Stanford



Lynette Cegelski

Monroe E. Spaght Professor of Chemistry and Professor, by courtesy, of Chemical Engineering

Curriculum Vitae available Online

CONTACT INFORMATION

- **Administrative Contact**

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Bio

BIO

From bacterial communities to human tissues and marine ecosystems, living systems are organized by their intrinsic chemical and macromolecular composition, molecular interactions, and often unusual chemical modifications that remain largely hidden from view. Our laboratory uncovers this chemistry. We harness fundamental discovery and innovative chemistry to solve pressing problems in human health and sustainability, translating molecular insight into new antibacterial, biological, and materials solutions.

Prior to joining Stanford, Cegelski received her undergraduate degree in chemistry from SUNY Binghamton (summa cum laude, Phi Beta Kappa) and her Ph.D. from Washington University in St. Louis, where she developed innovative solid-state NMR methods to uncover new chemistry in intact S. aureus bacteria, particularly investigating the mode of action of oritavancin, and soybean plant leaves and cell walls. She conducted postdoctoral research in molecular microbiology at Washington University School of Medicine, defining the role of functional amyloids in bacterial biofilms and introducing the first small-molecule inhibitors of bacterial amyloid assembly, inhibitors that were effective in reducing bacterial pathogenesis. She joined the faculty in the Stanford University Department of Chemistry in 2008. Her work has been recognized by multiple honors, including the Burroughs Wellcome Fund Career Award at the Scientific Interface, the NIH Director's New Innovator Award, the NSF CAREER Award, the ICMRBS Founders' Medal, and the Presidential Early Career Award for Scientists and Engineers.

ACADEMIC APPOINTMENTS

- Professor, Chemistry
- Professor (By courtesy), Chemical Engineering
- Member, Bio-X
- Faculty Fellow, Sarafan ChEM-H
- Member, Wu Tsai Neurosciences Institute

HONORS AND AWARDS

- Presidential Early Career Award for Scientists and Engineers, National Science Foundation (2019)
- ICMRBS Founder's Medal, International Council on Magnetic Resonance in Biological Systems (2018)

- NSF CAREER Award, National Science Foundation (2015)
- Hellman Faculty Scholar Award, Hellman Fellows Fund (2012)
- Terman Fellowship, Stanford University (2011)
- NIH Director's New Innovator Award, National Institutes of Health (2010)
- Career Award at the Scientific Interface, Burroughs Wellcome Fund (2008)
- Terman Fellowship, Stanford University (2008)

PROFESSIONAL EDUCATION

- Postdoc, Washington University School of Medicine , Molecular Microbiology (2008)
- PhD, Washington University , Chemistry (2004)
- BS, Binghamton University, SUNY , Chemistry (1998)

PATENTS

- Rahn HP, Sun J, Wender PA, Cegelski L, Chosy M, Liu X.. "United States Patent WO2025235652A1 Biguanide-vancomycin Conjugates as Effective Broad-spectrum Antibiotics", Leland Stanford Junior University
- Wender PA, Cegelski L, Brcic J, Chosy M, Rahn HP, Sun J. "United States Patent 12,653,892 B2 Composition and Method for New Therapeutic Agents including Guanidinium-presenting Dendrimers and Branched Structures", Leland Stanford Junior University, Jun 16, 2026
- Huttner, M.; Wender, P; Cegelski, L.; Zang, Xiaoyu; Antonoplis, A. "United States Patent 62/633,368 (WO2019165051A1) Composition and method for new antimicrobial agents with secondary mode of action", Leland Stanford Junior University, Aug 29, 2019
- Lynette Cegelski, Wiriya Thongsomboon. "United States Patent WO2018035411A1 Production and Use of Phosphoethanolamine Cellulose and Derivatives", Leland Stanford Junior University, Feb 22, 2018
- Lynette Cegelski, Ji Youn Lim. "United States Patent 9,271,493 Methods for Microbial Biofilm Destruction", Leland Stanford Junior University, Mar 1, 2016

LINKS

- The Cegelski Lab: http://www.cegelskilab.com
- Bio-X Profile: https://biox.stanford.edu/people/lynette-cegelski

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Our laboratory uncovers the chemical principles that organize living systems. Across biology - from microbial communities to human disease - chemical and macromolecular composition, molecular interactions, and chemical modifications govern the assembly, function, and persistence of complex biological systems, yet many of these principles remain hidden from conventional approaches. We develop innovative chemical, structural, and biological strategies to preserve and interrogate intact biological systems, revealing chemistry that cannot be observed by studying isolated components alone. Our work has uncovered previously unknown molecular structures, chemical modifications, and mechanisms of biological organization, including the discovery of phosphoethanolamine (pEtN) cellulose, a chemically modified form of cellulose that fundamentally changed our understanding of bacterial extracellular matrices.

