

CURRICULUM VITAE

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Part I: General Information

Name: Ho-Jin Koh

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University of South Carolina
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Place of Birth: Daegu, Korea

Education:

1995 B.S. Kyungpook National University (Department of Genetic Engineering)
1997 M.S. Kyungpook National University (Molecular Biology)
2002 Ph.D. Kyungpook National University (Molecular Biology)

Postdoctoral Training:

2002 – 2004 Assistant Manager, Genomic Function Research Team, TG Biotech Institute (TGBI)
Daegu, Korea
2002 – 2004 Research Fellow, Kyungpook National University, Department of Genetic
Engineering Daegu, Korea
2004 – 2007 Research Fellow, Section on Metabolism, Elliot P. Joslin Research
Laboratory, Harvard Medical School, Boston, MA

Academic Appointments:

1998 – 1999 Educational Assistant, Central Laboratory, Kyungpook National University
2008 – 2013 Instructor in Medicine, Harvard Medical School, Boston MA
2013 – Assistant Professor, University of South Carolina

Other Professional Positions:

2008 – 2013 Research Associate, Section on Metabolism, Elliott P. Joslin Research Laboratory,
Joslin Diabetes Center, Boston MA
2014 - Institutional Animal Care and Use Committee member, University of South Carolina,
Columbia SC

Awards and Honors:

2005 Travel Grant Award for 2005 ADA Meeting, San Diego (10 – 14 June, 2005)
2005 – 2006 Mary K. Iacocca Research Fellowship
2006 – 2008 American Physiological Society Postdoctoral Fellowship in Physiological Genomics
2008 Travel Grant Award for 2008 ADA Meeting, San Francisco (6 – 10 June, 2008)
2013 Mead Johnson Research Award in Endocrinology and Metabolism for the Experimental
Biology 2013 (20-24 April, 2013)

Other Experience and Professional Memberships:

- 2005 - Member, American Diabetes Association
- 2006 - Member, American Physiological Society
- 2013 - Member, American Heart Association
- 2014 - Member, Institutional Animal Care and Use Committee, University of South Carolina

Active Research Funding:

2015/06/01-2018/03/31

R03 AR066825-01A1, National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)

Koh, Ho-Jin (PI)

TRB3: A Novel Mediator for Denervation-induced Muscle Atrophy

The purpose of this grant is to address the role of TRB3 in denervation-induced muscle atrophy.

Role: PI

2013/08/16-2017/08/15

Departmental Start-Up, University of South Carolina

Koh, Ho-Jin (PI)

Effects of Exercise and High-Fat Diet on Skeletal Muscle and Adipose Tissue Metabolism

The purpose of this grant is to set up the PI's laboratory and generate preliminary data for extramural research support.

Role: PI

Completed Research Funding:

2013/06/01-2015/05/31

P20GM103961, NIH/NIGMS

Nagarkatti, Prakash (PI)

The Role of AMPK in Adipose Tissue Inflammation and Metabolism

The purpose of this grant is to test the PI's hypothesis regarding the role of AMPK in adipose tissue inflammation and metabolism.

Role: Co-Investigator

2014/09/01-2015/04/30

P20109091, NIH/NIGMS

Roninson, Igor (PI)

TRB3: A Novel Mediator for Denervation-induced Muscle Atrophy

The purpose of this grant is to test the PI's hypothesis regarding the role of TRB3 in denervation-induced muscle atrophy.

Role: Co-Investigator

2009/09/01-2011/08/31

P30DK040561, NIH/NIDDK

Walker, Allan (PI)

The Effects of Type 2 Diabetes on SNARK in the Regulation of Glucose Transport in Skeletal Muscle

The goal of this project is to determine if SNARK, an AMPK-related protein kinase that we have proposed to be an important mediator of glucose transport in skeletal muscle is activated by exercise in healthy subjects and subjects with obesity and type 2 diabetes.

Role: Co-Investigator

2009/04/01-2011/03/31

P30DK036836, NIH/NIDDK

Shoelson, Steve (PI)

TRB3: A Novel Modulator of Glucose and Lipid Metabolism in Skeletal Muscle

The goal of this project is to determine the role of TRB3 in regulating glucose and lipid metabolism in skeletal muscle.

