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기타소속:

Title : Next-generation cancer model for precision medicine

Abstract:

Conventional tumor models have critical shortcomings in that they lack the complexity of the human stroma. The heterogenous stroma is a central tumor microenvironment (TME) compartment that must be covered for cancer research and precision medicine. To fully exploit human tumor stroma, deconstruction and reconstruction of tumor tissues have been suggested as a new approach for in vitro tumor modeling. In this talk, I will discuss the heterogeneity of tumor-associated stromal cells and general deconstruction approaches to isolate patient-specific stromal cells from tumor tissue, including the effect of the deconstruction procedure on the characteristics of primary cells. Lastly, perspectives on the future of reconstructed tumor models will be discussed, emphasizing the essential prerequisites for developing authentic humanized tumor models.

Brief Biosketch

Prof. Pilnam Kim is an Associate Professor in the Department of Bio and Brain Engineering at KAIST, specializing in cancer mechanobiology, cell and tissue engineering, and extracellular matrix (ECM) research. She received his PhD from Seoul National University and conducted postdoctoral research at Princeton University. Her work focuses on cell-matrix interactions, mechanotransduction, and in vitro cancer models. Prof. Kim has published 85 SCI-indexed papers. Her research advances understanding of cancer progression and tissue remodeling, particularly in aging and solid tumor progression.