Stanford



Conor McClune

Basic Life Research Scientist, Chemical Engineering

Bio

BIO

I develop systematic approaches for studying the plasticity of life at the molecular level, especially the bioactive compounds in plants we consume as food or medicine.

ACADEMIC APPOINTMENTS

- Basic Life Research Scientist, Chemical Engineering

HONORS AND AWARDS

- Damon Runyon Fellowship, Damon Runyon Cancer Research Foundation (11/2020-2/2024)
- K99/R00 Pathway to Independence Award, NIH (2/2024-2/2026)

PROFESSIONAL EDUCATION

- BA, University of California, Berkeley , Biochemistry & Molecular Biology (Minor: Bioengineering) (2012)
- PhD, Massachusetts Institute of Technology , Biology (Computational and Systems) (2019)

Publications

PUBLICATIONS

- **Discovery of FoTO1 and Taxol genes enables biosynthesis of baccatin III.** *Nature*
  McClune, C. J., Liu, J. C., Wick, C., De La Peña, R., Lange, B. M., Fordyce, P. M., Sattely, E. S.
  2025
- **Multiplexed perturbation of yew reveals cryptic proteins that enable a total biosynthesis of baccatin III and Taxol precursors.** *bioRxiv : the preprint server for biology*
  McClune, C. J., Liu, J. C., Wick, C., De La Peña, R., Lange, B. M., Fordyce, P. M., Sattely, E. S.
  2024
- **Alleviating Cell Lysate-Induced Inhibition to Enable RT-PCR from Single Cells in Picoliter-Volume Double Emulsion Droplets** *ANALYTICAL CHEMISTRY*
  Khariton, M., McClune, C. J., Brower, K. K., Klemm, S., Sattely, E. S., Fordyce, P. M., Wang, B.
  2023; 95 (2): 935-945
- **Alleviating Cell Lysate-Induced Inhibition to Enable RT-PCR from Single Cells in Picoliter-Volume Double Emulsion Droplets.** *Analytical chemistry*
  Khariton, M., McClune, C. J., Brower, K. K., Klemm, S., Sattely, E. S., Fordyce, P. M., Wang, B.
  2023
- **Constraints on the expansion of paralogous protein families.** *Current biology : CB*

McClune, C. J., Laub, M. T.
2020; 30 (10): R460–R464

- **Engineering orthogonal signalling pathways reveals the sparse occupancy of sequence space.** *Nature*
  McClune, C. J., Alvarez-Buylla, A., Voigt, C. A., Laub, M. T.
  2019; 574 (7780): 702-706

- **Permanent genetic memory with >1-byte capacity.** *Nature methods*
  Yang, L., Nielsen, A. A., Fernandez-Rodriguez, J., McClune, C. J., Laub, M. T., Lu, T. K., Voigt, C. A.
  2014; 11 (12): 1261-6