In parallel, we discover and engineer molecules that probe, disrupt, and control biological systems. A major focus is the development of new strategies to combat antibiotic resistance and persistent bacterial communities. Our laboratory has introduced first-in-class vancomycin conjugates with multiple modes of action, unusually broad-spectrum activity, and the ability to sterilize biofilms - properties not observed together in other vancomycin conjugates. We also develop anti-biofilm agents, molecular probes, imaging agents, and other chemical tools that both reveal new biology and provide starting points for addressing pressing challenges in human health and disease.

Together, our research spans fundamental chemical discovery and molecular invention: uncovering the chemistry that enables biological systems to assemble and persist, and using those insights to create new ways to interrogate and control them. This work opens opportunities to combat infectious disease, improve human health, preserve marine ecosystems, advance sustainable materials, and deepen our understanding of how chemistry organizes life.

Teaching

COURSES

2026-27

- Biochemistry I: CHEM 181, CHEMENG 181, CHEMENG 281 (Aut)
- Biological Chemistry Laboratory: CHEM 184 (Spr)

2025-26

- Biochemistry I: CHEM 181, CHEMENG 181, CHEMENG 281 (Aut)
- Biological Chemistry Laboratory: CHEM 184 (Spr)

2024-25

- Biochemistry I: CHEM 181, CHEMENG 181, CHEMENG 281 (Aut)
- Biological Chemistry Laboratory: CHEM 184 (Spr)
- Chemistry Research Proposal: CHEM 211C (Win)
- Chemistry Research Seminar Presentation: CHEM 211B (Win)
- Curricular Practical Training for Chemists: CHEM 390 (Aut, Win, Spr, Sum)
- Research Progress in Chemistry: CHEM 211A (Win)

2023-24

- Biochemistry I: CHEM 181, CHEMENG 181, CHEMENG 281 (Aut)
- Chemistry Research Proposal: CHEM 211C (Win)
- Chemistry Research Seminar Presentation: CHEM 211B (Win)
- Curricular Practical Training for Chemists: CHEM 390 (Aut, Win, Spr, Sum)
- Manipulating Spins: NMR Theory and Applications: CHEM 277 (Spr)
- Research Progress in Chemistry: CHEM 211A (Win)

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biophysics (PhD Program)

Publications

PUBLICATIONS

- **Insights into phosphoethanolamine cellulose synthesis and secretion across the Gram-negative cell envelope.** *Nature communications*
  Verma, P., Ho, R., Chambers, S. A., Cegelski, L., Zimmer, J.
  2024; 15 (1): 7798
- **Biguanide-Vancomycin Conjugates are Effective Broad-Spectrum Antibiotics against Actively Growing and Biofilm-Associated Gram-Positive and Gram-Negative ESKAPE Pathogens and Mycobacteria.** *Journal of the American Chemical Society*
  Rahn, H. P., Liu, X., Chosy, M. B., Sun, J., Cegelski, L., Wender, P. A.
  2024

- **CPMAS NMR platform for direct compositional analysis of mycobacterial cell-wall complexes and whole cells.** *Journal of magnetic resonance open*
  Liu, X., Brčić, J., Cassell, G. H., Cegelski, L.
  2023; 16-17

- **Conjugation of Vancomycin with a Single Arginine Improves Efficacy against Mycobacteria by More Effective Peptidoglycan Targeting.** *Journal of medicinal chemistry*
  Brčić, J., Tong, A., Wender, P. A., Cegelski, L.
  2023

- **Vancomycin-Arginine Conjugate Inhibits Growth of Carbapenem-Resistant E. coli and Targets Cell-Wall Synthesis.** *ACS chemical biology*
  Antonoplis, A. n., Zang, X. n., Wegner, T. n., Wender, P. A., Cegelski, L. n.
  2019

