

Li Li, Ph.D.

Curriculum Vitae (9/2025)



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APPOINTMENTS

Assistant Professor , University of Wyoming	2025-present
Instructor , University of Texas Southwestern Medical Center	2024-2025
Postdoctoral Fellow , University of Texas Southwestern Medical Center	2018-2024

EDUCATION

Ph.D., Cell Biology	2017
Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, Beijing, China	
B.S., Biomedical Engineering and Bioinformatics	2010
Tianjin Medical University, Tianjin, China	

HONORS AND AWARDS

1 st Place Poster Award, 2025 CADA South Winter Symposium	2025
Best Poster Award, Gordon Research Conference - Hypothalamus	2024
Oral presentation Award, The 15 th CADA Annual Meeting	2024
Career Development Award, American Heart Association	2024
Finalist, Brown-Goldstein Award for Excellence in Postdoctoral Research	2024
Donald Seldin Basic Science Award, UT Southwestern Medical Center	2023
Postdoctoral Fellowship Award, American Heart Association	2023
Future of Science Fund Scholarship, Keystone Symposia	2022
Postdoctoral Association Travel Award, UT Southwestern Medical Center	2022
Yihai Kerry - IGDB Scholarship, Chinese Academy of Sciences	2017
Merit Student, University of Chinese Academy of Sciences	2014

TEACHING AND MENTORING EXPERIENCE

Mentoring, IGDB and UTSW

Trained, supervised and managed graduate students, rotation students, and summer undergraduate students to work on projects that contribute to my overall research programs.

• Daiyan Chowdhury, undergraduate student at University of Texas at Dallas	2024
• Alexandra Serrato, undergraduate student at University of Rice, NIDDK STEP-UP Fellow	2021
• Eman Khan, high school student, UTSW STARS Fellow	2021
• Khyathi Thallapureddy, undergraduate student at University of Missouri	2019

- Min Li, graduate student at Institute of Genetics and Developmental Biology 2014-2017
- Xue Liu, master student at Institute of Genetics and Developmental Biology 2014-2015

PUBLICATIONS

Selected Peer-Reviewed Articles (equal contribution):*

1. **Li Li***, Baijie Xu*, Xiameng Chen, Rong Wan, Amanda Almeida, Steven Wyler, Swati, Chen Liu. Developmental reprogramming of the melanocortin neurons regulates energy homeostasis. **Neuron** (revision).
2. **Li Li***, Ciria C Hernandez*, Luis E Gimenez*, Baijie Xu, Naima S Dahir, Swati, Shari G Birnbaum, Roger D Cone, Chen Liu. Functional coupling between MC4R and Kir7.1 contributes to clozapine-induced hyperphagia. **Nature Communications** (revision).
3. **Li Li***, Baijie Xu*, Chen Liu. Sample Enrichment for Single Nucleus Sequencing Using Concanavalin A (ConA)-conjugated Magnetic Beads. **STAR Protocols**, 2023 Sep 22;4(4):102595.
4. **Li Li**, Steven C Wyler, Luis A León-Mercado, Baijie Xu, Youjin Oh, Xiameng Chen, Rong Wan, Amanda G Arnold, Lin Jia, Guanlin Wang, Katherine Nautiyal, René Hen, Jong-Woo Sohn, Chen Liu. Delineating a serotonin 1B receptor circuit for appetite suppression in mice. **The Journal of Experimental Medicine**, 2022 Aug 1;219(8):e20212307.
5. **Li Li***, Eun-Seon Yoo*, Xiujuan Li*, Steven C Wyler, Xiameng Chen, Rong Wan, Amanda G Arnold, Shari G Birnbaum, Lin Jia, Jong-Woo Sohn, Chen Liu. The atypical antipsychotic risperidone targets hypothalamic melanocortin 4 receptors to cause weight gain. **The Journal of Experimental Medicine**, 2021 Jul 5;218(7):e20202484.
6. Min Li*, **Li Li***, Baoguo Li*, Catherine Hambly, Guanlin Wang, Yingga Wu, Zengguang Jin, Anyongqi Wang, Chaoqun Niu, Christian Wolfrum, John R Speakman. Brown adipose tissue is the key depot for glucose clearance in microbiota depleted mice. **Nature Communications**, 2021 Aug 5;12(1):4725.
7. **Li Li***, Baoguo Li*, Min Li*, John R Speakman. Switching on the furnace: regulation of heat production in brown adipose tissue. **Molecular Aspects of Medicine**, 2019 Aug;68:60-73.
8. Baoguo Li*, **Li Li***, Min Li*, Sin Man Lam*, Guanlin Wang, Yingga Wu, Hanlin Zhang, Chaoqun Niu, Xueying Zhang, Xue Liu, Catherine Hambly, Wanzhu Jin, Guanghou Shui, John R Speakman. Microbiota depletion impairs thermogenesis of brown adipose tissue and browning of white adipose tissue. **Cell Reports**, 2019 Mar 5;26(10):2720-2737.e5.
9. Sumei Hu*, LU Wang*, Dengbao Yang*, **Li Li***, Jacques Togo*, Yingga Wu*, Quansheng Liu, Baoguo Li, Min Li, Guanlin Wang, Xueying Zhang, Chaoqun Niu, Jianbo Li, Yanchao Xu, Elspeth Couper, Andrew Whittington-Davies, Mohsen Mazidi, Lijuan Luo, Shengnan Wang, Alex Douglas, John R Speakman. Dietary fat, but not protein or carbohydrate, regulates energy intake and causes adiposity in mice. **Cell Metabolism**, 2018 Sep 4;28(3):415-431.e4.
10. **Li Li***, Baoguo Li*, Min Li, Chaoqun Niu, Guanlin Wang, Ting Li, Elżbieta Król, Wanzhu Jin, John R Speakman. Brown adipocytes can display a mammary basal myoepithelial cell phenotype in vivo. **Molecular Metabolism**, 2017 Oct;6(10):1198-1211.

