

# CURRICULUM VITAE

**JUNGMIN LEE, Ph.D.**



## **POSITION**

Associate Professor, Handong University

## **EDUCATION**

2003-2009      **Seoul National University, Ph.D.**

2001-2003      **Seoul National University, M.S.**

1997-2001      **Handong University, B.S.**

## **PROFESSIONAL EXPERIENCES**

2021-present      Chief scientific officer (CSO), **INEXOPLAT**

2019-present      Associate professor, **Handong University**

2017-2019      Director, **ToolGen Inc**

2012-2017      Post-Doc., **Harvard University**

2011-2012      Post-Doc., **Salk Institute**

2009-2011      Post-Doc., **University of California San Diego**

## **SELECTED PUBLICATIONS**

1. Shu JH, Joo HS, Hong EB, Lee HJ, **Lee J.** (2021) Therapeutic application of exosomes in inflammatory diseases. *International Journal of Molecular Sciences*. Jan. 24;22(3) (corresponding author)
2. Bae HS, Jin YK, Ham S, Kim HK, Shin H, Cho GB, Lee KJ, Lee H, Kim KM, Koo OJ, Jang G, **Lee J**, Lee JY. (2020) CRISPR/Cas9-mediated knockout of Mct8 reveals a functional involvement of Mct8 in testis and sperm development in a rat. *Scientific Reports*. Jul. 10(1):11148 (co-author)
3. Joo HS, Suh JH, Lee HJ, Bang ES, **Lee J.** (2020) Current Knowledge and Future Perspectives on Mesenchymal Stem Cell-Derived Exosomes as a New Therapeutic Agent. *International Journal of Molecular Sciences*. Jan. 21(3):727 (corresponding author)
4. Lee JS, Lee JY, Song DW, Bae HS, You HS, Lee KJ, Kim HK, Hwang H, Kwak G, Kim DS, Hong YB\*, Kim SK\*, Choi BO.,\* **Lee J\*** (2019) CRISPR/Cas9-mediated *PMP22* downregulation ameliorates the phenotype in a rodent model of Charcot-Marie-Tooth disease type 1A. *Nucleic acid Research*. Nov. 12 (\*co-correspondence)
5. Jo DH, Song DW, Cho CS, Kim UG, Lee KJ, Park SW, Kim DS, Kim JH, Kim JS, Kim JH\*, **Lee J\***. (2019) CRISPR/Cas9-mediated therapeutic editing of *Rpe65* ameliorates the disease phenotypes in a mouse model of Leber Congenital Amaurosis. *Science Advances*. Oct. 30; 5(10) (\*co-correspondence)
6. **Lee J**, (2019) When CAR meets stem cells, *International Journal of Molecular Sciences*. Apr 12; 20(8)
7. Jung IY and **Lee J.** (2018) Unleashing the therapeutic potential of CAR-T cell therapy using gene editing technologies. *Molecules and Cells*. Aug 31; 3141(8):717-723
8. Jung IY, Kim YY, You HS, Kim SK, **Lee J.** (2018) CRISPR/Cas9-mediated knockout of DGK improves anti-tumor activities of human T cells. *Cancer Research*. Aug 15;78(16):4692-4703
9. **Lee J\***, Mondal N\*, Dykstra B\*, Ashline DJ, Reinhold VN, Rossi DJ, Sackstein RS. (2018) Distinct human  $\alpha(1,3)$ -fucosyltransferases drive Lewis-X/sialyl Lewis-X assembly in human cells. *Journal of Biological Chemistry*. May 11;293(19):7300-7314 (\*co-first author)
10. **Lee J\***, Dykstra B\*, Spencer JA, Kenney LL, Greiner DL, Shultz LD, Brehm MA, Lin CP, Sackstein R, Rossi DJ. (2017) mRNA-mediated glycoengineering ameliorates deficient homing properties of iPS-derived HSPCs. *Journal of Clinical Investigation*. Jun 1;127(6):2433-2437 (\*co-first author)
11. **Lee J\***, Dykstra B\*, Mortensen LJ\*, Yu H, Wu ZL, Lin CP, Rossi DJ, Sackstein R. (2016) Glycoengineering of E-Selectin ligands by intracellular versus extracellular fucosylation differentially affects osteotropism of human mesenchymal stem cells. *Stem Cells*. Oct;34(10):2501-2511 (\*co-first author)
12. **Lee J\***, Dykstra B\*, Sackstein R, Rossi DJ. (2015) Progress and obstacles towards generating hematopoietic stem cells from pluripotent stem cells. *Current Opinion in Hematology*. Jul;22(4):317-23 (\*co-first author)
13. Li M, Suzuki K, Qu J, Saini P, Dubova I, Yi F, **Lee J**, Sancho-Martinez I, Liu GH, Izpisua Belmonte JC. (2011) Efficient correction of hemoglobinopathy-causing mutations by homologous recombination in integration-free patient iPSCs. *Cell Research*. Dec;21(12):1740-4

