



## Boxuan Zhao

Postdoctoral Research Fellow, Genetics

### Bio

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#### BIO

I am a Stanford Neurosciences Institute Interdisciplinary Scholar and Postdoctoral Research Fellow at Stanford University, jointly advised by Prof. Alice Ting and Prof. Liqun Luo. My current research is focused on the development of molecular tools for transcriptome studies in neuronal systems.

#### HONORS AND AWARDS

- Stanford Neurosciences Institute Interdisciplinary Scholar Awards, Stanford University (2017)
- 2018 RNA Society/Scaringe Graduate Student Award, RNA Society (2017)
- Elizabeth R. Norton Prize for Excellence in Research in Chemistry, The University of Chicago (2017)
- Graduate Council Travel Fund, The University of Chicago (2017)
- GLCACS Outstanding Student Research Award, Chinese American Chemical Society (2016)
- William Rainey Harper Dissertation Fellowship, The University of Chicago (2016)
- Student Leadership Recognition and Access Program Award, The University of Chicago (2016)
- Joan Shiu Chemistry Department Student Service Award, The University of Chicago (2016)
- Collège de France Science Research Travel Grants for Doctoral Research in Paris, The University of Chicago (2016)
- The Albert J. Cross Prize for Excellence in Research, Teaching, and Department Citizenship, The University of Chicago (2015)
- HHMI International Student Fellowship, Howard Hughes Medical Institute (2014)
- Silver Prize of 8th "Challenge Cup" National College Students Business Plan Competition, Ministry of Education / China Association for Science and Technology (2012)
- Best graduation thesis and defense of Peking University, Peking University (2012)
- First Prize of 1st "Star of Chemistry" Undergraduate and Graduate Selection of College of Chemistry, Peking University (2012)
- Grand Prize and Technology Transfer Award of 13th Peking University Business Plan Competition, Peking University (2011)
- Grand Prize of 12th "Challenge Cup" National Science and Technology Academic Competition, Ministry of Education / China Association for Science and Technology (2011)
- Student Innovation Award of Peking University in 2010-2011 Academic Year, Peking University (2011)
- Dow Sustainability Innovation Student Challenge Award, Dow Chemistry Company (2011)
- First Runner Up and Best Environment Project of iGEM 2010, iGEM / MIT (2010)
- Fangzheng Fellowship, Peking University (2008)

#### BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, RNA Society (2016 - present)

## PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of Chicago (2017)
- Master of Science, University of Chicago , Chemistry (2013)
- Bachelor of Science, Peking University , Chemistry (2012)

## Research & Scholarship

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### LAB AFFILIATIONS

- Alice Ting, Ting lab (11/1/2017)
- Liqun Luo, Luo lab (11/1/2017)

## Publications

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### PUBLICATIONS

- **RNA-protein interaction mapping via MS2- or Cas13-based APEX targeting.** *Proceedings of the National Academy of Sciences of the United States of America*  
Han, S., Zhao, B. S., Myers, S. A., Carr, S. A., He, C., Ting, A. Y.  
2020
- **m(6)A-dependent maternal mRNA clearance facilitates zebrafish maternal-to-zygotic transition** *NATURE*  
Zhao, B. S., Wang, X., Beadell, A. V., Lu, Z., Shi, H., Kuuspalu, A., Ho, R. K., He, C.  
2017; 542 (7642): 475-?
- **Post-transcriptional gene regulation by mRNA modifications** *NATURE REVIEWS MOLECULAR CELL BIOLOGY*  
Zhao, B. S., Roundtree, I. A., He, C.  
2017; 18 (1): 31-42
- **N-6-methyladenosine Modulates Messenger RNA Translation Efficiency** *CELL*  
Wang, X., Zhao, B. S., Roundtree, I. A., Lu, Z., Han, D., Ma, H., Weng, X., Chen, K., Shi, H., He, C.  
2015; 161 (6): 1388-1399
- **DNA 5-Methylcytosine-Specific Amplification and Sequencing.** *Journal of the American Chemical Society*  
Liu, C., Cui, X., Zhao, B. S., Narkhede, P., Gao, Y., Liu, J., Dou, X., Dai, Q., Zhang, L., He, C.  
2020
- **m(6)A Demethylase ALKBH5 Maintains Tumorigenicity of Glioblastoma Stem-like Cells by Sustaining FOXM1 Expression and Cell Proliferation Program** *CANCER CELL*  
Zhang, S., Zhao, B. S., Zhou, A., Lin, K., Zheng, S., Lu, Z., Chen, Y., Sulman, E. P., Xie, K., Bogler, O., Majumder, S., He, C., Huang, et al  
2017; 31 (4): 591-?
- **YTHDF3 facilitates translation and decay of N-6-methyladenosine-modified RNA** *CELL RESEARCH*  
Shi, H., Wang, X., Lu, Z., Zhao, B. S., Ma, H., Hsu, P. J., Liu, C., He, C.  
2017; 27 (3): 315-328
- **Evolution of transcript modification by N-6-methyladenosine in primates** *GENOME RESEARCH*  
Ma, L., Zhao, B., Chen, K., Thomas, A., Tuteja, J. H., He, X., He, C., White, K. P.  
2017; 27 (3): 385-392
- **"Gamete On" for m6A: YTHDF2 Exerts Essential Functions in Female Fertility.** *Molecular cell*  
Zhao, B. S., He, C.  
2017; 67 (6): 903-5
- **Dynamics of Human and Viral RNA Methylation during Zika Virus Infection** *CELL HOST & MICROBE*  
Lichinchi, G., Zhao, B. S., Wu, Y., Lu, Z., Qin, Y., He, C., Rana, T. M.  
2016; 20 (5): 666-673