- **Phosphoethanolamine cellulose enhances curli-mediated adhesion of uropathogenic Escherichia coli to bladder epithelial cells.** *Proceedings of the National Academy of Sciences of the United States of America*
  Hollenbeck, E. C., Antonoplis, A., Chai, C., Thongsomboon, W., Fuller, G. G., Cegelski, L.
  2018

- **Phosphoethanolamine cellulose: A naturally produced chemically modified cellulose** *SCIENCE*
  Thongsomboon, W., Serra, D. O., Possling, A., Hadjineophytou, C., Hengge, R., Cegelski, L.
  2018; 359 (6373): 334–38

- **Bacterial cell wall composition and the influence of antibiotics by cell-wall and whole-cell NMR.** *Philosophical transactions of the Royal Society of London. Series B, Biological sciences*
  Romaniuk, J. A., Cegelski, L.
  2015; 370 (1679)

- **Glycogen phase-separation drives macromolecular rearrangement and asymmetric division in E. coli.** *The EMBO journal*
  Thappeta, Y., Cañas-Duarte, S. J., Wang, H., Kallem, T., Fragasso, A., Xiang, Y., Gray, W., Lee, C., Hardo, G., Cegelski, L., Jacobs-Wagner, C.
  2025

- **Polyacrylamide-Based Antimicrobial Copolymers to Replace or Rescue Antibiotics.** *ACS central science*
  Williams, S. C., Chosy, M. B., Jons, C. K., Dong, C., Prossnitz, A. N., Liu, X., Hernandez, H. L., Cegelski, L., Appel, E. A.
  2025; 11 (3): 486-496

- **Vibrio cholerae RbmB is an α-1,4-polysaccharide lyase with biofilm-disrupting activity against Vibrio polysaccharide (VPS).** *PLoS pathogens*
  Weerasekera, R., Moreau, A., Huang, X., Nam, K. M., Hinbest, A., Huynh, Y., Liu, X., Ashwood, C., Pepi, L. E., Paulson, E., Cegelski, L., Yan, J., Olson, et al
  2024; 20 (12): e1012750

- **Unveiling the Stability of Encapsulated Pt Catalysts Using Nanocrystals and Atomic Layer Deposition.** *Journal of the American Chemical Society*
  Liccardo, G., Cendejas, M. C., Mandal, S. C., Stone, M. L., Porter, S., Nhan, B. T., Kumar, A., Smith, J., Plessow, P. N., Cegelski, L., Osio-Norgaard, J., Abild-Pedersen, F., Chi, et al
  2024

- **Glycogen phase separation drives macromolecular rearrangement and asymmetric division in E. coli.** *bioRxiv : the preprint server for biology*
  Thappeta, Y., Cañas-Duarte, S. J., Kallem, T., Fragasso, A., Xiang, Y., Gray, W., Lee, C., Cegelski, L., Jacobs-Wagner, C.
  2024

- **Molecular insights into phosphoethanolamine cellulose formation and secretion.** *bioRxiv : the preprint server for biology*
  Verma, P., Ho, R., Chambers, S. A., Cegelski, L., Zimmer, J.
  2024

- **Vancomycin-Polyguanidino Dendrimer Conjugates Inhibit Growth of Antibiotic-Resistant Gram-Positive and Gram-Negative Bacteria and Eradicate Biofilm-AssociatedS.aureus.** *ACS infectious diseases*
  Chosy, M. B., Sun, J., Rahn, H. P., Liu, X., Brcic, J., Wender, P. A., Cegelski, L.
  2024

