Stanford

Michael Christopher Jewett

Professor of Bioengineering and, by courtesy, of Chemical Engineering

Bio

BIO

Michael Jewett is a Professor of Bioengineering at Stanford University. He received his B.S. from UCLA and PhD from Stanford University, both in Chemical Engineering. He completed postdoctoral studies at the Center for Microbial Biotechnology in Denmark and the Harvard Medical School. Jewett was also a guest professor at the Swiss Federal Institute of Technology (ETH Zurich). His research group focuses on advancing synthetic biology research to support planet and societal health, with applications in medicine, manufacturing, sustainability, and education.

ACADEMIC APPOINTMENTS

- Professor, Bioengineering
- Professor (By courtesy), Chemical Engineering
- Member, Bio-X
- Faculty Fellow, Sarafan ChEM-H

ADMINISTRATIVE APPOINTMENTS

- Professor, Bioengineering, (2023- present)

HONORS AND AWARDS

- Fellow, American Association of Microbiology (AAM), AAM (2026)
- Rising Star Award, SynBioBeta (2026)
- Andreas Acrivos Award for Professional Progress in Chemical Engineering, AIChE (2025)
- American Institute of Chemical Engineers Division 15 Distinguished Service Award, AIChE (2024)
- American Institute of Chemical Engineers Division 15 Plenary Award, AIChE (2024)
- Beaker List: Top 50 Academic Life Science Entrepreneurs, BIOS (2022)
- American Institute of Chemical Engineers Division 15C Plenary Award, AIChE (2021)
- Fellow, American Association for the Advancement of Science (AAAS), AAAS (2020)
- Fellow, American Institute for Medical and Biological Engineering (AIMBE), AIMBE (2020)
- Fellow, National Academy of Inventors (NAI), NAI (2020)
- Finalist, Blavatnik National Awards for Young Scientists, Life Sciences Category, Blavatnik Awards for Young Scientists (2019)
- Biochemical Engineering Journal Young Investigator Award, BEJ (2018)
- American Chemical Society Biological Technologies Division Young Investigator Award, ACS (2017)
- Camille Dreyfus Teacher-Scholar Award, The Dreyfus Foundation (2015)

- 3M Non-tenured Faculty Grant, 3M (2012)
- Agilent Early Career Professor Award, Agilent (2011)
- David and Lucile Packard Fellowship for Science and Engineering, The Packard Foundation (2011)
- Defense Advanced Research Projects Agency Young Faculty Award, DARPA (2011)
- NIH Pathway to Independence Award, National Institutes of Health (2008)

PROFESSIONAL EDUCATION

- Ph.D., Stanford University , Chemical Engineering (2005)
- M.S., Stanford University , Chemical Engineering (2001)
- B.S., University of California, Los Angeles , Chemical Engineering (1999)

Teaching

COURSES

2025-26

- Biochemical Engineering: BIOE 150, BIOE 250, CHEMENG 150, CHEMENG 250 (Aut)
- Principles of Synthetic Biology: BIOE 240 (Aut)

2024-25

- Principles of Synthetic Biology: BIOE 240 (Aut)

2023-24

- Principles of Synthetic Biology: BIOE 240 (Aut)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Hope Leng

Postdoctoral Faculty Sponsor

Sam Crowe, Beau Dronsella, Megan McSweeney, Samer Saleh, Helena Schulz Mirbach

Doctoral Dissertation Advisor (AC)

Stella Anastasakis, Ravalika Damerla, Megan Fleeharty, Laura Guerrero, Irene Martinez, Anru Tian, Kyle Zolkin

Doctoral (Program)

Veronica Bot, Megan Fleeharty, Brian Kang, Jake Stillson, Hyunjae Woo

Publications

PUBLICATIONS

- **Design-driven optimization of low-cost reagent formulations for reproducible and high-yielding cell-free gene expression.** *Nature communications*
  Olsen, M. L., Copeland, C. E., Sundberg, C. A., Aw, R., Shaver, Z. M., Rao, G., Swartz, J. R., Karim, A. S., Jewett, M. C.
  2026
- **A synthetic cell-free pathway for biocatalytic upgrading of formate from electrochemically reduced CO₂** *NATURE CHEMICAL ENGINEERING*
  Landwehr, G. M., Vogeli, B., Tian, C., Singal, B., Zolkin, K., Martinez, I., Gupta, A., Lion, R., Sargent, E. H., Karim, A. S., Jewett, M. C.
  2025

