•Field Cardiovascular disease

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Educational background

▪ 2007 – 2013 Ph.D., Seoul National University (Animal Biotechnology)

▪ 1999 – 2007 B.S., Chung-Ang University (Animal Science & Technology

Major careers

▪ 2023-present: Assistant Professor Adjunct, School of Medicine, Yale University

▪ 2022–present: Assistant Professor, Department of Physiology, College of Medicine, Hallym University

▪ 2019-2022: Associate Research Scientist, School of Medicine, Yale University

▪ 2015-2019: Postdoctoral Associate, School of Medicine, Yale University

▪ 2014-2015: Postdoctoral Fellow, Division of Animal Science, University of Missouri

■ Publications

1. Biswas PK, Park J. Applications, challenges, and prospects of induced pluripotent stem cells for vascular disease. Mol Cells. 2024;47:100077. doi: 10.1016/j.mocell.2024.100077. (corresponding)

2. Ellis MW, Riaz M, Huang Y, Anderson CW, Hoareau M, Li X, Luo H, Lee S, Park J, Luo J, et al. De Novo Elastin Assembly Alleviates Development of Supravalvular Aortic Stenosis-Brief Report. Arterioscler Thromb Vasc Biol. 2024;44:1674-1682. doi: 10.1161/ATVBAHA.124.320790

3. Kural MH, Djakbarova U, Cakir B, Tanaka Y, Chan ET, Arteaga Muniz VI, Madraki Y, Qian H, Park J, Sewanan LR, et al. Mechano-inhibition of endocytosis sensitizes cancer cells to Fas-induced Apoptosis. Cell Death Dis. 2024;15:440. doi: 10.1038/s41419-024-06822-3

4. Yang HW, Kho AR, Lee SH, Kang BS, Park MK, Lee CJ, Park SW, Woo SY, Kim DY, Jung HH, Choi BY, Yang

WI, Song HK, Coi HC, Park JK, Suh, SW. A phosphodiesterase 4 (PDE4) inhibitor, amlexanox, reduces neuroinflammation and neuronal death after pilocarpine-induced seizure. Neurotherapeutics. 2024;21:e00357. doi: 10.1016/j.neurot.2024.e00357. (corresponding)

5. Riaz M*, Park J*, Sewanan LR*, Ren Y, Schwan J, Das SK, Pomianowski PT, Huang Y, Ellis MW, Luo J, Liu J, Song L, Chen IP, Qiu C, Yazawa M, Tellides G, Hwa J, Young LH, Yang L, Marboe CC, Jacoby DL, Campbell SG and Qyang Y. Muscle LIM Protein Force-Sensing Mediates Sarcomeric Biomechanical Signaling in Human Familial Hypertrophic Cardiomyopathy. Circulation. 2022;145:1238-1253. (*contributed equally)

6. Luo J*, Qin L*, Park J*, Kural MH*, Huang Y, Shi X, Riaz M, Wang J, Ellis MW, Anderson CW, Yuan Y, Ren Y, Yoder MC, Tellides G, Niklason LE and Qyang Y. Readily Available Tissue-Engineered Vascular Grafts Derived From Human Induced Pluripotent Stem Cells. Circ Res. 2022;130:925-927. (*contributed equally)

7. Ellis MW, Riaz M, Huang Y, Anderson CW, Luo J, Park J, Lopez CA, Batty LD, Gibson KH and Qyang Y. Epigallocatechin gallate facilitates extracellular elastin fiber formation in induced pluripotent stem cell derived vascular smooth muscle cells for tissue engineering. J Mol Cell Cardiol. 2022;163:167-174.

8. Sewanan LR*, Park J*, Rynkiewicz MJ, Racca AW, Papoutsidakis N, Schwan J, Jacoby DL, Moore JR, Lehman W, Qyang Y and Campbell SG. Loss of crossbridge inhibition drives pathological cardiac hypertrophy in patients harboring the TPM1 E192K mutation. J Gen Physiol. 2021;153. (*contributed equally)

9. Park J*, Anderson CW*, Sewanan LR*, Kural MH*, Huang Y, Luo J, Gui L, Riaz M, Lopez CA, Ng R, Das SK, Wang J, Niklason L, Campbell SG and Qyang Y. Modular design of a tissue engineered pulsatile conduit using human induced pluripotent stem cell-derived cardiomyocytes. Acta Biomater. 2020;102:220-230. (*contributed equally)

10. Yuan Y*, Park J*, Tian Y, Choi J, Pasquariello R, Alexenko AP, Dai A, Behura SK, Roberts RM and Ezashi T. A six-inhibitor culture medium for improving naive-type pluripotency of porcine pluripotent stem cells. Cell Death Discov. 2019;5:104. (*contributed equally)

11. Ng R, Manring H, Papoutsidakis N, Albertelli T, Tsai N, See CJ, Li X, Park J, Stevens TL, Bobbili PJ, Riaz M, Ren Y, Stoddard CE, Janssen PM, Bunch TJ, Hall SP, Lo YC, Jacoby DL, Qyang Y, Wright N, Ackermann MA and Campbell SG. Patient mutations linked to arrhythmogenic cardiomyopathy enhance calpain-mediated desmoplakin degradation. JCI Insight. 2019;5.