Role: Co-Investigator

Pending Research Funding:

NIH/NCCAM R21 Grant PI

Role of AMPK in resveratrol and exercise-mediated anti-inflammation in fat tissue (resubmission)

The purpose of this grant is to test PI's hypothesis regarding the role of AMPK in resveratrol- and exercise-mediated anti-inflammation in fat tissue

7/01/2016-6/31/2018

AHA Scientist Development Award PI

Role of TRB3 in Brown Adipose Tissue

The purpose of this grant is to test PI's hypothesis regarding the role of TRB3 in brown adipose tissue differentiation and metabolism.

7/01/2016-6/31/2019

Teaching Experience

2014 – Skeletal Muscle Physiology: Form and Function, EXSC669

2014 – Physiology of Exercise, EXSC780

2014 – Independent Study, EXSC790

2015 – Dissertation Preparation, EXSC899

Advising Responsibilities (Post-Graduate and Visiting Scientist)

2004-2005 Naoko Mukai, MD

2008 Amy Rathod, MD

2009 Archana Nagaraja, MD

2014- Ha-Won Jeong, PhD

Advising Responsibilities (Graduate)

2014 Ran Hee Choi, MS

Advising Responsibilities (Undergraduate)

2004 Marc Rogers (Bucknell University)

2005, 2006 Jennifer Wu (Boston College)

2005 David Arnold (Williams College)

2006-2008 Michelle Jung (Harvard University)

Advising Responsibilities (High School)

2008 Sarah Goodyear
2011, 2012 Andrew Park
2013 Jung-Min Lee

Bibliography

Original Reports:

1. Lee SM, **Koh HJ**, Huh TL, Park JW. Radiation sensitivity of an Escherichia coli mutant lacking NADP+-dependent isocitrate dehydrogenase. *Biochem. Biophys. Res. Commun.* 1999;254:647-650
2. Kim YO, Park SH, Kang YJ, **Koh HJ**, Kim SH, Park SY, Sohn U, Huh TL. Assignment of mitochondrial NAD+-specific isocitrate dehydrogenase β subunit gene (IDH3B) to human chromosome band 20p13 by in situ hybridization and radiation hybrid mapping. *Cytogenet. Cell Genet.* 1999;86:240-241
3. Kim YO, **Koh HJ**, Kim SH, Son BG, Huh JW, Jeong KS, Lee IJ, Song BJ, Huh TL. Identification and functional characterization of novel and tissue-specific mitochondrial NAD+-dependent isocitrate dehydrogenase β subunit isoform. *J. Biol. Chem.* 1999;274:36866-36875
4. Jo SH, Son MK, **Koh HJ**, Lee SM, Song IH, Kim YO, Jeong KS, Kim WB, Park JW, Song BJ, Huh TL. Control of mitochondrial redox balance and cellular defense against oxidative damage by the mitochondrial NADP+-dependent isocitrate dehydrogenase (IDPm). *J. Biol. Chem.* 2001;276:16168-16176
5. Jo SH, Lee SH, Chun HS, Lee SM, **Koh HJ**, Lee SE, Chun JS, Park JW, Huh TL. Cellular defense against UVB-induced phototoxicity by cytosolic NADP+-dependent isocitrate dehydrogenase. *Biochem. Biophys. Res. Commun.* 2002;292:542-549
6. Lee SM*, **Koh HJ***, Park DC, Song BJ, Huh TL, Park JW. Cytosolic NADP(+)-dependent isocitrate dehydrogenase status modulates oxidative damage to cells. *Free Radic. Biol. Med.* 2002;32:1185-1196 (* equal contribution)
7. Lee SH, Jo SH, Lee SM, **Koh HJ**, Song H, Park JW, Lee WH, Huh TL. Role of NADP+-dependent isocitrate dehydrogenase (NADP+-ICDH) on cellular defence against oxidative injury by gamma-rays. *Int. J. Radiat. Biol.* 2004;80:635-642
8. **Koh HJ**, Lee SM, Do, KM, Son BC, Ryoo ZY, Chang KT, Chun JS, Park JW, Jeong KS, Choi MS, Son M, Park DC, Song BJ, Veech RL, Song H, Huh TL. Cytosolic NADP+-dependent isocitrate dehydrogenase plays a key role in lipid metabolism. *J. Biol. Chem.* 2004;279:39968-39974
9. **Koh HJ**, Arnolds DE, Fujii N, Rogers, MJ, Jessen N, Ho RC, Hirshman MF, Goodyear LJ. Skeletal muscle-selective knockout of LKB1 increases insulin sensitivity, improves glucose homeostasis, and decreases TRB3. *Mol. Cell. Biol.* 2006;26:8217-8227
10. **Koh HJ**, Hirshman MF, He H, Li Y, Manabe Y, Balschi JA, Goodyear LJ. Epinephrine is a critical mediator of acute exercise-induced AMP-activated protein kinase activation in adipocytes. *Biochem. J.* 2007; 403:473-481

