Qing Tang

Curriculum Vitae

11.24.2025

ADDRESS: Department of Biochemistry,
University of Nebraska-Lincoln
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901 Vine St, Lincoln, NE 68588

EMAIL: qtang4@nebraska.edu

EDUCATION:

2001-2005 Wuhan University, China
B.S. Biotechnology

2005-2013 University of Vermont, Burlington, VT
Ph.D. Microbiology and Molecular Genetics
Mentor: Gary Ward

POSITIONS HELD:

2013-2017 Postdoctoral Researcher, University of Vermont,
Department of Molecular Physiology and Biophysics,
Burlington, VT
Mentor: Kathleen Trybus

2017-2020 Postdoctoral Researcher, Brandeis University,
Department of Biology, Waltham, MA
Mentor: Bruce Goode

2020-2024 Postdoctoral Researcher, University of Pennsylvania
Department of Physiology, Philadelphia, PA
Mentor: Melike Lakadamyali

2024.8-Date Assistant Professor, University of Nebraska-Lincoln
Department of Biochemistry, Lincoln, NE

PROFESSIONAL SOCIETIES

2021-Date: Member, Biophysical Society (BPS)

2011-Date: Member, American Society of Cell Biology (ASCB)

TEACHING EXPERIENCE

Courses:

2005-2013:

Teaching assistant for undergraduate course “Microbiology and Pathogenesis”

Teaching assistant for undergraduate course “Biology of Microorganisms”

Mentoring:

Ph.D. trainees:

2025-:	Andrew Steen, Ph.D. candidate at University of Nebraska-Lincoln (Recipient of NIGMS T32 fellowship and NIGMS CIBC summer research fellowship)
2023-2024:	Victor Xing, Ph.D. candidate at University of Pennsylvania
	Lisa Nakayama, Ph.D. candidate at University of Pennsylvania
2018-2020:	Neha Koundinya, Ph.D. candidate at Brandeis University
2011-2012:	Shruthi Krishnamurthy, Ph.D., Technology Transfer Specialist, Mass General Brigham

Undergraduate trainees:

2022:	Joseph Porter, NSF CEMB Program, undergraduate at East Tennessee State University

AWARDS

2023 University of Pennsylvania CEMB Future Leaders in Mechanobiology

2018 DFG (German Research association) Mercator Fellowship for visiting scholars

SERVICE

Professional Service

2024-Date:

Reviewer, Cytoskeleton (Journal)

Reviewer, Biophysical Journal

University Service

2024- Date:

Graduate student recruitment committee of Department of Biochemistry at UNL

GRANTS

Ongoing:

2025.8-2029.7: NIGMS 1R35GM160127-01, $2,041,875, Principle Investigator

“Single molecule dissection of Arp2/3 complex activities and its regulators in live cells”

2024.10-2026.7: NIGMS 5P20GM113126-09 (sub-project 5645), $355,450, Project Leader

Nebraska Center for Intermolecular Communication (NCIBC), NIGMS

“Mechanisms of tunneling nanotube architecture and function”

2025.8-2026.7: NVIBE, $15,223, University of Nebraska Nexus of Virology, Immunology, and Bioengineering Phase II, Multiple Principle Investigators

“Integrated Analysis of Viral-induced Epithelial Pathogenesis and Tissue Crosstalk in Biofabricated 3D Physiomimetic Skin Models”

OUTREACH

2025 WOMEN in Science workshop. 2025.04: Lab technique introduction and demonstration to high school students.

PRESENTATIONS

Talks

2025-Date:

Insight into cytoskeleton regulation at nanoscale in cells. *UNMC Genetics, Cell Biology and Anatomy, 2025. OMAHA, NE*

Insight into Insight into cytoskeleton sorting from microtubule detyrosination. *UNMC Biochemistry and Molecular Biology, 2025. OMAHA, NE*

Molecular Resolution of cytoskeleton in cells-Mechanism of tunneling nanotube architecture and function, *Nebraska Center for integrated Biomolecular Communication, 2025. Lincoln NE*

2024

Insight into Insight into cytoskeleton sorting from microtubule detyrosination. *UNMC Cell Biology-Trafficking Interest Group, 2024. OMAHA, NE (Zoom)*

Molecular resolution of cellular actin regulation-Mechanism of tunneling nanotube architecture and function. *Nebraska Center for Integrated Biomolecular Communication, 2024. Lincoln, NE*

Spatiotemporal regulation of mitochondria-associated motor complex in cells. *UNL Biochemistry Mitoclub research in progress, 2024. Lincoln, NE*

Detyrosination on microtubule subsets is established by the interplay between a stochastically-acting enzyme and microtubule stability. *Annual meeting of the Biophysical Society, 2024. Philadelphia, PA*

2008-2023:

Insight into cytoskeleton sorting from microtubule detyrosination. *Pennsylvania Muscle Institute 50th Annual Retreat and Symposium. 2023*. *Philadelphia, PA*

Insight into cytoskeleton sorting from microtubule detyrosination. *CEMB Future Leaders in Mechanobiology Meeting, 2023. University of Pennsylvania, Philadelphia, PA*

Insight into cytoskeleton sorting from microtubule detyrosination. *Chesapeake Bay Area Single Molecule Meeting, 2023. Baltimore, MD*

Microtubule detyrosination propagation and establishment revealed by super-resolution microscopy and single-molecule tracking. *Annual meeting of the Biophysical Society, 2022. San Francisco, CA*

