

3RD INTERNATIONAL CONFERENCE

MAY 23 – 25, 2012

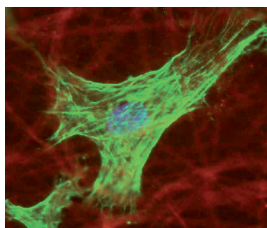
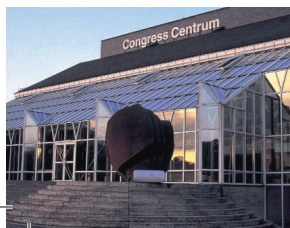


STRATEGIES IN **TISSUE ENGINEERING**

WÜRZBURG | GERMANY | CONGRESS CENTER

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FINAL PROGRAM



WITE
Würzburg Initiative
Tissue Engineering

**3rd International Conference
"Strategies in Tissue Engineering"**

Scientific Program

Wednesday May 23rd, 2012

Opening

10:00 - 10:30

Franconia Hall

Chair: **Maximilian Rudert** (Würzburg, Germany)

Welcome and opening remarks

W-001 **Ulrich Nöth** (Würzburg, Germany), 10 min
President WITE e.V.

Heike Walles (Würzburg, Germany),
Chair Department of Tissue Engineering and
Regenerative Medicine, University Hospital of Würzburg

Jürgen Groll (Würzburg, Germany)
Chair Department for Functional Materials in
Medicine and Dentistry, University of Würzburg

W-002 **Alfred Forchel** (Würzburg, Germany) 10 min
President of the University of Würzburg

W-003 **Matthias Frosch** (Würzburg, Germany) 10 min
Dean of the Medical Faculty, University of Würzburg

Session 1: Stem Cells

10:30 - 12:30

Franconia Hall

Chairs: **Paolo Bianco** (Rome, Italy)
Wiltrud Richter (Heidelberg, Germany)

Keynote Lectures

- O-001 **Paolo Bianco** (Rome, Italy) 25+5 min
Postnatal progenitors of skeletal and non-skeletal mesodermal tissues
- O-002 **Wiltrud Richter** (Heidelberg, Germany) 25+5 min
Activation or silencing - what is the true role of mesenchymal stem cells

Oral Presentations

- O-003 **Solvig Diederichs** (Pittsburgh, USA) 9+3 min
Mesenchymal progenitors derived from human induced pluripotent stem cells
- O-004 **Ludmila Buravkova** (Moscow, Russia) 9+3 min
Modulation of multipotent mesenchymal stromal cell immunosuppressive capacity under low oxygen tension
- O-005 **Stephan Hackenberg** (Würzburg, Germany) 9+3 min
Toxicity of nanoparticles in human mesenchymal stem cells
- O-006 **David Guerit** (Montpellier, France) 9+3 min
Role of Mir-29a during the chondrogenic differentiation of mesenchymal stem cells
- O-007 **Marc Mathieu** (Montpellier, France) 9+3 min
Collagen-based microspheres for vectorisation and differentiation of mesenchymal stem cells: a potential strategy for cartilage engineering

Session 2a: Symposium

10:30 - 12:30

"Biomaterials for Regenerative Medicine 1"

Balthasar Neumann Hall

Chairs: **Aldo Boccaccini** (Erlangen, Germany)
Jürgen Groll (Würzburg, Germany)

Keynote Lectures

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|--|--|----------|
| O-008 | Michael Gelinski (Dresden, Germany) | 20+4 min |
| Designing anisotropic biomaterials for engineering anisotropic tissues | | |
| O-009 | Hala Zreiqat (Sydney, Australia) | 20+4 min |
| The art of building new bone using uniquely designed ceramic | | |

Oral Presentations

- | | | |
|--|--|---------|
| O-010 | Ruben D. Godoy-Silva (Colombia, Colombia) | 9+3 min |
| Improved human fibrin with alginate as a scaffold for tissue Engineering of skin - microfluidic approach | | |
| O-011 | Antje Technau (Würzburg, Germany) | 9+3 min |
| Comparison of decellularized cartilage with collagen type I as a biomimetic material | | |
| O-012 | Ingo Heschel (Herzogenraht, Germany) | 9+3 min |
| Collagen membranes and three-dimensional collagen sponges for clinical applications in regenerative medicine | | |
| O-013 | Julio Suay (Valencia, Spain) | 9+3 min |
| Development of bioactive coating for metal implants | | |
| O-014 | Alexander Hoppe (Erlangen, Germany) | 9+3 min |
| In vitro and in vivo studies of Cu-releasing bioactive glass (type 45S5) derived scaffolds for bone tissue engineering | | |
| O-015 | Karla Lehle (Regensburg, Germany) | 9+3 min |
| Titanium coating increased biocompatibility of medical polyetherurethanes | | |

Wednesday May 23rd, 2012

Lunch Break

12:30 - 14:15

Posters & Industrial Exhibition

Foyer

VascuBone Lunch Symposium (EU FP-7)

12:30 - 14:15

Balthasar Neumann Hall

Chairs: **Heike Walles** (Würzburg, Germany)
Dietmar Hutmacher (Brisbane, Australia)

Keynote Lectures

- O-016 **Doris Steinmüller-Nethl** (Innsbruck, Austria) 15+3 min
Construction kit for tailor-made vascularized bone implants
- O-017 **Frank Kloss** (Innsbruck, Austria) 15+3 min
Construction kit for tailor-made vascularized bone implants- in vivo performance
- O-018 **Andreas Briel** (Berlin, Germany) 15+3 min
VISCOVERTM preclinical imaging: Innovative imaging agents enhance and advance the impact of in vivo small animal imaging.

Oral Presentations

- O-019 **Michaela Bruschi** (Innsbruck, Austria) 9+3 min
Protein Immobilization to hydrophilic diamond nanoparticles in synthetic scaffolds by mean of physisorption
- O-020 **Xujun Wu** (Innsbruck, Austria) 9+3 min
Functionalization of Scaffolds with Nanodiamond Particles and Subsequent Immobilization of Angiopoietin-1 Results in Enhanced Neovascularization
- O-021 **Katharina Scheller** (Heidelberg, Germany) 9+3 min
Upocyte[®] microvascular endothelial cells repopulate de-cellularized scaffolds
- O-022 **Zhe Xing** (Bergen, Norway) 9+3 min
In vitro and In vivo evaluations of copolymer scaffolds modified with nano-diamond particles

Wednesday May 23rd, 2012

Session 3: 3D Models for Tissue Engineering and Cancer Research 14:15 - 16:15

Franconia Hall

Chairs: **Heike Walles** (Würzburg, Germany)
Dietmar Hutmacher (Brisbane, Australia)

Keynote Lectures

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|---|--|----------|
| O-023 | James Kirkpatrick (Mainz, Germany) | 25+5 min |
| Co-culture models for tissue engineering and cancer | | |
| O-024 | Dietmar Hutmacher (Brisbane, Australia) | 25+5 min |
| Engineering of tumor microenvironments or tumor engineering | | |