Other Peer-Reviewed Articles

11. Baijie Xu, Katherine Lawler, Steven C Wyler, **Li Li**, Swati, Julia M Keogh, Xiameng Chen, Rong Wan, Amanda G Almeida, Susan Kirsch, Kathleen G Mountjoy, Joel K Elmquist, I Sadaf Farooqi, Chen Liu. Orthopedia regulates melanocortin 4 receptor transcription and energy homeostasis. **Science Translational Medicine**, 2025 Jan 17, eadr6459.

12. Lin Gao, Sumei Hu, Dengbao Yang, Lu Wang, Jacques Togo, Yingga Wu, Baoguo Li, Min Li, Guanlin Wang, Xueying Zhang, Li Li, Yanchao Xu, Moshen Mazidi, Elspeth Couper, Andrew Whittington-Davies, Chaoqun Niu, John R Speakman. The hedonic overdrive model best explains high-fat diet-induced obesity in C57BL/6 mice. **Obesity**, 2024 Apr;32(4):733-742.
13. Yanchao Xu, Dengbao Yang, Lu Wang, Elżbieta Król, Mohsen Mazidi, Li Li, Yi Huang, Chaoqun Niu, Xue Liu, Sin Man Lam, Guanghou Shui, Alex Douglas, John R Speakman. Maternal high fat diet in lactation impacts hypothalamic neurogenesis and neurotrophic development, leading to later life susceptibility to obesity in male but not female mice. **Advanced Science**, 2023 Dec;10(35):e2305472.
14. Shangang Zhao, Qian Lin, Wei Xiong, Li Li, Leon Straub, Dinghong Zhang, Rizaldy Zapata, Qingzhang Zhu, Xue-Nan Sun, Zhuzhen Zhang, Jan-Bernd Funcke, Chao Li, Shihwei Chen, Yi Zhu, Nisi Jiang, Guannan Li, Ziyang Xu, Steven C Wyler, May-Yun Wang, Juli Bai, Xianlin Han, Christine M Kusminski, Ningyan Zhang, Zhiqiang An, Joel K Elmquist, Olivia Osborn, Chen Liu, Philipp E Scherer. Hyperleptinemia contributes to antipsychotic drug-associated obesity and metabolic disorders. **Science Translational Medicine**, 2023 Nov 22;15(723):eade8460.
15. Xue Liu, Zengguang Jin, Stephanie Summers, Davina Deros, Min Li, Baoguo Li, Li Li, John R Speakman. Calorie restriction and calorie dilution have different impacts on body fat, metabolism, behavior, and hypothalamic gene expression. **Cell Reports**, 2022 May 17;39(7):110835.
16. Yingga Wu, Cara L Green, Guanlin Wang, Dengbao Yang, Li Li, Baoguo Li, Lu Wang, Min Li, Jianbo Li, Yanchao Xu, Xueying Zhang, Chaoqun Niu, Sumei Hu, Jacques Togo, Mohsen Mazidi, Davina Deros, Alex Douglas, John R Speakman. Effects of dietary macronutrients on the hepatic transcriptome and serum metabolome in mice. **Aging Cell**, 2022 Apr;21(4):e13585.
17. Yingga Wu, Sumei Hu, Dengbao Yang, Li Li, Baoguo Li, Lu Wang, Min Li, Guanlin Wang, Jianbo Li, Yanchao Xu, Xueying Zhang, Chaoqun Niu, John R Speakman. Increased variation in body weight and food intake is related to increased dietary fat but not increased carbohydrate or protein in mice. **Frontiers in Nutrition**, 2022 Mar 8;9:835536.
18. Agata M Rudolf, Qi Wu, Li Li, Jun Wang, Yi Huang, Jacques Togo, Christopher Liechti, Min Li, Chaoqun Niu, Yonggang Nie, Fuwen Wei, John R Speakman. A single nucleotide mutation in the dual-oxidase 2 (DUOX2) gene causes some of the panda's unique metabolic phenotypes. **National Science Review**, 2021 Jul 15;9(2):nwab125.
19. Eun-Seon Yoo, Li Li, Lin Jia, Caleb C Lord, Charlotte E Lee, Shari G Birnbaum, Claudia R Vianna, Eric D Berglund, Kathryn A Cunningham, Yong Xu, Jong-Woo Sohn, Chen Liu. Gai/o-coupled Htr2c in the paraventricular nucleus of the hypothalamus antagonizes the anorectic effect of serotonin agents. **Cell Reports**, 2021 Nov 16;37(7):109997.
20. Yingga Wu, Baoguo Li, Li Li, Sharon E Mitchell, Cara L Green, Giuseppe D'Agostino, Guanlin Wang, Lu Wang, Min Li, Jianbo Li, Chaoqun Niu, Zengguang Jin, Anyongqi Wang, Yu Zheng, Alex Douglas, John R Speakman. Very-low-protein diets lead to reduced food intake and weight loss, linked to inhibition of hypothalamic mTOR signaling, in mice. **Cell Metabolism**, 2021 May 4;33(5):888-904.e6.
21. Sumei Hu, Jacques Togo, Lu Wang, Yingga Wu, Dengbao Yang, Yanchao Xu, Li Li, Baoguo Li, Min Li, Jianbo Li, Guanlin Wang, Xueying Zhang, Chaoqun Niu, Mohsen Mazidi, Alex Douglas, John R Speakman. Effects of dietary macronutrients and body composition on glucose homeostasis in mice. **National Science Review**, 2020 Aug 6;8(1):nwaa177.
22. Yi Huang, Jazmin Osorio Mendoza, Catherine Hambly, Baoguo Li, Zengguang Jin, Li Li, Moshen Mazidi, Sumei Hu, John R Speakman. Limits to sustained energy intake. XXXI. Effect of graded levels of dietary fat on lactation performance in Swiss mice. **Journal of Experimental Biology**, 2020 May 22;223(Pt 10):jeb221911.
23. Xiameng Chen, Steven C Wyler, Li Li, Amanda G Arnold, Rong Wan, Lin Jia, Mark A Landy, Helen C Lai, Pin Xu, Chen Liu. Comparative transcriptomic analyses of developing melanocortin neurons