- **Active learning-guided optimization of cell-free biosensors for lead testing in drinking water.** *bioRxiv : the preprint server for biology*
  Wang, B. M., Chiang, N., Ekas, H. M., Brown, D. M., Dildine, G., Lucci, T. J., Feng, S., Bly, V., Gaillard, J. F., Lucks, J. B., Karim, A. S., Shukla, D., Jewett, et al
  2025

- **Accelerated enzyme engineering by machine-learning guided cell-free expression.** *Nature communications*
  Landwehr, G. M., Bogart, J. W., Magalhaes, C., Hammarlund, E. G., Karim, A. S., Jewett, M. C.
  2025; 16 (1): 865

- **Carbon-negative production of acetone and isopropanol by gas fermentation at industrial pilot scale** *NATURE BIOTECHNOLOGY*
  Liew, F., Nogle, R., Abdalla, T., Rasor, B. J., Canter, C., Jensen, R. O., Wang, L., Strutz, J., Chirania, P., De Tissera, S., Mueller, A. P., Ruan, Z., Gao, et al
  2022; 40 (3): 335-+

- **On-demand biomanufacturing of protective conjugate vaccines** *SCIENCE ADVANCES*
  Stark, J. C., Jaroentomeechai, T., Moeller, T. D., Hershewe, J. M., Warfel, K. F., Moricz, B. S., Martini, A. M., Dubner, R. S., Hsu, K. J., Stevenson, T. C., Jones, B. D., DeLisa, M. P., Jewett, et al
  2021; 7 (6)

- **In vitro prototyping and rapid optimization of biosynthetic enzymes for cell design.** *Nature chemical biology*
  Karim, A. S., Dudley, Q. M., Juminaga, A., Yuan, Y., Crowe, S. A., Heggestad, J. T., Garg, S., Abdalla, T., Grubbe, W. S., Rasor, B. J., Coar, D. N., Torculas, M., Krein, et al
  2020; 16 (8): 912-919

- **BioBits (TM) Bright: A fluorescent synthetic biology education kit** *SCIENCE ADVANCES*
  Stark, J. C., Huang, A., Nguyen, P. Q., Dubner, R. S., Hsu, K. J., Ferrante, T. C., Anderson, M., Kanapskyte, A., Mucha, Q., Packett, J. S., Patel, P., Patel, R., Qaq, et al
  2018; 4 (8): eaat5107

- **Cell-free protein synthesis from genomically recoded bacteria enables multisite incorporation of noncanonical amino acids** *NATURE COMMUNICATIONS*
  Martin, R. W., Des Soye, B. J., Kwon, Y., Kay, J., Davis, R. G., Thomas, P. M., Majewska, N. I., Chen, C. X., Marcum, R. D., Weiss, M., Stoddart, A. E., Amiram, M., Charna, et al
  2018; 9: 1203

- **Single-pot glycoprotein biosynthesis using a cell-free transcription-translation system enriched with glycosylation machinery.** *Nature communications*
  Jaroentomeechai, T. n., Stark, J. C., Natarajan, A. n., Glasscock, C. J., Yates, L. E., Hsu, K. J., Mrksich, M. n., Jewett, M. C., DeLisa, M. P.
  2018; 9 (1): 2686

- **Protein synthesis by ribosomes with tethered subunits** *NATURE*
  Orelle, C., Carlson, E. D., Szal, T., Florin, T., Jewett, M. C., Mankin, A. S.
  2015; 524 (7563): 119-U289

- **Impact of Process Interruptions in the Production of Lysates for Cell-Free Expression Systems.** *Biotechnology and bioengineering*
  Rhea, K. A., Walters, E. N., Zacharko, J. L., Seergae, M. J., Laws, T. R., Maishman, T. C., Choi, Y. N., Lazar, J. T., Karim, A., Kightlinger, W., Jewett, M. C., Lux, M. W.
  2026