11. **Koh HJ**, Brandauer JB, Goodyear LJ. AMPK and LKB1 and the Regulation of skeletal muscle metabolism. *Current Opinion in Clinical Nutrition and Metabolic Care*. 2008; 11(3):227-232
12. Treebak JT, Taylor EB, Witczak CA, An D, Toyoda T, **Koh HJ**, Xie J, Feener EP, Wojtaszewski JFP, Hirshman MF, and Goodyear LJ. Identification of a novel phosphorylation site on TBC1D4 regulated by AMP-activated protein kinase in skeletal muscle. *Am. J. Physiol. Endocrinol. Metab.* 2010; 298(2): C377-385.
13. Lee SH, Ha SO, **Koh HJ**, Kim K, Jeon SM, Choi MS, Kwon OS, and Huh TL. Upregulation of Cytosolic NADP⁺-Dependent Isocitrate Dehydrogenase by Hyperglycemia Protects Renal Cells Against Oxidative Stress. *Mol. Cells* 2010; 29: 203-208.
14. Jessen N, **Koh HJ**, Folmes CD, Wagg C, Fujii N, Lofgren B, Wolf CM, Berul CI, Hirshman MF, Lopaschuk GD, and Goodyear LJ. Ablation of LKB1 in the heart leads to energy deprivation and impaired cardiac function. *Biochimica. et. Biophysica acta.- Molecular Basis of Disease* 2010; 1802(7-8): 593-600.
15. **Koh HJ**, Toyoda T, Fujii N, Jung MM, Rathod A, Middelbeek RJ, Lessard SJ, Treebak JT, Tsuchihara K, Esumi H, Richter EA, Wojtaszewski JFP, Hirshman MF, and Goodyear LJ. The AMPK-related protein kinase SNARK mediates contraction-stimulated glucose transport in mouse skeletal muscle. *Proc. Natl. Acad. Sci.* 2010; 107(35): 15541-15546.
16. Toyoda T, An D, Witczak CA, **Koh HJ**, Hirshman MF, Fujii N, and Goodyear LJ. Myo1c regulates glucose uptake in mouse skeletal muscle. *J. Biol. Chem.* 2011; 286(6): 4133-4140.
17. Liew CW*, Boucher J*, Cheong JK*, Vernochet C, **Koh HJ**, Kawamori D, Hu J, Goodyear LJ, Farmer SR, Doria A, Bluher M, Hsu SI, and Kulkarni RN. Ablation of TRIP-Br2, a novel regulator of fat lipolysis, thermogenesis and oxidative metabolism, prevents diet-induced obesity and insulin resistance. *Nature Medicine* 2013; 19:217-226 (* equal contribution).
18. **Koh HJ***, Toyoda T, Didesch MM, Lee MY, Sleeman MW, Kulkarni RN, Musi N, Hirshman MF, and Goodyear LJ. Tribbles 3 Mediates ER Stress-Induced Insulin Resistance in Skeletal Muscle. *Nat. Commun.* 2013; 4:1871. 1038/ncomms2851 (* corresponding author).
19. Lauritzen HP, Brandauer J, Schjerling P, **Koh HJ**, Treebak JT, Hirshman MF, Galbo H, and Goodyear LJ. Contraction and AICAR Stimulate IL-6 Vesicle Depletion from Skeletal Muscle Fibers In Vivo. *Diabetes* 2013; 62(9):3081-3092.
20. An D, Lessard SJ, Toyoda T, Lee MY, **Koh HJ**, Qi L, Hirshman MF, and Goodyear LJ. Overexpression of TRB3 in muscle alters muscle fiber type and improves exercise capacity in mice. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 2014; 306(12):R925-R933.
21. Lessard SJ, Rivas DA, So K, **Koh HJ**, Queiroz AL, Hirshman MF, Fielding RA, and Goodyear LJ. The AMPK-related kinase SNARK regulates muscle mass and myocyte survival. *J. Clin. Invest.* 2015; Doi:10.1172/JCI79197.
22. Jeong HW, Choi R, McClellan JL, Piroli GG, Frizzell N, Tseng YH, Goodyear LJ, and **Koh HJ**. Tribbles 3 inhibits brown adipocyte differentiation and function by suppressing insulin signaling. *Biochem. Biophys. Res. Commun.* 2016; Doi:10.1016/j.bbrc.2016.01.064

