

Ziru Li, PhD

Faculty Scientist II
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Education

Sept 2009 – June 2014 Ph.D., Dept. of Physiology
Peking University Health Science Center, Beijing, China
Dissertation: Roles of gut hormones: ghrelin and nesfatin-1 in hepatic lipid metabolism
Sept 2004 – July 2009 Bachelor of Clinical Medicine
MuDanJiang Medical University, Heilongjiang, China

Postdoctoral Training

July 2016 – Dec 2020 Postdoctoral Research Fellow, Dept. of Molecular & Integrative Physiology, University of Michigan Medical School, Ann Arbor, MI
Mentor: Dr. Ormond A. MacDougald, Ph.D.
June 2014 – June 2016 Postdoctoral Research Fellow, Dept. of Surgery
University of Michigan Medical School, Ann Arbor, MI
Mentor: Dr. Weizhen Zhang, M.D./Ph.D.

Academic Appointment

May 2026 - Faculty Scientist II, Center for Molecular Medicine, MaineHealth Institute for Research, Scarborough, ME
Dec 2023 - Assistant Professor, Tufts university School of Medicine, Boston, MA
Nov 2022 - Graduate Adjunct Faculty, Graduate school of Biomedical Sciences and Engineering, University of Maine, Orono, ME
Aug 2022 – May 2026 Faculty Scientist I, Center for Molecular Medicine, MaineHealth Institute for Research, Scarborough, ME
Jan 2021 – July 2022 Research Investigator, Dept. of Molecular & Integrative Physiology, University of Michigan Medical School, Ann Arbor, MI

Grant:

National Institutes for Health (1R01DK141613; 09/01/2025-08/31/2029); Role: PI: 35% effort. Project title: Gastric Endocrine Functions in Skeletal Homeostasis.

National Institutes for Health (5R01DK137798; 03/07/2024-02/28/2029); Role: Co-I: 15% effort. Project title: Metabolism and functions of bone marrow adipose tissue in the marrow niche.

National Institutes for Health (1P20GM121301; 8/1/2022-8/31/2025); COBRE in Mesenchymal and Neural Regulation of Metabolic Networks. Role: Project lead: 50% effort. Project title: Gut regulation of bariatric surgery-induced bone loss.

American Diabetes Association Postdoctoral Fellowship (1-18-PDF-087; 1/1/2018—12/31/2020). Role: PI: 100% effort. Project title: Global and local metabolic roles of bone marrow adipose tissue.

Select Awards and Honors

2026	Sevgi Rodan Career Life Balance Award , ASBMR
2022	The First Place Poster Award , CDI-MOD Symposium
2020	Highest Ranking Basic/Translational Abstract—1st Place , Bone Marrow Adiposity (BMA) Society
2019	Postdoctoral Award in Research Excellence , Department of Molecular & Integrative Physiology, University of Michigan Medical School
2013 – 2014	Shuhua Medical Prize , Merit Scholarship of Peking University
2012 – 2013	National PhD Scholarship , China Ministry of Education Center
2011 – 2012	Deangyangyongman Prize , Merit Scholarship of Peking University Health Science Center
2010 – 2011	Guanghua Prize , Merit Scholarship of Peking University
2008 – 2009	National Scholarship , China Ministry of Education
2007 – 2008	National Scholarship , China Ministry of Education

Memberships in Professional Societies

2026 –	Member, American Heart Association
2025 – 2031	Scientific Board Member, Bone Marrow Adiposity Society (BMAS)
2024 – 2025	Associate Membership in Sigma Xi, The Scientific Research Honor Society.
2023 – 2028	Editorial Board Member of the Journal of Biological Chemistry (JBC)
2023 – present	Member, Endocrine Society (ENDO)
2023 – present	Member, American Society for Bone and Mineral Research (ASBMR)
2020 – present	Member, Bone Marrow Adiposity Society
2017 – 2020	Member, American Diabetes Association
2015 – 2017	Member, American Heart Association
2010 – 2014	Member, Chinese Association for Physiological Sciences (CAPS)

Journal Reviewer

Cell Reports (2025-present)
 Journal of Clinical Investigation (JCI) (2025-present)
 Nature Communications (2025-present)
 iScience (2025-present)
 Life Science (2025-present)
 Journal of Animal Science and Biotechnology (2025-present)
 Aging Cell (2022-present)
 Bone Research (2022-present)
 Frontiers in Endocrinology (2022-present)
 Genes (2021-present)
 Cells (2021-present)
 Journal of Biological Chemistry (2020-present)
 JCI insight (2020-present)
 Bone (2020-present)
 Journal of Clinical Medicine (2020-present)
 International Journal of Molecular Sciences (2020-present)
 Journal of Bone and Mineral Research (2019-present)
 European Journal of Pharmacology (2019-present)

Biomedicine & Pharmacotherapy (2018-present)

