

Public Abstract

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Title:FROM DEVELOPMENTAL BIOLOGY TO TISSUE-ENGINEERING: PRINTING BLOOD VESSELS

Cardiovascular disease is a leading cause of death and often requires bypass surgery. Here we describe a novel approach for vascular reconstruction. It is based on the use of a special bioprinter that deposit bioink particles (cells) into a biopaper (ex: collagen) layer-by-layer in order to produce custom shaped 3D tissue structures. We describe the production of multilayered blood vessels and vascular trees. This approach has the potential for fulfilling the crucial need for vascular grafts and providing new strategies for vascularization of tissues for transplantation.