

Maolin Lu
August 2025 - August 2026
Professor
(903)877-8738
maolin.lu@uthct.edu

CONTACT INFORMATION

401.4 Biomedical Research Building (BMR)
11937 U.S. Hwy 271
Tyler, Texas 75708

DEGREES

2014	Ph.D., Photochemical Sciences, Bowling Green State University, Bowling Green, Ohio, United States
2009	M.S., Biochemistry and Molecular Biology, Xi'an Jiaotong University, Xi'an, Shaanxi, China
2006	B.Sc., Biological Engineering, Xi'an Jiaotong University, Xi'an, Shaanxi, China

POST-GRADUATE TRAINING

Post-Doctorate, Yale University School of Medicine, Virology, Molecular Biology, New Haven, Connecticut, United States, January 2015, May 2021

ACADEMIC APPOINTMENTS

Assistant Professor, Department of Cellular and Molecular Biology, UT Tyler School of Medicine, Tyler, Texas, Tenure (if applicable): Not Tenured, 2021-06-01, 2024-08-31
Associate Professor, Department of Cellular and Molecular Biology, UT Tyler School of Medicine, Tyler, Texas, Tenure (if applicable): Not Tenured, 2024-09-01, 2025-08-31
Associate Professor, Department of Cellular & Molecular Biology, UT Tyler School of Medicine, Tyler, Texas, Tenure (if applicable): Tenured, 2025-09-01, 2032-08-31

OTHER ADMINISTRATIVE/LEADERSHIP POSITIONS AND PROFESSIONAL EXPERIENCES

2023, End Date: 2024, Co-director in research of Summer Research and Clinical Externship - ongoing, University of Texas at Tyler School of Medicine, Tyler, Texas
2022, End Date: 2024, Thesis Advisor and Committee of Biotechnology Master's program - ongoing, University of Texas at Tyler School of Medicine, Tyler, Texas
November 2024, End Date: 2024, Reviewer for NIH/NIAID HVCD study section - ongoing, NIH/NIAID, Bethesda, Maryland
May 2023, End Date: May 2023, Co-chair, CSHL (Cold Spring Harbor Laboratory) Retrovirus Annual Meeting, Cold Spring Harbor, New York
September 2022, End Date: September 2022, Co-chair, NIH/NIAID workshop "Novel Direct Antivirals for Eliminating HIV-1 Infected Cells", NIH/NIAID, Bethesda, Maryland
March 2022, End Date: March 2022, Reviewer for NIH study section U54 center grants: Centers for HIV Structural Biology, NIH/NIAID, Bethesda, Maryland

PROFESSIONAL MEMBERSHIPS

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International

December 2025 - December 2026

American Chemical Society, A complimentary year-long membership for reviewers. [Responsibility: Member]

January 2025 - Ongoing

American Society for Virology [Responsibility: Member]

September 2022 - Ongoing

American Society for Microbiology [Responsibility: Member]

September 2015 - Ongoing

Biophysical Society [Responsibility: Member]

SERVICE ON COMMITTEES

UTTSOM

August 2025 - Ongoing

Thesis Advisor for one PhD student - Narendra Kumar Gonepudi [Responsibility: Advisor]

February 2025 - Ongoing

Admission committee for Biotech MS program [Responsibility: Member]

January 2025 - Ongoing

Thesis committee for one Biotech MS student - Merina Basnet [Responsibility: Member]

December 2024 - Ongoing

Thesis Advisor for one MS student - Harry Baffour Awuah [Responsibility: Advisor]

December 2023 - August 2025

Thesis Advisor for one MS student - Narendra Kumar Gonepudi [Responsibility: Advisor]

April 2023 - Ongoing

Summer Research and Clinical Externship [Responsibility: co-director]

National

January 2026 - Ongoing

Thesis committee for one PhD student - Ruth Parsons at Duke U [Responsibility: Member]

November 2024 - Ongoing

NIH HVCD study session reviewer: HIV molecular virology, cell biology, and drug development[Responsibility: Member by Nomination]

EDITORIAL/BOARD APPOINTMENTS AND RESPONSIBILITIES

November 2023 - Ongoing

Frontiers in Immunology, Topic editor

TEACHING ACTIVITIES

Title	Setting	Level of Learner	Number of Learners	Contact Hours	Type of Learning Activity	Teaching Methods	Start Month	End Month
BIOT 5221 Proteins & Nucleic Acids lecture	Course	Doctoral/Master	11		Series	Lecture	September 2022	Ongoing
BIOT 5132 Critical Reading II	Course	Doctoral/Master	11		Single Session	Lecture	September 2022	Ongoing