Abstracts:

a.Oral presentations

1. Jessen N, **Koh HJ**, Arnolds DE, Mukai N, Hirshman MF, Fujii N, and Goodyear LJ. “LKB1 is a Critical Regulator of AMPK in Heart” 2005 ADA Meeting, San Diego, California (June 10-14, 2005)
2. **Koh, HJ**, Mukai N, Manabe Y, Ho RC, Fujii N, Hirshman MF, and Goodyear LJ. “The Role of AMP-activated Protein Kinase on the Exercise Effects in the Adipocytes” 2005 ADA Meeting, San Diego, California (June 10-14, 2005)
3. Goodyear LJ, **Koh HJ**, Fujii N, Arnolds DE, Jessen N, and Hirshman MF. “Glucose Transport in Skeletal Muscle: Regulation by LKB1 and AMPK” 2005 FASEB Summer Research Conferences, Glucose Transporter Biology, Snowmass Village, Colorado (August 6-11, 2005)
4. Jessen N, **Koh HJ**, Arnolds DE, Lofgren B, Luptak I, Hirshman MF, Fujii N, Tian R, and Goodyear LJ. “Altered Substrate Metabolism and Ablated AMPK α 2 Activity in LKB1 Knockout Hearts” 2005 AHA Scientific Sessions, Dallas, Texas (Nov. 13-16, 2005)
5. Hirshman MF, **Koh HJ**, and Goodyear LJ. “LKB1 in Skeletal Muscle is Critical for Exercise Capacity and Partially Regulates Glucose Transport” 2006 ADA Meeting, Washington D.C. (June 9-13, 2006)
6. **Koh HJ**, Arnolds DE, Hirshman MF, Tran TT, Fujii N, Kahn CR, and Goodyear LJ. “LKB1 in Skeletal Muscle Plays Important Roles in Insulin Signaling and Glucose Homeostasis” 2006 ADA Meeting, Washington D.C. (June 9-13, 2006)
7. **Koh HJ**, Fujii N, Toyoda T, Jung MM, Hirshman MF, Goodyear LJ. “The AMPK-related protein kinase SNARK mediates contraction-stimulated glucose transport in mouse skeletal muscle” 2008 ADA Meeting, San Francisco, CA (Jun. 6 – 10, 2008)
8. Goodyear LJ, **Koh HJ**, Fujii N, Toyoda T, Jung MM, Hirshman MF. “SNARK Regulation in Skeletal Muscle” 2005 FASEB Summer Research Conferences, AMPK in Sickness and Health: From Molecule to Man, Snekkersten, Denmark (Aug. 10-15, 2008)
9. Goodyear LJ, **Koh HJ**, Fujii N, Toyoda T, Jung MM, Hirshman MF. “Exercise and Diabetes: The Emerging Roles of AMPK and AMPK-Related Kinases” 2009 Keystone Symposia, Banff, Alberta, Canada (Jan. 20-25, 2009)
10. **Koh HJ**, Toyoda T, Rathod A, Hirshman MF, Goodyear LJ. “Exercise and AICAR Regulation of SNARK, an AMPK-Related Protein Kinase” 2009 ADA Meeting, New Orleans, LA (Jun. 5-9, 2009)
11. Goodyear LJ, **Koh HJ**, An D, Vichaiwong K, Toyoda T, Witczak CA, Lessard S, Purohit S, Hirshman MF. “Mediators of Contraction-Stimulated Glucose Transport in Skeletal Muscle” 2009 FASEB Summer Research Conferences, Glucose Transporter Biology and Diabetes, Lucca, Italy (Sep. 6-11, 2009)
12. Goodyear LJ, **Koh HJ**, Lessard S, Toyoda T, An D, Fujii N, Hirshman MF. “AMPK and AMPK-related kinases in skeletal muscle” 2010 FASEB Summer Research Conferences, AMPK: Central Regulatory System in Metabolism & Growth, Kyoto, Japan (Oct. 3-8, 2010)
13. **Koh HJ**. “AMPK and AMPK-related protein kinases in skeletal muscle” 24th Spring Congress of Korean Diabetes Association, Gwangju, Korea (May 12-14, 2011)

