, 2007.
9. “Biofilm Formation: A Problem When Bacteria Settle”, Florida State University, FL, 2007.
10. “Biofilm Formation: A Problem When Bacteria Settle”, Department of Biology, Syracuse University, 2008.
11. “Interdisciplinary Approaches to Understanding and Controlling Biofilm Formation” Union College, Schenectady, NY, 2008.
12. “Bacterial biofilm formation: from infectious diseases to biofuel production”. Brookhaven National Laboratory, 2009.
13. “Interdisciplinary Approaches to Understanding and Controlling Biofilm Formation”. University of Pittsburgh, 2010.
14. “Interdisciplinary Approaches to Understanding and Controlling Biofilm Formation”. New York University, 2010.
15. “Bacterial Biofilm Formation: From Infectious Diseases to Biofuel Production”. Tianjin University, China, 2010.
16. “Bacterial Biofilm Formation: From Infectious Diseases to Biofuel Production”. Shanghai JiaoTong University, China, 2010.
17. “Interdisciplinary Approaches to Understanding and Controlling Biofilm Formation”. Rensselaer Polytechnic Institute, 2010.
18. “Controlling bacterial biofilms and persister cells by target quorum sensing”, 20th annual event of AIMBE, Washington, DC, 2011.
19. “Patterned Biofilm Formation by Surface Engineering”, 11th New York Complex Matter Workshop”, Syracuse University, Syracuse, NY, 2011.
20. “Bacterial social networks: from cell-cell signaling to biofilm formation and drug resistance”, Cornell University, Ithaca, NY, 2011.
21. “Bacterial social networks: from cell-cell signaling to biofilm formation and drug resistance”, Binghamton University, Binghamton, NY, 2011.

22. “Bacterial social networks: from cell-cell signaling to biofilm formation and drug resistance”, SUNY Downstate Medical Center, Brooklyn, NY, 2012.
23. “Controlling Biofilms by Targeting Bacterial Cell-to-Cell Signaling”, The First EITA Conference on Agricultural Science and Technology, Biosystems Engineering, Cornell University, Ithaca, NY, 2013.
24. “Controlling bacterial persister cells by manipulating cell-cell signaling”. SUNY Upstate Medical University, Syracuse, NY, 2014.
25. “How do bacteria read the map: effects of surface properties on cell adhesion and biofilm formation”, University of Pennsylvania, Philadelphia, PA, 2014.
26. “How do bacteria read the map: effects of surface properties on cell adhesion and biofilm formation”, University of Buffalo, Buffalo, NY, 2014.
27. “Controlling Bacterial Biofilms and Persister Cells by Manipulating Intercellular Signaling”, Oregon State University, Corvallis, OR, 2014
28. “Materials and surface engineering to control bacterial adhesion and biofilm formation”, Illinois Institute of Technology, Chicago, IL, 2015

Conference presentations and posters

60. Fangchao Song and **Dacheng Ren**, “Surface Stiffness Affects Bacterial Adhesion, Growth and Antibiotic Susceptibility of Attached Cells”, AIChE Annual Meeting, Atlanta, GA, 2014
59. Aaron Chen, Robert Neiberger, Huan Gu, Xiangyu Yao, and **Dacheng Ren**, “Orientation and Cluster Formation of *Escherichia coli* Cells Attached to Poly(dimethylsiloxane) Surfaces with Microtopographic Line Patterns”, ASM Annual Meeting, Boston, MA, 2014.
58. Fangchao Song, **Dacheng Ren**, “Stiffness of cross-linked poly(dimethylsiloxane) affects bacterial adhesion and antibiotic susceptibility of attached cells”, ASM Annual Meeting, Boston, MA, 2014.
57. Ali Adem Bahar, Filbert Totsingan, Zhigang Liu, Neville Kallenbach, **Dacheng Ren**, “Controlling *Pseudomonas aeruginosa* with a Synthetic Antimicrobial Dendrimer 2D-24”, ASM Annual Meeting, Boston, MA, 2014.
56. Brian R. Austin, Ali Adem Bahar, and **Dacheng Ren**, “Identifying Oligopeptides for Binding to *Pseudomonas aeruginosa* Cells”. Emerging Researchers National Conference in STEM, Washington, 2014.
55. Anastasia Budinskaya, Xiangyu Yao, and **Dacheng Ren**, “Patterned Biofilm Formation of *Escherichia coli*”. Emerging Researchers National Conference in STEM, Washington, 2014.
54. Jiachuan Pan, and **Dacheng Ren**, “Reverting Antibiotic Tolerance of *Pseudomonas aeruginosa* Persister Cells by Synthetic Brominated Furanones”, 14th International Conference on Pseudomonas, Lausanne, Switzerland, 2013.
53. Ginger Gunnip, Dennis Frasier, Chelsea Stevens, Geetika Choudhary, Yating Liu, and **Dacheng Ren** “Multidisciplinary Approaches for Controlling Bacterial Biofilms and Persister Cells”. EFRI-REM Grantees’ Conference, Washington, DC, 2013.
52. Suzanne De Tore, Dianne LaChance, Chanokpon Yongyat, and **Dacheng Ren**. “Understanding Gene Functions in Biofilm Formation Using Patterned Surfaces”. EFRI-REM Grantees’ Conference, Washington, DC, 2013.
51. Jiachuan Pan, Ali Bahar, Haseeba Syed, and **Dacheng Ren**, “Reverting Antibiotic Tolerance of Bacterial Persisters by Brominated Furanones”, 6th ASM Conference on Biofilms, Miami, FL, 2012.