Oral Presentations

- | | | |
|---|--|---------|
| O-025 | David Fecher (Würzburg, Germany) | 9+3 min |
| Establishment of an in vitro three-dimensional tumor model by use of a decellularized lung Scaffold | | |
| O-026 | Vehid Salih (London, UK) | 9+3 min |
| Osteogenic events in hMSCs on Ti Implant surfaces are modified by tyrosine kinase AXL | | |
| O-027 | Gerhard Unteregger (Homburg, Germany) | 9+3 min |
| Invasive growing tumour cells from prostate carcinoma samples exhibit 3D-spheroid character | | |
| O-028 | Gerhard Unteregger (Homburg, Germany) | 9+3 min |
| 3D-Tumorspheroids in prostate cancer research as a tool to mimic the tumor-environment | | |
| O-029 | Verena Reichert (Erlangen, Germany) | 9+3 min |
| Unraveling breast cancer cell interactions with the bone microenvironment | | |

Session 2b: Symposium

14:15 - 16:15

"Biomaterials for Regenerative Medicine 2"

Balthasar Neumann Hall

Chairs: **Aldo Boccaccini** (Erlangen, Germany)
Jürgen Groll (Würzburg, Germany)

Keynote Lectures

- O-030 **Paolo A. Netti** (Naples, Italy) 20+4 min
Guiding tissue growth in 3D matrices by spatial and temporal control of signal presentation
- O-031 **Paul Dalton** (Brisbane, Australia) 20+4 min
Melt electrospinning writing of tissue engineering scaffolds

Oral Presentations

- O-032 **Agnieszka Piegat** (Szczecin, Poland) 9+3 min
Influence of carbon nanoparticles and fatty acids on antibacterial activity and blood compatibility of new polyesters
- O-033 **Toshiaki Takezawa** (Saga, Japan) 9+3 min
Development of a collagen xerogel membrane composed of high density collagen fibrils and its application to transplantation in vivo and a culture chamber in vitro
- O-034 **Gerald Dräger** (Hannover, Germany) 9+3 min
Towards biocompatible medical devices: functionalization of hydrocarbon surfaces with RGD Peptides
- O-035 **Andreina Parisi-Amon** (Stanford, USA) 9+3 min
Protein engineered biomaterials for bioactive coating
- O-036 **Pascal Joly** (Berlin, Germany) 9+3 min
Cell-matrix interaction in void regeneration: an age and inter-species comparison of ECM network formation in macroporous scaffolds

O-037 **Rainer Detsch** (Erlangen, Germany)

9+3 min

Bioactive materials, cell & tissue printing: new therapeutic approaches for organ level tissue engineering and regenerative medicine

Wednesday May 23rd, 2012

Coffee Break

16:15 - 16:45

Foyer

Session 4: Musculoskeletal Tissue Engineering I

16:45 - 18:45

Franconia Hall

Chairs: **Lars Rackwitz** (Würzburg, Germany)
Andre Steinert (Würzburg, Germany)

Keynote Lectures

- O-038 **Rocky Tuan** (Pittsburgh, USA) 25+5 min
Adult stem cells in skeletal tissue engineering and regeneration:
Application of nanostructured biomaterials and microenvironmental
regulation
- O-039 **Chris Evans** (Boston, USA) 25+5 min
Gene therapy approaches - Clinical trials and hurdles

Oral Presentations

- O-040 **Alexandra Karl** (Regensburg, Germany) 9+3 min
The Role of TGF β /BMP signaling in the terminal differentiation in
the in vitro chondrogenesis of mesenchymal stem cells
- O-041 **Gundula Schulze-Tanzil** (Berlin, Germany) 9+3 min
Chondrogenesis by heterotopic chondrocytes in polyglycolic acid
scaffolds
- O-042 **Jakob Sieker** (Würzburg, Germany) 9+3 min
Direct gene transfer for cartilage repair using coagulated bone
marrow aspirate - bone morphogenetic protein-2 [BMP-2] as potent
chondrogenic inductor with the risk of osteophyte formation in a
rabbit model
- O-043 **Anika Krase** (Heidelberg, Germany) 9+3 min
The correlation between biochemical and biomechanical properties
in chondrocyte-seeded scaffolds for cartilage tissue engineering
- O-044 **Marcy Zenobi-Wong** (Zürich, Switzerland) 9+3 min
Engineering MSC condensations for cartilage engineering

Session 5: Cardiovascular System

16:45 - 18:45

Balthasar Neumann Hall

Chairs: **Katja Schenke-Layland** (Stuttgart, Germany)
W. Robb MacLellan (Seattle, USA)

Keynote Lectures

- O-045 **W. Robb MacLellan** (Seattle, USA) 25+5 min
Characterization and therapeutic potential of human cardiovascular progenitor cells
- O-046 **Anthony Weiss** (Sydney, Australia) 25+5 min
Elasticity, cell interactions and vascular repair

Oral Presentations

- O-047 **Afshin Arti** (Leipzig, Germany) 9+3 min
Potential application of different types of adult stem cells on the treatment of patients following myocardial infarction (a clinical review)
- O-048 **Anja Metzner** (Kiel, Germany) 9+3 min
Use of CD133+-cells for percutaneous tissue-engineered pulmonary valved stent implantation
- O-049 **Miriam Votteler** (Tübingen, Germany) 9+3 min
Acquisition of RNA from FFPE fetal and adult human heart valve leaflets for transcriptional profiling
- O-050 **Ranjana Rai** (Erlangen, Germany) 9+3 min
Poly(glycerol sebacate) based platform for cardiac tissue engineering
- O-051 **Rodrigo Rezende** (Campinas, Brazil) 9+3 min
Organ printing enabling technologies: toward organ biofabrication line

Wednesday May 23rd, 2012

**Poster Presentation
with "Wine & Cheese"**

19 :00 - 21:00

Foyer

The poster session with "Wine & Cheese" (free of charge) starts at 19:00 at the Foyer of the Congress Center.

Please be available at your poster and ready to present it in the time from

19:00 - 20:00 if you have an odd poster number

20:00 - 21:00 if you have an even poster number

During the poster presentation, the poster-prize-jury will go through the posters and will nominate the best posters of the conference. The winners will be announced at the closing session on Friday, May 25th.

