Curriculum Vitae

Jae Man Lee, Ph.D.

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Nuclear Receptor & Disease Laboratory
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EDUCATION

2004-2011 **Ph.D.** in Developmental Biology
Baylor College of Medicine (BCM), Houston, TX, USA
Advisor: David D. Moore, Ph.D.
Thesis title: Identification of a novel ligand for the nuclear receptor LRH-1 and its physiologic impacts on type 2 diabetes and inflammatory bowel disease

2001-2003 **M.S.** in Life Science
Gwangju Institute of Science and Technology (GIST), Gwangju, Republic of Korea
Advisor: Do Han Kim, Ph.D.
Thesis title: Identification of binding motifs between the skeletal ryanodine receptor and triadin

1994-2001 **B.S.** in Biology
Kyungpook National University (KNU), Daegu, Republic of Korea
Advisor: Shin-Sung Kang, Ph.D.
(Leave of Absence for the Military Service in Army, 1996-1998)

RESEARCH EXPERIENCES

2015- present **Assistant Professor**
Department of Biochemistry and Cell Biology, School of Medicine, Kyungpook National University, Daegu, Republic of Korea

2011-2015 **Postdoctoral Associate**
Department of Molecular and Cellular Biology (MCB), BCM, Houston, TX, USA
Advisor: Prof. David D. Moore, Ph.D.

2004-2011 **Graduate Student** for Ph.D. degree
Program in Developmental Biology, BCM, Houston, TX, USA
Advisor: Prof. David D. Moore, Ph.D.

2003-2004 **Research Associate**
Department of Life Science, GIST, Gwangju, Republic of Korea
Advisor: Prof. Do Han Kim, Ph.D.

2001-2003 **Graduate Student** for M.S. degree

Department of Life Science, GIST, Gwangju, Republic of Korea
Advisor: Prof. Do Han Kim, Ph.D.

ACADEMIC AWARDS AND HONORS

2013	NIDDK/NIA Scholarship, 2013 Keystone symposia (Autophagy, Inflammation, and Immunity)
2011	NIDDK/NIA Scholarship, 2011 Keystone Symposia (Type 2 Diabetes, Insulin Resistance and Metabolic Dysfunction)
2010	NIDDK/NIA/Eunice Kennedy Shriver NICHD Scholarship, 2010 Keystone Symposia (Nuclear Receptors: Development, Physiology and Disease)
2009	John R. Kelsey, Jr. Student Speaker Award, 2009 Annual Graduate Student Symposium, BCM
2009	Lilly Singapore Center for Drug Discovery Scholarship, 2009 Keystone Symposia (Type 2 Diabetes and Insulin Resistance)
2008	First Place Poster Award, 2008 Annual Graduate Student Symposium, BCM
2004-2006	Predoctoral Fellowship for Studying Abroad, Korea Science and Engineering Foundation
1995-1997	Hyundai Asan Foundation Scholarship, (Full Tuition Coverage for 3 years, resigned in 1996)

PEER-REVIEWED PUBLICATIONS

1. Wagner M, Choi S, Panzitt K, Mamrosh JL, **Lee JM**, Zaufel A, Xio R, Wooton-Kee R, Ståhlman M, Newgard CB, Borén J, and Moore DD. LRH-1 is a critical determinant of methyl-pool metabolism. ***Hepatology.*** 2015 Aug 12. doi: 10.1002/hep.28124. [Epub ahead of print]

2. **Lee JM**, Wagner M, Xiao R, Kim KH, Feng D, Lazar MA, and Moore DD. Nutrient-sensing nuclear receptors coordinate autophagy. ***Nature.*** 2014 Dec 4; 516(7529): 112-5. Epub 2014 Nov 12.

   Comment in *Nature* | NEWS & VIEWS, Cell Metabolism: Autophagy transcribed, Nature. 2014 Dec 4;516(7529):40-1. doi: 10.1038/nature13939. Epub 2014 Nov 12.
   Comment in *Nature Reviews Endocrinology* | RESEARCH HIGHLIGHTS, Metabolism: Nutrient-sensing and autophagic genes in fed and fasted states, *Nat Rev Endo*. 2015 Feb; 11(2):66

3. Mamrosh JM, **Lee JM**, Wagner M, Stambrook PJ, Whitby RJ, Sifers RN, Wu SP, Tsai MJ, DeMayo FJ, and Moore DD. Nuclear receptor LRH-1/NR5A2 is required and targetable for liver endoplasmic reticulum stress resolution. ***Elife***. 2014 Apr 15; 3:e01694.

