

TRANSLATED TEXT

Lung tissue engineering, strategy in producing blood vessels

Summary

Tissue engineering is a new field of study using engineering principles and biology to repair damaged living tissue in order to renew, recover and protect the tissue function. In living tissues, the cells are protected by a structure known as Extracellular Matrix (ECM). ECM is a scaffold for tissue morphogenesis, reproduction, emigration, differentiation and will protect this differentiation too. It is maybe used in restoration, tissue engineering and basic cells application for tissue replacement. Lung tissue includes cells and extracellular matrix containing collagen, Elastin and different kinds of proteoglycanes. Collagen can be used in tissue engineering studies as a natural scaffold due to its high compatibility. Blastma tissue is a group of undifferentiated cells having capability for cells division and differentiation similar to embryonic cells. Angiogenesis is a physiologic process created from new blood vessel's development.

Tissue engineering is a multipurpose science that needs several sciences like cell biology, biochemistry, molecular biology, chemical engineering and bioengineering, such that genetic engineering sciences, simulation and basic cell's biology results in new methods in this field. This replacement science reminds tissue and damaged organs' restoration.

ORIGINAL TEXT

در آرشیو موجود نیست.