14. Sun X, Lessard SJ, An D, **Koh HJ**, Zhao J, Hirshman MF, and Goodyear LJ. "Sucrose Nonfermenting AMPK-Related Kinase (SNARK) Regulates Exercise- and Ischemia-Stimulated Glucose Transport in the Heart" 2011 ADA Meeting, San Diego, CA (Jun. 25-28, 2011)
15. **Koh HJ**. "Novel Signaling Molecules Regulating Glucose Transport in Skeletal Muscle" 208th NEBS monthly meeting, Boston, MA (Sept. 29, 2011)
16. **Koh HJ**, Musi N, Hirshman MF, Goodyear LJ. "Tribbles 3 (TRB3) Mediates Endoplasmic Reticulum (ER) Stress-Induced Decreases in Insulin-Stimulated Glucose Uptake in Mouse Skeletal Muscle" 2012 ADA Meeting, Philadelphia, PA (Jun. 8-12, 2012)
17. **Koh HJ**. "The role of TRB3 in ER stress-induced insulin resistance in mouse skeletal muscle" The 5th Asia-Pacific Nutrigenomics Conference, Daegu, Korea (Oct. 11-13, 2012)
18. **Koh HJ**, Toyoda T, Jung MM, Lee MY, Hirshman MF, and Goodyear LJ. "The Role of Skeletal Muscle Tribbles 3 on Endoplasmic Reticulum Stress- and High Fat Diet-Induced Insulin Resistance" 2013 EB Meeting, Boston, MA (Apr. 20-24, 2013)
19. Jeong HW, Choi RH, McClellan JL, Piroli G, Frizzell N, Tseng YH, Goodyear LJ, and **Koh HJ**. "TRB3 Regulates Brown Adipocyte Differentiation and Function through Insulin Signaling" 2015 ADA Meeting, Boston, MA (Jun. 5-Jun. 9, 2015)

b. Posters

1. Kim YO, **Koh HJ**, Kim SH, Lee IJ, and Huh TL. "Characterization of cDNAs for Human NAD⁺-specific Isocitrate Dehydrogenase Subunits" FEBS Meeting Barcelona, Spain (July 7-13, 1996)
2. Kim YO, **Ko HJ**, Kim SH, Park YB, and Huh TL. "Coexpression and Characterization of the Recombinant NAD⁺-specific Isocitrate Dehydrogenase Subunits" KSMCB Annual Meeting, Seoul, Korea (October. 24-26, 1996)
3. **Ko HJ**, Kim YO, Kim SH, and Huh TL. "Molecular Cloning of Human NAD⁺-specific Isocitrate Dehydrogenase β Subunit and Tissue Specific Expression" KSMCB Annual Meeting, Seoul, Korea (October 24-26, 1996)
4. Huh TL, Kim YO, **Koh HJ**, Kim SH, Park HC, Lee IJ, and Song BJ. " Human NAD⁺-specific Isocitrate Dehydrogenase β and γ subunits : Cloning, Tissue Specific Expression, and Functional Analyses of the Recombinant Proteins" Annual Meeting of the ASBMB, San Francisco, California (August 24-29, 1997)
5. Kim YO, **Ko HJ**, Son BC, Jo SH, and Huh TL. "Isolation of Isoform for Human NAD⁺-specific Isocitrate Dehydrogenase β subunit and Functional Analyses of the Recombinant Proteins" KSMCB Annual Meeting, Seoul, Korea (October 16-18, 1997)
6. Son BC, **Ko HJ**, Jo SH, Kim YO, and Huh TL. "Activation of Adipocyte Differentiation by Cytosolic NADP⁺-specific Isocitrate Dehydrogenase" KSMCB Annual Meeting, Seoul, Korea (October, 22-24, 1998)
7. Kim YO, **Ko HJ**, Jo SH, and Huh TL. "Regulation of NAD⁺-specific Isocitrate Dehydrogenase Enzyme Activity by Alternative Splicing" KSMCB Annual Meeting, Seoul, Korea (October, 22-24, 1998)