- **Topological reprogramming transforms an integral membrane oligosaccharyltransferase into a water-soluble glycosylation catalyst.** *bioRxiv : the preprint server for biology*
  Kwon, Y. H., Mihaljević, L., Kim, K., Kim, D. E., Donahue, T. C., Bidstrup, E. J., Bandi, C. K., Sotomayor, B., Hulbert, S. W., Myers, K. A., Tian, A., Culpepper, M., Mizrachi, et al
  2026

- **Design of solubly expressed miniaturized SMART MHCs.** *Proceedings of the National Academy of Sciences of the United States of America*
  White, W. L., Bai, H., Kim, C. J., Jude, K. M., Sun, R., Guerrero, L., Han, X., Chen, X., Chaudhuri, A., Bonzanini, J. E., Sun, Y., Onwuka, A. E., Wang, et al
  2026; 123 (1): e2505932123

- **Active learning-guided optimization of cell-free biosensors for lead testing in drinking water.** *Nature communications*

Wang, B. M., Chiang, N., Ekas, H. M., Brown, D. M., Dildine, G., Lucci, T. J., Feng, S., Bly, V., Gaillard, J. F., Lucks, J. B., Karim, A. S., Shukla, D., Jewett, et al
2025

- **A Scalable Cell-Free Manufacturing Platform for Two-Step Bioproduction of Immunogenic Conjugate Vaccines.** *ACS synthetic biology*
  Wong, D. A., Aw, R., Hulbert, S. W., Qin, Y., Shaver, Z. M., Myers, K. A., Karim, A. S., DeLisa, M. P., Jewett, M. C.
  2025
- **LDBT instead of DBTL: combining machine learning and rapid cell-free testing.** *Nature communications*
  Clark-ElSayed, A., Harrison, I. M., Olsen, M. L., Lazar, J. T., Jewett, M. C., Ellington, A. D.
  2025; 16 (1): 9782
- **Engineered orthogonal translation systems from metagenomic libraries expand the genetic code.** *bioRxiv : the preprint server for biology*
  Seki, K., Nguyen, M. T., Penev, P. I., Banfield, J. F., Isaacs, F. J., Jewett, M. C.
  2025
- **Characterizing and engineering post-translational modifications with high-throughput cell-free expression.** *Nature communications*
  Wong, D. A., Shaver, Z. M., Cabezas, M. D., Daniel-Ivad, M., Warfel, K. F., Prasanna, D. V., Sobol, S. E., Fernandez, R., Tobias, F., Filip, S. K., Hulbert, S. W., Faull, P., Nicol, et al
  2025; 16 (1): 7215
- **Carbon-negative production of acetone and isopropanol by gas fermentation at industrial pilot scale (vol 40, pg 335, 2022)** *NATURE BIOTECHNOLOGY*
  Liew, F., Nogle, R., Abdalla, T., Rasor, B. J., Canter, C., Jensen, R. O., Wang, L., Strutz, J., Chirania, P., De Tissera, S., Mueller, A. P., Ruan, Z., Gao, et al
  2025
- **Discovery of a single-subunit oligosaccharyltransferase that enables glycosylation of full-length IgG antibodies in bacteria.** *Nature communications*
  Sotomayor, B., Donahue, T. C., Mahajan, S. P., Taw, M. N., Hulbert, S. W., Bidstrup, E. J., Owitipana, D. N., Pang, A., Yang, X., Ghosal, S., Alabi, C. A., Azadi, P., Gray, et al
  2025; 16 (1): 6152
- **Can protein expression be 'solved'?** *Trends in biotechnology*
  Baranowski, C., Martin, H. G., Oyarzún, D. A., Spinner, A., Desai, B., Petzold, C. J., Nikolados, E. M., Jaaks-Kraatz, S., Gaber, A., Chalkley, R. J., Scannell, D., Sevey, R., Jewett, et al
  2025
- **Glycosylation of Structured Protein Domains in Cell-Free Reaction Environments.** *ACS synthetic biology*
  Bidstrup, E. J., Hill, K., Bandi, C. K., Owitipana, D. N., Chisti, A., Aw, R., Yang, X., Azadi, P., Jewett, M. C., Wang, L. X., Kightlinger, W., DeLisa, M. P.
  2025
- **Scalable Cell-Free Production of Active T7 RNA Polymerase.** *Biotechnology and bioengineering*
  Rezvani, R. N., Aw, R., Chan, W., Satish, K., Chen, H., Lavy, A., Rimal, S., Patel, D. A., Rao, G., Swartz, J. R., DeLisa, M. P., Kvam, E., Karim, et al
  2025
- **Semiautomated Production of Cell-Free Biosensors.** *ACS synthetic biology*
  Brown, D. M., Phillips, D. A., Garcia, D. C., Arce, A., Lucci, T., Davies, J. P., Mangini, J. T., Rhea, K. A., Bernhards, C. B., Biondo, J. R., Blum, S. M., Cole, S. D., Lee, et al
  2025
- **Cell-Free Expression of Soluble Leafhopper Proteins from Brochosomes.** *ACS synthetic biology*
  Lay, C. G., Burks, G. R., Li, Z., Barrick, J. E., Schroeder, C. M., Karim, A. S., Jewett, M. C.
  2025
- **Exploring the potential landscape of chemical engineering science** *NATURE CHEMICAL ENGINEERING*
  Adjiman, C. S., Angeli, P., Bardow, A., Bent, S. F., Brandon, N., Galloway, K., Gorte, R. J., Guillen-Gosalbez, G., Gutierrez-Antonio, C., Hatzell, M. C., Jewett, M. C., Kanga, M., Kopke, et al
  2025; 2 (1): 19-25
- **Cell-Free Gene Expression: Methods and Applications.** *Chemical reviews*

