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직위: 조교수/Assistant Professor

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기타소속:

강연제목: 조직 손상 치료를 위한 조직 모사 생체재료/Tissue-mimicking biomaterials for managing tissue damage

Abstract: Tissue microenvironment plays crucial roles in functional homeostasis and remodelling of damaged tissues. Despite various synthetic and natural polymers have been exploited to fabricate tissue-specific or disease-specific microenvironment, there still are tremendous limitations in ultimately recapitulating structural and biochemical specificity of native tissues due to complexity. Tissue-mimicking bio-scaffolds have been highlighted as key mediators to improve regeneration efficacy by providing favourable microenvironment to cells participating directly or indirectly in the regeneration. We report tissue-derived biomaterial platforms and their engineering techniques for versatile regenerative therapeutics. Not only modulating stem cell differentiation, but the engineered tissue extracellular matrix can trigger regenerative immune modulation for successful tissue regeneration. In addition, different formats of tissue-mimicking biomaterials such as suture fibers expanded their applications in therapeutics delivery and sensing the status of regeneration.

Positions

- (2021-present) Assistant Professor, Dept. Biomedical Engineering, Sungkyunkwan University
- (2018-2021) Postdoc, MIT, Koch Institute for Integrative Cancer Research, MA, USA
- (2017-2018) Postdoc, Dept. of Biotechnology, Yonsei University

Scientific Appointments

- Director, Korean Tissue Engineering and Regenerative Medicine Society (2022 ~ present)
- Committee member, The Korean Society for Biomaterials (2022 ~ present)
- Editorial board, MedComm-Biomaterials and Applications, (2022 ~ present)