Session 6: Biomimetic Materials

8:00 - 10:00

Franconia Hall

Chairs: **Jürgen Groll** (Würzburg, Germany)
Michael Gelinski (Dresden, Germany)

Keynote Lectures

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|---|--|----------|
| O-052 | Jos Malda (Utrecht, Netherland) | 25+5 min |
| Induction of complex tissue organisation in articular cartilage | | |
| O-053 | Carsten Werner (Dresden, Germany) | 25+5 min |
| Modular Biohybrid Hydrogels | | |

Oral Presentations

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|--|---|---------|
| O-054 | Daniel Seitz (Bayreuth, Germany) | 9+3 min |
| Tissue ingrowth and osteoclast behavior on microporous BCP 3D-printed bone scaffolds in co-culture | | |
| O-055 | Lars Rackwitz (Würzburg, Germany) | 9+3 min |
| Heteropolymeric polycaprolactone-collagen type II nanofiber scaffolds - Co-Electrospinning | | |
| O-056 | Jürgen Paletta (Marburg, Germany) | 9+3 min |
| Influence of PLLA nanofiber functionalization on colonialization, bone healing, angiogenesis and stem cell migration in vivo | | |
| O-057 | Robert G. Stigler (Innsbruck, Austria) | 9+3 min |
| Pluronic F-127 - A potential scaffold in stem cell based tissue engineering | | |
| O-058 | Afshin Arti (Leipzig, Germany) | 9+3 min |
| The role of the Biomaterials for the treatment of Myocardial Infarction - a review | | |

Balthasar Neumann Hall

Chairs: **Norbert Schütze** (Würzburg, Germany)
Joachim Nickel (Würzburg, Germany)

Keynote Lectures

- O-059 **Martin Richter** (Munich, Germany) 25+5 min
Bioreactors with microfluidic components for tissue engineering
- O-060 **Matthias Lutolf** (Lausanne, Switzerland) 25+5 min
Microtechnologies to deconstruct and reconstruct stem cell environments

Oral Presentations

- O-061 **Michael Monaghan** (Galway, Irland) 9+3 min
Delivery and efficacy of interfering RNA via a crosslinked collagen hydrogel in an excisional in vivo model and a human pre-clinical model to reduce fibrosis
- O-062 **Meike Simann** (Würzburg, Germany) 9+3 min
Fibroblast growth factor signaling during the adipogenic conversion of osteoblasts
- O-063 **Michaela Leyh** (Regensburg, Germany) 9+3 min
Cartilage-, and subchondral bone derived Factors regulate collagen production in MSC
- O-064 **Sylvia Hondke** (Würzburg, Germany) 9+3 min
WISP1 and -3 affect cell survival in human mesenchymal stem cells (hMSCs) and TC28a2 chondrocytes
- O-065 **Theresa Schildberg** (Dresden, Germany) 9+3 min
Array-based identification of potential osteoarthritis key genes using mesenchymal stromal cells from osteoarthritic versus healthy donors

Thursday May 24th, 2012

Coffee Break

10:00 - 10:30

Foyer

Session 8: Nanomaterials in Regenerative Medicine

10:30 - 12:30

Franconia Hall

Chairs: **Julia Will** (Erlangen, Germany)
Uwe Gbureck (Würzburg, Germany)

Keynote Lectures

- O-066 **Sarah Heilshorn** (Stanford, USA) 25+5 min
Designing stem cell delivery systems through protein engineering
- O-067 **Andreas Greiner** (Marburg, Germany) 25+5 min
Nanofibres by electrospinning for TE applications

Oral Presentations

- O-068 **Lars Rackwitz** (Würzburg, Germany) 9+3 min
Electrospun collagen type I nanofibers with highly isotropic scaffold architecture support the tenogenic differentiation of human mesenchymal stem cells
- O-069 **Bettina Ibold** (Berlin, Germany) 9+3 min
Immunological in vitro characterization of xenogeneic extracellular matrix proteins for novel electrospun matrices in cardiovascular tissue-engineering
- O-070 **Elena Andreeva** (Moscow, Russia) 9+3 min
Silica-based nanoparticle cytotoxicity is composition and cell type dependent
- O-071 **Elham Vatankhah** (Isfahan, Iran) 9+3 min
Structural characterization of PCL-gelatin composite scaffolds electrospun with different solvent systems
- O-072 **Ali Negahi Shirazi** (Sydney, Australia) 9+3 min
The effect of cellulose nanofibres on mechanical properties and bioactivity of chitosan

Thursday May 24th, 2012

Session 9: Symposium "Start MSC" (BMBF) 10:30 - 12:30
Standardization of Innovative
Stem Cell Products for Regenerative Medicine

Balthasar Neumann Hall

Chairs: **Albrecht Müller** (Würzburg, Germany)
Anthony D. Ho (Heidelberg, Germany)

Keynote Lectures

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|---|--|----------|
| O-073 | Claus Cichutek (Langen, Germany) | 25+5 min |
| Development and regulation of tissue engineered products | | |
| O-074 | Anthony D. Ho (Heidelberg, Germany) | 25+5 min |
| Mesenchymal stem cells, pluripotent, multipotent or impotent? | | |
| Results of the collaborative research consortium START MSC | | |

Oral Presentations

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|--|--|----------|
| O-075 | Karen Bieback (Heidelberg, Germany) | 15+5 min |
| Xenogenic free culture media for MSC expansion | | |
| O-076 | Michael Ott (Hannover, Germany) | 15+5 min |
| Cell therapies for liver disease - which cells for what? | | |
| O-077 | Matthias Becker (Würzburg, Germany) | 15+5 min |
| Function of chromatin regulators in MSC ageing and differentiation | | |

Session 10: Healthy Aging - Regeneration in Old Age and Multimorbidity 10:30 - 12:30

Auvera - Bossi - Wagner Hall

Chairs: **Franz Jakob** (Würzburg, Germany)
Günter Lepperdinger (Innsbruck, Austria)

Keynote Lectures

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|---|---|----------|
| O-078 | Günter Lepperdinger (Innsbruck, Austria) | 25+5 min |
| Stem cell aging: agelessness of mesenchymal stem cells? | | |
| O-079 | Johannes Grillari (Wien, Austria) | 25+5 min |
| Title to be announced | | |
| O-080 | Denitsa Docheva (Munich, Germany) | 20+4 min |
| Stem Cells for Tendon Tissue Engineering | | |

Oral Presentations

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|--|---|---------|
| O-081 | Robert G. Stigler (Innsbruck, Austria) | 9+3 min |
| The aging bone - a comparison of murine mandibles and femora | | |
| O-082 | Sebastian A. Müller (Basel, Switzerland) | 9+3 min |
| Tendon healing: treatment options following natural growth factor expression | | |
| O-083 | Patrick Prager (Würzburg, Germany) | 9+3 min |
| Similar regenerative characteristics of human anterior cruciate ligament fibroblasts from old and young donors | | |

Thursday May 24th, 2012

Lunch Break

12:30 - 14:00

Posters & Industrial Exhibition

Foyer

ADIPOA

12:30 - 14:00

Lunch Symposium (EU FP-7)

Balthasar Neumann Hall

Chairs: **Danièle Noël** (Montpellier, France)
Andrea Facchini (Bologna, Italy)

Keynote Lectures

- O-084 **Danièle Noël** (Montpellier, France) 15+5 min
Anti-fibrotic effect of adipose stromal cells on chondrocytes from osteoarthritic patients
- O-085 **Andrea Facchini** (Bologna, Italia) 15+5 min
Effect of intra-articular injection of adipose stem cells on different animal models of osteoarthritis