- **Detection of intact vancomycin-arginine as the active antibacterial conjugate in E. coli by whole-cell solid-state NMR.** *RSC medicinal chemistry*
  Werby, S. H., Brčić, J., Chosy, M. B., Sun, J., Rendell, J. T., Neville, L. F., Wender, P. A., Cegelski, L.
  2023; 14 (6): 1192-1198
- **Nordihydroguaiaretic Acid (NDGA) Inhibits CsgA Polymerization, Bacterial Amyloid Biogenesis, and Biofilm Formation.** *Chembiochem : a European journal of chemical biology*
  Visser, J. A., Yager, D., Chambers, S. A., Lim, J. Y., Cao, X., Cegelski, L.
  2023: e202300266
- **Catching Threads in Bacterial Cell Walls** *ACS CENTRAL SCIENCE*
  Kallem, T., Cegelski, L.
  2022: 1376-1379
- **PITing it forward: A new link in the journey of uropathogenic E.coli in the urothelium.** *Cell reports*
  Joshi, C. S., Cegelski, L., Mysorekar, I. U.
  2022; 39 (4): 110758
- **Chemical and Molecular Composition of the Chrysalis Reveals Common Chitin-rich Structural Framework for Monarchs and Swallowtails.** *Journal of molecular biology*
  Goularte, N. F., Kallem, T., Cegelski, L.
  1800: 167456
- **Molecular organization of the E. coli cellulose synthase macrocomplex.** *Nature structural & molecular biology*
  Acheson, J. F., Ho, R., Goularte, N. F., Cegelski, L., Zimmer, J.
  2021; 28 (3): 310–18
- **In vivo targeting of E. coli with vancomycin-arginine.** *Antimicrobial agents and chemotherapy*
  Neville, L. F., Shalit, I. n., Warn, P. A., Scheetz, M. H., Sun, J. n., Chosy, M. B., Wender, P. A., Cegelski, L. n., Rendell, J. T.
  2021
- **Identification of a novel pyruvyltransferase using 13C solid-state NMR to analyze rhizobial exopolysaccharides.** *Journal of bacteriology*
  Wells, D. H., Goularte, N. F., Barnett, M. J., Cegelski, L., Long, S. R.
  2021: JB0040321
- **Mechanochemical synthesis of an elusive fluorinated polyacetylene.** *Nature chemistry*
  Boswell, B. R., Mansson, C. M., Cox, J. M., Jin, Z., Romaniuk, J. A., Lindquist, K. P., Cegelski, L., Xia, Y., Lopez, S. A., Burns, N. Z.
  2020
- **Variation in the ratio of curli and phosphoethanolamine cellulose associated with biofilm architecture and properties.** *Biopolymers*
  Jeffries, J., Thongsomboon, W., Visser, J. A., Enriquez, K., Yager, D., Cegelski, L.
  2020: e23395
- **Bicyclohexene-peri-naphthalenes: Scalable Synthesis, Diverse Functionalization, Efficient Polymerization, and Facile Mechanoactivation of Their Polymers.** *Journal of the American Chemical Society*
  Yang, J., Horst, M., Werby, S. H., Cegelski, L., Burns, N. Z., Xia, Y.
  2020; 142 (34): 14619–26
- **Evaluation of Phosphoethanolamine Cellulose Production among Bacterial Communities using Congo Red Fluorescence.** *Journal of bacteriology*
  Thongsomboon, W., Werby, S. H., Cegelski, L.
  2020
- **Mechanical and microstructural insights of Vibrio cholerae and Escherichia coli dual-species biofilm at the air-liquid interface.** *Colloids and surfaces. B, Biointerfaces*
  Abriat, C., Enriquez, K., Virgilio, N., Cegelski, L., Fuller, G. G., Daigle, F., Heuzey, M.
  2020; 188: 110786
- **Design and Implementation of a Six-Session CURE Module Using Biofilms to Explore the Chemistry-Biology Interface** *JOURNAL OF CHEMICAL EDUCATION*
  Werby, S., Cegelski, L.