Removal of fission yeast myosin II lever arm slows the motility and accelerates the contractile ring constriction during cytokinesis. *Annual meeting of American Society of Cell Biology, 2014. Philadelphia, PA*

Posters

2024-Date:

Detyrosination on microtubule subsets is established by the interplay between a stochastically-acting enzyme and microtubule stability. *Annual meeting of the Biophysical Society, 2024. Philadelphia, PA*

2008-2023:

Detyrosination enrichment on microtubule subsets is established by the interplay between a stochastically-acting enzyme and microtubule stability. *Annual meeting of American Society of Cell Biology, 2023. Boston, MA*

Insight into cytoskeleton sorting from microtubule detyrosination. *Chesapeake Bay Area Single Molecule Meeting, 2023. Baltimore, MD*

Microtubule stability reinforces stochastic detyrosination to define functional microtubule subsets. *Annual Meeting of American Society of Cell Biology*, 2022. *Washington. DC*

Microtubule detyrosination propagation and establishment revealed by single-molecule tracking and super-resolution microscopy. *Annual meeting of American Society of Cell Biology, 2021. (Remote)*

A single-headed fission yeast myosin V transports actin in a tropomyosin-dependent manner. *Muscle and Molecular Motors Gordon conference 2016. Dover, VT*

A single-headed fission yeast myosin V transports actin in a tropomyosin-dependent manner. *Annual meeting of American Society of Cell Biology 2015. San Diego, CA*

Evaluating 2D-DIGE as an approach to small molecule target identification in *T. gondii*. *Molecular Parasitology Meeting, 2008. Marine Biological Laboratories (MBL) in Woods Hole, MA*

PUBLICATIONS

2024-Date:

Hugelier S., **Tang Q.**, Kim HH., Gyparaki MT., Bond C., Santiago-Ruiz AN., Porta S., Lakadamyali M. (2024) “ECLiPSE: a versatile classification technique for structural and morphological analysis of 2D and 3D single-molecule localization microscopy data”. *Nature Methods*. 21(10), 1909–1915.

2012-2023:

Tang, Q., Sensale, S., Bond, C., Qiao, A., Hugelier, S., Arab, A., Arya, G., Lakadamyali, M. (2023) “Interplay Between Stochastic Enzyme Activity and Microtubule Stability Drives Detyrosination Enrichment on Microtubule Subsets.” *Current Biology,* 33(23), 5169–5184.e8.

Tang, Q., Pollard, L.W., Homa, K.E., Kovar, D.R., Trybus, K.M. (2023). “Acetylation of fission yeast tropomyosin does not promote differential association with cognate formins.” *Cytoskeleton,* 80(3-4), 77–92.

Coscia, S M., Thompson, C. P., **Tang, Q.**, Baltrusaitis, E. E., Rhodenhiser, J.A., Quintero-Carmona, O. A., Ostap, E., M, Lakadamyali, M., Holzbaur E. L. F. (2022) “Myo19 tethers mitochondria to endoplasmic reticulum-associated actin to promote mitochondrial fission.” *Journal of Cell Science,* 136 (5): jcs260612.

Bond, C.*, Santiago-Ruiz, A.*, **Tang Q.***, Lakadamyali M. (2022). “Technological advances in super-resolution microscopy to study cellular processes.” *Molecular Cell,* 82(2):315-332.
**Equal contribution, alphabetically ordered*

Tang, Q., Schaks, M., Koundinya, N., Yang, C., Pollard, L.W., Svitkina, T.M., Rottner, K, Goode, B.L. (2020). “WAVE1 and WAVE2 have distinct and overlapping roles in controlling actin assembly at the leading edge." *Molecular Biology of the Cell,* 31(20): 2168-2178.

Singh, S. P., Thomason, P. A., Lilla, S., Schaks M., **Tang Q.**, Goode B.L., M. Machesky, L.M., Rottner K, Insall R.H. (2019). “Cell–substrate adhesion drives Scar/WAVE activation and phosphorylation by a Ste20-family kinase, which controls pseudopod lifetime.” *PLOS Biology* 18(8): e3000774.

Pollard, L.W., Bookwalter, C.S., **Tang, Q.**, Krementsova, E.B., Trybus, K.M., Lowey, S. (2017). “Fission yeast myosin Myo2 is down-regulated in actin affinity by light chain phosphorylation.” *Proceedings of the National Academy of Sciences USA,* 114(35): E7236-44.

Tang, Q., Billington, N., Krementsova E.B., Bookwalter, C.S., Lord, M., Trybus, K.M. (2016) A single-headed fission yeast myosin V transports actin in a tropomyosin-dependent manner. *Journal of Cell Biology,* 214(2):167-79.

Tang, Q., Pollard, L.W., Lord, M. (2016). Measurements of myosin-II motor activity during cytokinesis in fission yeast. *Methods in Molecular Biology,* 1369:137-50.

Tang Q., Andenmatten, N., Hortua Triana, M.A., Deng, B., Meissner, M., Moreno, S.N., Ballif, B.A., Ward, G.E. (2014). “Calcium-dependent phosphorylation alters class XIVa myosin function in the protozoan parasite *Toxoplasma gondii*.” *Molecular Biology of the Cell,* 25(17):2579-91.

Parussini, F., **Tang, Q.**, Moin, S.M., Mital, J., Urban, S., Ward, G.E. (2012). “Intramembrane proteolysis of *Toxoplasma* apical membrane antigen 1 facilitates host-cell invasion but is dispensable for replication.” *Proceedings of National Academy of Sciences USA,* 109(19):7463-8.