Oral Presentations

- O-086 **Giovanna Desando** (Bologna, Italy) 8+2 min
Effect of adipose stem cells for the treatment of osteoarthritis in a rabbit model
- O-087 **Simona Neri** (Bologna, Italy) 8+2 min
Replicative senescence and genetic stability of cultured human adipose stem cells (ASC) for the regeneration of injured cartilage
- O-088 **Karine Toupet** (Montpellier, France) 8+2 min
Long-term detection of human adipose tissue-derived mesenchymal stem cells after intra-articular injection

Keynote Lecture

- O-089 **Louis Casteilla** (Toulouse, France) 15+5 min
Adipose-derived stromal cells: their identity and uses in clinical trials

Session 11: Musculoskeletal Tissue Engineering II

14:00 - 16:00

Franconia Hall

Chairs: **Maximilian Rudert** (Würzburg, Germany)
Frank Barry (Galway, Ireland)

Keynote Lectures

- O-090 **Dietmar Hutmacher** (Brisbane, Australia) 25+5 min
Regenerative potential of osteoblasts versus bone marrow derived mesenchymal progenitor cells in the reconstruction of critical sized segmental tibial bone defects in a large animal model
- O-091 **Frank Barry** (Galway, Ireland) 25+5 min
Mesenchymal stem cells: host response and mechanism of action

Oral Presentations

- O-092 **Tzu-Miao Lin** (Hsin-Chu, Taiwan) 9+3 min
Cartilage hydrolysate-derived biomaterials for chondrogenesis
- O-093 **Solvig Diederichs** (Heidelberg, Germany) 9+3 min
Interplay of local TGF- β with fibrin hydrogel and collagen-type I/III scaffolds: role of cells and impact on human mesenchymal stem cell chondrogenesis
- O-094 **Marie Morille** (Montpellier, France) 9+3 min
New pharmacologically active microsphere (PAM) formulation enhances protein release and promotes cell survival: illustration in hMSC chondrogenesis
- O-095 **Claudia Eder** (Vienna, Austria) 9+3 min
Spinal deformities & tissue engineering:
Intervertebral disc regeneration in the scoliotic spine
- O-096 **Alexandra Schmiermund** (Giessen, Germany) 9+3 min
The need of an appropriate matrix composition for the differentiation of human mesenchymal stem cells to disc cells

Session 12: Skin & Regulatory Affairs

14:00 - 16:00

Balthasar Neumann Hall

Chairs: **Heike Walles** (Würzburg, Germany)
Oliver Pullig (Würzburg, Germany)

Keynote Lecture

O-097 **Heike Walles** (Würzburg, Germany) 20+4 min
Automated production of an engineered skin equivalent

Oral Presentations

O-098 **Sivan Unnikrishnan** (Trivandrum, India) 9+3 min
Differentiation of adipose derived mesenchymal stem cells to keratinocytes using matrix directed approach

O-099 **Florian Groeber** (Würzburg, Germany) 9+3 min
Development of a vascularised skin equivalent with a physiological perfused vascular network

O-100 **Ulrike Kriegebaum** (Würzburg, Germany) 9+3 min
Tissue engineering of oral mucosa - in vitro comparison of different scaffolds and cell culture methods

O-101 **Mohd Hilmi Abu Bakar** (Kedah, Malaysia) 9+3 min
In vitro characterization of chitosan skin regenerating template as a porous scaffold for three dimensional cultivation

O-102 **Renjith P. Nair** (Trivandrum, India) 9+3 min
In vitro construction of dermal and epidermal substitutes for healing chronic wounds on biodegradable hybrid scaffold

O-103 **Sarah Küchler** (Berlin, Germany) 9+3 min
Filaggrin knock-down skin models - a new approach in dermatological research

- O-104 **Moritz Goeldner** (Hamm-Lippstadt, Germany) 9+3 min
In search of finding a suitable business model for regenerative medicine - A reason why cell-based therapies are still not commercially successful
- O-105 **Sabine Kloth** (Munich, Germany) 9+3 min
ISO 13022 - A new international standard for the management of risk and requirements for processing practices for medical products containing viable human cells

Session 13: Nervous System

14:00 - 16:00

Auvera - Bossi - Wagner Hall

Chairs: **Burkhard Schlosshauer** (Reutlingen, Germany)
Guido Nikkah (Freiburg, Germany)

Keynote Lectures

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|-------|---|----------|
| O-106 | Burkhard Schlosshauer (Reutlingen, Germany) | 20+4 min |
| | Biohybrid concepts for neuro tissue engineering | |
| O-107 | Guido Nikkah (Freiburg, Germany) | 20+4 min |
| | Stem cell-based restorative approaches in neurodegenerative diseases: challenges and limits | |
| O-108 | Garry Brook (Aachen, Germany) | 20+4 min |
| | The development of an orientated nanofibre-based strategy for the repair of the injured peripheral nervous system | |

Oral Presentations

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|-------|--|---------|
| O-109 | Winfried Neuhaus (Vienna, Austria) | 9+3 min |
| | The role of astrocytes in a mouse blood-brain barrier in vitro model of oxygen/glucose deprivation | |
| O-110 | Frank Edenhofer (Bonn, Germany) | 9+3 min |
| | Direct conversion of fibroblast cells into tripotent neural stem cells | |
| O-111 | Marco Metzger (Würzburg, Germany) | 9+3 min |
| | Evaluation of the in vitro and in vivo potential of neural stem cells derived from human postnatal gut | |
| O-112 | Marcel Dihn  (T bingen, Germany) | 9+3 min |
| | Functional neuronal networks generated from human induced pluripotent stem cells | |

Thursday May 24th, 2012

Coffee Break

16:00 - 16:30

Foyer

Session 14: Drug Delivery

16:30 - 18:30

Franconia Hall

Chairs: **Lorenz Meinel** (Würzburg, Germany)
Markus Textor (Zürich Switzerland)

Keynote Lectures

- O-113 **Markus Textor** (Zürich, Switzerland) 25+5 min
Biomimetic Nanoparticle Functionalization and Smart Membrane
Assembly of Core-Shell Nanoparticles for Triggered Release
Application
- O-114 **Wim Henning** (Utrecht, Netherlands) 25+5 min
Thermosensitive and Biodegradable Hydrogels for Protein Delivery

Oral Presentations

- O-115 **Jens Möller** (Würzburg, Germany) 12+3 min
Catch bonds mediate the uptake of surface bound bacteria by
macrophages
- O-116 **Martin Ehrbar** (Zürich, Switzerland) 12+3 min
Cell-instructive matrices for the recruitment and differentiation of
mesenchymal stromal cells during bone healing
- O-117 **Martin Behe** (Villingen, Switzerland) 12+3 min
Delivery of radioisotopes for diagnostic and therapeutic application
- O-118 **Subhas C. Kundu** (Kharagpur, India) 12+3 min
Non-mulberry silk biomaterial for regenerative medicine

