Weihan Li, PhD

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Professional Employment

Assistant Professor — 07/2025-now
Department of Molecular Biology, Cell Biology, and Biochemistry
Brown University, USA

Education & Postgraduate Training

Postdoctoral Fellow — 11/2018-06/2025
Albert Einstein College of Medicine, USA
Mentor: Dr. Robert H. Singer

Ph.D. in Biophysics — 09/2011-10/2018
University of California, San Francisco (UCSF), USA
Mentor: Dr. Peter Walter

Visiting Research Assistant — 07/2010-10/2010
Niels Bohr Institute, Denmark
Mentor: Dr. Mogens H. Jensen

B.Sc. in Applied Physics — 09/2007-07/2011
Hong Kong Baptist University (HKBU), Hong Kong
Mentor: Dr. Leihan Tang

Awards & Honors

RNA Society Member Spotlight (link)	03/2024
Dennis Shields Research Award (link)	10/2023
K99/R00 NIH/NIGMS Pathway to Independence Award	08/2023-07/2028
American Heart Association Postdoctoral Fellowship	01/2022-08/2023
UCSF Zaffaroni Family Fellowship	09/2011

Current Funding

K99/R00 NIH/NIGMS Pathway to Independence Award 4R00GM148788 (PI: Weihan Li) — 08/2023-07/2028
"Spatial coordination of cytosolic and mitochondrial translation."

NIH COBRE Research Project Leader 1P20GM156712 (project 8694, Weihan Li) — 09/2025-07/2030
"Optogenetic control of mRNA localization."

Publications

1. Yonghao Zhao, Zhouyuan Zhu, Sen Yang, and **Weihan Li***. "YeastSAM: a deep learning model for accurate segmentation of budding yeast cells." *bioRxiv*, 2025.
2. Hendrik Glauninger, Jared A.M. Bard, Caitlin J. Wong Hickernell, Edo M. Airoldi, **Weihan Li**, Robert H. Singer, Sneha Paul, Jingyi Fei, Tobin R. Sosnick, Edward W. J. Wallace, and D. Allan Drummond. "Transcriptome-wide mRNA condensation precedes stress granule formation and excludes stress-induced transcripts." *Molecular Cell,* 85, no. 23: 4393-4409 (2025).
3. **Weihan Li***,†, Anna Maekiniemi*,†, Hanae Sato, Christof Osman, and Robert H. Singer†. "An improved imaging system that corrects MS2-induced RNA destabilization." *Nature Methods*, 19(12), 1558-1562. (2022) (* equal contribution, † correspondence).
4. **Weihan Li**†, and Robert H. Singer. "Detecting the non-conventional mRNA splicing and translational activation of *HAC1* in budding yeast." *Methods in Molecular Biology*, vol. 2378: 113-120 (2022). († correspondence)