Grant Reviewer

November 2025	American Heart Association Fellowship – Lipoproteins - Lipid Metabolism and Nutrition
October 2025	Michigan Diabetes Research Center (MDRC) and the Stanley and Judith Frankel Institute for Heart and Brain Health Diabetes Interdisciplinary Study Program.
March 2025	Vanderbilt Diabetes Research and Training Center (DRTC) Pilot Project
November 2024	American Heart Association Fellowship - Cell Transport Metabolism
February 2024	NNE-CTR Pilot Project Round 8 Proposal Review
November 2023	American Heart Association Fellowship - Cell Transport Metabolism
November 2022	American Heart Association Fellowship - Cell Transport Metabolism

Institutional Service

2026 –	GSBSE Admission Committee
2026 –	Faculty Advisor for MHIR Bioinformatics and Analytics Working Group
2025 –	Faculty Advisor for Student and Postdoctoral Association
2025 –	Faculty Funding Policy Focus Group
2024 –2026	Research Training Advisory Committee
2024 –	Animal Facility Oversight Committee
2024 –	MaineHealth Scientific Advisory Board Committee
2024	Director of Research Ethics and Compliance Search Committee
2023 –	MaineHealth Institute for Research Social Media Committee
2022 –2025	Center for Molecular Medicine Seminar Series Committee

Teaching Experience

Visiting Scholars

2011 – 2012	Mentor to Ling Gao, visiting scholar, Binzhou Medical School, China <i>Title: Effects of nesfatin-1 on glucose homeostasis.</i> <u>Publication: PMC3744551.</u>
2011 – 2012	Mentor to Yan Qin, visiting scholar, Dali Medical School, China <i>Title: Ghrelin contributes to protection of hepatocellular injury induced by ischemia/reperfusion.</i> <u>Publication: PMID: 23998356.</u>

Undergraduate Students

2025	Matilda Genevriere, undergraduate student, University of California, San Diego <i>Title: Effects of gastric endocrine factors on osteoclasts and osteoblasts</i>
2025	Radfar Zohori, undergraduate student, University of New England <i>Title: Mechanistic studies of bariatric surgery-induced metabolic benefits and side effects</i>
2024	Mavy Ho, undergraduate student, Bates College <i>Title: Bariatric surgery induced bone loss and improvement in heart function</i> <u>Publication: PMCID: PMC12121371</u>
2022	Erica (Jingtong) Zhao, undergraduate student, University of Michigan <i>Title: The roles of bone marrow adipose tissue in bone metabolism</i> <u>Publication: PMC10513354.</u>
2021	Kevin Qiu, undergraduate student (SURF), University of Michigan <i>Title: Effects of anti-SOST and anti-G-CSF receptor antibodies on sleeve gastrectomy-induced bone loss and marrow niche changes.</i> <u>Publication: PMC10513354.</u>
2019 – 2020	Mentor to Katrina Granger, undergraduate student (SURF),

- University of Michigan
 2017 *Title: Effects of G-CSF receptor on sleeve gastrectomy-induced bone loss.*
 Mentor to Sara Kitterman, undergraduate student (SURF),
 University of Michigan
Title: The interactions between vertical sleeve gastrectomy and estrogen deficiency in bone metabolism.
 2013 – 2014 Mentor to Sara Lutz, undergraduate student (UROP), University of Michigan
Title: Hepatic mTOR signaling and glucose/lipid metabolism.
 2012 – 2013 Mentor to Yuexin Wang, undergraduate student, Peking University
Title: Nesfatin-1 promotes brown adipocyte phenotype.
Publication: PMCID: PMC5099693.
 2012 – 2013 Mentor to Wenying Liang, undergraduate student, Peking University
Title: mTOR signaling and inflammation.
Publication: PMID: 23847925.
Publication: PMCID: PMC9273217; PMC9675472; PMC10513354.

Graduate Students

- 2025 Emma Yvanovich, graduate student, Graduate school of Biomedical Sciences and Engineering, University of Maine
 2023 – 2024 Mentor to Ziyi (Kevin) Liu, graduate student, University of New England.
 2024 – 2024 Mentor to Nicholas Gammaitoni, graduate student, University of New England.
 2023 – 2024 Mentor to Jeyrie Ramos Aponte, graduate student, University of New England.
Award: 2023-2024 Peter Morgane Student Research Fellowship
Award: 2nd Place---Basic Science Research Awards, 2023 Research and Scholarship Fall Forum, UNE
 2022 – 2023 Mentor to Siddhant Sharma, graduate student, University of New England.
Award: 1st Place---Basic Science Research Awards, 2023 Research and Scholarship Fall Forum, UNE
 2020 – 2023 Co-mentor to Tiange Feng, graduate student, Peking University
Title: mTOR signaling in gastric X/A-like cell affects bone/marrow niche.
 2018 – 2020 Co-mentor to Wenzhen Yin, graduate student, Peking University
Title: Cross-talk between GI tract and bone/marrow niche.

