

**Hanzhi Luo, PhD**  
Molecular Pharmacology Program  
Memorial Sloan Kettering Cancer Center  
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## EDUCATION

University of California, Berkeley  
Ph.D., Metabolic Biology  
Berkeley, CA  
9/2011-5/2017

Peking University  
B.Med., Basic Medical Sciences  
Beijing, China  
9/2006-7/2011

## RESEARCH EXPERIENCE

Post-doctoral fellow  
Memorial Sloan Kettering Cancer Center — Advisor: Dr. Michael G. Kharas  
3/2018-present

Graduate Student  
University of California, Berkeley — Advisor: Dr. Danica Chen  
Thesis: Study on the Role of SIRT2 in Stem Cell Aging and Chronic Inflammation  
8/2011-2/2018

Summer Undergraduate Research Program  
University of California, Los Angeles — Advisor: Dr. Fuyuhiko Tamanoi  
Project: Mesoporous silica nanoparticles facilitate delivery of siRNA to shutdown signaling pathways in mammalian cells  
Summer 2009

Undergraduate research assistant  
Peking University — Advisor: Dr. Dehua Chui  
Project: Impact of formaldehyde exposure on rat aggressive behavior  
2005-2011

## AWARDS AND HONORS

American Society of Hematology Abstract Achievement Award  
K99/R00 pathway to independence award and supplement, NIDDK  
MSKCC Society Scholar, Memorial Sloan Kettering Cancer Center  
NYSTEM Fellow Award, Memorial Sloan Kettering Cancer Center  
Ellsworth C. Dougherty Memorial Fund Award, UC Berkeley  
UCB-UCSF-UCSC stem cell center retreat Poster Award  
Outstanding Graduate Student Instructor Award, UC Berkeley  
UC Berkeley Graduate Division Conference Travel Awards  
Glenn/AFAR Scholarships for Research in the Biology of Aging  
National Scholarship, Ministry of Education, China  
May 4th Scholarship, Peking University, Beijing, China  
2023  
2021-2024  
2023  
2018  
2017  
2017  
2016  
2016  
2015  
2009  
2006-2011

## PUBLICATIONS

### First Author Research Articles

1. **Luo, H.\***, Cortés-López, M.\*, Tam, C.L., Xiao, M., Wakiro I., Chu K.L., Pierson, A., Chan, M., Chang, K., Yang, X., Han G., Ahn E.E., Morris Q.D., Landau D.A., Kharas, M.G. SON is an Essential m6A Target for Hematopoietic Stem Cell Fate. *Cell Stem Cell*, 2023

2. Cheng, Y.\* **Luo, H.\***, Izzo, F.\*, Pickering, B.F., Nguyen, D., Myers, R., Schurer, A., Gourkanti, S., Bruning, J.C., Vu, L.P., Jaffrey, S.R., Landau, D.A., Kharas, M.G. (2019) m6A RNA Methylation Maintains Hematopoietic Stem Cell Identity and Symmetric Commitment. *Cell Reports*, Volume 28, Issue 7, pages 1703-1716 e6 (\* equal contribution, co-first author)
3. **Luo, H.**, Mu, W.C., Karki, R., Chiang, H.H., Mohrin, M., Shin, J., Ohkubo, R., Ito, K., Kanneganti, T.D., Chen, D. (2019) Mitochondrial stress-initiated aberrant activation of the NLRP3 inflammasome regulates hematopoietic stem cell aging. *Cell Reports*, Volume 26, Issue 4, pages 945-954 e4
4. He, M.\* **Luo, H.\***, Chiang, H.H.\* **Luo, H.\***, Zheng, Z.\* **Luo, H.\***, Ohkubo, R., Susanto, A., Chen, D. (2020) An Acetylation switch of the NLRP3 inflammasome regulates aging- and overnutrition associated chronic inflammation and insulin resistance. *Cell Metabolism*, Volume 31, Issue 3, pages 580-591.E5 (\* equal contribution, co-first author)

