



Program 24th Annual Meeting, 3 & 4 December 2015

at

“De Werelt congress center”, Westhofflaan 2, 6741 KH Lunteren

Thursday, 3 December

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| 09.15 – 09.45 | Registration and coffee |
| 09.45 – 10.00 | Welcome |
| 10.00 – 11.20 (8+2 min) | Oral Presentations Chair: Suzanne Detiger |
| 01 | Mani Diba , RadboudUMC-Biomaterials, Nijmegen. <i>Exploiting Interactions between Bisphosphonate and Bioactive Glass as a Strategy to Develop Novel Hybrid Materials for Bone Regeneration</i> |
| 02 | Payal Balraadsjing , AMC-Medical Microbiology, Amsterdam. <i>Bacterial infiltration in electrospun polymer meshes visualized by confocal microscopy</i> |
| 03 | Anita Krouwels , UMCU-Orthopedics, Utrecht. <i>BMPs Enhance In Vitro Tissue Regeneration By Human Degenerated Nucleus Pulposus Cells</i> |
| 04 | Johanna Melke , TU/e-Orthopaedic Biomechanics, Eindhoven. <i>Effect of fetal bovine serum on the mineralization of human mesenchymal stem cells in 2D and 3D cultures</i> |
| 05 | Rachel Elzes , UTwente- Biomaterials Science and Technology, Enschede. <i>Tunable Degradability of Disulfide-Functional Poly(amido amine)s as Gene Carriers</i> |
| 06 | Corien Oostendorp , RadboudUMC-Biochemistry, Nijmegen. <i>The Effect of Growth Factors on Skin Regeneration After Intra Uterine Closure of Full Thickness Skin Defects</i> |
| 07 | Erik Vrij , MERLN-Inspired Regenerative Medicine, Maastricht. <i>3D high throughput screening and monitoring of emboid bodies in thermoformed microwell plates</i> |
| 08 | Stefan Remmers , TU/e-Orthopaedic Biomechanics, Eindhoven. <i>Investigating bone resorption ‘in-a-dish’</i> |
| 11.20 – 11.45 | Coffee break |

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| 11.45 – 12.55 (8+2 min) | Oral Presentations Chair: Anita Krouwels |
| 09 | Agnieszka Bochynska , RadboudUMC-Orthopedics, Nijmegen. <i>Glues for meniscus repair in explant culture in vitro - Mechanical Properties and Tissue Response</i> |
| 10 | Antonio Castro , RadboudUMC-Biomaterials, Nijmegen. <i>Mechanical reinforcement of calcium-phosphate cements through the incorporation of polymeric micro-cylinders</i> |
| 11 | Suzanne Detiger , VUMC-Orthopedics, Amsterdam. <i>Testing a Novel Nucleus Pulposus Substitute: Biomechanical and In Vivo Studies</i> |
| 12 | Nicole van Gestel , TU/e-Orthopaedic Biomechanics, Eindhoven. <i>Composition dependent mechanical properties of S53P4 bioactive glass putty materials for bone healing applications</i> |
| 13 | Thijs de Jong , ACTA-Oral Cell Biology, Amsterdam. <i>Immediately applied strain reduces markers of osteogenic differentiation in adipose-derived stem cells seeded in fibrin matrices</i> |
| 14 | Shorouk Fahmy , ErasmusMC-Orthopedics, Rotterdam. <i>Follistatin, Nell1, CCN2 and HMGB1 for bone repair in vitro</i> |
| 15 | Daniel Pereira , UTwente-Tissue Regeneration, Enschede. <i>Surface micropatterning with calcium phosphate ceramics by micromoulding in capillaries</i> |

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| 12.55 – 13.55 | Lunch |
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| 13.55 – 15.05 (8+2 min) | Oral Presentations Chair: Simone Boersema |
| 16 | Marta Baroncelli , ErasmusMC-Internal Medicine, Rotterdam. <i>In-Vitro Models of Devitalized Extracellular Matrix to Modulate the Osteogenic Potential of Mesenchymal Stromal Cells</i> |
| 17 | Inge van Loosdregt , TU/e-Biomedical Engineering, Eindhoven. <i>Cell Density and Alignment Dictate Stress Generation in Tissue Engineered Cell Sheets</i> |
| 18 | Eline-Claire Grosfeld , RadboudUMC- Biomaterials, Nijmegen. <i>Long-term Biological Performance of Injectable Calcium-Phosphate/Polymer Formulations</i> |
| 19 | Andrea Schwab , Univ Hospital Würzburg-Tissue Engineering and Regenerative Medicine, Würzburg, Germany. <i>In vitro osteochondral test system for biomaterial screening in cartilage regeneration</i> |
| 20 | Alessia Longoni , UMCU-Oral & Maxillofacial surgery, Utrecht. <i>In vitro Monitoring of Chondrogenesis to Evaluate the Temporary Window of Implantation for Endochondral Bone Tissue Engineering Applications</i> |
| 21 | Francis van Esterik , ACTA-Oral Cell Biology, Amsterdam. <i>Enhanced Osteogenic and Vasculogenic Differentiation of Human Adipose Stem Cells on Biphasic Calcium Phosphate 20/80 versus 60/40 in Fibrin Gels</i> |
| 22 | Vivian Mouser , UMCU-Orthopedics, Utrecht. <i>Evaluation of cartilage regeneration mechanisms in an ex vivo osteochondral defect model</i> |

