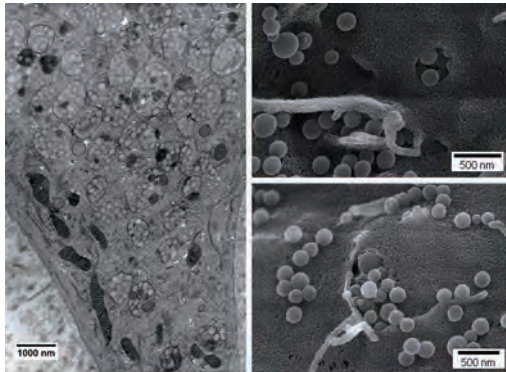




Focus Program BiomaTiCS

... is a collaboration of scientists from the University Medical Center Mainz that intensively work together on projects focussed on the interaction of biomaterials with cells and tissues. Besides the diverse clinical partners - which are involved in this research cooperation - partners from the material science disciplines from the University of Mainz and from other research institutes come together. Here also partners from the Max-Planck-Institute for Polymer Research (MPIP) and the Institute für Mikrotechnik Mainz (IMM) contribute to the success to solve these interdisciplinary problems. This lecture series therefore aims to bring together these groups on the levels of the doctoral and master students and to connect to other groups and disciplines.



Geb. 708, Large Lecture Hall

Universitätsmedizin
der Johannes Gutenberg-Universität Mainz,
Langenbeckstr. 1, 55131 Mainz

Auf unserer Homepage www.unimedizin-mainz.de finden Sie Anfahrtsskizzen sowie mögliche Busverbindungen.



BiomaTiCS

Biomaterials, Tissues and Cells

Lecture Series
Fridays 08.15 - 09.00 am
Building. 708

Unser Wissen für Ihre Gesundheit

Biomaterials, Tissues and Cells

Dear postgraduate and master students,

after structural damage to a tissue or organ has occurred (e.g. a bone fracture) implants are widely used to enable or enhance healing and restore functions. The durability of implants such as artificial joints, pacemakers, vascular grafts or prostheses is a common clinical problem among almost all disciplines. Furthermore the addition of specific cell types like predifferentiated cells from progenitor cells is a concept that should enhance these functionalities such as faster healing processes. Therefore combining biomaterials with these cell types is a highly promising and interdisciplinary field. Furthermore surface functionalization by nanostructuring or using specifically designed nanocarriers for a long time release of desired differentiation and growth factors can be achieved. Here BiomaTiCS brings together the different disciplines from material science from chemistry and physics with biologists and medical doctors to work cooperatively on these challenges.

The lecture series is intended for master students and doctoral students interested in or working in this field but is open to the different disciplines ranging from chemistry, physics, biomedical chemistry to translational medicinal.

Univ.-Prof. Dr. Dr. B. Al-Nawas PD Dr. V. Mailänder

Summer Semester 2013

Zeit: Fridays, 08:15 - 09:00 am
Ort: Building 708 (Pathology), Lecture hall

19.04.2013 Introduction to BiomaTiCS Nanoparticles for Cellular Therapeutics in Regenerative Medicine
PD Volker Mailänder

26.04.2013 Biopolymers and PEG: Biocompatibility
Prof. Holger Frey

03.05.2013 Bone regenerating cells: cellular and molecular mechanisms of regulation
PD Alexander Hofmann

10.05.2013 Chemically modified surfaces: cell-adhesive, antifouling and combinations thereof
Dr. Matthias Gabriel

17.05.2013 In-vitro tests for the evaluation of bone biomaterials
Dr. Ulrike Ritz

24.05.2013 Biomineralisation: basic concepts learned from nature
Prof. Werner E. G. Müller

31.05.2013 Bacterial Adhesion to surfaces and assays for testing surfaces and biomaterials for their antibacterial properties

Prof. Bernd Jansen

07.06.2013 Animal Models for testing Biomaterials
Prof. Bilal Al-Nawas

14.06.2013 Polymeric nanoparticles for biomedical applications
Prof. Katharina Landfester

21.06.2013 Endothelial progenitor cells and vascularisation of biomaterials
Dr. Ronald Unger

28.06.2013 The ongoing challenge of cartilage Tissue Engineering
Dr. Christoph Brochhausen

05.07.2013 Anorganic silica nanoparticles: from synthesis to biomedical applications
Prof. Michael Maskos

12.07.2013 Toxicology of nanoparticles
Prof. Jürgen Brieger

19.07.2013 Coculture models for soft tissue regeneration
Prof. Walburgis Brenner