#### Co-authored Research Articles

1. Chavez, F.H., **Luo, H.**, Cifani, P., Pine, A., Chu, K.L., Joshi, S., Barin, E., Schurer, A., Chan, M., Chang, K., Han, G.Y., Pierson, A.J., Xiao, M., Yang, X., Kuehm, L.M., Hong, Y., Nguyen, D., Chiosis, G., Kentsis, A., Leslie, C., Vu, L.P., Kharas, M.G. (2023) RNA binding protein SYNCRIP maintains proteostasis and self-renewal of hematopoietic stem and progenitor cells. *Nature Communications*, 14, 2290
2. Kotini, A.G., Carcamo, S., Rodriguez, N.C., Olszewska, M., Wang, T., Demircioglu, D., Chang, C.J., Bernard, E., Chao, M.P., Majeti, R., **Luo, H.**, Kharas, M.G., Hasson, D., Papapetrou, E.P. (2023) Patient-Derived iPSCs Faithfully Represent the Genetic Diversity and Cellular Architecture of Human Acute Myeloid Leukemia. *Blood Cancer Discovery*. 4 (4): 318–335.
3. Klatt, M.G., Dao, T., Yang, Z., Liu, J., Mun, S.S., Dacek, M.M., **Luo, H.**, Gardner, T.J., Bourne, C., Peraro, L., Aretz, Z.E., Korontsvit, T., Lau, M., Kharas, M.G., Liu, C., Scheinberg, D.A. (2022) A TCR mimic CAR T cell specific for NDC80 is broadly reactive with solid tumors and hematologic malignancies. *Blood* (2022) 140 (8): 861–874.
4. Wang, Y., Yen, F.S., Zhu, X.G., Timson, R.C., Weber, R., Xing, C., Liu, Y., Allwein, B., **Luo, H.**, Yeh, H.W., Heissel, S., Unlu, G., Gamazon, E.R., Kharas, M.G., Hite, R., Birsoy, K. (2021) SLC25A39 is necessary for mitochondrial glutathione import in mammalian cells. *Nature*, 599, 136–140
5. Feng, W., Cao, Z., Lim, P.X., Zhao, H., **Luo, H.**, Mao, N., Lee, Y.S., Rivera, A.A., Choi, D., Wu, C., Han, T., Romero, R., Stanchina, E.D., Carver, B.S., Wang, Q., Jasin, M., Sawyers, C.L. (2021) Rapid interrogation of cancer cell of origin through CRISPR editing. *PNAS*, 118 (32) e2110344118
6. Cheng, Y., Xie, W., Pickering, B.F., Chu, K.L., Savino, A.M., Yang, X., **Luo, H.**, Nguyen, D., Mo, S., Barin, E., Velleca, A., Rohwetter, T.M., Patel, D.J., Jaffrey, S.R., Kharas, M.G. (2021) N6-Methyladenosine on mRNA facilitates a phase-separated nuclear body that suppresses myeloid leukemic differentiation. *Cancer Cell*. Volume 39, Issue 7, pages 958-972 e8
7. Lee, S., Kalidindi, T.M., **Luo, H.**, Gangangari, K., Punzalan, K., Bitton, A., Lee, C.J., Vargas, H.A., Park, S., Bodei, L., Kharas, M.G., Singh, V.K., Pillarsetty, N., Larson, S.M. (2021)  $\gamma$ -Tocotrienol-Loaded Liposomes for Radioprotection from Hematopoietic Side Effects Caused by Radiotherapeutic Drugs. *Journal of Nuclear Medicine*, 62 (4) 584-590
8. Wesely, J., Kotini, A.G.#, Izzo, F.#, **Luo, H.#**, Yuan, H.#, Sun, J., Georgomanoli, M., Zviran, A., Deslauriers, A.G., Dusaj, N., Nimer, S.D., Leslie, C., Landau, D.A., Kharas, M.G.\* **Luo, H.\***, Papapetrou, E.P.\* (2020) Acute Myeloid Leukemia iPSCs reveal a role for RUNX1 in the maintenance of human Leukemia Stem Cells. *Cell Reports*, 31(9):107688. (# equal contribution, co-second author)
9. Mohrin, M., Widjaja, A., Liu, Y., **Luo, H.**, Chen, D. (2018) The mitochondrial unfolded protein response is activated upon hematopoietic stem cell exit from quiescence. *Aging Cell*, 17 (3), e12756
10. Mohrin, M.\* **Luo, H.\***, Shin, J.\* **Luo, H.\***, Liu, Y.\* **Luo, H.\***, Brown, K.\* **Luo, H.\***, Xi, Y., Haynes, C.M., Chen, D. (2015) A mitochondrial UPR-mediated metabolic checkpoint regulates hematopoietic stem cell aging. *Science*. 2015, Volume 347, No. 6228, pages 1374-1377
11. Shin, J.\* **Luo, H.\***, He, M.\* **Luo, H.\***, Liu, Y.\* **Luo, H.\***, Paredes, S.\* **Luo, H.\***, Villanova, L., Brown, K., Qiu, X., Nabavi, N., Mohrin, M., Wojnoonski, K., Li, P., Cheng, H.W., Murphy, A.J., Valenzuela, D.M., **Luo, H.**, Kapahi, P., Krauss, R., Mostoslavsky, R., Yancopoulos, G.D., Alt, F.W., Chua, K.F., Chen, D. (2013) SIRT7 represses Myc