Postdoctoral Fellows

- 2026 – present Beatriz Rocha, postdoctoral fellow, MaineHealth Institute for Research.
Title: The gut-neural axis in skeletal metabolism.
 2023 – present Tiange Feng, postdoctoral fellow, MaineHealth Institute for Research.
Title: The effects of bone marrow adipose tissue on bone homeostasis.
Award: 2025 Young Investigator Travel Award, ASBMR 2025
 2022 – present Caroline Picoli, postdoctoral fellow, MaineHealth Institute for Research.
Title: The roles of gut-bone axis in bone metabolism.
Award: 2023 Young Investigator Award, ASBMR
Award: 2023 SPA Mini Grant for Travel, MHIR
Award: 2024 SPA Mini Grant for Research, MHIR
Award: 2025 Eugenia Rosenberg Abstract Travel Award, Endo 2025

Oral Presentations

- 2025 BMAS Summer School 2025, on zoom, September 25th, 2025 (Invited keynote talk)
 2025 52nd Maine Biological and Medical Sciences Symposium (MBMSS), MDILBL, Bar Harbor, ME, April 26th, 2025 (Invited talk).
 2024 Rutgers University, Department of Nutritional Sciences, New Brunswick, NJ, Nov 6th, 2024 (Invited talk).

- 2024 University of New England-Biddeford, Center for Excellence in Neuroscience: Work In Progress Meetings, Biddeford, ME, May 15th, 2024 (Invited talk).
- 2024 Vanderbilt University Medical Center, Division of Clinical Pharmacology, Nashville, TN. April 29th, 2024 (Invited talk).
- 2024 The second Maine Research Symposium on Biomedical Science and Engineering. University of Maine, Orono. March 28th, 2024 (Invited talk).
- 2023 Ayrton Moreira's Lecture at University of São Paulo, Brazil. December 7, 2023 (Invited talk).
- 2023 The multifaceted roles of bone marrow adipocytes in bone homeostasis. Pharmaceutical Sciences Seminar Series, Northeast Ohio Medical University. Oct 20, 2023 (Invited talk).
- 2023 The gut-bone axis: how are bariatric surgery and bone loss linked? GSBSE Orientation-Faculty talks. Aug 25, 2023 (Invited talk).
- 2022 The gut-bone axis: how are bariatric surgery and bone loss linked? The 8th Biennial National IDeA Symposium of Biomedical Research Excellence (NISBRE) annual meeting. Dec 12, 2022 (Invited talk).
- 2022 The gut-bone axis: how are bariatric surgery and bone loss linked? GSBSE retreat. Oct 29, 2022 (Invited talk).
- 2022 Lipolysis of bone marrow adipocytes is required to fuel bone and the marrow niche during energy deficits. ORL Seminar. Jan 4, 2022 (Invited talk).
- 2021 Bone Marrow Adipocytes: Friend or foe in bone homeostasis? Preventive Cardiology, Hypertension, Vascular Medicine Lipids/Atherosclerosis Conference (2021). March 3, 2021 (Invited talk).
- 2020 Bone Marrow Adipocytes: Friend or foe in bone homeostasis? MMCRI (Maine Medical Center Research Institute) Seminar Series Presents. October 30, 2020 (Invited talk).
- 2020 Cellular interactions in the bone marrow niche evaluated with a bone marrow adipocyte-specific knockout mouse model. The 6th International Meeting on Bone Marrow Adiposity (BMA2020, Marrow Adiposity: Bone, Aging and Beyond), September 9-10, 2020. (Plenary Oral)
- 2020 Do bone marrow adipocytes influence bone homeostasis and hematopoiesis? GH/IGF-1 action in health, disease and aging meeting. New York University. May 28, 2020 (Invited talk).
- 2020 Cellular interactions in the bone marrow niche evaluated with a bone marrow adipocyte-specific knockout mouse model. MDRC Annual Diabetes Symposium. Ann Arbor, MI. May 21, 2020 (Virtual talk).
- 2020 Do bone marrow adipocytes influence bone homeostasis and hematopoiesis? Integrative Aspects of Diabetes, Obesity and Metabolism Research Club. Ann Arbor, MI April 16, 2020 (Virtual talk).
- 2019 Mechanisms by which vertical sleeve gastrectomy influences bone and the marrow niche. MDRC Annual Diabetes Symposium. Ann Arbor, MI. March 2, 2019.
- 2018 Mechanisms by which vertical sleeve gastrectomy influences bone and the marrow niche. Sun Yat-sen University. December 21-22, 2018.
- 2018 Does granulocyte-colony stimulating factor mediate vertical sleeve gastrectomy-induced loss of bone and marrow adipose? Musculoskeletal Health Symposium. Ann Arbor, MI. April 6, 2018.
- 2018 Does granulocyte-colony stimulating factor mediate vertical sleeve gastrectomy-induced loss of bone and marrow adipose? Cellular Aspects of Diabetes, Obesity and Metabolism Research Club. Ann Arbor, MI. March 6, 2018.
- 2017 Bone mass and marrow adipose loss after vertical sleeve gastrectomy surgery in mice. Summer Diabetes Symposium. Ann Arbor, MI. August 8, 2017.
- 2016 Activation of mTOR protects liver from ischemia and reperfusion induced injury through NFkB pathway. Moses Gunn 27th Annual Research Conference. Ann Arbor, MI. May 17, 2016.
- 2011 Regulation of gastric nesfatin-1/NUCB2 by mTOR signaling. Chinese Association of Pathophysiological Sciences: Digestive, Endocrinology and Reproductive Conference. Guangxi, China. November 2-7, 2011.