Session 15: Regulatory Affairs and Clinical Studies

16:30 - 18:30

Balthasar Neumann Hall

Chairs: **Hans-Georg Eckert** (Mannheim, Germany)
Oliver Pullig (Würzburg, Germany)

Keynote Lectures

- O-119 **Ralf Sanzenbacher** (Langen, Germany) 25+5 min
Advanced Therapy Medicinal Products: A Regulatory Requirements
Roadmap for Europe and Germany
- O-120 **Heiko von der Leyen** (Hannover, Germany) 25+5 min
Design and realization of clinical trials—from bench to bedside

Oral Presentations

- O-121 **Oliver Pullig** (Würzburg, Germany) 10+5 min
Application for cell based medical therapies: A long distance run in
the academic environment
- O-122 **Christine Günther** (Munich, Germany) 10+5 min
Cells as a drug: development of pharma-grade cell-based therapies
for clinical application
- O-123 **Klaus Kühlcke** (Idar-Oberstein, Germany) 10+5 min
Manufacturing of vectors and gene modified cells for early phase
clinical trials on ex-vivo gene therapy in Europe
- O-124 **Albrecht Meichle** (Weinheim, Germany) 10+5 min
Human Heterologous Liver Cells for Treatment of Urea Cycle
Disorders - a Regulatory Challenge

Thursday May 24th, 2012

Gala Dinner

19:00

Gala Dinner at the Würzburg Residence

The Gala Dinner at 19:00 starts with a reception at the main entrance of the Würzburg Residence.

Please check the Würzburg map at the end of this program book to find your way to the Würzburg Residence.

Additional tickets for the Gala Dinner are available at the conference office in the Foyer of the Congress Center.

Session 16: Strategies for Tissue Vascularization

8:00 - 10:00

Franconia Hall

Chairs: **Anthony Weiss** (Sydney, Australia)
Vladimir Mironov (Chaleston, USA)

Keynote Lectures

- O-125 **Vladimir Mironov** (Chaleston, USA) 25+5 min
Title to be announced
- O-126 **Felipe Prosper** (Pamplona, Spain) 25+5 min
Cardiovascular regeneration and strategies for neovascularization

Oral Presentations

- O-127 **Achim Feucht** (Munich, Germany) 9+3 min
Prefabrication of tissue engineered constructs – a viable strategy for neovascularisation – a model tested on rabbits
- O-128 **Stefan Zorn** (Wisconsin-Madison, USA) 9+3 min
Specific and reversible growth factor sequestering and release from PEG based hydrogels
- O-129 **Andreas Arkudas** (Erlangen, Germany) 9+3 min
Generation of axially vascularized bone substitute in the AV loop rat model using mesenchymal stem cells and BMP2
- O-130 **Caroline Seebach** (Frankfurt, Germany) 9+3 min
Endothelial progenitor cells improve directly and indirectly early vascularization of mesenchymal stem cells-driven bone regeneration in a critical bone defect in rats
- O-131 **Christian Muhr** (Würzburg, Germany) 9+3 min
3D coculture spheroids of adipose-derived stem cells and microvascular endothelial cells - local inhibition of adipogenesis

Session 17: Musculoskeletal Tissue Engineering III

8:00 - 10:00

Balthasar Neumann Hall

Chairs: **Mehdi Shakibaei** (Munich, Germany)
Johannes Reichert (Würzburg, Germany)

Keynote Lecture

O-132 **Franz Jakob** (Würzburg, Germany) 20+4 min
Stem cell targeted strategies for bone regeneration

Oral Presentations

O-133 **Elisabeth Seebach** (Heidelberg, Germany) 9+3 min
Enhanced in vivo attraction of host cells into mesenchymal stem cell
- seeded fibrin hydrogels transplanted in a rat femur bone defect

O-134 **Johannes Reichert** (Würzburg, Germany) 9+3 min
A Tissue Engineering Solution for Segmental Defect Regeneration in
Long Bones

O-135 **Peter Brett** (London, UK) 9+3 min
Osteogenic events in hMSCs on Ti implant surfaces are modified by
tyrosine kinase AXL

O-136 **Alexander Kahlig** (Stuttgart, Germany) 9+3 min
Evaluation of the optimal culture conditions to develop in vitro bone
tissue through various methods of in silico modeling

O-137 **Pia Voltz** (Heidelberg, Germany) 9+3 min
Ectopic Bone Formation by Human MSC on Synthetic versus
Biological Bone Substitutes

O-138 **Mehdi Shakibaei** (Munich, Germany) 9+3 min
Three-Dimensional High-Density Co-Culture with Primary
osteoblasts promotes osteogenic differentiation in MSCs in vitro

- O-139 **Falk Milan** (Dresden, Germany) 9+3 min
Dynamic seeding of large cancellous bone scaffolds with
mesenchymal stromal cells: spatial cell distribution using perfusion,
rotation and static seeding techniques
- O-140 **Sabine Stöckl** (Regensburg, Germany) 9+3 min
In vitro knockdown of Sox9 affects cell survival via p21 and Cyclin D1
and favors osteogenic differentiation of mesenchymal stem cells

Auvera - Bossi - Wagner Hall

Chairs: **Marco Metzger** (Würzburg, Germany)
Insa Schröder (Halle, Germany)

Keynote Lectures

- O-141 **Insa Schröder** (Halle, Germany) 25+5 min
In vitro pancreas - hopes and hypes
- O-142 **Günter Paeth** (Freiburg, Germany) 25+5 min
Cellular crosstalk between bone-marrow-derived mesenchymal stromal cells (MSC) and β -cells

Oral Presentations

- O-143 **Christiani Amorin** (Louvain, Belgium) 9+3 min
Transplantation of alginate-matrigel hydrogel containing isolated ovarian stromal cells: first step to develop an artificial ovary
- O-144 **Tigran Poghosyan** (Paris, France) 9+3 min
Esophageal tissue engineering using a hybrid approach. In vitro analysis of cell seeding conditions
- O-145 **Iris Dally** (Stuttgart, Germany) 9+3 min
From R&D to GMP - Development of tracheal patch
- O-146 **Karl-Heinz Heffels** (Würzburg, Germany) 9+3 min
Hernia meshes enhanced with nanofibres for treatment of diaphragm defects
- O-147 **Mirosława El Fray** (Szczecin, Poland) 9+3 min
Enzymatic degradation of injectable polymeric materials for hernia repair

Friday May 25th, 2012

Coffee Break

10:00 - 10:30

Foyer

Session 19: New Tools for Cell and Tissue Imaging

10:30 - 12:30

Franconia Hall

Chairs: **Peter Jakob** (Würzburg, Germany)
Thorsten Walles (Würzburg, Germany)

Keynote Lectures

- O-148 **Peter Jakob** (Würzburg, Germany) 25+5 min
New tools for cell and tissue imaging: MRI and MPI
- O-149 **Karin Schütze** (Tutzing, Germany) 25+5 min
Photonic fingerprinting - Raman spectroscopy for marker-free and nondestructive cell and tissue analyses

