
The 60th iCeMS SEMINAR

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演 題：**Nano/Meso-level Design of Biomaterials
for Regenerative Medical Innovation**

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The creation of artificial three-dimensional (3D) tissues possessing a similar structure and function as natural tissue is a key challenge for implantable tissues in tissue engineering, and for model tissues in pharmaceutical assay. To achieve the artificial 3D-tissue constructs, nano/meso-level material design is crucial to induce the 3D cell-cell and cell-extracellular matrix (ECM) interactions. Recently, we demonstrated a simple cell manipulation technique in lengthwise direction for the construction of hierarchical structures, which possess a precisely controlled layer number and type of cells, by direct fabrication of ECM nanofilms on the surface of each cell layer. These 3D-layered tissues can be useful as 3D-tissue models for tissue engineering and pharmaceutical assays.

