

Ju Youn Kim

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EDUCATION

2023, 03~Present	Associate Professor	Hanyang University, ERICA, Ansan, South Korea
2021-2023,02	Staff Research Associate III	University of California San Diego, San Diego, CA
2018-2020	Assistant Project Scientist	University of California San Diego, San Diego, CA
2013-2017	Post-Doctoral Fellow	University of California San Diego, San Diego, CA
2005-2012	Doctor of Philosophy	Boston University School of Medicine, Boston, MA
2001-2003	Master in Science	Yonsei University College of Medicine, Seoul, South Korea
1996-2000	Bachelor in Science	Hanyang University, Seoul, South Korea

PEER REVIEWED PUBLICATIONS

1. Peng Zhang, Junlai Liu, Hua Su, **Ju Youn Kim**, Li Gu, Shabnam Shalapur, Gautam Bandyopadhyay, Suling Zeng, Cristina Llorente, Nicolas Vo, Allen Lee, Irene Tsaour, Mandy Zhu, Jerrold M. Olefsky, Bernd Schnabl, Pejman Soroosh, Michael Karin. IL-22 resolves NAFLD via STAT3 dependent restoration of diet perturbed intestinal homeostasis. *Cell Metabolism* (2023), *In revision*.
2. Michael Karin, **Ju Youn Kim**. NASH-driven Hepatocellular Carcinoma: Obesity-associated preclinical models. *Molecular Oncology* (2023), *In revision* *Corresponding Author
3. **Ju Youn Kim**, Lily Q. Wang, Valentina C. Sladky, Tae Gyu Oh, Junlai Liu, Kaitlyn Trinh, Felix Eichin, Michael Downes, Mojgan Hosseini, Etienne D. Jacotot, Ronald M. Evans, Andreas Villunger, Michael Karin. PIDDosome-SCAP cross-talk controls fructose diet-dependent transition from simple steatosis to steatohepatitis. *Cell Metabolism* (2022), Oct; 34:1548-1560. *Co-corresponding & Lead Author
4. Elodie Bosc, Julie Anastasie, Feryel Soualmia, Pascale Coric, **Ju Youn Kim**, Lily Q. Wang, Gullen Lacin, Kaitao Zhao, Ronak Patel, Eric Duplus, Philippe Tixador, Andrew Sproul, Bernard Brugg, Michelle Reboud-Ravaux, Michael Shelanski, Serge Bouaziz, Michael Karin, Chahrazade El Amri, and Etienne Jacotot. Genuine Selective Caspase-2 Inhibition with new Irreversible Small Peptidomimetics. *Cell Death and Disease* (2022), Nov; 13:1~14.
5. **Ju Youn Kim**, Feng He, Michael Karin. From Liver Fat to Cancer:Perils of the Western Diet. *Cancers* (2021), Mar;13 (5): 1-19.
6. Hsiao-Yen Ma, Jun Xu, Gen Yamamoto, Sara B. Rosenthal, Ludmil B. Alexandrov, Daniel Karin, **Ju Youn Kim**, Sven Heinz, Chris Benner, Yukinori Koyama, Takahiro Nishio, Shuang Liang, Mengxi Sun, Xiao Liu, Gabriel Karin, Peng Zhao, Pnina Brodt, Iain H. Mckillop, Oswald Quehenberger, Ed Dennis, Alan Saltiel, Hidekazu Tsukamoto, Bin Gao, Michael Karin, David A. Brenner, Tatiana Kisseleva. IL-17 signaling in steatotic hepatocytes and macrophage promotes alcohol-induced HCC. *J. Hepatology* (2020) May;72: 946-959.
7. **Ju Youn Kim**, Ricard Garcia-Carbonell, Shinichiro Yamachika, Peng Zhao, Debanjan Dhar, Rohit Loomba, Randal J. Kaufman, Alan R Saltiel, Michael Karin. ER Stress Drives Lipogenesis and Steatohepatitis via Caspase-2 Activation of S1P. *Cell* (2018) Sept;175: 1-13.
8. Ricard Garcia-Carbonell, Jerry Wong, **Ju Youn Kim**, Lisa Abernathy Close, Brigid S. Boland, Thomas L Wong, Philip A Harris, Samuel B Ho, Soumita Das, Peter B Ernst, Roman Sasik, William J Sandborn,