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| 15.05 – 15.30 | Coffee Break |
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| 15.30 – 16.40 (8+2 min) | Oral Presentations Chair: Erik Vrij |
| 23 | Jiankang Song , RadboudUMC-Biomaterials, Nijmegen. <i>Electrospun Nanofibrous Silk Fibroin Membranes Embedding Gelatin Nanospheres for Controlled Drug Delivery</i> |
| 24 | Simone Boersema , ErasmusMC-Surgery, Rotterdam. <i>Obesity inhibits an anti-inflammatory reaction of macrophages in response to biomaterials.</i> |
| 25 | Lizette Utomo , ErasmusMC-Orthopedics, Rotterdam. <i>In Situ Modulation of Macrophage Phenotype to Control Inflammation and Improve Tissue Regeneration</i> |
| 26 | Robin Nadar , RadboudUMC-Biomaterials, Nijmegen. <i>In Vivo Biodistribution of Bone-targeted Chemotherapeutic Platinum-bisphosphonate Complexes as a Theranostic Agent</i> |
| 27 | Martijn Riool , AMC-Medical Microbiology, Amsterdam. <i>Prevention of Staphylococcus aureus biomaterial-associated infections using a polymer-lipid coating containing the antimicrobial peptide OP-145</i> |
| 28 | Michiel Pot , RadboudUMC-Biochemistry, Nijmegen. <i>Articular Cartilage Regeneration Using Biomaterials Implanted After Microfracturing: A Systematic Review and Meta-Analysis of Animal Studies</i> |
| 29 | Maurits Olthof , Mayo Clinics-Orthopedic Surgery & Biomedical Engineering, Rochester, USA. <i>The effect of various release buffers on in vitro Bone Morphogenetic Protein-2 release from polymer composites and its correlation with in vivo release profiles</i> |

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| 16.50 – 18.00 | <i>NBTE members Annual Meeting</i> |
| 18.15 – 20.30 | <i>Dinner</i> |

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| 20.30 – 21.30 | <p>Invited lecture</p> <p><i>360 degree Bone Tissue Engineering - From Bench to Bedside & Back to Bench</i></p> <p>Dietmar Hutmacher</p> <p>Professor, Chair of Regenerative Medicine, Institute of Health and Biomedical Innovation, Queensland University of Technology, Brisbane, Australia</p> |
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| 21.30 – | <i>Party time!</i> |
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| 10.45 – 12.15 | Poster presentations and drinks |
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| 12.15 – 13.15 | Lunch Break |
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| 13.15 – 14.25 (8+2 min) | Oral Presentations Chair: Simone Mastrogiacomo |
| 31 | Tom Kamperman , UTwente-Developmental Bioengineering, Enschede. <i>Single Cell Microgels as Modular Building Blocks for 3D Multiscale Tissue Engineering</i> |
| 32 | Yang Zhang , RadboudUMC-Biomaterials, Nijmegen. <i>Effects of macrophages on osteogenic differentiation of adipose tissue MSCs</i> |
| 33 | Honglin Chen , MERLN-Complex Tissue Regeneration, Maastricht. <i>Tailoring surface nanoroughness of electrospun scaffolds for skeletal tissue engineering</i> |
| 34 | Maaike Braham , UMCU-Orthopedics, Utrecht. <i>A 3D bone marrow niche to study normal hematopoiesis and multiple myeloma</i> |
| 35 | Marcel Boerman , RadboudUMC- Institute Molecules & Materials, Nijmegen. <i>Development of a poly(2-oxazoline) based haemostatic sealant</i> |
| 36 | Maarten Blokzijl , UU-Pharmaceutics, Utrecht. <i>Reinforcing bioinks using amphiphilic triblock copolymer based hydrogels</i> |
| 37 | Valentina Bonito , TU/e-Biomedical Engineering, Eindhoven. <i>Smart materials for in situ vascular regeneration: IL-4 guided macrophage polarization in instructive supramolecular materials</i> |

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| 14.25 – 14.40 | Coffee break |
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| 14.40 – 15.40 (8+2 min) | Oral Presentations Chair: Tom Kamperman |
| 38 | Paul de Jonge , RadboudUMC-Urology, Nijmegen. <i>Ureteral Reconstruction in Goats Using Tissue Engineered Templates</i> |
| 39 | Yao Fu , UTwente-Developmental Bioengineering, Enschede. <i>Tracking the degradation of polysaccharide hydrogels by non-invasive near-infrared fluorescence imaging</i> |
| 40 | Iris Pennings , UMCU-Oral & Maxillofacial surgery, Utrecht. <i>Donor Variation of Multipotent Stromal Cells and Endothelial Progenitor Cells Influences Osteogenesis and Vasculogenesis in 3-Dimensional Tissue Engineered Constructs</i> |
| 41 | Rongquan Duan , MIRA UTwente-Biomaterial Sciences and Technology, Enschede. <i>Bone Regeneration in Rabbit Condyle Defects with Different Surface Structured Calcium Phosphate Ceramics</i> |
| 42 | Simone Mastrogiacomo , RadboudUMC-Biomaterials, Nijmegen. <i>Multimodal imaging of calcium phosphate cement in bone defects</i> |
| 43 | Luuk van Dijk , Xpand Biotechnology BV, Bilthoven. <i>Accelerated osteoinduction by biphasic calcium phosphate with epitaxial crystal surface structure</i> |

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| 15.40 | Announcement of the chair, poster and presentation awards |
| 15.50 | Closure of the meeting |