Hunt, A. C., Rasor, B. J., Seki, K., Ekas, H. M., Warfel, K. F., Karim, A. S., Jewett, M. C.
2024

- **Developing, Characterizing, and Modeling CRISPR-Based Point-of-Use Pathogen Diagnostics.** *ACS synthetic biology*
  Jung, J. K., Dreyer, K. S., Dray, K. E., Muldoon, J. J., George, J., Shirman, S., Cabezas, M. D., d'Aquino, A. E., Verosloff, M. S., Seki, K., Rybnicky, G. A., Alam, K. K., Bagheri, et al
  2024

- **Discovery of a single-subunit oligosaccharyltransferase that enables glycosylation of full-length IgG antibodies in Escherichia coli.** *bioRxiv : the preprint server for biology*
  Sotomayor, B., Donahue, T. C., Mahajan, S. P., Taw, M. N., Hulbert, S. W., Bidstrup, E. J., Owitipana, D. N., Pang, A., Yang, X., Ghosal, S., Alabi, C. A., Azadi, P., Gray, et al
  2024

- **An Automated Cell-Free Workflow for Transcription Factor Engineering.** *ACS synthetic biology*
  Ekas, H. M., Wang, B., Silverman, A. D., Lucks, J. B., Karim, A. S., Jewett, M. C.
  2024

- **What is chemical biology?** *CELL CHEMICAL BIOLOGY*
  Antolin, A. A., Aye, Y., Bar-Peled, L., De Vita, E., Dudkina, N., Jewett, M. C., Kiely-Collins, H., Mazitschek, R., Zhang, Z.
  2024; 31 (9): 1562-1565

- **Engineering a PbrR-Based Biosensor for Cell-Free Detection of Lead at the Legal Limit.** *ACS synthetic biology*
  Ekas, H. M., Wang, B., Silverman, A. D., Lucks, J. B., Karim, A. S., Jewett, M. C.
  2024

- **Alternate conformational trajectories in ribosome translocation.** *PLoS computational biology*
  Alejo, J. L., Girodat, D., Hammerling, M. J., Willi, J. A., Jewett, M. C., Engelhart, A. E., Adamala, K. P.
  2024; 20 (8): e1012319