Oral Presentations

- O-150 **Jan Hansmann** (Stuttgart, Würzburg) 9+3 min
Impedance spectroscopy - a tool for the characterization of skin equivalents
- O-151 **Ben Fabry** (Erlangen-Nuremberg, Germany) 9+3 min
Physical principles of cell migration in 3 dimensions
- O-152 **Carmen Pettersson** (Berlin, Germany) 9+3 min
Quantifying of adhesion and mechanics of single cells on biomaterials
- O-153 **Marianne E. Mertens** (Aachen, Germany) 9+3 min
Magnetic Resonance Imaging of Tissue-Engineered Implants
- O-154 **Joachim Schrauth** (Würzburg, Germany) 9+3 min
Comparison of different MRI sequences for the characterization of cartilage in an Osteoarthritis model in goats

Balthasar Neumann Hall

Chairs: **Lauren Flynn** (Kingston, Canada)
Torsten Blunk (Würzburg, Germany)

Keynote Lectures

- O-155 **Lauren Flynn** (Kingston, Canada) 25+5 min
Decellularized Adipose Tissue as an Adipo-inductive Substrate for Soft Tissue Engineering
- O-156 **Nestor Torio-Padron** (Freiburg, Germany) 25+5 min
Adipose tissue engineering by transplantation of preadipocytes in fibrin

Oral Presentations

- O-157 **Lukas Prantl** (Regensburg, Germany) 9+3 min
Different Methods to Collect Human Adipose Tissue-derived Adult Stem Cells
- O-158 **Katharina Storck** (Munich, Germany) 9+3 min
In vivo vascularization of engineered adipose tissue using composite constructs made from biodegradable porous scaffolds and hydrogels
- O-159 **Jürgen H. Dolderer** (Tuebingen, Germany) 9+3 min
Assessment of angiogenic factors in de-novo generated vascularized adipose tissue
- O-160 **Jan-Thorsten Schantz** (Munich, Germany) 9+3 min
Development of 3D Breast Shape Scaffolds for Adipose Tissue Engineering
- O-161 **Timm P. Wolter** (Aachen, Germany) 9+3 min
The effect of hyperbaric oxygenation on the expression of the growth factors VEGF, bFGF, IGF, PDGF-BB and MMP-9 in autologous fat transplantation

Session 21: Symposium

10:30 - 12:30

"Tissue Engineering Ear, Nose, Throat and Eye"

Auvera - Bossi - Wagner Hall

Chairs: **Norbert Kleinsasser** (Würzburg, Germany)
Gerd Geerling (Düsseldorf, Germany)

Keynote Lectures

- | | | |
|--|--|----------|
| O-162 | Norbert Kleinsasser (Würzburg, Germany) | 15+5 min |
| Applications of Tissue Engineering in Otorhinolaryngology-
Reconstructive Head and Neck Surgery | | |
| O-163 | Rainer Staudenmaier (Munich, Germany) | 15+5 min |
| Customized Tissue Engineering For Ear Reconstruction | | |
| O-164 | Nicole Rotter (Ulm, Germany) | 15+5 min |
| Cell based restoration of salivary gland function | | |

Oral Presentations

- | | | |
|---|---|---------|
| O-165 | Kristina Spaniol (Düsseldorf, Germany) | 9+3 min |
| Strategies for Lacrimal Gland Replacement | | |
| O-166 | Katrin Frölich (Würzburg, Germany) | 9+3 min |
| Tissue Engineering in Laryngology | | |
| O-167 | Thomas Fuchsluger (Düsseldorf, Germany) | 9+3 min |
| Current Status of Ocular Surface Reconstruction with Tissue
Constructs | | |
| O-168 | Stefan Schrader (Düsseldorf, Germany) | 9+3 min |
| Perspectives of Conjunctival Tissue Engineering | | |
| O-169 | Gesa Maria Grobe (Braunschweig, Germany) | 9+3 min |
| Stimulation of extracellular matrix synthesis in human corneal
keratocytes for tissue engineering applications | | |

Friday May 25th, 2012

Closing Remarks

12:30 - 13:00

Franconia Hall

Chair: **Maximilian Rudert** (Würzburg, Germany)

Farewell

C-001 **Ulrich Nöth** (Würzburg, Germany) 30 min
Heike Walles (Würzburg, Germany)
Jürgen Groll (Würzburg, Germany)

Announcement of the poster prize winners and closing remarks

Poster Presentation

Poster Presentations P 1 - P 101

Foyer

The posters are presented at the foyer in front of Franconia Hall and can be visited during the whole conference.

Poster set up is on Wednesday, May 23rd, from 7:30 - 10:00.
Suitable mounting material is available at the registration desk.

A special poster session with "Wine & Cheese" will be held on Wednesday evening (May 23rd), starting at 19:00 at the Foyer of the Congress Center.

Please be available at your poster and ready to present it in the time from

19:00 - 20:00	if you have an odd poster number
20:00 - 21:00	if you have an even poster number.

During this poster presentation, the poster-prize-jury will go through the posters and will nominate the best posters of the conference. The winners will be announced in the closing session on Friday, May 25th.

Posters have to be removed on Friday, May 25th, in the time from 13:00 - 14:00. Posters that have not been removed by 14:00 will be discarded.

Poster Presentation

Poster

P-001	Miroslava Sedlackova (Brno, Czech Republic)	P 1
	Understanding cell-to-cell communication in hESCs – creating basis for the move to 3D culture	
P-002	Jan Vojtassak (Trnava, Slovakia)	P 2
	Autologous MSC, Collagenous membrane, PRP and hydroxyapatite: a perspective for Cleft Palate treatment	
P-003	Gudrun Hager (Wien, Austria)	P 3
	Isolation of EPC from human liposuction material by Magnetic Cell Sorting	
P-004	Mariana P. Vamanu (Loughborough, Leicestershire, UK)	P 4
	Microcarrier Engineering: Pluripotent Stem Cell recovery from thermoresponsive particles produced via Membrane Emulsification	
P-005	Natalia Gurtowska (Torun, Poland)	P 5
	Characterization of novel stem cell sources for urological Tissue Engineering	
P-006	Sigrid Seuß (Erlangen, Germany)	P 6
	Electrophoretic deposition of soft polymer-based composite coatings containing bioactive glass particles	
P-007	Viviana Mourino (Buenos Aires, Argentina)	P 7
	Characterization of Novel Nano-Composites Containing Bioactive Glass for Bone Tissue Engineering Applications	
P-008	Madeleine Witting (Munich, Germany)	P 8
	Enzymatic Functionalization of Collagens for Medical Applications	
P-009	Matthias Kuhlmann (Aachen, Germany)	P 9
	Dual setting calcium phosphate cements	
P-010	Anna Statmann (Würzburg, Germany)	P 10
	Validation of a human 3D Lung Adenocarcinoma Tumor Model via Drug Testing	
P-011	Sarah Nietzer (Würzburg, Germany)	P 11
	Development of a 3D intestinal tumor model on the basis of a natural collagen matrix - induction of beta-catenin and invasion by fibroblasts	