ADVISING/MENTORING/COACHING

Name of Individual	Level of Training	Purpose/Objective	Mentoring/Advising Activities	Start Month	End Month
Junyu Liu	Fellow or Post-Doc	Scholarly work	Formal, Research mentor/advisor/coach	December 2025	Ongoing
Harry Baffour Awuah	Graduate	Scholarly work	Formal, Research mentor/advisor/coach, Educational mentor/advisor/coach	December 2024	Ongoing
Yufan He	Faculty/Professional Colleague	Scholarly work	Formal, Research mentor/advisor/coach	January 2024	Ongoing
Wang Xu	Fellow or Post-Doc	Scholarly work	Formal, Research mentor/advisor/coach	January 2024	Ongoing
Narendra Kumar Gonepudi	Graduate	Scholarly work	Formal, Research mentor/advisor/coach, Educational mentor/advisor/coach	December 2023	Ongoing
Revan Katte	Fellow or Post-Doc	Scholarly work	Formal, Research mentor/advisor/coach	January 2023	Ongoing
Yang Han	Fellow or Post-Doc	Scholarly work	Formal, Research mentor/advisor/coach	September 2021	Ongoing

EDUCATIONAL LEADERSHIP AND ADMINISTRATION

May 2025 - Ongoing

Admission committee for the Biotech MS program, Unit/Location: UTT SOM, Your Role: Appointed

May 2024 - Ongoing

Co-director , Unit/Location: Summer Research and Clinical Externship, Your Role: Appointed

GRANTS

Completed

Collaborative Development Award from Duke University

Visualizing conformational masking of Env and virus-host membrane contacts Funded by NIH/NIAID/Duke University, Federal Pass Thru (April 1, 2024 - March 31, 2025), awarded August 1, 2024 (**\$150,000.00**), Completed, December 2025, PI Maolin Lu (5%) [Type of Grant: Research]

Federal

Probing conformational dynamics of HIV-1 Env in real time and in situ during virus entry Funded by NIH/NIAID (August 1, 2022 - July 31, 2024), awarded August 1, 2022 (**\$370,700.00**), Completed, December 2025, PI Maolin Lu (1%) [Type of Grant: Research]

Funded - In Progress

Federal

Probing real-time conformational dynamics and allosteric cooperativity of the HIV-1 envelope glycoprotein during virus entry Funded by NIH/NIAID (December 1, 2023 - October 31, 2028), awarded December 1, 2023 (**\$2,173,635.00**), Funded - In Progress, December 2025, PI Maolin Lu (25%) [Type of Grant: Research]

The role of conformational dynamics of enveloped virus spike proteins in cell entry Funded by NIH/NIGMS (September 1, 2023 - August 31, 2028), awarded August 24, 2023 (**\$1,862,500.00**), Funded - In Progress, December 2025, PI Maolin Lu (46%) [Type of Grant: Research]

University

UT STARs Award, Funded by UT System - UT Tyler (February 4, 2025), awarded February 4, 2025 **\$500,000.00**), Funded - In Progress, December 2025, PI Maolin Lu [Type of Grant: Research]

Submitted - Not Funded

Foundation

Real-time single-molecule monitoring of viral surface spikes in receptor and inhibitor binding dynamics Funded by Welch Foundation (June 1, 2025) **\$300,000.00**), Submitted - Not Funded, January 2026, PI Maolin Lu [Type of Grant: Research]

SCHOLARLY CONTRIBUTIONS AND CREATIVE PRODUCTIONS

Journal Article

Completed/Published

Peer-reviewed

1. Gonepudi, N. K., Awuah, H. B., Xu, W., Katte, R. H., & Lu, M. (2026). Structure-Guided Design of Peptide Inhibitors Targeting Class I Viral Fusion Proteins

Pathogens, 15(1), 32.

<https://doi.org/10.3390/pathogens15010032>

2. Xu, W., Gonepudi, N. K. K., & Lu, M. (2025). Protocol for click labeling of HIV-1 envelope on amber-free virions prepared using genetic code expansion. *STAR Protocols*, 6(3), 103995.

Additional Activities

3. Gonepudi, N. K. K., Baffour Awuah, H., Xu, W., Katte, R. H., & Lu, M. (2025). Structure-Guided Design of Peptide Inhibitors Targeting Class I Viral Fusion Proteins. *Pathogens (Basel, Switzerland)*, 15(1).

PROFESSIONAL COMMUNITY SERVICE

December 2025 - Ongoing

Current Opinion in Structural Biology, Ad hoc peer reviewer for scholarly journals

May 2025 - August 2025

UT Austin, Research mentor for an undergraduate student, Charles Lu from UT Austin, providing supervised laboratory learning and skill development.

February 2025 - Ongoing

UT Tyler, Research mentor for undergraduate students, Gabriel Lozano and Kora Ottun, providing supervised laboratory learning and skill development.

August 2024 - Ongoing

Structure, Ad hoc peer reviewer for scholarly journals.

Cell Reports, Ad hoc peer reviewer for scholarly journals.

January 2024 - Ongoing

Journal of Virology, Ad hoc peer reviewer for scholarly journals.

November 2023 - Ongoing

Natural Structural and Molecular Biology, Ad hoc peer reviewer for scholarly journals.

Science Advances, Ad hoc peer reviewer for scholarly journals.

February 2022 - Ongoing

Nature Communications, Ad hoc peer reviewer for scholarly journals.