- **A synthetic cell-free pathway for biocatalytic upgrading of one-carbon substrates.** *bioRxiv : the preprint server for biology*
  Landwehr, G. M., Vogeli, B., Tian, C., Singal, B., Gupta, A., Lion, R., Sargent, E. H., Karim, A. S., Jewett, M. C.
  2024

- **A frugal CRISPR kit for equitable and accessible education in gene editing and synthetic biology.** *Nature communications*
  Collins, M., Lau, M. B., Ma, W., Shen, A., Wang, B., Cai, S., La Russa, M., Jewett, M. C., Qi, L. S.
  2024; 15 (1): 6563

- **Chloroplast Cell-Free Systems from Different Plant Species as a Rapid Prototyping Platform** *ACS SYNTHETIC BIOLOGY*
  Bohm, C. V., Inckemann, R., Burgis, M., Baumann, J., Brinkmann, C. K., Lipinska, K. E., Gilles, S., Freudigmann, J., Seiler, V. N., Clark, L. G., Jewett, M. C., Voll, L. M., Niederholtmeyer, et al
  2024

- **Establishing a High-Yield Chloroplast Cell-Free System for Prototyping Genetic Parts.** *ACS synthetic biology*
  Clark, L., Voigt, C. A., Jewett, M. C.
  2024

- **Bacterial glycoengineering: Cell-based and cell-free routes for producing biopharmaceuticals with customized glycosylation.** *Current opinion in chemical biology*
  Palma, J. A., Bunyatov, M. I., Hulbert, S. W., Jewett, M. C., DeLisa, M. P.
  2024; 81: 102500

- **Cell-Free Translation Quantification via a Fluorescent Minihelix.** *ACS synthetic biology*
  Willi, J. A., Karim, A. S., Jewett, M. C.
  2024

- **Developing, characterizing and modeling CRISPR-based point-of-use pathogen diagnostics.** *bioRxiv : the preprint server for biology*
  Jung, J. K., Dreyer, K. S., Dray, K. E., Muldoon, J. J., George, J., Shirman, S., Cabezas, M. D., D'Aquino, A. E., Verosloff, M. S., Seki, K., Rybnicky, G. A., Alam, K. K., Bagheri, et al
  2024

- **Establishing a Cell-Free Glycoprotein Synthesis System for Enzymatic N-GlcNAcylation.** *ACS chemical biology*
  DeWinter, M. A., Wong, D. A., Fernandez, R., Kightlinger, W., Thames, A. H., DeLisa, M. P., Jewett, M. C.
  2024

- **Deconstructing synthetic biology across scales: a conceptual approach for training synthetic biologists.** *Nature communications*
  Karim, A. S., Brown, D. M., Archuleta, C. M., Grannan, S., Aristilde, L., Goyal, Y., Leonard, J. N., Mangan, N. M., Prindle, A., Rocklin, G. J., Tyo, K. J., Zoloth, L., Jewett, et al
  2024; 15 (1): 5425

- **Cell-free biosynthesis and engineering of ribosomally synthesized lanthipeptides.** *Nature communications*
  Liu, W. Q., Ji, X., Ba, F., Zhang, Y., Xu, H., Huang, S., Zheng, X., Liu, Y., Ling, S., Jewett, M. C., Li, J.
  2024; 15 (1): 4336

- **Phylogenomics and genetic analysis of solvent-producing Clostridium species.** *Scientific data*
  Jensen, R. O., Schulz, F., Roux, S., Klingeman, D. M., Mitchell, W. P., Udwary, D., Moraïs, S., Reynoso, V., Winkler, J., Nagaraju, S., De Tissera, S., Shapiro, N., Ivanova, et al
  2024; 11 (1): 432

- **Ribosome Pool Engineering Increases Protein Biosynthesis Yields.** *ACS central science*
  Kofman, C., Willi, J. A., Karim, A. S., Jewett, M. C.
  2024; 10 (4): 871-881

- **Building Synthetic Cells—From the Technology Infrastructure to Cellular Entities.** *ACS synthetic biology*
  Rothschild, L. J., Averesch, N. J., Strychalski, E. A., Moser, F., Glass, J. I., Cruz Perez, R., Yekinni, I. O., Rothschild-Mancinelli, B., Roberts Kingman, G. A., Wu, F., Waeterschoot, J., Ioannou, I. A., Jewett, et al
  2024