Poster Presentation

P-012	Corinna Moll (Würzburg, Germany)	P 12
	Development of a human 3D in vitro tumor test system for nerve sheath tumors	
P-013	Annika Jaenicke (Berlin, Germany)	P 13
	Development of 3D human vascularized intestinal equivalents for substance testing in microliter-scale on a multi-organ-chip	
P-014	Manuel Röder (Würzburg, Germany)	P 14
	Effects and biocompatibility of surface functionalized nanodiamonds on mesenchymal stem cells and breast cancer cells	
P-015	Daniel Seitz (Bonn, Germany)	P 15
	Glucose metabolism under low and high oxygen concentration in cartilage tissues of a small animal model	
P-016	Verena Dexheimer (Heidelberg, Germany)	P 16
	Proliferation: an important part of in vitro chondrogenesis of human mesenchymal stem cells	
P-017	Kai Stuckensen (Würzburg, Germany)	P 17
	A route to osteochondral interface tissue engineering by layered hydrogel deposition	
P-018	Eiva Bernotiene (Vilnius, Lithuania)	P 18
	Benificial effects of human adipose tissue derived stem cells on osteoarthritic cartilage explants in vitro	
P-019	Achim Feucht (Ulm, Germany)	P 19
	Mechanical effect on homogeneity of cultured cartilage constructs by reciprocal agitation	
P-020	Reza Abedian Dehaghani (Hannover, Germany)	P 20
	Arthroscopic measurements of streaming potential integrals as a clinical approach for the quantification of cartilage degeneration	
P-021	Alexandra Karl (Regensburg, Germany)	P 21
	BAMBI - a modulator in mesenchymal stem cell chondrogenesis	
P-022	Karolien Gellynck (Gent, Belgium)	P 22
	PMMA and PDMS surface modification to enhance sensor-associated vascularization: a histological analysis.	

Poster Presentation

P-023	Jenny Wehmüller (Würzburg, Germany)	P 23
	Interaction of human mesenchymal stem cells and human meniscus cell with extracellular matrix and neighboring cells	
P-024	Jürgen Steinmeyer (Giessen, Germany)	P 24
	Are collagen hydrolysates novel tools to stimulate collagen type II synthesis by human chondrocytes?	
P-025	Ausra Unguryte (Vilnius, Lithuania)	P 25
	Poorly adherent population of isolated chondrocytes from human articular cartilage express ABC transporter ABCG2 and better redifferentiate to chondrogenic phenotype after propagation in monolayer	
P-026	Alexander Nedopil (Würzburg, Germany)	P 26
	Comparison of Intra-individual chondrogenic differentiation capacity of ASCs and MSCs in type I collagen-hydrogel	
P-027	Fabian Gilbert (Würzburg, Germany)	P 27
	Chondrogenic differentiation of bone marrow-derived MSCs with a novel high affine GDF-5 variant (R57A) in vitro	
P-028	Manuel Weißenberger (Würzburg, Germany)	P 28
	Indian hedgehog gene transfer is a chondrogenic inductor of human mesenchymal stem cells	
P-029	Manuela Kunz (Würzburg, Germany)	P 29
	Reduced chondrogenic hypertrophy In Vitro following Sox 9 gene transfer in human mesenchymal stem cells	
P-030	Afshin Arti (Leipzig, Germany)	P 30
	The application of the nanobiomaterials in cardiac tissue engineering (A review)	
P-031	Afshin Arti (Leipzig, Germany)	P 31
	Stem Cells Differentiation into Human Cardiomyocytes (A Clinical Review)	
P-032	Volha Ninichuk (Würzburg, Germany)	P 32
	Trans-differentiation of vascular wall-resident progenitor and stem cells into cardiomyocytes	

Poster Presentation

P-033	Sebastian Schürlein (Würzburg, Germany) Tissue engineering of human 3D cardiac muscle patches	P 33
P-034	Claus Moseke (Würzburg, Germany) Dicalcium phosphate emulsion synthesis for calcium phosphate cements with optimized setting reaction stoichiometry	P 34
P-035	Andrea Ewald (Würzburg, Germany) Cytocompatibility of macroporous phosphate ceramic scaffolds	P 35
P-036	Kathrin Hahn (Würzburg, Germany) Differentiation of human monocytes into osteoclasts and their activity on calcium and magnesium phosphate cements	P 36
P-037	Tomasz Jüngst (Würzburg, Germany) Physical vapor deposition of nanocrystalline calcium phosphate coatings	P 37
P-038	Franziska Warmuth (Würzburg, Germany) Physical vapor deposition of Ti-Ag coatings by means of modular targets	P 38
P-039	Daniela Duarte Campos (Aachen, Germany) Submerged biofabrication into a hydrophobic high-density fluid	P 39
P-040	Tobias Schmitz (Würzburg, Germany) Antimicrobial properties of Ti(Ag)N coatings produced by physical vapour deposition	P 40
P-041	Tobias Schmitz (Würzburg, Germany) Oxygen diffusion hardening of tantalum coatings on cp-titanium for biomedical applications	P 41
P-042	Andreas Krause (Hannover, Germany) Intelligent bio-based hydrogels as extracellular matrices for tissue engineering	P 42
P-043	Holger Kirch (Würzburg, Germany) Suitability of a silica gel based non-woven fibre mat for tissue engineering	P 43
P-044	Julia van de Kamp (Aachen, Germany) Towards in vivo recruitment of mesenchymal stem cells using HGF-loaded biomaterials	P 44

Poster Presentation

P-045	Jasmin Hum (Erlangen, Germany) Gelatin coatings on bioactive glass (Bioglass®) scaffolds	P 45
P-046	Michael Schmitz (Würzburg, Germany) Synthesis of hydrophilic, multifunctional polymers based of poly(ethylene glycol) methyl ether acrylate	P 46
P-047	Giselle Yeo (Sydney, Australia) The tropoelastin bridge region contributes to elastin fiber assembly and cell interactions	P 47
P-048	Lim Jeong (Chungnam, Korea) Preparation and cellular response of silk fibroin nanofibers containing silver nanoparticles for skin regeneration	P 48
P-049	Kathrin Hahn (Würzburg, Germany) Designing an artificial extracellular matrix by combining biofunctional nanofibers with hyaluronic acid-based hydrogels	P 49
P-050	Matthias Becker (Heidelberg, Germany) Replicative aging and differentiation potential of human adipose tissue-derived mesenchymal stromal cells expanded in pooled human or fetal bovine serum	P 50
P-051	Prager Patrick (Würzburg, Germany) Fabrication of autologous conditioned plasma hydrogels for anterior cruciate ligament regeneration	P 51
P-052	Jörn Probst (Würzburg, Germany) SKINHEAL - Development and Evaluation of new therapies for chronic wound diseases	P 52
P-053	Manuel Butting (Frankfurt, Germany) Autologous full-thickness skin equivalents an alternative for the treatment of non-healing or slowly healing wounds?	P 53
P-054	Frederike Weil (Würzburg, Germany) A human artificial skin model for ex-vivo simulation of graft-versus-host disease	P 54
P-055	Malgorzata Burek (Würzburg, Germany) Generation of an immortalized murine brain microvascular endothelial cell line as an in vitro blood brain barrier model	P 55