50. Tagbo Niepa, Jeremy Gilbert, and **Dacheng Ren**, "Controlling *Pseudomonas aeruginosa* persister cells by weak electrochemical currents and synergistic effects with tobramycin", 6th ASM Conference on Biofilms, Miami, FL, 2012.
49. Huan Gu, Shuyu Hou, and **Dacheng Ren**, "Patterned Biofilm Formation Revealed New Insights into Bacteria-Surface Interactions", 6th ASM Biofilm Conference on Biofilm, Miami, FL, 2012.
48. Huan Gu, Shuyu Hou, and **Dacheng Ren**, "Patterned Biofilm Formation Reveals Critical Information of Bacteria-Surface Interactions", ASM 2012 Annual General Meeting, San Francisco, CA, 2012.
47. Huan Gu, Kristopher William Kolewe, and **Dacheng Ren**, "Horizontal Gene Transfer in *Escherichia coli* Biofilms on polydimethylsiloxane surfaces with microtopographic patterns", ASM 2012 Annual General Meeting, San Francisco, CA, 2012.
46. Geetika Choudhary, Rebecca A. Bader, and **Dacheng Ren**, "Controlling bacterial persister cells with Granulocyte Macrophage-Colony Stimulating Factor", ASM 112th General Meeting, San Francisco, CA, 2012.
45. Jiachuan Pan, Ali Bahar, Haseeba Syed, and **Dacheng Ren**, "Controlling Bacterial Persister Cells With Brominated Furanones", ASM 112th General meeting, San Francisco, CA, 2012.
44. Tagbo Niepa, Jeremy Gilbert, and **Dacheng Ren**, "Electrochemical Inhibition of *Pseudomonas aeruginosa* Persister Cells", BMES Annual Meeting, Hartford, CT, 2011.
43. Jiachuan Pan and **Dacheng Ren**, "Reverting Antibiotic Tolerance of Bacterial Persister Cells", BMES Annual Meeting, Hartford, CT, 2011.
42. Huan Gu, Shuyu Hou, Cassandra Smith, and **Dacheng Ren**, "Effects of microtopographic patterns on *Escherichia coli* biofilm formation on polydimethylsiloxane surfaces", Stevens Conference on Bacteria-Material Interactions, Hoboken, NJ, 2011.
41. Tagbo Niepa, Mi Zhang, Jeremy Gilbert, and Dacheng Ren, "Electrochemical Inhibition of Bacterial Persister Cells", Stevens Conference on Bacteria-Material Interactions, Hoboken, NJ, 2011.
40. **Dacheng Ren** (invited speaker), Yan-Yeung Luk, Jeremy L. Gilbert and Neville R. Kallenbach, "Bacterial control by targeting biofilms and persister cells". Conference on Recent Advances in Microbial Control, sponsored by the Society for Industrial Microbiology, Arlington, VA, 2010.
39. Xi Chen, Mi Zhang, Chunhui Zhou, Anne W. Young, Neville R. Kallenbach and **Dacheng Ren**, "Effects of Trp/Arg antimicrobial peptides on persister cells of *Escherichia coli*", AICHE annual meeting, Salt Lake City, UT, 2010.
38. Shuyu Hou, Cassandra Smith, Huan Gu and **Dacheng Ren**, "Effects of microtopographic patterns on *Escherichia coli* biofilm formation on polydimethylsiloxane surfaces", AICHE annual meeting, Salt Lake City, UT, 2010.
37. Shuyu Hou and **Dacheng Ren**, "Patterned Biofilm Formation Reveals the Maximum Distance for Interaction Between Bacterial Clusters", AICHE annual meeting, Nashville, TN (2009).
36. Mi Zhang, Guifen Luo, and **Dacheng Ren**, "Inactivation of Persister Cells by Low-Level Direct Currents", AICHE annual meeting, Nashville, TN (2009).
35. Shuyu Hou, Zhigang Liu, Neville R. Kallenbach, and **Dacheng Ren**, "The Structural Effects On Biofilm Inhibition and Dispersion by Trp/Arg Antimicrobial Peptides", AICHE annual meeting, Nashville, TN (2009).
34. Wen-Hsuan Huang, Zhiqiang Wang, Beverly Guo, Jianshun Zhang, and **Dacheng Ren**, "Characterization of Microbes in a Regenerative Biofilter System for VOC Removal", AICHE annual meeting, Nashville, TN (2009).