Poster Presentations

- 2023 Gut-bone axis: X/A-like cells may mediate the effects on skeletal homeostasis. 2023 ASBMR. Vancouver, BC, Canada. October 13-16, 2023.
- 2023 Gastric X/A-like cells mediate effects of gut-bone axis on skeletal homeostasis. 2023 Costas T. Lambrew Retreat. Portland, ME. May 3rd, 2023.
- 2022 Lipolysis of bone marrow adipocytes is required to fuel bone and the marrow niche during energy deficits. CDI-MOD Symposium (Data Blitz). Ann Arbor, MI. May 11, 2022.
- 2019 Mechanisms by which vertical sleeve gastrectomy influences bone and the marrow niche. Third Annual Musculoskeletal Health Symposium. Ann Arbor, MI. April 29, 2019.
- 2019 Mechanisms by which vertical sleeve gastrectomy influences bone and the marrow niche. MDRC Annual Diabetes Symposium. Ann Arbor, MI. March 2, 2019.
- 2018 Development, regulation, metabolism and function of bone marrow adipose tissues. Presented at the 16th European Congress of Toxicologic Pathology. Adipose Tissue and Central Nervous System Toxicity in Metabolic Disease. Copenhagen, Denmark. September 11 – 14, 2018.
- 2018 Bone mass and marrow adipose loss after vertical sleeve gastrectomy surgery in mice. Keystone Symposium. Silverthorne, CO. January 21-25, 2018.
- 2017 Bone mass and marrow adipose loss after vertical sleeve gastrectomy surgery in mice is inversely correlated with splenomegaly. Cold Spring Harbor Laboratory. Cold Spring Harbor, NY. May 16-20, 2017.
- 2017 Bone mass and marrow adipose loss after vertical sleeve gastrectomy surgery in mice is inversely correlated with splenomegaly. MDRC Annual Diabetes Symposium. Ann Arbor, MI. March 18, 2017.
- 2015 Differential regulation of hepatic lipid metabolism by ghrelin and nesfatin-1. Moses Gunn 27th Annual Research Conference. Ann Arbor, MI. April 1, 2015.
- 2014 Amelioration of nonalcoholic fatty liver disease by interference of ghrelin receptor. Moses Gunn 26th Annual Research Conference. Ann Arbor, MI. April 23, 2014.
- 2013 Regulation of glucose metabolism by nesfatin-1. Experimental Biology. Boston, MA. April 20-24, 2013.
- 2012 Peripheral effects of nesfatin-1 on glucose homeostasis. Chinese Association of Pathophysiological Sciences: Digestive, Endocrinology and Reproductive Conference. Liaoning, China. June 21-25, 2012.

Peer-Reviewed Publications

1. de Araújo IM, Le PT, de Carvalho Picoli C, Hardy R, **Li Z**, de Paula FJA, Rosen CJ. 11 β -Hydroxysteroid dehydrogenase type 1 deficiency causes sexual dimorphism in body composition and bone mass in response to caloric restriction. **JBMR Plus**. 2026 Apr 17;10(6):ziag075. doi: 10.1093/jbmrpl/ziag075. PMID: 42136731; PMCID: PMC13171033.
2. Feng T, Yin W, Picoli C, Liu L, Le PT, Liu Z, Yu R, Eltahir M, Zohori R, Rosen CJ, Zhang W, and **Li Z***. *Intact mTOR signaling in gastric X/A-like cells is required for bone homeostasis*. **Front. Endocrinol**. 2026 Apr 10;17:1763507. doi: 10.3389/fendo.2026.1763507. PMID: 42039138; PMCID: PMC13106587.
3. Bozadjieva-Kramer N, McMahon G, **Li Z**, Wean J, Shin JH, Myronovych A, O'Rourke RW, MacDougald OA, Seeley RJ. *Gut-derived FGF15 modulates lean mass, bone, and bile acid responses to weight loss*. **Diabetes**. 2026 Apr 1:db250466. doi:10.2337/db25-0466. Epub ahead of print. PMID: 41920187.
4. Maung JN, Schill RL, Nishii A, Foss de Freitas M, Obua BN, Nygård M, Mendez-Casillas MD, Hermsmeyer ID, Gilio D, Besci O, Chen Y, Desrosiers B, Adler RE, Gomes AD, Celik Guler M, Mori H, Uranga RM, **Li Z**, Hariri H, Zhang L, de Paula Souza A, Hoose KS, Lewis KT, Hetrick TA, Cederna P, Lumeng CN, Mandrup S, Oral EA, MacDougald OA. *Altered lipid metabolism and inflammatory programs associate with adipocyte loss in familial partial lipodystrophy 2*. **J Clin Invest**. 2025 Nov 11;136(1):e198387. doi:10.1172/JCI198387. PMID: 41217838; PMCID: PMC12721891.