4. Park YJ, Kim SC, Kim J, Anakk S, **Lee JM**, Tseng HT, Yechoor V, Park J, Choi JS, Jang HC, Lee KU, Novak CM, Moore DD, and Lee YK. Dissociation of diabetes and obesity in mice lacking orphan nuclear receptor small heterodimer partner. ***J Lipid Res.*** 2011 Dec;52(12):2234-44. Epub 2011 Sep 23.

5. **Lee JM**, Lee YK, Mamrosh JL, Busby SA, Griffin PR, Pathak MC, Ortlund EA, and Moore DD. A nuclear-receptor-dependent phosphatidylcholine pathway with antidiabetic effects. ***Nature.*** 2011 May 25;474(7352):506-10.

   Comment in *Nature* | NEWS & VIEWS, Metabolism: A lipid for fat disorders, *Nature.* 2011 Jun 23;474(7352):455-6.
   Comment in *Nature Reviews Drug Discovery* | RESEARCH HIGHLIGHTS, Obesity and diabetes: An antidiabetic phospholipid, *Nat Rev Drug Discov.* 2011 Jul 1;10(7):493
   Comment in *Journal of Hepatology* | Commentary on A lipid to treat non-alcoholic fatty liver disease - The dawn of 'lipo-rehabilitation'?, *J Hepatol.* 2011 Oct 18.
   Comment In *Nature Medicine* | NEWS, Notable advances 2011, Metabolism, Bile thumper, *Nature Medicine.* 2011 Dec 06;17(12):1540-1541.

6. Lee EH, Song DW, **Lee JM**, Meissner G, Allen PD, and Kim do H. Occurrence of atypical Ca2+ transients in triadin-binding deficient-RYR1 mutants. ***Biochem Biophys Res Commun.*** 2006 Dec 29;351(4):909-14.

7. **Lee JM**, Rho SH, Shin DW, Cho C, Park WJ, Eom SH, Ma J, and Kim DH. Negatively charged amino acids within the intraluminal loop of ryanodine receptor are involved in the interaction with triadin. ***J Biol Chem.*** 2004 Feb 20;279(8):6994-7000.

8. Shin DW, Pan Z, Kim EK, **Lee JM**, Bhat MB, Parness J, Kim DH, and Ma J. A retrograde signal from calsequestrin for the regulation of store-operated Ca2+ entry in skeletal muscle. ***J Biol Chem.*** 2003 Jan 31;278(5):3286-92.

PATENT

1. "Phospholipid compositions and uses thereof", David D. Moore and Jae Man Lee, US Patent 8,410,085 (April 2, 2013).