- **Using High-Throughput Experiments To Screen N-Glycosyltransferases with Altered Specificities.** *ACS synthetic biology*
  Lin, L., Kightlinger, W., Warfel, K. F., Jewett, M. C., Mrksich, M.
  2024

- **Ribosome Pool Engineering Increases Protein Biosynthesis Yields** *ACS CENTRAL SCIENCE*
  Kofman, C., Willi, J. A., Karim, A. S., Jewett, M. C.
  2024

- **Validation of Cell-Free Protein Synthesis Aboard the International Space Station.** *ACS synthetic biology*
  Kocalar, S., Miller, B. M., Huang, A., Gleason, E., Martin, K., Foley, K., Copeland, D. S., Jewett, M. C., Saavedra, E. A., Kraves, S.
  2024

- **Progress in Engineering Synthetic Cells and Cell-Free Systems.** *ACS synthetic biology*
  Dogterom, M., Kamat, N. P., Jewett, M. C., Adamala, K. P.
  2024

- **Cell-Free Systems for the Production of Glycoproteins.** *Methods in molecular biology (Clifton, N.J.)*
  Bidstrup, E. J., Kwon, Y. H., Kim, K., Bandi, C. K., Aw, R., Jewett, M. C., DeLisa, M. P.
  2024; 2762: 309-328

- **Improving Cell-Free Expression of Model Membrane Proteins by Tuning Ribosome Cotranslational Membrane Association and Nascent Chain Aggregation.** *ACS synthetic biology*
  Steinkuhler, J., Peruzzi, J. A., Kruger, A., Villasenor, C. G., Jacobs, M. L., Jewett, M. C., Kamat, N. P.
  2023

- **Enzymatic transfer of a single GlcNAc residue to asparagine in a single-pot in vitro glycosylation reaction**
  DeWinter, M., Wong, D., Kightlinger, W., DeLisa, M., Jewett, M.
  OXFORD UNIV PRESS INC.2023: 1073

- **Developing a cell-free platform for engineering bacterial oligosaccharyltransferases**
  Wong, D., Warfel, K., Shaver, Z., Sobol, S., Fernandez, R., Jewett, M.
  OXFORD UNIV PRESS INC.2023: 1053