Poster Presentation

P-056	Antje Appelt (Würzburg, Germany) Development of an in vitro 3D blood brain barrier model	P 56
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P-058	Sven Knaack (Dresden, Germany) Functionalized biomaterials for the controlled release of VEGF – an approach for bone defect healing by chemoattraction	P 58
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P-060	Elke Vorndran (Würzburg, Germany) 3D-Powder Printing of Magnesium Phosphate Scaffolds with Drug Eluting Properties	P 60
P-061	Matthias Kuhlmann (Aachen, Germany) Polyglycidol-based Nanogels for Targeted Protein Delivery	P 61
P-062	Szymon Kurdyn (Würzburg, Germany) Multi-factor release systems for regenerative applications in tissue engineering	P 62
P-063	Karl Wenzelowski (Pforzheim, Germany) Standardization: A strategic approach in support towards meeting regulatory requirements	P 63
P-064	Meltem Avci-Adali (Tübingen, Germany) An in vitro rotation model composed of single-use sterile disposables for investigation of endothelialization of different vascular prostheses	P 64
P-065	Torbjorn O. Pedersen (Bergen, Norway) Osteogenic stimulatory conditions enhance growth and maturation of endothelial cell microvascular networks	P 65

Poster Presentation

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| Differentiation of adipose tissue-derived mesenchymal stem cells towards the endothelial lineage by combination of hypoxic treatment and angiogenic growth factors | | |
| P-067 | Claudia Kleinhans (Stuttgart, Germany) | P 67 |
| The influence of low pressure plasma modification on cell-adhesion and proliferation on degradable bone substitute material | | |
| P-068 | Andreas Gerken (Mannheim, Germany) | P 68 |
| Assembly of tissue engineering constructs for the reconstruction of bone: Investigation of iron oxide labelled vs. unlabelled mesenchymal stem cells seeded on polylactic acid scaffolds with regard to morphology, viability and differentiation | | |
| P-069 | Christoph Rücker (Würzburg, Germany) | P 69 |
| BioVaSc as scaffold for tissue engineering of bone substitutes | | |
| P-070 | Alexey Ivanov (Moscow, Russia) | P 70 |
| Surgical treatment of congenital pseudarthroses using cellular technologies in children | | |
| P-071 | Alexey Ivanov (Moscow, Russia) | P 71 |
| Reparative potential of allografts in pelvic surgery in children | | |
| P-072 | Ko Eun Park (Wonkwang, Korea) | P 72 |
| Bone regeneration ability of SF/PCL nano/microfibrous composite scaffolds | | |
| P-073 | Carina Adamzyk (Aachen, Germany) | P 73 |
| Biomaterial-based bone tissue engineering using mesenchymal stem cells | | |
| P-074 | Monica Garcia (Porto, Portugal) | P 74 |
| Osteoblastic cytocompatibility of anodised AZ31 and RZ5 magnesium alloys | | |
| P-075 | Dirk Henrich (Frankfurt, Germany) | P 75 |
| Initial adhesion of bone marrow mononuclear cells (BMC) on a beta-Tricalciumphosphat (TCP)-scaffold is independent from the surface coating | | |

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	An experimental comparison of ovine manibular and tibial osteoblasts	
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P-078	Verena Kleiner (Mainz, Germany)	P 78
	Label-free protein detection with individual plasmonic nanoparticles	
P-079	Sofia Dembski (Würzburg, Germany)	P 79
	ORMOBEAD® - New Generation of Multifunctional Particle Systems for Diagnostics and Therapy	
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	Photostimulated nanoparticles for biomedical diagnostics	
P-081	Sönke Frey (Würzburg, Germany)	P 81
	Influence of locally applied CYR61 on Muscle Strength Recovery after acute Compartment Syndrome treated by Limb shortening and distraction procedure in rabbits	
P-082	Katharina Wittmann (Würzburg, Germany)	P 82
	Development of volume-stable adipose tissue constructs	
P-083	Katharina Werner (Würzburg, Germany)	P 83
	Towards Engineering Vascularized Adipose Tissue Using Decellularized Jejunal Segments as Cell Carrier	
P-084	Susanne Dietl (Würzburg, Germany)	P 84
	Engineering adipose tissue constructs using different fibrin gel modifications	
P-085	Steffen Koch (Tutzing, Germany)	P 85
	Micro-Raman Spectroscopy – an invaluable Method for Tissue Engineering and Regenerative Medicine	
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	Stem Cell-Seeded Collagen Matrices for the Reconstruction of the Subcutaneous Fat Layer	

Poster Presentation

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P-088	Marc Burghartz (Würzburg, Germany)	P 88
	Cultivation of human salivary gland tissue	
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	Evaluation of the maxillofacial bone regeneration process in an animal model of post-menopausal osteoporosis	
P-090	Katrin Lochner (Rostock, Germany)	P 90
	Migration capacity and viability of human primary osteoblasts in synthetic three-dimensional bone scaffolds made of electron beam-melted Ti-6Al-4V	
P-091	Anke Hoppensack (Stuttgart, Germany)	P 91
	An in vitro model of the renal proximal tubule composed of human kidney-derived cells and small intestinal submucosa	
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	A biodegradable collagen cell carrier stabilize tissue-engineered urothelium for pre-clinical application	
P-093	Matthias Schweinlin (Würzburg, Germany)	P 93
	Establishment of primary human gut models in vitro	
P-094	Holger Koch (Leipzig, Germany)	P 94
	Implantation of decellularized esophagus scaffold patches in piglets: a pilot study	
P-095	Alexander van Asbeck (Würzburg, Germany)	P 95
	Establishment of a long-term organotypic culture of adult murine pancreas tissue	
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	Magnetic Resonance Imaging - a Tool for Planning and Monitoring Implants in Maxillofacial Surgery	
P-097	Daniel Weber (Würzburg, Germany)	P 97
	Dynamic 3D imaging of the free moving human knee using a retrospective self-gated sequence with a quasi-random sampling scheme	

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- P-098 **Joachim Nickel** (Würzburg, Germany) P 98
Antagonistic activities of growth factors - A key for cartilage maintenance?
- P-099 **Gariele Vacun** (Stuttgart, Germany) P 99
Systems Biology for tissue engineering of mesenchymal stem cells - integrating novel experimental methods and mathematical modelling
- P-100 **Alexander Hoppe** (Erlangen, Germany) P 100
Ion doped bioactive glass derived scaffolds for bone tissue engineering
- P-101 **Rainer Detsch** (Erlangen, Germany) P 101
Advanced approaches for the application of bioactive glasses in bone tissue engineering