activity to suppress ER stress and prevent fatty liver disease. *Cell Reports*. Volume 5, Issue 3, pages 654-665

12. Hom, C., Lu, J., Liong, M., **Luo, H.**, Li, Z., Zink, J.I., Tamanoi, F. (2010) Mesoporous silica nanoparticles facilitate delivery of siRNA to shutdown signaling pathways in mammalian cells. *Small*. Volume 6, Issue 11, pages 1185–1190
13. Liu, Y.\*, Ye, Z.\*, **Luo, H.**, Dunkley, P.R., Sun, M., Li, M., Wang, L., Chui, D. (2009) Inhalative formaldehyde exposure enhances aggressive behavior and disturbs monoamines in frontal cortex synaptosome of male rats. *Neuroscience Letters*. Volume 464, Issue 2, pages 113-116

#### Review and Preview Articles

1. **Luo, H.**, Kharas, M.G. (2021) Decoding m6A, One Reader at a Time. *Haematologica*. Epub ahead of print
2. Cheng, Y., **Luo, H.**, Kharas, M.G. (2020) Rubbing Out Leukemia Stem Cell by Erasing the Erasers. *Cell Stem Cell*. Volume 27, Issue 1, pages 3-5
3. **Luo, H.**, Chiang, H.H., Louw, M., Susanto, A., Chen, D. (2017) Nutrient sensing and the oxidative stress response. *Trends in Endocrinology and Metabolism*. Volume 28, Issue 6, pages 449-460

#### Patent

1. Chen, D., **Luo, H.** (2019) Compositions and Methods for Inhibiting Stem Cell Aging

#### SELECTED TALKS AND SEMINARS

Tri-I RNA club winter mini-symposium, Rockefeller University	Dec 2023
Postdoctoral Symposium, MSKCC	Sep 2023
Albert Einstein School of Medicine,	Aug 2023
Workshop on HSC homeostasis and Leukemic evolution	
Icahn School of Medicine at Mount Sinai,	May 2023
4 <sup>th</sup> Workshop on Splicing Factor Mutations and RNA Biology in Cancer	
MSKCC, Center of Stem Cell Biology Seminars	March 2023
NYSTEM trainee meeting, New York	July 2020
MSKCC, Center of Stem Cell Biology Seminars	Sep 2019
MSKCC, Center of Hematological Malignancy Seminars	Oct 2018
Bay Area Aging Meeting, Stanford	Nov 2017
Bay Area Aging Meeting, UCSF	Nov 2016

#### TEACHING EXPERIENCE and TRAINING

Leadership and Management Course for Postdoc Trainee,	May 2023
Yale Cooperative Center of Excellence in Hematology (YCCEH)	
Graduate student instructor, (UC, Berkeley)	Fall 2016
Toxicology	
Graduate student instructor, (UC, Berkeley)	Spring 2016
Metabolic Bases of Human Health and Diseases	
Graduate student instructor, (UC, Berkeley)	Spring 2015
Intro to Toxicology	
Graduate student instructor, (UC, Berkeley)	Fall 2013
Nutrient Function and Metabolism	

#### STUDENTS MENTORED

Aspen Pierson, research technician	2022-now
Daniel Fecko, undergraduate student	Summer 2023

Michael Xiao, MD/PhD rotation student	Summer 2022
Isaac Wakiro, graduate rotation student (HHMI Gilliam Fellow)	Summer 2021
Mandy Chan, research technician	2020-2022
Tiffany Vaughan, undergraduate student	Summer 2019
Chalisse Fortson, undergraduate Bridge Fellow	Summers 2014
Katie Dea, undergraduate student	2016-2017