Ian W. Campbell | Assistant Professor of Microbiology, University of Texas Southwestern Medical Center

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Research and teaching interests

Host-microbe	Infectious disease	Microbiology	Molecular genetics
Synthetic biology	Microbial ecology	Sequencing technology	Population modeling

Education

2012-2019	Ph.D., Biology, Massachusetts Institute of Technology, Cambridge, MA
2008-2012	B.S., Biology, Carnegie Mellon University, Pittsburgh, PA

Academic positions

2026-present	Assistant professor of microbiology, University of Texas Southwestern Medical Center, Dallas, Tx
2019-2026	Postdoctoral research fellow, Advisor Matthew K. Waldor, M.D., Ph.D., Brigham & Women's Hospital and Harvard Medical School, Boston, MA
2012-2019	Graduate researcher, Advisor Angelika Amon Ph.D., Massachusetts Institute of Technology, Cambridge, MA
2009-2012	Undergraduate researcher, Advisor John L. Woolford Jr. Ph.D., Carnegie Mellon University, Pittsburgh, PA
2009	Undergraduate research assistant, Advisor Denise Cecil, Ph.D., Tumor Vaccine Group, University of Washington, Seattle, WA

Awards and funding

2026-2031	UT Southwestern endowed scholar Amount: $3,000,000
2023-2025	Harvard Digestive Disease Center pilot and feasibility grant Amount: $56,250 ($45,000 direct, $11,250 indirect)
2020-2022	Ruth L. Kirschstein National Research Service Award (NRSA) T32 Training fellowship (Competitive selection)
2016	Carl Singer Foundation travel award
2012	Carnegie Mellon senior leadership award
2010, 2011	Howard Hughes undergraduate summer researcher grant
2011	Carnegie Mellon small undergraduate research grant
2008-2011	Edmund F. Maxwell Foundation scholarship

Teaching experience

2016	Teaching assistant, Molecular biology, Massachusetts Institute of Technology, Cambridge, MA
2013	Teaching assistant, Graduate genetics, Massachusetts Institute of Technology, Cambridge, MA
2011	Teaching assistant, Summer academy of math and science, Carnegie Mellon U., Pittsburgh, PA
2011	Teaching assistant, Experimental genetics, Carnegie Mellon U., Pittsburgh, PA

Mentoring

	Name	Current position
2026	Soojung Yi, Postdoctoral fellow	Postdoctoral fellow, Brigham & Women's Hosp.
2025-2026	Kaylee Nguyen, Research assistant	Research assistant, Brigham & Women's Hosp.
2024-2026	Sudhir Doranga, Postdoctoral fellow	Postdoctoral fellow, Brigham & Women's Hosp.
2023-2025	Emily Sullivan, Research assistant	Graduate student, ETH Zurich

2025	Li Lin, HHMI SURP	Undergraduate student, Boston University
2024	Mehek Garg, Khorana scholar	Research intern, Tata Inst. for Fundamental Research
2022-2024	Julia Hotinger, Postdoctoral fellow	Associate scientist, Henry M. Jackson Foundation
2021-2023	Ruchika Dehinwal, Postdoctoral fellow	Scientist, Xbiotix
2021-2022	Antje Flieger, Sabbatical	Faculty, Robert Koch Institute

Research publications

Zong DM, Bailey S, Fatima Z, Kanne CK, Siguenza N, Richter RA, **Campbell IW**, Waldor MK, Ding Y, Hasty J, Zarrinpar A (2026). Tn7 Integration Efficiently Introduces Gene Expression Cassettes into a Gut-Native Escherichia coli Strain. *ACS Synth. Biol*. https://doi.org/10.1021/acssynbio.6c00472.

Hasegawa* Y, Osaki* A, Suzuki* M, Yan T, **Campbell IW**, Waldor MK (2026). Transcriptomic timeseries links hepatic gene expression to an early and self-limited systemic response to enteric infection. *PLoS Pathog* 22(8): e1014152. PMID: 42555620. * co-first author.

Campbell* IW, Basta* DW, Zingl FG, Sullivan EJ, Doranga S, Waldor MK (2025). Anoxia activates CRISPR-Cas immunity in the mouse intestine. *Nature Microbiology,* 10, 3069–3074. PMID: 41162659. * co-first author.

Campbell* IW, Dehinwal* R, Morano AA, Dailey KG, Zingl FG, Waldor MK (2025). *Vibrio cholerae* motility is associated with inter-animal transmission. *Nature Communications* 16(1):7989. PMID: 40866349. * co-first author.

Basta* DW, **Campbell* IW**, Sullivan EJ, Hotinger JA, Hullahalli K, Garg M, Waldor MK (2025). Inducible transposon mutagenesis identifies bacterial fitness determinants during infection in mice. *Nature Microbiology,* 10(5):1171-1183. PMID: 40148565. * co-first author.

Hotinger* JA, **Campbell* IW**, Hullahalli K, Osaki A, Waldor MK (2025). Quantification of *Salmonella enterica* serovar Typhimurium population dynamics in murine infection using a highly diverse barcoded library. *Elife*, *13*:RP101388. PMID: 39945742. * co-first author.

Landau LM, Chaudhary N, Tien YC, Rogozinska M, Joshi S, Yao C, Crowley J, Hullahalli K, **Campbell IW**, Waldor MK, Haigis M, Kagan JC (2024). pLxIS-containing domains are biochemically flexible regulators of interferons and metabolism. *Mol Cell* 84(13):2436-2454.e10. PMID: 38925114.

Campbell IW, Hullahalli K, Turner JR, Waldor MK (2023). Quantitative dose-response analysis untangles host bottlenecks to enteric infection. *Nature Communications* 14(1):456. PMID: 36709326.

Lang C, Fruth A, **Campbell IW**, Jenkins C, Smith P, Strockbine N, Weill F-X, Nübel U, Grad YH, Waldor MK, Flieger A (2023). O-Antigen Diversification Masks Identification of Highly Pathogenic Shiga Toxin-Producing Escherichia coli O104:H4-Like Strains. *Microbiol Spectr* 11(3):e0098723. PMID: 37212677.

Campbell IW, Zhou X, Amon A (2020). Spindle pole bodies function as signal amplifiers in the Mitotic Exit Network. *Mol Biol Cell* 31(9):906-916. PMID: 32074005.

Campbell IW, Zhou X, Amon A (2019). The Mitotic Exit Network integrates temporal and spatial signals by distributing regulation across multiple components. *Elife* 8:e41139. PMID: 30672733.

Falk JE, **Campbell IW**, Joyce K, Whalen J, Seshan A, Amon A (2016). LTE1 promotes exit from mitosis by multiple mechanisms. *Mol Biol Cell* 27(25):3991-4001. PMID: 27798238.

Talkish J, **Campbell IW**, Sahasranaman A, Jakovljevic J, Woolford, JL (2014). Ribosome Assembly Factors Pwp1 and Nop12 Are Important for Folding of 5.8S rRNA during Ribosome Biogenesis in Saccharomyces cerevisiae. *Mol Cell Biol* 34(10):1863-77. PMID: 24636992.

Reviews

Campbell* IW, Hullahalli* K, Waldor MK (2026). Quantifying host-microbe interactions with bacterial lineage tracing. *Science* 391 (6780):34-40. PMID: 41477882. * co-first author.

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