- John Bertin, Pete J Gough, John T Chang, Michelle Kelliher, David Boone, Monica Guma and Michael Karin. Elevated A20 promotes TNF-induced and RIPK1-dependent intestinal epithelial cell death. *Proc Natl Acad Sci USA*. (2018) Sept;12:1-9.
9. Debanjan Dhar, Laura Antonucci, Hayato Nakagawa, **Ju Youn Kim**, Elisabeth Gritzner, Stefano Caruso, Shabnam Shalpour, Ling Yang, Mark A Valasek, Sooyeon Lee, Kerstin Minnich, Ekihiro Seki, Jan Tuckermann, Maria Sibilia, Jessica Zucman-Rossi, Michael Karin. Liver Cancer Initiation Requires p53 Inhibition by CD44-Enhanced Growth Factor Signaling. *Cancer Cell* (2018) Jun;33(6):1061-1077.
 10. Laura Antonucci, Johan B. Fagman, **Ju Youn Kim**, Jelena Todoric, Ilya Gukovsky, Mason Mackey, Mark H. Ellisman, Michael Karin. Basal autophagy maintains pancreatic acinar cell homeostasis and protein synthesis and prevents ER stress. *Proc Natl Acad Sci USA*. (2015) Oct;28:1-9.
 11. Guanrong Hwang, Dana Buckler-Pena, Tessa Nauta, Maneet Singh, Agnes Asmar, Jun Shi, **Ju Youn Kim**, Kandror KV. Insulin responsiveness of glucose transporter 4 in 3T3-L1 cells depends on the presence of sortilin. *Mol. Biol. Cell*. (2013) Oct;24(19):3115-22.
 12. Partha Chakrabarti, **Ju Youn Kim**, Maneet Singh, Yu-Kyung Shin, Jessica Kim, Joerg Kumbrink, Yuanyuan Wu, Mi-Jeong Lee, Kathrin H. Kirsch, Susan K Fried, Konstantin V Kandror. Insulin inhibits lipolysis in adipocytes via the evolutionarily conserved mTORC1-Egr1-ATGL mediated pathway. *Mol. Cell. Biol.* (2013) Sep;33(18):3659-66.
 13. **Ju Youn Kim**, Konstantin V Kandror. The first luminal loop confers insulin responsiveness to the glucose transporter 4. *Mol. Biol. Cell*. (2012) Mar;23(5); 910-917
 14. Partha Chakrabarti, Taylor English, Shakun Karki, Li Quang, Rong Tao, **Ju Youn Kim**, Zhijun Luo, Stephen R Farmer, Konstantin V Kandror. SIRT 1 controls lipolysis in adipocytes via FOXO1-mediated expression of ATGL. *J Lipid Res*. (2011) Sep; 52(9): 1693-701.
 15. Han-Jong Kim, Joon-Young Kim, **Ju-Youn Kim**, Sang-Kyu Park, Ji-Ho Seo, Jae Bum Kim, In-Kyu Lee, Kyung-Sup Kim, Heung-Sik Choi. Differential regulation of human and mouse orphan nuclear receptor small heterodimer partner promoter by sterol regulatory element binding protein-1. *J Biol. Chem.* (2004) Jul 2;279(27):28122-31.
 16. **Ju-Youn Kim**, Jae-Jung Lee, Kyung-Sup Kim. Acetyl-CoA carboxylase beta expression mediated by MyoD and muscle regulatory factor 4 is differentially affected by retinoic acid receptor and retinoid X receptor. *Exp. Mol. Med.* (2003) Feb; 35(1):23-9.

HONORS AND AWARDS

2022-2023	Prevent Cancer Foundation Grant (P.I., Active)
2017-2018	Diabetes Research Center Pilot and Feasibility Grant (P.I.)
2016-2017	Superfund Postdoctoral Fellowship
2016-2017	AACR BAYER Hepatocellular Carcinoma Post-doctoral Research fellowship
2011	Myrna and Carl Franzblau Student Traveling Award, Boston University School of Medicine, Boston
2011	Selected as a promising post-doc candidates, Post-doctoral researcher Recruitment Symposium, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio
2001-2002	Graduate Fellowship, Brain Korea 21 Project for Medical Sciences, National Research Foundation of Korea, South Korea
2002	Best Article Award, Yonsei University, College of Medicine, South Korea

PATENT

Method for inhibition Nonalcoholic Steatohepatitis, Nonalcoholic Fatty Liver disease, And/Or De Novo Lipogenesis. (2017-152-2) (Patent is pending approval).

TEACHING EXPERIENCES

2015-Present Course: BISP199 (UCSD)

Teach Lab Science to Undergraduate Students, Give a grade.