5. Picoli CC, Tsibulnikov S, Ho M, Demambro V, Feng T, Eltahir M, Le PT, Chlebek C, Rosen CJ, Ryzhov S, **Li Z***. *Vertical sleeve gastrectomy and semaglutide have distinct effects on skeletal health and heart function in obese male mice.* **Am J Physiol Endocrinol Metab.** 2025 Mar 12. doi:10.1152/ajpendo.00521.2024. PMID: 40072928; PMCID: PMC12121371.
6. Zhang L, Li Y, Gao W, **Li Z**, Wu T, Lang C, Rui L, Zhang W. *Deficiency of neuronal LGR4 increases energy expenditure and inhibits food intake via hypothalamic leptin signaling.* **EMBO Rep.** 2025 Mar 11. doi:10.1038/s44319-025-00398-5. Epub ahead of print. PMID: 40069508.
7. Schill RL, Visser J, Ashby ML, **Li Z**, Lewis KT, Morales-Hernandez A, Hoose KS, Maung JN, Uranga RM, Hariri H, Hermsmeyer IDK, Mori H, MacDougald OA. *Deficiency of glucocorticoid receptor in bone marrow adipocytes has mild effects on bone and hematopoiesis but does not influence expansion of marrow adiposity with caloric restriction.* **Front Endocrinol (Lausanne).** 2024 Jun 3;15:1397081. doi:10.3389/fendo.2024.1397081. PMID: 38887268; PMCID: PMC11180776.
8. Bozadjieva-Kramer N, Shin JH, **Li Z**, Rupp AC, Miller N, Kernodle S, Lanthier N, Henry P, Seshadri N, Myronovych A, MacDougald OA, O'Rourke RW, Kohli R, Burant CF, Rothberg AE, Seeley RJ. *Intestinal FGF15 regulates bile acid and cholesterol metabolism but not glucose and energy balance.* **JCI Insight.** 2024 Apr 8;9(7):e174164. doi:10.1172/jci.insight.174164. PMID: 38587078; PMCID: PMC11128213.
9. Mori H, Peterson SK, Simmermon RC, Overmyer KA, Nishii A, Paulsson E, **Li Z**, Jen A, Uranga RM, Maung JN, Yacawych WT, Lewis KT, Schill RL, Hetrick T, Seino R, Inoki K, Coon JJ, MacDougald OA. *Scd1 and monounsaturated lipids are required for autophagy and survival of adipocytes.* **Mol Metab.** 2024 Mar 14;83:101916. doi:10.1016/j.molmet.2024.101916. PMID: 38492843; PMCID: PMC10975504.
10. Gao W, Zhang L, **Li Z**, Wu T, Lang C, Mulholland MW, Zhang W. *Nuclear Acly protects the liver from ischemia-reperfusion injury.* **Hepatology.** 2023 Nov 20. doi:10.1097/HEP.0000000000000692. Epub ahead of print. PMID: 37983829.
11. **Li Z**, Qiu K, Zhao J, Granger K, Yu H, Lewis AG, Myronovych A, Toure MH, Hatsell SJ, Economides AN, Seeley RJ, MacDougald OA. *Antibodies to sclerostin or G-CSF receptor partially eliminate bone or marrow adipocyte loss, respectively, following vertical sleeve gastrectomy.* **Bone.** 2023 Apr;169:116682. doi:10.1016/j.bone.2023.116682. Epub 2023 Jan 26. PMID: 36709915; PMCID: PMC10513354.
12. **Li Z**, Bagchi DP, Zhu J, Bowers E, Yu H, Hardij J, Mori H, Granger K, Skjaerlund J, Mandair G, Singer K, Hankenson HD, Rosen CJ, MacDougald OA. *Constitutive bone marrow adipocytes suppress local bone formation.* **JCI Insight.** 2022 Nov 8;7(21):e160915. PMID: 36048537.
13. **Li Z**, Bowers E, Zhu J, Yu H, Hardij J, Bagchi DP, Mori H, Lewis KT, Granger K, Schill RL, Romanelli SM, Abrishami S, Hankenson KD, Singer K, Rosen CJ, MacDougald OA. *Lipolysis of bone marrow adipocytes is required to fuel bone and the marrow niche during energy deficits.* **eLife.** 2022 Jun 22;11:e78496. PMID: 35731039.
14. Romanelli SM, Lewis KT, Nishii A, Rupp AC, **Li Z**, Mori H, Schill RL, Learman BS, Rhodes CJ, MacDougald OA. *BAd-CRISPR: Inducible gene knockout in interscapular brown adipose tissue of adult mice.* **J Biol Chem.** 2021 Dec;297(6):101402. PMID: 34774798.
15. Bozadjieva-Kramer N, Shin JH, Shao Y, Gutierrez-Aguilar R, **Li Z**, Heppner KM, Chiang S, Vargo SG, Granger K, Sandoval DA, MacDougald OA, Seeley RJ. *Intestinal-derived FGF15 protects against deleterious effects of vertical sleeve gastrectomy in mice.* **Nat Commun.** 2021 Aug 6;12(1):4768. PMID: 34362888; PMCID: PMC8346483.
16. Corsa CAS, Walsh CM, Bagchi DP, Foss Freitas MC, **Li Z**, Hardij J, Granger K, Mori H, Schill RL, Lewis KT, Maung JN, Azaria RD, Rothberg AE, Oral EA, MacDougald OA. *Adipocyte-specific deletion of Lamin A/C largely models human familial partial lipodystrophy type 2.* **Diabetes.** 2021 Sep;70(9):1970–1984. PMID: 34088712.
17. Mori H, Dugan CE, Nishii A, Benchamana A, **Li Z**, Cadenhead TS IV, Das AK, Evans CR, Overmyer KA, Romanelli SM, Peterson SK, Bagchi DP, Corsa CA, Hardij J, Learman BS, El Azzouny M, Coon JJ, Inoki K, MacDougald OA. *The molecular and metabolic program by which*