2019; 96 (9): 2050–54

- **Benzoladderene Mechanophores: Synthesis, Polymerization, and Mechanochemical Transformation** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Yang, J., Horst, M., Romaniuk, J. A. H., Jin, Z., Cegelski, L., Xia, Y.
  2019; 141 (16): 6479–83
- **Benzoladderene Mechanophores: Synthesis, Polymerization, and Mechanochemical Transformation.** *Journal of the American Chemical Society*
  Yang, J., Horst, M., Romaniuk, J. A., Jin, Z., Cegelski, L., Xia, Y.
  2019
- **Integration of electron microscopy and solid-state NMR analysis for new views and compositional parameters of Aspergillus fumigatus biofilms** *MEDICAL MYCOLOGY*
  Reichhardt, C., Joubert, L., Clemons, K. V., Stevens, D. A., Cegelski, L.
  2019; 57: S239–S244
- **Integration of electron microscopy and solid-state NMR analysis for new views and compositional parameters of Aspergillus fumigatus biofilms.** *Medical mycology*
  Reichhardt, C., Joubert, L., Clemons, K. V., Stevens, D. A., Cegelski, L.
  2019; 57 (Supplement_2): S239–S244
- **Spectral comparisons of mammalian cells and intact organelles by solid-state NMR** *JOURNAL OF STRUCTURAL BIOLOGY*
  Werby, S. H., Cegelski, L.
  2019; 206 (1): 49–54
- **Respiratory Heterogeneity Shapes Biofilm Formation and Host Colonization in Uropathogenic Escherichia coli** *MBIO*
  Beebout, C. J., Eberly, A. R., Werby, S. H., Reasoner, S. A., Brannon, J. R., De, S., Fitzgerald, M. J., Huggins, M. M., Clayton, D. B., Cegelski, L., Hadjifrangiskou, M.
  2019; 10 (2)
- **Carbon compositional analysis of hydrogel contact lenses by solid-state NMR spectroscopy.** *Solid state nuclear magnetic resonance*
  Rabiah, N. I., Romaniuk, J. A., Fuller, G. G., Scales, C. W., Cegelski, L. n.
  2019; 102: 47–52
- **Unraveling Escherichia coli's Cloak: Identification of Phosphoethanolamine Cellulose, Its Functions, and Applications.** *Microbiology insights*
  Jeffries, J. n., Fuller, G. G., Cegelski, L. n.
  2019; 12: 1178636119865234
- **Respiratory Heterogeneity Shapes Biofilm Formation and Host Colonization in Uropathogenic Escherichia coli.** *mBio*
  Beebout, C. J., Eberly, A. R., Werby, S. H., Reasoner, S. A., Brannon, J. R., De, S., Fitzgerald, M. J., Huggins, M. M., Clayton, D. B., Cegelski, L., Hadjifrangiskou, M.
  2019; 10 (2)
- **Functional Specialization in Vibrio cholerae Diguanylate Cyclases: Distinct Modes of Motility Suppression and c-di-GMP Production.** *mBio*
  Zamorano-Sánchez, D. n., Xian, W. n., Lee, C. K., Salinas, M. n., Thongsomboon, W. n., Cegelski, L. n., Wong, G. C., Yildiz, F. H.
  2019; 10 (2)
- **Synthesis and Mechanochemical Activation of Ladderene-Norbornene Block Copolymers.** *Journal of the American Chemical Society*
  Su, J. K., Feist, J. D., Yang, J., Mercer, J. A., Romaniuk, J. A., Chen, Z., Cegelski, L., Burns, N. Z., Xia, Y.
  2018; 140 (39): 12388–91
- **Peptidoglycan and Teichoic Acid Levels and Alterations in Staphylococcus aureus by Cell-Wall and Whole-Cell Nuclear Magnetic Resonance** *BIOCHEMISTRY*
  Romaniuk, J. A. H., Cegelski, L.
  2018; 57 (26): 3966–75
- **REDOR NMR Reveals Multiple Conformers for a Protein Kinase C Ligand in a Membrane Environment** *ACS CENTRAL SCIENCE*
  Yang, H., Staveness, D., Ryckbosch, S. M., Axtman, A. D., Loy, B. A., Barnes, A. B., Pande, V. S., Schaefer, J., Wender, P. A., Cegelski, L.
  2018; 4 (1): 89–96