PROCEEDINGS OF MEETINGS

1. **Jae Man Lee**, Martin Wager, Rui Xiao, Dan Feng, Mitchell A. Lazar and David D. Moore. (2013) Transcriptional Coordination of Autophagy by Nutrient Sensing Nuclear Receptors. ***Cold Spring Harbor Meeting (Metabolic Signaling & Disease: From cells to organism)***, Cold Spring Harbor, New York, USA.
2. **Jae Man Lee**, Martin Wagner, Rui Xiao and David D. Moore. (2013) Transcriptional Coordination of Autophagy by Nutrient Sensing Nuclear Receptors. ***Keystone Symposia (Autophagy, Inflammation, and Immunity)***, Montreal, QC, Canada.
3. **Jae Man Lee**, Martin Wagner, Rui Xiao and David D. Moore. (2012) Transcriptional Regulation of Autophagy by Nutrient Sensing Nuclear Receptors. ***2012 Endo Meeting***, Houston, Texas, USA.
4. **Jae Man Lee**, Martin Wagner, Rui Xiao and David D. Moore. (2012) Transcriptional Control of Autophagy by Nutrient Sensing Nuclear Receptors. ***Keystone Symposia (Nuclear Receptor Matrix: Reloaded)***, Whistler, British Columbia, Canada.
5. **Jae Man Lee**, Jennifer L. Mamrosh, Charity Mills, Rui Xiao and David D. Moore. (2011) Targeting the nuclear receptor LRH-1 to treat inflammatory bowel disease. ***76th Cold Spring Harbor Symposium on Quantitative Biology (Metabolism & Disease)***, Cold Spring Harbor, New York, USA.
6. **Jae Man Lee**, Yoon Kwang Lee, Jennifer L. Mamrosh, Manish Pathak, Eric A. Ortlund and David D. Moore. (2011) Antidiabetic effects of a novel agonist ligand for nuclear receptor LRH-1. ***Keystone Symposia (Type 2 Diabetes, Insulin Resistance & Metabolic Dysfunction)*****,** Keystone, Colorado, USA.
7. **Jae Man Lee**, Jennifer L. Mamrosh, Charity Mills, and David D. Moore. (2010) Anti-inflammatory effect of a novel agonist ligand for nuclear receptor LRH-1 in the inflammatory bowel disease. ***Cold Spring Harbor Laboratory Meeting (Nuclear Receptors & Disease)***, Cold Spring Harbor, New York, USA.
8. **Jae Man Lee**, Yoon Kwang Lee, and David D. Moore. (2010) Antidiabetic effects of novel ligands for the nuclear receptor LRH-1. ***Keystone Symposia (Nuclear Receptors: Development, Physiology and Disease)***, Keystone, Colorado, USA.
9. **Jae Man Lee**, Yoon Kwang Lee, and David D. Moore. (2009) Antidiabetic effects of novel ligands for the orphan nuclear receptor LRH-1. ***Keystone Symposia (Type 2 Diabetes & Insulin Resistance)***, Banff, Alberta, Canada.
10. **Jae Man Lee**, Ryan Thomas Wagner, Yoon Kwang Lee, Austin J. Cooney and David D. Moore. (2008) Identification of Novel ligands for Orphan Nuclear Receptor 5A Subfamily. ***Keystone Symposia (Nuclear Receptors: Orphan Brothers)***, Whistler, British Columbia, Canada.
11. **Jae Man Lee**, Seong-Hwan Rho, Dong Wook Shin, Chunghee Cho, Woo Jin Park, Soo Hyun Eom, Jianjie Ma, Do Han Kim. (2004) Negatively charged amino acids within the intraluminal loop of ryanodine receptor are involved in the interaction with triadin. ***Annual Meeting of the Biophysical Society*****,** Baltimore, Maryland, USA.

INVITED SEMINARS AND SYMPOSIA

1. "Nutrient-sensing nuclear receptors coordinate autophagy", ***The 15th Hamamatsu-Kyungpook Joint Medical Symposium***, School of Medicine, Kyungpook National University, Daegu, Republic of Korea, October 6th, 2015.
2. "Nutrient-sensing nuclear receptors coordinate autophagy", ***The 3rd Autophagy Symposium***, Yangyang, Kangwondo, Republic of Korea, August 28-29, 2014.

3. "Transcriptional coordination of autophagy by nutrient sensing nuclear receptors", ***2013 R & D Seminar***, Department of Molecular and Cellular Biology, BCM, Houston, TX, USA, January 17, 2013.
4. "Targeting the nuclear receptor LRH-1 to treat inflammatory bowel disease", ***2012 Korean-American Bio-Medical Scientists Symposium***, Houston, TX, USA, November 10, 2012.
5. "Adopting the orphan nuclear receptor LRH-1 and its physiologic impacts on human disease", ***2011 Korean-American Bio-Medical Scientists Symposium***, Houston, TX, UAS, November 5, 2011.

TEACHING AND MENTORSHIP

2010	Mentorship of the Graduate Program Rotation Candidate (Peter Kratz, DB Program; Jennifer L. Mamrosh, Dept. of MCB)
2009	Mentorship of the Graduate Program Rotation Candidate, (Alex David Ridgeway, Dept. of MCB)
2008	Mentorship of the SMART Undergraduate Program, (Charity M. Mills, Univ. of Houston)
2007	Mentorship of the Graduate Program Rotation Candidate, (Wei Wei, Dept. of MCB)