

# HYUN-JI PARK, PH.D.

Department of Molecular Science and Technology  
Ajou University

## EDUCATION

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**Ph.D. Department of Biotechnology**, Yonsei University, Seoul, Korea 2017

*Dissertation:* Modification of substance P for enhanced therapeutic angiogenesis in diabetic critical limb ischemia (Advisor: Seung-Woo Cho, Ph.D.)

**M.S. Department of Biotechnology**, Yonsei University, Seoul, Korea 2012

*Thesis:* Delivery of small interfering RNA using epoxide-conjugated polyamine nanoparticles for the potential treatment of hepatitis C (Advisor: Seung-Woo Cho, Ph.D.)

**B.S. Department of Biotechnology**, Ajou University, Suwon, Korea 2007

## PROFESSIONAL EXPERIENCE

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**Assistant Professor**, Ajou University, Suwon, Korea 2022 – Current  
Department of Molecular Science and Technology  
Department of Applied Chemistry and Biological Engineering

**Postdoctoral Research Fellow**, Emory University, Atlanta, GA 2019 – 2022  
Department of Biomedical Engineering, School of Medicine (Advisor: Michael E. Davis, Ph.D.)

**Postdoctoral Research Fellow**, Georgia Institute of Technology, Atlanta, GA 2018 – 2019  
George W. Woodruff School of Mechanical Engineering (Advisor: YongTae Kim, Ph.D.)

**Postdoctoral Research Fellow**, Yonsei University, Seoul, Korea 2017  
Department of Biotechnology, School of Lifescience and Biotechnology (Advisor: Seung-Woo Cho, Ph.D.)

## SELECTED PUBLICATIONS

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Total 45 SCI(E) articles (Total 1,976 citations, H-index: 23, i10-index: 29)

1. Pham HTM, Nguyen DL, Kim HS, Yang EK, Kim JH\*, Yoon HC\*, **Park HJ\***. A novel and cost-effective method for high-throughput 3D culturing and rhythmic assessment of hiPSC-derived cardiomyocytes using retroreflective Janus microparticles. *Biomater Res* 2023;27:79. 2022 IF: 11.3
2. Park JH\*, **Park HJ\***, Tucker SJ, Rutledge SR, Wang L, Davis ME, Hollister SJ. 3D Printing of Poly-ε-caprolactone (PCL) Auxetic Implant with Advanced Performance for Large Volume Soft Tissue Engineering. *Adv Funct Mater* 2023;2215220 2022 IF: 19
3. **Park HJ**, Hoffman JR, Brown ME, Bheri S, Brazhkina O, Son YH, Davis ME. Knockdown of deleterious miRNA in progenitor cell-derived small extracellular vesicles enhances tissue repair in myocardial infarction. *Sci Adv* 2023;9(9):eabo4616 2022 IF: 13.6
4. **Park HJ**, De Jesus Morales KJ, Bheri S, Davis ME. Bidirectional relationship between cardiac cellular matrix and cardiac cells in ischemic heart disease. *Stem Cells* 2021;39(12):1650-1659. 2020 IF: 6.277
5. Baek J\*, Cho Y\*, **Park HJ\***, Choi G, Lee JS, Lee M, Yu S, Cho SW, Lee E, Im SG. A surface-tailoring method for rapid non-thermosensitive cell-sheet engineering via functional polymer coatings. *Adv Mater* 2020;32(16):1907225. 2020 IF: 30.849
6. **Park HJ\***, Kuai R\*, Jeon EJ, Seo Y, Jung Y, Moon J, Schwendeman A, Cho SW. High-density lipoprotein-mimicking nanodiscs carrying peptide for enhanced therapeutic angiogenesis in diabetic hindlimb ischemia. *Biomaterials* 2018;161:69-80. 2018 IF: 10.708

## **PATENTS**

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1. Park JH, Hollister SJ, Tucker SJ, Wang L, **Park HJ**, Davis ME, Rutledge SK, Verga AS. 3D auxetic structures and fabrication methods thereof, PCT pending/US2022/045937.
2. Park JH, Tucker SJ, Davis ME, Hollister SJ, **Park HJ**, Wang L. Bioabsorbable 3D auxetic implants and fabrication methods thereof, US 63/252,742.
3. Kim YJ, Cho SW, Hwang JH, Kim MJ, **Park HJ**, Cho AN. A lncRNA for induced pluripotent stem cell differentiation and uses 10-2477906.
4. Son Y, Hong HS, Kim S, Cho SW, Lee H, **Park HJ**, Yoon K, Lim S. A novel pegylated substance P, 10-2142978 & 10-1811996.
5. Cho SW, **Park HJ**. Nanoliposome for liver-targeting RNA interference, 10-1685304.
6. Cho SW, Lee H, **Park HJ**, Kim MJ, Yang K, Ko E. Polyamine-peptide-immobilized substrates for feeder-free maintenance and enhanced differentiation of stem cells and methods for preparing the substrates, 10-1545217.

## **HONORS AND AWARDS**

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### **AWARDS**

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| 1. The L'Oreal-UNESCO Korea Fellowships for Young Women in Science                   | 2017 |
| 2. Best Poster Presentation Award at Annual Spring Meeting of Korean Biochip Society | 2017 |
| 3. Student Oral Competition Award at Fall Meeting of Korean Society for Biomaterials | 2016 |
| 4. Best Paper Award for Graduate Students, Yonsei University                         | 2015 |
| 5. Best Presentation Award at Spring Meeting of the Polymer Society of Korea         | 2015 |
| 6. Research Competitiveness Improvement Scholarship, Yonsei University               | 2015 |
| 7. Best Poster Presentation Award at TERMIS-AP conference                            | 2014 |
| 8. NRF-KSSCR Young Investigator Award, National Research Foundation of Korea         | 2014 |
| 9. Best Poster Presentation Award, BK21PLUS Symposium, Yonsei University             | 2014 |
| 10. Best Poster Award, Korea Society for Biotechnology and Bioengineering            | 2013 |
| 11. Best Oral Presentation Award, BK21/WCU Symposium, Yonsei University              | 2012 |
| 12. Best Poster Presentation Award, Korean Society for Biomaterials                  | 2010 |

### **FELLOWSHIPS**

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| 1. American Heart Association (AHA) Postdoc Fellowship (\$69,446/year) | 2021 – 2022 |
| 2. Yonsei University Postdoc Fellowship (15,000,000 KRW/year)          | 2017        |