14. **Lee J\***, Jeong Y\*, Jeong S, Rhee K. (2010) Centrobilin/NIP2 is a microtubule stabilizer whose activity is enhanced by PLK1 phosphorylation during mitosis. *Journal of Biological Chemistry*. Aug 13;285(33):25476-84 (\*co-first author)
15. **Lee J**, Kim S, Jeong Y, Rhee K. (2009) Centrobilin/Nip2 expression in vivo suggests its involvement in cell proliferation. *Molecules and Cells*. Jul 31;28(1):31-6
16. Soung NK, Park JE, Yu LR, Lee KH, **Lee JM**, Bang JK, Veenstra TD, Rhee K, Lee KS. (2009) Plk1-dependent and -independent roles of an ODF2 splice variant, hCenexin1, at the centrosome of somatic cells. *Developmental Cell*. Apr;16(4):539-50
17. Jeong Y, **Lee J**, Kim K, Yoo JC, Rhee K. (2007) Characterization of NIP2/centrobilin, a novel substrate of Nek2, and its potential role in microtubule stabilization. *Journal of Cell Science*. Jun 15;120(Pt 12):2106-16
18. **Lee J**, Hong J, Kim E, Kim K, Kim SW, Krishnamurthy H, Chung SS, Wolgemuth DJ, Rhee K. (2004) Developmental stage-specific expression of Rbm suggests its involvement in early phases of spermatogenesis. *Molecular Human Reproduction*. Apr;10(4):259-64

## **PATENTS**

1. 중간엽 줄기세포 유래 엑소좀 (출원번호 10-2019-0106921, 출원일 2019.08.30)
2. Engineered-immune regulatory factor and immunity activation thereby (출원번호:PCT/KR2017/008835, 출원일:2017.08.14)
3. CRISPR/Cas9-mediated DGKS knockout potentiates anti-tumor efficacy of human T-cell therapy (출원번호:62/595,159, 출원일:2017.12.06)
4. Therapeutic genome editing for Charcot-Marie-Tooth disease (출원번호:PCT/KR2017/010897, 출원일:2017.09.28)
5. Use and effect of CIRSPR system for regulatory factor targeting (tata-box) (출원번호:62/565,868, 출원일 2017.09.29)
6. Use of CIRSPR for treatment a retinal dysfunction by gene correction (출원번호:62/565,838, 출원일:2017.09.29)
7. Engineered lipid metabolism control factor (출원번호:62/591,882, 출원일:2017.11.29)
8. Liver Biofactory platform (출원번호:PCT/KR2018/006803, 출원일:2018.06.15)
9. A gene editing of anticoagulant factors (출원번호:62/703,578, 출원일:2018.07.26)
10. Genome editing for treating autoimmune disease (출원번호:62/702,984, 출원일:2018.07.25)