

Weihan Li, PhD

Incoming Assistant Professor at Brown University

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Professional Employment

Assistant Professor Starting on 07/2025
Department of Molecular Biology, Cell Biology, and Biochemistry
Brown University, USA

Education & Postgraduate Training

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

PhD 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

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

Funding

Active and completed fundings:

K99/R00 NIH/NIGMS Pathway to Independence Award K99GM148788 (PI: Weihan Li) 08/2023-07/2028
"Spatial coordination of cytosolic and mitochondrial translation."
The goal of this project is to decipher how the cytosolic and mitochondrial translations are coordinated during mitochondrial biogenesis.

American Heart Association Postdoctoral Fellowship 903024 (PI: Weihan Li) 01/2022-07/2023
"Spatial coordination of cytosolic and mitochondrial translations."
This funding helped me collect essential preliminary data and build the foundation of the project that was later awarded by K99/R00.

RNA Salon (MPI: Robert H. Singer, Weihan Li, Sulagna Das, Dong Woo Hwang) 11/2022-10/2024
"The Einstein RNA Club"
This is an RNA Salon program at the RNA Society. Renewable funding of \$1,500 per year. I co-organized the Einstein RNA Symposium and NYC RNA Symposium via this funding support.

UCSF Zaffaroni Family Fellowship (PI: Weihan Li) 09/2011-09/2013
This fellowship supported the first two years of my PhD training.

Other fundings that I participated in:

MIRA Award NIH/NIGMS R35GM136296 (PI: Robert H. Singer) 09/2020-08/2025
"Following mRNA from birth to death at single-molecule resolution."
The goal of this project is to develop advanced RNA imaging methodologies and dissect the spatiotemporal regulation of RNA lifecycle. As a Senior/Key Personnel, I have composed the Research Statement during the application process, compiled the annual Progress Reports, and mentored two PhD students, two rotation students, one intern, and two visiting scholars.

MIRA Award Supplement 3R35GM136296-03S1 (PI: Robert H. Singer) 06/2023
This supplement of \$250,000 was awarded to purchase a fluorescent microscope for single-

molecule imaging. I drafted and edited the Research Statement and the Budget Justification. I am in charge of the purchase, setup, operation and maintenance of the microscope.

Awards & Honors

RNA Society Member Spotlight	03/2024
Dennis Shields Research Award	10/2023
Award description: https://www.einsteinmed.edu/research/belfer-institute/dennis-shields-awards/	
K99/R00 NIH/NIGMS Pathway to Independence Award	08/2023-07/2028
American Heart Association Postdoctoral Fellowship	01/2022-08/2023
Invited speaker at the ASBMB Annual Meeting	05/2020
UCSF Zaffaroni Family Fellowship	09/2011
China Youth Science and Technology Innovation Award (two recipients in Hong Kong)	06/2011
Gold Medal, International Genetically Engineered Machine (iGEM) competition	10/2009
College Full Scholarship, Hong Kong Baptist University	09/2007-07/2011

Service & Leadership

Junior lead editor, special issue "RNA Cell Biology" in <i>Molecular Biology of the Cell (MBoC)</i>	2024
Peer reviewer for American Heart Association Pre- and Postdoctoral Fellowships	2023
Co-organizer and chair of a subgroup session 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

Publications

Manuscript in preparation:

Weihan Li, Louis Degroux, Young J. Yoon, and Robert H. Singer. "Long-term single-molecule tracking of mRNAs using an MS2 sparse labeling approach."

Published articles:

- Hendrik Glauninger, Jared A.M. Bard, Caitlin J. Wong Hickernell, Edo M. Airoidi, **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." *bioRxiv*, 2024.
- 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).
- 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)
- 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 IRE1 α ." *Nature Communications*, 12, 7310 (2021).
- 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).
- 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]
- 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)
- 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)
- 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).
10. **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).
 11. **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

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

Seminar at UMass Chan Medical School (hosted by Dr. Allan Jacobson)	12/2023
Seminar at Columbia University (hosted by Dr. Liza Pon)	05/2023
Seminar at University of California, San Diego (hosted by Dr. Brian Zid)	01/2023
Seminar at University of California, Santa Barbara (hosted by Dr. Brooke Gardner)	01/2023
Tri-Institutional RNA Symposium, Rockefeller University, USA	12/2022
Invited seminar at Colorado State University (hosted by Dr. Timothy Stasevich)	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 (hosted by Dr. Alexei Korennykh)	12/2017
Seminar at Genentech (hosted by Dr. Avi Ashkenazi)	11/2017
HHMI Collaborative Innovation seminar	10/2017
Seminar at University of Pittsburgh (hosted by Dr. Jeffrey Brodsky)	04/2017

Teaching Experience

Mentor of the intern program of the European Master's Degree in Genetics	11/2022-Present
Mentor of two PhD students, two rotation students, and two visiting scholars at Einstein	01/2019-Present
Mentor of the UCSF High School Intern Program	06/2018-08/2018
Mentor of the HHMI EXROP undergraduate research program	07/2017-08/2017
Teaching assistant of <i>Physical Chemistry</i> at UCSF (class size: 120)	09/2012-12/2012
Organizer & lecturer of a student-organized course <i>Linear Algebra</i> at HKBU	09/2009-12/2009

References

Robert H. Singer, PhD

Harold and Muriel Block Endowed Chair,
 Director of the Program in RNA Biology,
 Professor, Department of Cell Biology,
 Professor, Department of Neuroscience,
 Chairman Emeritus of Anatomy & Structural Biology,
 Albert Einstein College of Medicine.
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Peter Walter, PhD

Professor Emeritus,
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Allan Jacobson, PhD

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