

THERESA BERENS LOVELESS
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Education

PhD in Cell Biology, University of California, San Francisco 2015
BS in Biological Sciences, BA in Philosophy, Stanford University 2006

Research Experience

Postdoctoral Researcher, Chang Liu Lab, Department of Biomedical Engineering, University of California, Irvine, 2016-present
Graduate Student, Toczyski Lab, Department of Biochemistry and Biophysics, University of California, San Francisco, 2008-2015
Research Assistant, Johannes Walter Lab, Department of Biological Chemistry and Molecular Pharmacology, Harvard Medical School, 2006-2008
Undergraduate, Stearns Lab, Department of Biological Sciences, Stanford University, 2004-2006
Student Assistant, Lab of Michael E. Berens (no relation), TGen, Phoenix, AZ, 2000-2003

Awards

MOSAIC K99/R00, NIGMS 2021-2026
Fellow, Leading Edge Symposium 2021
Center Fellow, Center for Multiscale Cell Fate, UC Irvine 2019,2021
Interdisciplinary Opportunity Award, CMCF, UC Irvine 2018-2019
American Heart Association Predoctoral Fellowship 2012-2014

Pre-print

Loveless TB^{*#}, Carlson CK^{*}, Hu VJ, Dentzel Helmy CA, Liang G, Ficht M, Singhai A, Liu CC[#]. Molecular recording of sequential events into DNA. doi.org/10.1101/2021.11.05.467507.
^{*}equal contribution [#]co-corresponding

Peer-Reviewed Publications

Rothman JA, **Loveless TB**, Karcia J, Adams E, Steele JA, Zimmer-Faust A, Langlois K, Wanless D, Griffith ML, Griffith JF, Whiteson KL. RNA viromics of Southern California wastewater and detection of SARS-CoV-2 single nucleotide variants. Online ahead of print at *Applied and Environmental Microbiology*. 2021 Sep 22. doi: 10.1128/AEM.01448-21.

Loveless TB, Grotts JG, Schechter MW, Forouzmand EF, Carlson CK, Agahi BS, Liang G, Ficht M, Liu B, Xie X, Liu CC. Lineage tracing and analog recording in mammalian cells by single-site DNA writing. *Nature Chemical Biology*. 2021 Jun;17(6):739-47.

Chow DS, Glavis-Bloom J, Soun JE, Weinberg B, **Loveless TB**, Xie X, Mutasa S, Monuki E, Park JI, Bota D, Wu J, Thompson L, Boden-Albala B, Khan S, Amin AN, Chang PD. Development and external validation of a prognostic tool for COVID-19 critical disease. *PLoS One*. 2020 Dec 9;15(12):e0242953.

Rothman JA, **Loveless TB**, Griffith ML, Steele JA, Griffith JF, Whiteson KL. Metagenomics of wastewater influent from Southern California wastewater treatment facilities in the era of COVID-19. *Microbiology Resource Announcements*. 2020 Oct 8;9(41):e00907-20.

- Mark KG*, **Loveless TB***, Toczyski DP. Isolation of ubiquitinated substrates by tandem affinity purification of E3 ligase-polyubiquitin-binding domain fusions (ligase traps). *Nature Protocols*. 2016;11(2):291-301. *equal contribution
- Loveless TB**, Topacio BR, Vashisht AA, Galaang S, Ulrich, KMS, Young BD, Wohlschlegel JA, Toczyski DP. DNA damage regulates translation through β TRCP targeting of CREP. *PLoS Genetics*. 2015 Jun 19;11(6)e1005292.
- Berens TJ**, Toczyski DP. Colocalization of Mec1 and Mrc1 is sufficient for Rad53 phosphorylation in vivo. *Molecular Biology of the Cell*. 2012 Mar;23(6):1058-67.
- Kapitzky L, Beltrao P, **Berens TJ**, Gassner N, Zhou C, Wüster A, Wu J, Babu MM, Elledge SJ, Toczyski D, Lokey RS, Krogan NJ. Cross-species chemogenomic profiling reveals evolutionarily conserved drug mode of action. *Molecular Systems Biology*. 2010 Dec 21;6:451.
- Hoelzinger DB, Mariani L, Weis J, Woyke T, **Berens TJ**, McDonough WS, Sloan A, Coons SW, Berens ME. Gene expression profile of glioblastoma multiformes invasive phenotype points to new therapeutic targets. *Neoplasia*. 2005 Jan;7(1):7-16.
- Tran NL, McDonough WS, Donohue PJ, Winkles JA, **Berens TJ**, Ross KR, Hoelzinger DB, Beaudry C, Coons SW, Berens ME. The human Fn14 receptor gene is up-regulated in migrating glioma cells in vitro and overexpressed in advanced glial tumors. *American Journal of Pathology*. 2003 Apr;162(4):1313-21.
- Mariani L, Beaudry C, McDonough WS, Hoelzinger DB, Demuth T, Ross KR, **Berens T**, Coons SW, Watts G, Trent JM, Wei JS, Giese A, Berens ME. Glioma cell motility is associated with reduced transcription of proapoptotic and proliferation genes: a cDNA microarray analysis. *Journal of Neurooncology*. 2001 Jun;53(2):161-76.

Invited Publications

- Loveless TB**, Liu CC. Synthetic epigenetics to engineer regulation. *Biochemistry*. 2019 Mar;58(12): 1558-9.
- Berens TJ**, Toczyski DP. Keeping it together in times of stress: checkpoint function at stalled replication forks. *Molecular Cell*. 2012 Mar 9;45(5):585-6.

Invited Presentations

- Seminar:** Molecular Biology and Genetics, Cornell University, February 14, 2022.
- Seminar:** Genetics, Cell Biology, and Development, University of Minnesota, January 24, 2022.
- Seminar:** Molecular Biology and Biochemistry, Rutgers University, January 10, 2022.
- Seminar:** Department of BioSciences, Rice University, November 15, 2021.
- Talk:** Symposium of the Center for Multiscale Cell Fate, October 28, 2021.
- Talk:** International Conference on CRISPR Technologies, October 3, 2021.
- Talk:** NextGen Genomics Conference, September 27, 2021.
- Seminar:** SynBYSS, September 16, 2021.
- Talk:** Mammalian Synthetic Biology Workshop, July 19, 2021.
- Talk:** Leading Edge Symposium, June 10, 2021.
- Seminar:** University of British Columbia DNA Recording Journal Club, October 5, 2020.
- Talk:** CMM5372, a class at the University of Ottawa, July 22, 2020.
- Seminar:** UCSF Cancer Center, October 4, 2019.
- Talk:** International Conference on CRISPR Technologies, December 11, 2018.
- Talk:** Synthetic Biology: Engineering, Evolution, and Design (SEED), June 5, 2018.
- Talk:** Engineering Biology Research Consortium Spring Retreat, March 23, 2018.
- Seminar:** Basic Sciences Division, Fred Hutchinson Cancer Research Center, October 30, 2014.
- Talk:** The Cell Cycle meeting, Cold Spring Harbor, May 14, 2014.