# 조직공학용 3D 바이오 프린팅 기술(3D Bio-Printing Technology in Tissue Engineering)

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In tissue engineering, the scaffold serves as a three-dimensional (3D) supporting structure for cell adhesion and proliferation. The scaffold needs good mechanical properties to keep the shape under the mechanical loading during the implantation. In this talk, I will demonstrate the scaffold printing system (SPS) which is based on the 3D printing technology. The SPS can fabricate the 3D polymer scaffold by dispensing biocompatible polymers layer-by-layer. It can control the shape, size, pore size and porosity of the scaffold. I will also present the cell printing system which can fabricate 3D cell-laden hydrogel scaffolds. The mechanical properties of the scaffolds, proliferation and differentiation characteristics of the cells in the scaffolds are compared with different biocompatible polymers and hydrogels.