- **Quantifying mammalian genomic DNA hydroxymethylcytosine content using solid-state nanopores** *SCIENTIFIC REPORTS*  
Zahid, O. K., Zhao, B. S., He, C., Hall, A. R.  
2016; 6
- **N-6-methyladenosine of HIV-1 RNA regulates viral infection and HIV-1 Gag protein expression** *ELIFE*  
Tirumuru, N., Zhao, B. S., Lu, W., Lu, Z., He, C., Wu, L.  
2016; 5
- **Nucleic Acid Modifications in Regulation of Gene Expression** *CELL CHEMICAL BIOLOGY*  
Chen, K., Zhao, B. S., He, C.  
2016; 23 (1): 74-85
- **TET Family Proteins: Oxidation Activity, Interacting Molecules, and Functions in Diseases** *CHEMICAL REVIEWS*  
Lu, X., Zhao, B. S., He, C.  
2015; 115 (6): 2225-2239
- **Base-resolution maps of 5-formylcytosine and 5-carboxylcytosine reveal genome-wide DNA demethylation dynamics** *CELL RESEARCH*  
Lu, X., Han, D., Zhao, B. S., Song, C., Zhang, L., Dore, L. C., He, C.  
2015; 25 (3): 386-389
- **Fate by RNA methylation: m(6)A steers stem cell pluripotency** *GENOME BIOLOGY*  
Zhao, B. S., He, C.  
2015; 16
- **Pseudouridine in a new era of RNA modifications** *CELL RESEARCH*  
Zhao, B. S., He, C.  
2015; 25 (2): 153-154
- **5mC Oxidation by Tet2 Modulates Enhancer Activity and Timing of Transcriptome Reprogramming during Differentiation** *MOLECULAR CELL*  
Hon, G. C., Song, C., Du, T., Jin, F., Selvaraj, S., Lee, A. Y., Yen, C., Ye, Z., Mao, S., Wang, B., Kuan, S., Edsall, L. E., Zhao, et al  
2014; 56 (2): 286-297
- **The multiple antibiotic resistance regulator MarR is a copper sensor in Escherichia coli** *NATURE CHEMICAL BIOLOGY*  
Hao, Z., Lou, H., Zhu, R., Zhu, J., Zhang, D., Zhao, B. S., Zeng, S., Chen, X., Chan, J., He, C., Chen, P. R.  
2014; 10 (1): 21-U48
- **A highly sensitive and genetically encoded fluorescent reporter for ratiometric monitoring of quinones in living cells** *CHEMICAL COMMUNICATIONS*  
Ji, Q., Zhao, B. S., He, C.  
2013; 49 (73): 8027-8029
- **Probing subcellular organic hydroperoxide formation via a genetically encoded ratiometric and reversible fluorescent indicator** *INTEGRATIVE BIOLOGY*  
Zhao, B. S., Zhang, G., Zeng, S., He, C., Chen, P. R.  
2013; 5 (12): 1485-1489
- **A Selective Fluorescent Probe for Carbon Monoxide Imaging in Living Cells** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION*  
Wang, J., Karpus, J., Zhao, B. S., Luo, Z., Chen, P. R., He, C.  
2012; 51 (38): 9652-9656
- **A Highly Selective Fluorescent Probe for Visualization of Organic Hydroperoxides in Living Cells** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*  
Zhao, B. S., Liang, Y., Song, Y., Zheng, C., Hao, Z., Chen, P. R.  
2010; 132 (48): 17065-17067