- white adipocytes adapt to cool physiologic temperatures. PLoS Biol.* 19(5):e3000988, 2021. PMID: 33979328.
18. Yin Y, Wang Q, Qi M, Zhang C, **Li Z**, Zhang W. *Ghrelin ameliorates nonalcoholic steatohepatitis induced by chronic low-grade inflammation via blockade of Kupffer cell M1 polarization. J Cell Physiol.* 236(7):5121–5133, 2020. PMID: 33345314.
 19. **Li Z**, MacDougald OA. *Meeting abstracts from the 2020 International Meeting on GH/IGF: Actions in the Shadow of COVID-19—T11: Cellular interactions in the bone marrow niche evaluated with a bone marrow adipocyte-specific knockout mouse model. Pituitary.* 23:2–35, 2020. PMID: 33174076.
 20. Bagchi DP, Nishii A, **Li Z**, DelProposto JB, Corsa CA, Mori H, Hardij J, Learman BS, Lumeng CN, MacDougald OA. *Wnt/ β -catenin signaling regulates adipose tissue lipogenesis and adipocyte-specific loss is rigorously defended by neighboring stromal-vascular cells. Mol Metab.* 9:101078, 2020. PMID: 32919095.
 21. Bagchi DP, **Li Z**, Corsa CA, Hardij J, Mori H, Learman BS, Lewis KT, Schill RL, Romanelli SM, MacDougald OA. *Wntless regulates lipogenic gene expression in adipocytes and protects against diet-induced metabolic dysfunction. Mol Metab.* 20:100992, 2020. PMCID: PMC7264081.
 22. **Li Z**, Hardij J, Evers SS, Hutch CR, Choi SM, Shao Y, Learman BS, Lewis KT, Schill RL, Mori H, Corsa CAS, Bagchi DP, Romanelli SM, Kim K, Griffin C, Seeley RJ, Singer K, Sandoval DA, Rosen CJ, MacDougald OA. *G-CSF partially mediates effects of sleeve gastrectomy on the bone marrow niche. J Clin Invest.* 129:2404–2416, 2019. PMCID: PMC6546463.
 23. Griffin C, Hutch CR, Abrishami S, Stelmak D, Eter L, **Li Z**, Chang E, Agarwal D, Zamarron B, Varghese M, Subbaiah P, MacDougald OA, Sandoval DA, Singer K. *Inflammatory responses to dietary and surgical weight loss in male and female mice. Biol Sex Differ.* 10(1):16, 2019. PMCID: PMC6446331.
 24. **Li Z**, Liu S, Lou J, Zhang W, Mulholland M. *LGR4 protects hepatocytes from injury in mice. Am J Physiol Gastrointest Liver Physiol.* 316:G123–G131, 2019. PMCID: PMC6383381.
 25. **Li Z**, Yu R, Yin W, Qin Y, Ma L, Mulholland M, Zhang W. *mTOR signaling in X/A-like cells contributes to lipid homeostasis in mice. Hepatology.* 69:860–875, 2018. PMCID: PMC6351211.
 26. Yu R, **Li Z**, Liu S, Huwatibieke B, Li Y, Yin Y, Zhang W. *Activation of mTORC1 signaling in gastric X/A-like cells induces spontaneous pancreatic fibrosis and derangement of glucose metabolism by reducing ghrelin production. EBioMedicine.* 36:304–315, 2018. PMCID: PMC6197745.
 27. He R, Yin Y, Li Y, **Li Z**, Zhao J, Zhang W. *Esophagus-duodenum gastric bypass surgery improves glucose and lipid metabolism in mice. EBioMedicine.* 28:241–250, 2018. PMCID: PMC5898028.
 28. Scheller EL, Khandaker S, Learman BS, Cawthorn WP, Andersen L, Pham HA, Robles H, Wang Z, **Li Z**, Parlee SD, Simon BR, Mori H, Bree AJ, Craft CS, MacDougald OA. *Bone marrow adipocytes resist lipolysis and remodeling in response to β -adrenergic stimulation. Bone.* 118:32–41, 2018. PMCID: PMC6062480.
 29. Sherman MA, Suresh MV, Dolgachev VA, McCandless LK, Xue X, Ziru L, Machado-Aranda D, Shah YM, Raghavendran K. *Molecular characterization of hypoxic alveolar epithelial cells after lung contusion indicates an important role for HIF-1 α . Ann Surg.* 267:382–391, 2018. PMCID: PMC6010036.
 30. **Li Z**, Zhang J, Zhang W, Mulholland M. *mTOR activation protects liver from ischemia and reperfusion-induced injury through NF κ B pathway. FASEB J.* 31:3018–3026, 2017. PMCID: PMC5471519.
 31. Wang Y, **Li Z**, Zhang X, Xiang X, Li Y, Mulholland MW, Zhang W. *Nesfatin-1 promotes brown adipocyte phenotype. Sci Rep.* 6:34747, 2016. PMCID: PMC5099693.
 32. Tang H, Yu R, Liu S, Huwatibieke B, **Li Z**, Zhang W. *Irisin inhibits hepatic cholesterol synthesis via AMPK-SREBP2 signaling. EBioMedicine.* 6:139–148, 2016. PMCID: PMC4856751.
 33. Jiang S, Zhai H, Li D, Huang J, Zhang H, **Li Z**, Zhang W, Xu G. *AMPK-dependent regulation of GLP1 expression in L-like cells. J Mol Endocrinol.* 57(3):151–160, 2016. PMID: 27493247.
 34. Yin Y#, **Li Z**# (co-first author), Gao L, Li Y, Zhao J, Zhang W. *AMPK-dependent modulation of hepatic lipid metabolism by Nesfatin-1. Mol Cell Endocrinol.* 417:20–26, 2015. PMID: 26363221.