8. Kim YO, **Koh HJ**, Kim SH, Jo SH, Huh JW, Jeong KS, Lee IJ, Song BJ, and Huh TL. "Tissue-specificity and Differential Optimal pH of NAD⁺-dependent Isocitrate β Subunit by an Alternative Splicing" 6th IUBMB Seoul conference, Seoul, Korea (October 10-13, 1999)
9. Huh TL, Jo SH, Sohn MK, Lee SM, Song IH, **Koh HJ**, Kim YO, and Park JW. "Control of Mitochondrial Redox Balance by the Mitochondrial NADP⁺-dependent Isocitrate Dehydrogenase" 8th Congress on International Association of BioMedical Gerontology, Kyungjoo, Korea (February 21-25, 2000)
10. Jo SH, Son MK, Lee SM, **Koh HJ**, Lee SH, Park JW, and Huh TL "Protective Role of Cytosolic NADP⁺-Isocitrate Dehydrogenase (IDPc) Against Ultraviolet B Irradiation Mediated Oxidative Injury" KSBMB Annual Meeting, Daejeon, Korea (October, 6-7, 2000)
11. **Koh HJ**, Kang SH, and Huh TL. "IDPc Plays a Key Role in Fatty Liver, Hyperlipidemia, and Obesity" 2003 Keystone Symposia, Denver, Colorado (January 21-26, 2003)
12. **Koh HJ**, Hirshman MF, Fujii N, Arnolds DE, Rogers MJ, Mukai N, Jessen N, Ho RC, and Goodyear LJ. "Skeletal Muscle-specific Knockout of LKB1 Causes AICAR Resistance but Improves Glucose Tolerance" 2005 ADA Meeting, San Diego, California (June 10-14, 2005)
13. **Koh HJ**, Hirshman MF, He H, Li Y, Peter LE, Balschi JA, and Goodyear LJ. "Epinephrine is a Key Molecule for Exercise-induced AMP-activated Protein Kinase Activation in Rat Adipocytes" 2006 ADA Meeting, Washington D.C. (June 9-13, 2006)
14. Witczak CA, Fujii N, **Koh HJ**, Nozaki N, Hirshman MF, and Goodyear LJ. "CAMKKa Regulates Glucose Uptake in Mouse Skeletal Muscle in Vivo" 2006 AMPK Meeting, Snowmass, Colorado. (Aug. 12-17, 2006)
15. Jessen N, **Koh HJ**, Arnolds DE, Li Y, Fujii N, Hirshman MF, Lofgren B, Wolf C, Wagg C, Berul C, Lund S, Tian R, Lopaschuk GD, and Goodyear LJ. "Altered Substrate Metabolism in LKB1 Knockout Hearts" 2006 AMPK Meeting, Snowmass, Colorado. (Aug. 12-17, 2006)
16. Taylor E, Kramer HF, Fujii N, Yu H, Roeckl K, **Koh HJ**, Sano H, Hirshman MF, Witters LA, Lienhard GE, and Goodyear LJ. "AMPK regulates the Akt-substrate of 160KD (AS160) in Skeletal Muscle" 2006 AMPK Meeting, Snowmass, Colorado. (Aug. 12-17, 2006)
17. Lee SH, Park J, Kim H, **Koh HJ**, Jo SH, and Huh TL. "Effect of Cytosolic NADP⁺-dependent Isocitrate Dehydrogenase on Hyperglycemia-induced Oxidative Damage" 2006 KSMCB Annual Meeting, Seoul, Korea (Oct. 12-13, 2006)
18. Hwangbo DS, Min KJ, **Koh HJ**, Goodyear LJ, Tatar M, and Promislow EL. "Lifespan Extension by Anti-diabetic Drug Metformin in Drosophila" 2007 48th Annual Drosophila Research Conference, Philadelphia, Philadelphia. (Mar. 7-11, 2007)
19. **Koh HJ**, Hirshman MF, Peter LE, Li Y, Fujii N, Witczak C, and Goodyear LJ. "LKB1 Regulates Contraction-Stimulated Glucose Transport in Mouse Skeletal Muscle" 2007 Experimental Biology Annual Meeting, Washington, District of Columbia. (Apr. 28- May 2, 2007)
20. Brandauer J, **Koh HJ**, Jung MM, Toyoda T, An D, Yu H, Fujii N, Hirshman MF, Witters LA, and Goodyear LJ. "Effect of altered AMP-activated protein kinase activity and exercise training on muscle PBEF-1/visfatin levels" 2008 Experimental Biology Annual Meeting, San Diego, CA. (Apr. 5 – 9, 2008)