- **The Congo red derivative FSB binds to curli amyloid fibers and specifically stains curliated E. coli.** *PloS one*
  Reichhardt, C., Cegelski, L.
  2018; 13 (8): e0203226
- **A dual function antibiotic-transporter conjugate exhibits superior activity in sterilizing MRSA biofilms and killing persister cells.** *Journal of the American Chemical Society*
  Antonoplis, A. n., Zang, X. n., Huttner, M. A., Chong, K. n., Lee, Y. B., Co, J. Y., Amieva, M. n., Kline, K. n., Wender, P. A., Cegelski, L. n.
  2018
- **Whole-Cell Detection of C-P Bonds in Bacteria** *BIOCHEMISTRY*
  Bartlett, C., Bansal, S., Burnett, A., Suits, M. D., Schaefer, J., Cegelski, L., Horsman, G. P., Weadge, J. T.
  2017; 56 (44): 5870–73
- **Whole Ribosome NMR: Dipolar Couplings and Contributions to Whole Cells.** *The journal of physical chemistry. B*
  Nygaard, R., Romaniuk, J. A., Rice, D. M., Cegelski, L.
  2017; 121 (40): 9331-9335
- **Disentangling Nanonets: Human a-Defensin 6 Targets Candida albicans Virulence.** *Biochemistry*
  Cegelski, L.
  2017; 56 (8): 1027-1028
- **Visualization of Aspergillus fumigatus biofilms with Scanning Electron Microscopy and Variable Pressure-Scanning Electron Microscopy: A comparison of processing techniques** *JOURNAL OF MICROBIOLOGICAL METHODS*
  Joubert, L., Ferreira, J. A., Stevens, D. A., Nazik, H., Cegelski, L.
  2017; 132: 46-55
- **Mechanochemical unzipping of insulating polyladderene to semiconducting polyacetylene** *Science*
  Chen, Z., Mercer, J. A., Zhu, X., Romaniuk, J. A., Pfattner, R., Cegelski, L., Martinez, T. J., Burns, N. Z., Xia, Y.
  2017; 357 (6350): 475-479
- **Pseudomonas phage inhibition of Candida albicans.** *Microbiology (Reading, England)*
  Nazik, H. n., Joubert, L. M., Secor, P. R., Sweere, J. M., Bollyky, P. L., Sass, G. n., Cegelski, L. n., Stevens, D. A.
  2017
- **Influence of the amyloid dye Congo red on curli, cellulose, and the extracellular matrix in E. coli during growth and matrix purification.** *Analytical and bioanalytical chemistry*
  Reichhardt, C., McCrate, O. A., Zhou, X., Lee, J., Thongsomboon, W., Cegelski, L.
  2016; 408 (27): 7709-7717
- **Fungal biofilm composition and opportunities in drug discovery.** *Future medicinal chemistry*
  Reichhardt, C., Stevens, D. A., Cegelski, L.
  2016; 8 (12): 1455-1468
- **Mechanical Behavior of a Bacillus subtilis Pellicle** *JOURNAL OF PHYSICAL CHEMISTRY B*
  Hollenbeck, E. C., Douarche, C., Allain, J., Roger, P., Regeard, C., Cegelski, L., Fuller, G. G., Raspaud, E.
  2016; 120 (26): 6080-6088
- **Analysis of the Aspergillus fumigatus Biofilm Extracellular Matrix by Solid-State Nuclear Magnetic Resonance Spectroscopy.** *Eukaryotic cell*
  Reichhardt, C., Ferreira, J. A., Joubert, L., Clemons, K. V., Stevens, D. A., Cegelski, L.
  2015; 14 (11): 1064-1072
- **Frequency-selective REDOR and spin-diffusion relays in uniformly labeled whole cells.** *Solid state nuclear magnetic resonance*
  Rice, D. M., Romaniuk, J. A., Cegelski, L.
  2015; 72: 132-9
- **Frequency-selective REDOR and spin-diffusion relays in uniformly labeled whole cells** *SOLID STATE NUCLEAR MAGNETIC RESONANCE*
  Rice, D. M., Romaniuk, J. A., Cegelski, L.
  2015; 72: 132-139