12. Sewanan LR, Schwan J, Kluger J, Park J, Jacoby DL, Qyang Y and Campbell SG. Extracellular Matrix From Hypertrophic Myocardium Provokes Impaired Twitch Dynamics in Healthy Cardiomyocytes. JACC Basic Transl Sci. 2019;4:495-505.

13. Lee SG, Mikhalchenko AE, Yim SH, Lobanov AV, Park JK, Choi KH, Bronson RT, Lee CK, Park TJ and Gladyshev VN. Naked Mole Rat Induced Pluripotent Stem Cells and Their Contribution to Interspecific Chimera. Stem Cell Reports. 2017;9:1706-1720.

14. Yuan Y, Yang Y, Tian Y, Park J, Dai A, Roberts RM, Liu Y and Han X. Efficient long-term cryopreservation of pluripotent stem cells at -80 degrees C. Sci Rep. 2016;6:34476.

15. Choi KH*, Park JK*, Son D, Hwang JY, Lee DK, Ka H, Park J and Lee CK. Reactivation of Endogenous Genes and Epigenetic Remodeling Are Barriers for Generating Transgene-Free Induced Pluripotent Stem Cells in Pig. PLoS One. 2016;11:e0158046. (*contributed equally)

16. Lee SG*, Park JK*, Choi KH, Son HY and Lee CK. Embryo Aggregation Promotes Derivation Efficiency of Outgrowths from Porcine Blastocysts. Asian-Australas J Anim Sci. 2015;28:1565-72. (*contributed equally)

17. Uh KJ, Park CH, Choi KH, Park JK, Jeong YW, Roh S, Hyun SH, Shin T, Lee CK and Hwang WS. Analysis of imprinted IGF2/H19 gene methylation and expression in normal fertilized and parthenogenetic embryonic stem cells of pigs. Anim Reprod Sci. 2014;147:47-55.

18. Choi KH, Park JK, Kim HS, Uh KJ, Son DC and Lee CK. Epigenetic changes of lentiviral transgenes in porcine stem cells derived from embryonic origin. PLoS One. 2013;8:e72184.

19. Park JK, Kim HS, Uh KJ, Choi KH, Kim HM, Lee T, Yang BC, Kim HJ, Ka HH, Kim H and Lee CK. Primed pluripotent cell lines derived from various embryonic origins and somatic cells in pig. PLoS One. 2013;8:e52481.
20. Son HY, Kim JE, Lee SG, Kim HS, Lee E, Park JK, Ka HH, Kim HJ and Lee CK. Efficient Derivation and Long Term Maintenance of Pluripotent Porcine Embryonic Stem-like Cells. Asian-Australasian Journal of Animal Sciences. 2009; 22: 26-34.

Chapters, Books, and Reviews:

1. Batty L, Ellis M, Anderson CW, Lou J, Riaz M, Park J, Das S, Huang Y, Jacoby D, Campbell S, and Qyang Y. Use of Human Cells and Heart Muscle Tissue Patches as Therapeutics for Heart Diseases. Encyclopedia of Tissue Engineering and Regenerative Medicine. 2019: p1-13.
2. Anderson CW., Boardman N, Luo J, Park J and Qyang Y. Stem Cells in Cardiovascular Medicine: The Road to Regenerative Therapies. Current Cardiology Reports. 2017; Apr;19(4):34.

■ Awards

1. Outstanding Young Research Funding by NRF, "Development of the platform for the treatment of heart diseases using patient-specific iPSCs and high throughput drug screening", Project Duration: 03/01/2023-02/29/2028, Budget: 463,525,000KW)
2. Discovery Award as a PI, titled "High-Throughput Screening for Novel Drug Discovery Using Patient-Specific Induced Pluripotent Stem Cells for Familial Hypertrophic Cardiomyopathy" funded by the Department of Defense (Project Duration: 01/01/2020-08/31/2022, Grants.gov ID Number: GRANT12837582, Budget: $334,940)
3. Yale Stem Cell Center 10th Annual Research Retreat, Selected speaker for "SESSION IV: New approaches and technologies-Tissue engineered pulsatile conduits from human induced pluripotent stem cells for patients with single ventricle" (2018)
4. President of the Yale Korean Bioscience Society which consists of Korean graduate students, postdocs, researchers and professors at Yale: September,2016-March,2018
5. The Korean Society of Animal Reproduction, Encouragement Prize in Oral Presentation Competition (2012)
6. The Korean Society of Animal Reproduction, Excellent Prize in Outstanding Poster Award (2011)