35. Xu G, Hong X, Tang H, Jiang S, Liu F, Shen Z, **Li Z**, Zhang W. *Ghrelin regulates GLP-1 production through mTOR signaling in L cells*. **Mol Cell Endocrinol**. 416:9–18, 2015. PMID: 26279396.
36. Xu G, **Li Z**, Ding L, Tang H, Guo S, Liang H, Wang H, Zhang W. *Intestinal mTOR regulates GLP-1 production in mouse L cells*. **Diabetologia**. 58:1887–1897, 2015. PMID: 26037201.
37. Zhang W, Chang L, Zhang C, Zhang R, **Li Z**, Chai B, Li J, Chen E, Mulholland M. *Irisin: A myokine with locomotor activity*. **Neurosci Lett**. 595:7–11, 2015. PMCID: PMC4836606.
38. Zhang W, Chang L, Zhang C, Zhang R, **Li Z**, Chai B, Li J, Chen E, Mulholland M. *Central and peripheral irisin differentially regulate blood pressure*. **Cardiovasc Drugs Ther**. 29:121–127, 2015. PMCID: PMC4431576.
39. Xu Y, **Li Z**, Yin Y, Lan H, Wang J, Zhao J, Feng J, Li Y, Zhang W. *Ghrelin inhibits the differentiation of T helper 17 cells through mTOR/STAT3 signaling pathway*. **PLoS One**. 10:e0117081, 2015. PMCID: PMC4319964.
40. **Li Z**, Xu G, Qin Y, Zhang C, Tang H, Yin Y, Xiang X, Li Y, Zhao J, Mulholland M, Zhang W. *Ghrelin promotes hepatic lipogenesis by activation of mTOR-PPAR γ signaling pathway*. **Proc Natl Acad Sci U S A**. 111:13163–13168, 2014. PMCID: PMC4246976.
41. Qin Y, **Li Z**, Wang Z, Li Y, Zhao J, Mulholland M, Zhang W. *Ghrelin contributes to protection of hepatocellular injury induced by ischemia/reperfusion*. **Liver Int**. 34:567–575, 2014. PMID: 23998356.
42. **Li Z**, Gao L, Tang H, Yin Y, Xiang X, Li Y, Zhao J, Mulholland M, Zhang W. *Peripheral effects of nesfatin-1 on glucose homeostasis*. **PLoS One**. 8:e71513, 2013. PMCID: PMC3744551.
43. Xiang X, Yuan F, Zhao J, **Li Z**, Wang X, Guan Y, Tang C, Sun G, Li Y, Zhang W. *Deficiency in pulmonary surfactant proteins in mice with fatty acid binding protein 4-Cre-mediated knockout of the tuberous sclerosis complex 1 gene*. **Exp Physiol**. 98:830–841, 2013. PMCID: PMC3593000.
44. **Li Z**, Xu G, Li Y, Zhao J, Mulholland MW, Zhang W. *mTOR-dependent modulation of gastric nesfatin-1/NUCB2*. **Cell Physiol Biochem**. 29:493–500, 2012. PMCID: PMC3711577.
45. Xu G, Wang Z, Li Y, **Li Z**, Tang H, Zhao J, Xiang X, Ding L, Ma L, Yuan F, Fei J, Wang W, Wang N, Guan Y, Tang C, Mulholland M, Zhang W. *Ghrelin contributes to glucose intolerance induced by rapamycin in mice*. **Diabetologia**. 55:1813–1823, 2012. PMCID: PMC3496261.
46. Xu G, Li Y, An W, Zhao J, Xiang X, Ding L, **Li Z**, Guan Y, Wang X, Tang C, Zhu Y, Wang N, Li X, Mulholland M, Zhang W. *Regulation of gastric hormones by systemic rapamycin*. **Peptides**. 12:2185–2192, 2010. PMCID: PMC2995266.