21. Toyoda T, An D, Brandauer J, **Koh HJ**, Fujii N, Hirshman M, Goodyear LJ. “5'-AMP-activated protein kinase is a key mediator of post-exercise insulin sensitivity in mouse skeletal muscle” 2008 ADA Meeting, San Francisco, CA (Jun. 6 – 10, 2008)
22. An D, Toyota T, **Koh HJ**, Roeckl KS, Hirshman MF, Qi L, Song Y, Montminy M, Goodyear LJ. “Muscle-specific overexpression of TRB3 increases exercise capacity” 2008 ADA Meeting, San Francisco, CA (Jun. 6 – 10, 2008)
23. Treebak JT, Taylor EB, Witczak CA, An D, Toyoda T, **Koh HJ**, Feener EP, Wojtaszewski JFP, Hirshman MF, Goodyear LJ. “AMPK phosphorylates TBC1D4 on S711 in skeletal muscle” 2009 International Biochemistry of Exercise Conference, Ontario, Canada (Jun. 1-4, 2009)
24. **Koh HJ**, Jung MM, Toyoda T, An D, Kulkarni RN, Hirshman MF, Goodyear LJ. “TRB3: A novel mediator for ER stress-induced insulin resistance in skeletal muscle” 2010 Keystone Symposia, Whistler, Canada (Apr. 12-16, 2010)
25. Toyoda T, An D, Witczak CA, **Koh HJ**, Hirshman MF, Fujii N, Goodyear LJ. “Myo1c Regulates Glucose Uptake in Mouse Skeletal Muscle” 2010 ADA Meeting, Orlando, FL (Jun. 25-29, 2010)
26. **Koh HJ**, Fujii N, Toyoda T, Hirshman MF, Goodyear LJ. “Effects of AICAR on SNARK Activity in Mouse Skeletal Muscle” 2010 FASEB Summer Research Conferences, AMPK: Central Regulatory System in Metabolism & Growth, Kyoto, Japan (Oct. 3-8, 2010)
27. **Koh HJ**, Jung MM, Toyoda T, An D, Kulkarni RN, Hirshman MF, and Goodyear LJ. “TRB3 Regulates ER Stress-Induced Insulin Resistance in Skeletal Muscle Cells” 2011 ADA Meeting, San Diego, CA (Jun. 25-28, 2011)
28. **Koh HJ**, Lee MY, Hirshman MF, and Goodyear LJ. “Deletion of Tribbles 3 (TRB3) Protects Mice from High Fat Diet-Induced Insulin Resistance and Hepatosteatosis. 2013 ADA Meeting, Chicago, IL (Jun. 21-15, 2013)
29. Lessard S, Rivas D, So K, **Koh HJ**, Hirshman MF, Fielding R, and Goodyear LJ. “SNARK Is a Novel Regulator of Muscle Mass and Myocyte Apoptosis” 2015 EB Meeting, Boston, MA (Mar. 28-Apr 1, 2015)
30. Jeong HW, Choi RH, McClellan JL, Tseng YH, Goodyear LJ, and **Koh HJ**. “TRB3 Inhibits Brown Adipocyte Differentiation and Function by Suppressing Insulin Signaling” 2015 EB Meeting, Boston, MA (Mar. 28-Apr 1, 2015)

Patents:

1. **Koh HJ**, Choi MS, Jung UJ, Huh TL. Isocitrate dehydrogenase, gene thereof, and use of the same in the treatment of obesity, hyperlipidemia, and fatty liver in lipid biosynthesis. 2001;PCT/KR01/01271
2. Huh TL, **Koh HJ**, Choi MS, Jung UJ. Isocitrate dehydrogenase, gene thereof, screening and development of metabolic remedy for obesity, hyperlipidemia, and fatty liver curbing expression and activity of isocitrate dehydrogenase. 2002;10-2000-0061962
3. Park JW, Huh TL, Lee SM, **Koh HJ**. Prevention and remedy of obesity, hyperlipidemia and fatty liver including efficient ingredient for inhibition of isocitrate dehydrogenase. 2002;10-2001-0033599