mimicking the extracellular matrix the
Hence mimicking cancer xenograft models represents a well-defined To summarize the tumor micro-environment, the typical xenograft tumor contains stroma cells and extracellular matrix besides mimicking and surpassing the xenograft model with cancer-on-chip technology Researchers have announced new breakthrough for nerve repair therapies based on body’s own processes in the journal Matrix Biology. researchers harness the
cell matrix to repair nerves in pre-clinical study
It allows the combination of perfusion, mechanical and biochemical stimuli, biological cues, biomaterials (mimicking the extracellular matrix of bone), and multiple cell types. This review will

perfused platforms to mimic bone microenvironment at the macro/milli/microscale: pros and cons
Kilian in Mimicking the Extracellular Matrix, ed. Gregory A. Hudalla, William L. Murphy, Royal Society of Chemistry, Cambridge, 2015, p. 161. Royalty payments are made annually at the end of March for

frequently asked questions
Synthetic bone graft substitutes have the goal of mimicking the physical and mechanical nature the porosity should be high enough to provide sufficient space for cell adhesion, extracellular

new biomaterials for bone regeneration
mimicking what happens in

living beings. We study and exploit interactions between material surfaces, synthetic biocompatible materials, natural and synthetic extracellular matrix (ECM) molecules and

institute of molecular, cell and systems biology
Human dermis is considered in analogy to other connective tissue as a biphasic, composite material in which the extracellular fluid permeates a negatively charged gel-like matrix of glycoproteins. A

artificial sensing skin mimicking mechanoelectrical conversion properties of human dermis
Biomimetic nanofibrous scaffolds mimicking important features of the native extracellular matrix provide a promising strategy to restore functions or achieve favorable responses for tissue

biomimetic electrospun nanofibrous structures for tissue engineering
Lp(a) stimulation led to release of SMC and VIC EVs
that readily calcified in acellular 3D-collagen hydrogels mimicking formation of ectopic microcalcification occurring in extracellular matrix of lipoprotein(a) induces vesicular cardiovascular calcification revealed with single-extracellular vesicle analysis

Its permanent exposure to the external environment can result in different kinds of damage with loss of variable volumes of extracellular matrix. For the treatment of skin lesions, several advanced biofabrication strategies for skin regeneration and repair

Extracellular matrix: Matrilin-1 and -3 are cartilage specific matrix We identified a class of mechano-responsive RNAs including miRNA-365 using an in vivo mimicking mechanical stimulation system.

research projects

Stem cells cultured on extracellular matrix (ECM) with different stiffnesses have been Here, we propose a protocol for mimicking this stem cell microenvironment with an in vitro system. This effect of bmp-2 from matrices of different stiffnesses for the modulation of stem cell fate.

In early OA, degeneration of cartilage pericellular matrix (PCM), a 2-4 µm thick region surrounding chondrocytes that facilitates cross-talk between the extracellular matrix "brush"-like

biomimetic proteoglycans augment the cellular microniche in cartilage

To determine the pathways that regulate primary human sebocytes growth and differentiation, we developed a novel culture method by mimicking the use of extracellular matrix or supporting