reveal new regulators for the anorexigenic neuron identity. **Journal of Neuroscience**, 2020 Apr 15;40(16):3165-3177.

24. Guanlin Wang, Baoguo Li, Xueying Zhang, Chaoqun Niu, Jianbo Li, **Li Li**, John R Speakman. No seasonal variation in physical activity of Han Chinese living in Beijing. **International Journal of Behavioral Nutrition and Physical Activity**, 2017 Apr 17;14(1):48.
25. Zhi-Jun Zhao, **Li Li**, Deng-Bao Yang, Qing-Sheng Chi, Catherine Hambly, John R Speakman. Limits to sustained energy intake XXV: milk energy output and thermogenesis in Swiss mice lactating at thermoneutrality. **Scientific Reports**, 2016 Aug 24;6:31626.
26. Deng-Bao Yang, **Li Li**, Lu-Ping Wang, Qing-Sheng Chi, Catherine Hambly, De-Hua Wang, John R Speakman. Limits to sustained energy intake. XIX. A test of the heat dissipation limitation hypothesis in Mongolian gerbils (*Meriones unguiculatus*). **Journal of Experimental Biology**, 2013 Sep 1;216(Pt 17):3358-68.

INVITED TALKS AND POSTERS

Wyoming Sensory Biology Center at University of Wyoming	Talk	2025
Division of Endocrinology, Diabetes, and Metabolism at the University of Illinois Chicago	Talk	2024
The 15th CADA Annual Meeting, Orlando, FL, US	Talk	2024
Gordon Research Conference – Hypothalamus, Lewiston, ME, US	Poster	2024
The Obesity Society annual meeting, Obesity week 2023, Dallas, TX, US	Poster	2023
The Society for the Study of Ingestive Behavior annual meeting, Oregon, US	Poster	2023
The Obesity Society annual meeting, Obesity week 2022, San Diego, CA, US	Talk	2022
Gordon Research Conference – Hypothalamus, Ventura, CA, US	Poster	2022
Keystone Symposia Conference: Neuronal Control of Appetite, Banff, Canada	Poster	2022
The Obesity Society annual meeting, Obesity week 2021	Talk	2021
The Society for the Study of Ingestive Behavior annual meeting	Poster	2021
Keystone Symposia on Obesity: From Cell to Patient	Poster	2021
Nature conference on inflammatory diseases, Beijing, China	Poster	2017
The XIII International Congress on Obesity, Vancouver, Canada	Talk	2016
Keystone Symposia Conference: Beige and brown fat, Salt Lake, UT, US	Poster	2015
The XII International Congress on Obesity, Kuala Lumpur, Malaysia	Talk	2014
NAIST International Student Workshop, Nara, Japan	Talk	2013

INDEPENDENT FUNDING

American Heart Association Career Development Award (24CDA1257999)

Li (PI), \$231,000 09/01/2024 - 08/31/2027
 Title: Serotonin (5-HT) receptor signaling in gut-brain communication

American Heart Association Postdoctoral Fellowship (23POST1019715)

Li (PI), \$155,993 01/01/2023 - 08/31/2024
 Title: Investigating the mechanisms that underlie the antipsychotic drugs' effect on MC4R function