- **Cell-Based High-Throughput Screening Identifies Rifapentine as an Inhibitor of Amyloid and Biofilm Formation in Escherichia coli.** *ACS infectious diseases*
  Maher, M. C., Lim, J. Y., Gunawan, C., Cegelski, L.
  2015; 1 (10): 460-8
- **C-di-GMP Regulates Motile to Sessile Transition by Modulating MshA Pili Biogenesis and Near-Surface Motility Behavior in Vibrio cholerae.** *PLoS pathogens*
  Jones, C. J., Utada, A., Davis, K. R., Thongsomboon, W., Zamorano Sanchez, D., Banakar, V., Cegelski, L., Wong, G. C., Yildiz, F. H.
  2015; 11 (10)
- **C-di-GMP Regulates Motile to Sessile Transition by Modulating MshA Pili Biogenesis and Near-Surface Motility Behavior in Vibrio cholerae.** *PLoS pathogens*
  Jones, C. J., Utada, A., Davis, K. R., Thongsomboon, W., Zamorano Sanchez, D., Banakar, V., Cegelski, L., Wong, G. C., Yildiz, F. H.
  2015; 11 (10): e1005068
- **Cell-Based High-Throughput Screening Identifies Rifapentine as an Inhibitor of Amyloid and Biofilm Formation in Escherichia coli** *ACS INFECTIOUS DISEASES*
  Maher, M. C., Lim, J. Y., Gunawan, C., Cegelski, L.
  2015; 1 (10): 460-468
- **Bottom-up and top-down solid-state NMR approaches for bacterial biofilm matrix composition.** *Journal of magnetic resonance*
  Cegelski, L.
  2015; 253: 91-97
- **Spectral Snapshots of Bacterial Cell-Wall Composition and the Influence of Antibiotics by Whole-Cell NMR** *BIOPHYSICAL JOURNAL*
  Nygaard, R., Romaniuk, J. A., Rice, D. M., Cegelski, L.
  2015; 108 (6): 1380-1389
- **Toward a Biorelevant Structure of Protein Kinase C Bound Modulators: Design, Synthesis, and Evaluation of Labeled Bryostatin Analogues for Analysis with Rotational Echo Double Resonance NMR Spectroscopy** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Loy, B. A., Lesser, A. B., Staveness, D., Billingsley, K. L., Cegelski, L., Wender, P. A.
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- **Characterization of the Vibrio cholerae extracellular matrix: a top-down solid-state NMR approach.** *Biochimica et biophysica acta*
  Reichhardt, C., Fong, J. C., Yildiz, F., Cegelski, L.
  2015; 1848 (1): 378-383
- **NMR spectroscopy for atomistic views of biomembranes and cell surfaces.** *Biochimica et biophysica acta*
  Cegelski, L., Weliky, D. P.
  2015; 1848 (1 Pt B): 201-2
- **Characterization of the Vibrio cholerae extracellular matrix: A top-down solid-state NMR approach.** *Biochimica et biophysica acta*
  Reichhardt, C., Fong, J. C., Yildiz, F., Cegelski, L.
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- **Congo Red Interactions with Curli-Producing E. coli and Native Curli Amyloid Fibers.** *PloS one*
  Reichhardt, C., Jacobson, A. N., Maher, M. C., Uang, J., McCrate, O. A., Eckart, M., Cegelski, L.
  2015; 10 (10): e0140388
- **Molecular determinants of mechanical properties of V. cholerae biofilms at the air-liquid interface.** *Biophysical journal*
  Hollenbeck, E. C., Fong, J. C., Lim, J. Y., Yildiz, F. H., Fuller, G. G., Cegelski, L.
  2014; 107 (10): 2245-2252
- **Putative Hydrogen Bond to Tyrosine M208 in Photosynthetic Reaction Centers from Rhodobacter capsulatus Significantly Slows Primary Charge Separation** *JOURNAL OF PHYSICAL CHEMISTRY B*
  Saggu, M., Carter, B., Zhou, X., Faries, K., Cegelski, L., Holten, D., Boxer, S. G., Kirmaier, C.
  2014; 118 (24): 6721-6732
- **Solid-state NMR for bacterial biofilms** *MOLECULAR PHYSICS*
  Reichhardt, C., Cegelski, L.

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- **Community behavior and amyloid-associated phenotypes among a panel of uropathogenic E. coli.** *Biochemical and biophysical research communications*
  Lim, J. Y., Pinkner, J. S., Cegelski, L.
  2014; 443 (2): 345-350
- **Sum of the parts: composition and architecture of the bacterial extracellular matrix.** *Journal of molecular biology*
  McCrate, O. A., Zhou, X., Reichhardt, C., Cegelski, L.
  2013; 425 (22): 4286-4294
- **REDOR NMR for drug discovery** *BIOORGANIC & MEDICINAL CHEMISTRY LETTERS*
  Cegelski, L.
  2013; 23 (21): 5767-5775
- **Curcumin as an amyloid-indicator dye in E. coli.** *Chemical communications*
  McCrate, O. A., Zhou, X., Cegelski, L.
  2013; 49 (39): 4193-4195
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