5. Adrien Le Thomas, Elena Ferri, Scot Marsters, Jonathan M. Harnoss, David A. Lawrence, Iratxe Zuazo-Gaztelu, Zora Modrusan, Sara Chan, Margaret Solon, Cécile Chalouni, **Weihan Li**, Hartmut Koeppen, Joachim Rudolph, Weiru Wang, Thomas D. Wu, Peter Walter, & Avi Ashkenazi. "Decoding non-canonical mRNA decay by the endoplasmic-reticulum stress sensor IRE1α." *Nature Communications*, 12, 7310 (2021).
6. Ravi V. Desai, Xinyue Chen, Benjamin Martin, Sonali Chaturvedi, Dong Woo Hwang, **Weihan Li**, Chen Yu, Sheng Ding, Matt Thomson, Robert H. Singer, Robert A. Coleman, Maike M.K. Hansen, Leor S. Weinberger. "A DNA-repair pathway can affect transcriptional noise to promote cell fate transitions." *Science*, 373, no. 6557: eabc6506 (2021).
7. Jeetayu Biswas, **Weihan Li**, Robert H. Singer, and Robert A. Coleman. "Imaging Organization of RNA Processing within the Nucleus." *Cold Spring Harbor Perspectives in Biology*, a039453 (2021). [review]
8. **Weihan Li***, Kelly Crotty*, Diego Garrido Ruiz, Mark Voorhies, Carlos Rivera, Anita Sil, Dyche Mullins, Matthew Jacobson, Jirka Peschek, and Peter Walter. "Protomer alignment modulates specificity of RNA substrate recognition by Ire1." *eLife*, 10: e67425 (2021). (* equal contribution)
9. **Weihan Li**†, Voytek Okreglak, Jirka Peschek, Philipp Kimmig, Meghan Zubradt, Jonathan Weissman and Peter Walter†. “Engineering ER-stress dependent non-conventional mRNA splicing.” *eLife*, 7:e35388 (2018). († co-correspondence)
10. Lu, Dan, Juliet Girard, **Weihan Li**, Arda Mizrak, and David O. Morgan. “Quantitative framework for ordered degradation of APC/C substrates.” *BMC biology*, 13(1), 96 (2015).
11. **Weihan Li**, Sandeep Krishna, Simone Pigolotti, Namiko Mitarai, and Mogens H Jensen. “Switching between oscillations and homeostasis in competing negative and positive feedback motifs.” *Journal of Theoretical Biology*, 307, 205–210 (2012).
12. **Weihan Li** and Changsong Zhou. “Topological determinants of synchronizability of oscillators on large complex networks.” *The Open Bioinformatics Journal*, 5, 42-52 (2011). [review]

Conference Talks

Cold Spring Harbor Meeting on Single Biomolecules, USA	10/2024
ASCB|EMBO Annual Meeting, Boston, USA	12/2023
Gordon Research Conference (GRC) RNA Nanotechnology, USA	01/2023
ASCB|EMBO Annual Meeting, Washington DC, USA	12/2022
Cold Spring Harbor Meeting on Single Biomolecules, USA	08/2022
ASBMB Annual Meeting, Philadelphia, USA	04/2022
FASEB the ER Conference (virtual)	06/2021
Invited talk at the ASBMB Annual Meeting (virtual)	05/2020
The Annual Meeting for the Chilean Society for Cell Biology, Chile	10/2018
Cold Spring Harbor Meeting on Protein Homeostasis in Health & Disease, USA	04/2018
ASCB|EMBO Annual Meeting, Philadelphia, USA	12/2017
Gordon Research Seminar (GRS) on Nucleic Acids, Biddeford, USA	06/2017
Cold Spring Harbor Meeting on Cell Biology of Yeasts, USA	10/2015

Symposium/Seminar Talks

RNA Without Borders: Academic Insights, Industry Impact.	10/2025
RNA Symposium at Brown University	01/2025
Seminar at UMass Chan Medical School	12/2023
Seminar at Columbia University	05/2023
Seminar at University of California, San Diego	01/2023
Seminar at University of California, Santa Barbara	01/2023
Tri-Institutional RNA Symposium, Rockefeller University, USA	12/2022
Seminar at Colorado State University	06/2022
The 8th Annual RNA Symposium, SUNY Albany, USA	03/2022
Northern California Symposium of Computational Biology, USA	10/2018
Seminar at Princeton University	12/2017
Seminar at Genentech	11/2017
HHMI Collaborative Innovation seminar	10/2017
Seminar at University of Pittsburgh	04/2017

Service & Leadership

Lead editor, special issue “RNA Cell Biology” in *Molecular Biology of the Cell* (*MBoC*)	2024-now
Peer reviewer for American Heart Association Pre- and Postdoctoral Fellowships	2023
Co-organizer and chair of subgroup sessions at 2022 & 2023 ASCB|EMBO Annual Meetings	2022-2023
Advisory committee and poster judge of the 1st Pan-NYC RNA Symposium	09/2023
Co-organizer of the 1st Einstein RNA Symposium	06/2023
Co-founder of the Einstein RNA Club (sponsored by the RNA Society)	11/2022-10/2023