- Teach basic pathways in metabolism and inflammation
- Teach mouse genetics that are required for maintain lab small animal
- Teach mouse physiology
- Teach basic lab skills to conduct experiments, including histological analysis with mouse tissues, immune-blot analysis, q-RTPCR analysis, gene-editing skills, *in vitro* cell experiments etc.
- Evaluate performance of students and provide a grade

2002-2003 Teaching Assistant

- Course: Biochemical Experiments

2001-2003 Teaching Assistant

- Course: Molecular Biology Workshop

Outside Scientific Activities

2019- Reviewer for EMBO Reports (IF:7.497)

2019- Reviewer for FEBS Journal (IF: 4.392)

2020- Reviewer for Science Reports (IF: 4.379)

2021- Reviewer for Journal of Hepatology (IF: 17.42)

2021- Reviewer for Cell Death & Differentiation (IF:15.83)

2022- Reviewer for Oncogenesis (IF:7.485)

RESEARCH EXPERIENCES

2013-present Post-Doctoral Scholar: Department of Pharmacology, University of California San Diego, CA, USA

Supervisor: Dr. Michael Karin, Ph.D., Distinguished Professor

- Study the role of caspase 2 in aberrant lipid metabolisms in livers of mouse that develops non-alcoholic steatohepatitis (NASH) upon high fat diet feeding.
- Discover key molecular mechanism by which inflammation signaling induces lipid accumulation in liver of NASH mouse model.

2005-2012 Ph.D. Research : Boston University School of Medicine, Boston, MA, USA

Supervisor: Dr. Konstantin V. Kandror, Ph.D., Professor, Biochemistry Department.

Investigated molecular mechanism by which GLUT4 targets to the insulin responsive vesicle (IRV) in adipose cells

- Identified a novel role of the first luminal loop of GLUT4 in the biogenesis of the IRVs in adipocytes.
- Determined the function of sortilin as a scaffold protein in formation of the IRV.
- Studied transcriptional regulation of ATGL in adipose cells.
- Presented data at scientific meetings.
- Taught graduate students and international students.

2003-2005 Research Scientist : Hai-Tai Confectionary and Food co. Ltd., Seoul, South Korea

Supervisor: Dr. Ji-Young Han, Ph.D., Director of Laboratory

- Investigated the source of potential food contamination from manufacturing or distribution processes
- Analyzed nutrient composition and formulated delectable and balanced diet
- Screened for microbial food contamination
- Carried out computational analysis of the data
- Taught industrial researchers in the field of food contamination

2000-2003 M.S. Research : Yonsei University, College of Medicine, Seoul, South Korea

Supervisor: Dr. Kyungsup Kim, Ph.D., Professor of Biochemistry and Molecular Biology

- Investigated an effects of RXR α and RAR α on transcriptional regulation of Acetyl-CoA carboxylase beta in C2C12 muscle cells
- Studied sterol regulatory element binding protein 1 (SREBP 1) mediated regulation of orphan nuclear receptor SHP.
- Presented experimental data at international meetings
- Taught undergraduate students

1998-2000 Undergraduate Research : Hanyang University, College of Natural Sciences, Seoul, South Korea

Supervisor: Moonsoo Kim, Ph.D., Professor of College of Natural Sciences

- Studied *in vitro* fertilization and developmental biology

Representative POSTER and ORAL Presentations

1. **Ju Youn Kim** ER Stress Drives Lipogenesis and Steatohepatitis via Caspase-2 Activation of S1P. Oral Presentation. Annual Retreat of Diabetes Research Center. Feb, 2018, Los Angeles.
2. **Ju Youn Kim** and Michael Karin, The role of TNFR1 in *de novo* lipid synthesis through caspase2-mediated SREBP activation, 2015 Annual Meeting Super Fund Research Program, Nov 16~21, 2015, Puerto Rico. USA.
3. **Ju Youn Kim** and Michael Karin, New way to prevent non-alcoholic steatohepatitis (NASH): Defining the role of TNFR1 in *de novo* lipid synthesis through caspase2-mediated SREBP activation, Lipid Maps Annual Meeting 2015, May 12-13, 2015, La Jolla, CA. USA.
4. **Ju Youn Kim** and Michael Karin, New way to prevent non-alcoholic steatohepatitis (NASH): Defining the role of TNFR1 in *de novo* lipid synthesis through caspase2-mediated SREBP1 activation, 2014 Annual Meeting Super Fund Research Program, Nov 12-14, 2014, San Jose, CA. USA.
5. **Ju Youn Kim**, Konstantin V. Kandror, The first luminal loop of GLUT4 confers insulin responsiveness to the glucose transporter, 71st scientific sessions of American Diabetes Association, Jun 26th, 2011, San Diego, CA. USA.
6. **Ju Youn Kim**, Konstantin V. Kandror, The first luminal loop of GLUT4 confers insulin responsiveness to the transporter, Promising Post-doc Symposium, Apr 29th, 2011, Cincinnati Children's Hospital, Cincinnati, OH. USA.
7. **Ju Youn Kim**, Kandror KV. The first luminal loop of GLUT4 confers insulin responsiveness to the glucose transporter, Student Research Day, Oct 14th, 2011, Boston University School of Medicine, MA. USA.
8. **Ju Youn Kim**, Kandror KV. Role of interaction between first luminal loop of GLUT4 and Vps10p domain of sortilin in generation of insulin responsive vesicles in adipose cells, Student Research Day, Nov 12th, 2009, Boston University, School of Medicine, MA. USA.