Reviews and Book Chapters

1. Feng T, Rosen CJ, **Li Z***. *Omics characteristics and epigenetic modifications of adipose-derived stem cells*. **J Biol Chem**. 2025 Nov;301(11):110758. doi:10.1016/j.jbc.2025.110758. Epub 2025 Sep 24. PMID: 41005477; PMCID: PMC12590281.
2. Picoli CC, Birbrair A, **Li Z***. *Pericytes as the orchestrators of vasculature and adipogenesis*. **Genes (Basel)**. 2024 Jan 19;15(1):126. doi:10.3390/genes15010126. PMID: 38275607; PMCID: PMC10815550.
3. **Li Z***, Rosen CJ*. *The multifaceted roles of bone marrow adipocytes in bone and hematopoietic homeostasis*. **J Clin Endocrinol Metab**. 2023 Jun 14:dgad355. doi:10.1210/clinem/dgad355. PMID: 37315208.
4. Feng T, Zhang W*, **Li Z***. *Potential mechanisms of gut-derived extracellular vesicle participation in glucose and lipid homeostasis*. **Genes (Basel)**. 2022 Oct 28;13(11):1964. doi:10.3390/genes13111964. PMID: 36360201; PMCID: PMC9689624.
5. **Li Z**, MacDougald OA. *Preclinical models for investigating how bone marrow adipocytes influence bone and hematopoietic cellularity*. **Best Pract Res Clin Endocrinol Metab**. 2021 May 1:101547. PMID: 34016532.
6. **Li Z***, MacDougald OA. *Stem cell factor—the bridge between bone marrow adipocytes and hematopoietic cells*. **Haematologica**. 2019;104(9):1689–1691. PMID: 31473604.
7. Ji Y, Yin Y, **Li Z**, Zhang W. *Gut microbiota-derived components and metabolites in the progression of non-alcoholic fatty liver disease (NAFLD)*. **Nutrients**. 2019;11(8). PMID: 31349604.

8. Yin W, **Li Z***, Zhang W*. *Modulation of bone and marrow niche by cholesterol*. **Nutrients**. 2019 Jun 21;11(6). PMID: 31234305.
9. **Li Z**, Hardij J, Bagchi DP, Scheller EL, MacDougald OA. *Development, regulation, metabolism and function of bone marrow adipose tissue*. **Bone**. 2018;110:134–140. PMCID: PMC6277028.
10. Craft CS, **Li Z**, MacDougald OA, Scheller EL. *Molecular differences between subtypes of bone marrow adipocytes*. **Curr Mol Biol Rep**. 2018;4:16–23. PMCID: PMC6054309.
11. **Li Z**, Zhang W. *The 2016 Albert Lasker Basic Medical Research Award: Oxygen sensing—a mysterious process essential for survival*. **Sci China Life Sci**. 2016;59:1195–1197. PMID: 27783260.
12. **Li Z**, Mulholland M, Zhang W. *Ghrelin O-acyltransferase (GOAT) and energy metabolism*. **Sci China Life Sci**. 2016;59:281–291. PMID: 26732975.
13. **Li Z**, Zhang W, Mulholland M. *LGR4 and its role in intestinal protection and energy metabolism*. **Front Endocrinol (Lausanne)**. 2015;6:131. PMCID: PMC4548225.
14. **Li Z**, Mulholland M, Zhang W. *Regulation of gastric nesfatin-1/NUCB2*. **Curr Pharm Des**. 2013;19(39):6981–6985. Review. PMID: 23537086.
15. **Li Z**, Li Y, Zhang W. *Ghrelin receptor in energy homeostasis and obesity pathogenesis*. **Prog Mol Biol Transl Sci**. 2013;114:45–87. PMID: 23317782.
16. **Li Z**, Luo J, Li Y, Zhang W. *Ghrelin, a Gastric Hormone with Diverse Functions*. In: **Chemical Biology**. InTech; 2012. ISBN: 978-953-51-0049-2. doi:10.5772/35067.

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