- **Establishing a versatile toolkit of flux enhanced strains and cell extracts for pathway prototyping.** *Metabolic engineering*
  Yi, X., Rasor, B. J., Boadi, N., Louie, K., Northen, T. R., Karim, A. S., Jewett, M. C., Alper, H. S.
  2023
- **At-Home, Cell-Free Synthetic Biology Education Modules for Transcriptional Regulation and Environmental Water Quality Monitoring.** *ACS synthetic biology*
  Jung, J. K., Rasor, B. J., Rybnicky, G. A., Silverman, A. D., Standeven, J., Kuhn, R., Granito, T., Ekas, H. M., Wang, B. M., Karim, A. S., Lucks, J. B., Jewett, M. C.
  2023
- **A Cell-Free Protein Synthesis Platform to Produce a Clinically Relevant Allergen Panel.** *ACS synthetic biology*
  Thames, A. H., Rische, C. H., Cao, Y., Krier-Burris, R. A., Kuang, F. L., Hamilton, R. G., Bronzert, C., Bochner, B. S., Jewett, M. C.
  2023
- **Glycovaccinology: The design and engineering of carbohydrate-based vaccine components.** *Biotechnology advances*
  Hulbert, S. W., Desai, P., Jewett, M. C., DeLisa, M. P., Williams, A. J.
  2023: 108234
- **A rapid cell-free expression and screening platform for antibody discovery.** *Nature communications*
  Hunt, A. C., Vögeli, B., Hassan, A. O., Guerrero, L., Kightlinger, W., Yoesep, D. J., Krüger, A., DeWinter, M., Diamond, M. S., Karim, A. S., Jewett, M. C.
  2023; 14 (1): 3897
- **Rapid biosynthesis of glycoprotein therapeutics and vaccines from freeze-dried bacterial cell lysates.** *Nature protocols*
  Stark, J. C., Jaroentomeechai, T., Warfel, K. F., Hershewe, J. M., DeLisa, M. P., Jewett, M. C.
  2023
- **Point-of-Care Peptide Hormone Production Enabled by Cell-Free Protein Synthesis** *ACS SYNTHETIC BIOLOGY*
  DeWinter, M. A., Thames, A., Guerrero, L., Kightlinger, W., Karim, A. S., Jewett, M. C.
  2023; 12 (4): 1216-1226
- **Community science designed ribosomes with beneficial phenotypes.** *Nature communications*
  Kruger, A., Watkins, A. M., Wellington-Oguri, R., Romano, J., Kofman, C., DeFoe, A., Kim, Y., Anderson-Lee, J., Fisker, E., Townley, J., Eterna Participants, d'Aquino, A. E., Das, R., et al
  2023; 14 (1): 961
- **Cell-free Biosynthesis of Peptidomimetics** *BIOTECHNOLOGY AND BIOPROCESS ENGINEERING*
  Lee, K., Willi, J. A., Cho, N., Kim, I., Jewett, M. C., Lee, J.
  2023; 28 (6): 905-921
- **At-home, cell-free synthetic biology education modules for transcriptional regulation and environmental water quality monitoring.** *bioRxiv : the preprint server for biology*
  Jung, K. J., Rasor, B. J., Rybnicky, G. A., Silverman, A. D., Standeven, J., Kuhn, R., Granito, T., Ekas, H. M., Wang, B. M., Karim, A. S., Lucks, J. B., Jewett, M. C.
  2023
- **A low-cost recombinant glycoconjugate vaccine confers immunogenicity and protection against enterotoxigenic Escherichia coli infections in mice.** *Frontiers in molecular biosciences*
  Williams, A. J., Warfel, K. F., Desai, P., Li, J., Lee, J., Wong, D. A., Nguyen, P. M., Qin, Y., Sobol, S. E., Jewett, M. C., Chang, Y., DeLisa, M. P.
  2023; 10: 1085887
- **Cell-free Macromolecular Synthesis Preface** *CELL-FREE MACROMOLECULAR SYNTHESIS*
  Lu, Y., Jewett, M. C.
  edited by Lu, Y., Jewett, M. C.
  2023; 185: VII-VIII
- **Cell-free Production System Development Preface** *CELL-FREE PRODUCTION*
  Lu, Y., Jewett, M. C.
  edited by Lu, Y., Jewett, M. C.
  2023; 186: VII-VIII

- **Computationally-guided design and selection of high performing ribosomal active site mutants.** *Nucleic acids research*
  Kofman, C., Watkins, A. M., Kim, D. S., Willi, J. A., Wooldredge, A. C., Karim, A. S., Das, R., Jewett, M. C.
  2022
- **Three-dimensional structure-guided evolution of a ribosome with tethered subunits.** *Nature chemical biology*
  Kim, D. S., Watkins, A., Bidstrup, E., Lee, J., Topkar, V., Kofman, C., Schwarz, K. J., Liu, Y., Pintilie, G., Roney, E., Das, R., Jewett, M. C.
  2022
- **Characterizing and Controlling Nanoscale Self-Assembly of Suckerin-12** *ACS SYNTHETIC BIOLOGY*
  Hershewe, J. M., Wiseman, W. D., Kath, J. E., Buck, C. C., Gupta, M. K., Dennis, P. B., Naik, R. R., Jewett, M. C.
  2020; 9 (12): 3388-3399
- **Ribosome-mediated polymerization of long chain carbon and cyclic amino acids into peptides in vitro** *NATURE COMMUNICATIONS*
  Lee, J., Schwarz, K. J., Kim, D., Moore, J. S., Jewett, M. C.
  2020; 11 (1): 4304
- **In vitro ribosome synthesis and evolution through ribosome display.** *Nature communications*
  Hammerling, M. J., Fritz, B. R., Yoesep, D. J., Kim, D. S., Carlson, E. D., Jewett, M. C.
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