HBIGS Lecture

by

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„ From model tissues towards functional organs: Bioengineers beyond the cell "

Date: Wednesday, 21 July 2010
Start of Lecture: 17:00 s.t.
Venue: INF 267 (Bioquant), R041

Abstract:
Monolayer and suspension cultures are still a highly artificial cellular environment for target screening and drug development. Target screening requires testsystems that mimic the human tissues with increasing accuracy in order to optimize the selection of potential effectors.

We developed a new 3D vascularised test system based on decellularized porcine small bowl segments and preserved tubular structures of the capillary network. This vascularised matrix enables the generation of a functional artificial vascular network and can be in addition be populated with primary cells, like hepatocytes or cells of the respiratory tract to create ex vivo human vascularised functional tissue.

This model offers the possibility to simulate physiological drug application and a human 3D testsystem to established nanomaterials/systems for research and therapy.