33. Shuyu Hou, Zhigang Liu, Neville R. Kallenbach, and **Dacheng Ren**, "Effects of chain length on biofilm inhibition by Trp/Arg antimicrobial peptides", ACS annual meeting, Washington, DC (2009).
32. Shuyu Hou, Erik A. Burton, Yan-Yeung Luk, and **Dacheng Ren**, "Prolonged control of patterned biofilms on self-assembled monolayers of alkanethiols presenting functional groups", ACS annual meeting, Washington, DC (2009).
31. Shuyu Hou, Miao Duo, YongBin Han, Yan-Yeung Luk, and **Dacheng Ren**, "Inhibiting Microbial Biofilm Formation by Brominated Furanones" Materials and Processes for Medical Devices meeting, Minneapolis, MN (2009).
30. Adam Smith, Manas C. Medisetty, Wen-Hsuan Huang, Joseph J. Priola, and **Dacheng Ren**, "Engineering *Escherichia coli* for Improved Ethanol and Butanol Tolerance for Biofuel Production", AICHE Annual Meeting, Philadelphia, PA (2008).
29. Shuyu Hou, Erik A. Burton, Yan-Yeung Luk, and **Dacheng Ren**, "Controlling Microbial Adhesion and Biofilm Formation by Self-assembled Monolayers of Alkanethiols Presenting Mannitol Group", AICHE Annual Meeting, Philadelphia, PA (2008).
28. Shuyu Hou, Erik A. Burton, Karen A. Simon, Yan-Yeung Luk, and **Dacheng Ren**, "Bacterial Adhesion on Surfaces with Gradients of Bio-Inertness and Roughness", AICHE Annual Meeting, Philadelphia, PA (2008).
27. Miao Duo, Sheron Mark, Xi Chen, Shuyu Hou, and **Dacheng Ren**, "Identifying Genes Involved in Multidrug Resistance in Gram-negative Bacteria", AICHE Annual Meeting, Philadelphia, PA (2008).
26. Kristen Manchester, Yongbin Han, Susan E. Anagnost, Yan-Yeung Luk, and **Dacheng Ren**, "Control of Wood Decay Fungi by Brominated Furanones", AICHE Annual Meeting, Philadelphia, PA, (2008).
25. Shuyu Hou, Erik A. Burton, Yan-Yeung Luk, and **Dacheng Ren**, "Controlling Microbial Adhesion and Biofilm Formation by Self-assembled Monolayers of Alkanethiols Presenting Mannitol Group", Syracuse CoE Symposium (2008).
24. Robert Szkotak, Shuyu Hou, Elden P. Swindell III, Erik. A. Burton, Yan-Yeung Luk, Jeremy Gilbert, and **Dacheng Ren**, "Electrically Enhanced Control of Bacterial Biofilms", Inaugural SBI Offsite Meeting, Syracuse, NY (2008).
23. Miao Duo, Sheron Mark, Xi Chen, Shuyu Hou, and **Dacheng Ren**, "Identifying Genes Involved in Multidrug Resistance in Gram-Negative Bacteria by Transposon Mutagenesis", Inaugural SBI Offsite Meeting, Syracuse, NY (2008).
22. Jian Wu, Shuyu Hou, **Dacheng Ren**, and Patrick T. Mather, "Antimicrobial Nanostructured Hydrogel Webs with Controlled Silver Release", Inaugural SBI Offsite Meeting, Syracuse, NY (2008).
22. Shuyu Hou, Erik. A. Burton, Yan-Yeung Luk, and **Dacheng Ren**, "Controlling Microbial Adhesion and Biofilm Formation by Self-assembled Monolayers of Alkanethiols Presenting Mannitol Group", Inaugural SBI Offsite Meeting, Syracuse, NY (2008).
21. Shuyu Hou, Erik A. Burton, Yan-Yeung Luk, and **Dacheng Ren**, "Controlling Microbial Adhesion and Biofilm Formation by Self-assembled Monolayers of Alkanethiols Presenting Mannitol Group" 108th ASM General Meeting, Boston, MA (2008).
20. Robert Szkotak, Elden P Swindell III, and **Dacheng Ren**, "Development of A Flow Cell System for the Study of Bioelectric Effects" 108th ASM General Meeting, Boston, MA (2008).
19. Miao Duo, Shuyu Hou, and **Dacheng Ren**, "Identifying *Escherichia coli* Multidrug Resistance Genes by Transposon Mutagenesis" 108th ASM General Meeting, Boston, MA (2008).

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