



## Program

27th Annual Meeting, 29 & 30 November 2018

at

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

Thursday, 29<sup>th</sup> November

09.15 – 09.45	<i>Registration and coffee</i>
09.45 – 10.00	<i>Welcome</i>

10.00 – 11.20 (8+2 min)	<b>Oral Presentations</b> Chair: Victor P. Galván
01	<b>Dynamic supramolecular multi-responsive biomaterial to induce motion</b> <i>D.J. Wu</i> , Biomed. Engin., Eindhoven University of Technology, Eindhoven
02	<b>Application of biomineralization mechanisms to develop novel biomaterials for bone regeneration</b> <i>D. de Melo Pereira</i> , MERLN, Maastricht University, Maastricht
03	<b>Effects of sterilization on the mechanical properties of poly(methyl methacrylate) based personalized medical devices</b> <i>T.J.A.G. Münker</i> , ACTA, Academic Medical Center, Amsterdam
04	<b>Motored PLGA microspheres for localized inflammation inhibition</b> <i>J. Wang</i> , Dep. of Biomaterials, Radboud UMC, Nijmegen
05	<b>Two-Compartment Culture Chamber for Perfusion of Vascular Grafts</b> <i>I. Pennings</i> , Oral and Maxillofacial Surgery & Special Dental Care, UMC Utrecht, Utrecht
06	<b>Spatiotemporal Biomaterial Functionalization via Competitive Supramolecular Complexation of Avidin and Biotin Analogs</b> <i>T. Kamperman</i> , Developmental BioEngin., University of Twente, Enschede
07	<b>Requirements for the Development of an Immunoprotective Islet Encapsulation Device</b> <i>D.F.A. de Bont</i> , MERLN, Maastricht University, Maastricht
08	<b>The True Story about Topography Driven Osteogenic Differentiation of hBM-MSCs</b> <i>L. Yang</i> , Biomed. Engin., UMC Groningen, Groningen

11.20 – 11.45	<i>Coffee break</i>
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<b>11.45 – 12.45 (8+2 min)</b>	<b>Oral Presentations</b> <b>Chair: Chantal Voskamp</b>
09	<b>Silk Fibroin Conformation Modulates MSCs Osteogenic Differentiation</b> <i>X. Cheng</i> , Dep. of Biomaterials, Radboud UMC, Nijmegen
10	<b>Fabrication of a Biomimetic Peripheral Nerve Platform</b> <i>A. Malheiro</i> , MERLN, Maastricht University, Maastricht Netherlands
11	<b>Shear stress and Cyclic Stretch differentially regulate Early In Situ Tissue Regeneration</b> <i>E. van Haften</i> , Soft Tissue Engin. and Mechanobiology, Eindhoven University of Technology, Eindhoven
12	<b>Immunomodulatory Effects of Surface-Modified 3D Printed Titanium Implants on Human Macrophages</b> <i>N. Fahy</i> , Orthopedics, Erasmus MC, Rotterdam
13	<b>Programmable Release of Vascular Endothelial Growth Factor for Vascularization in Engineered Tissues</b> <i>D. Rana</i> , Biomech. Engin., University of Twente, Enschede
14	<b>Towards Patient-Specific Treatment: The Influence of Sex on in situ Cardiovascular Regeneration</b> <i>B.J. de Kort</i> , Biomed. Engin., Eindhoven University of Technology, Eindhoven

<b>12.45 – 13.45</b>	<b>Lunch</b>
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## FOCUS Symposium

<b>13.45 – 15.15 (25+5 min)</b>	<b>Biointerfaces focus symposium:</b> <b>Chairs: Patricia Dankers</b>
Invited Speaker 1	<b>Jan de Boer, Eindhoven University of Technology</b> Molecular mechanisms of material-induced cell responses
Invited Speaker 2	<b>Pascal Jonkheijm, University of Twente</b> Cell-instructive biointerfaces with dynamic complexity
Invited Speaker 3	<b>Sandra Loerakker, Eindhoven University of Technology</b> Computational modeling inspired valve design enables long-term functionality of tissue-engineered heart valves


<b>15.15 – 15.40</b>	<b>Short Coffee Break</b>
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<b>15.40 – 16.40 (8+2 min)</b>	<b>Oral Presentations</b> <b>Chair: Suzanne Koch</b>
15	<b>Cell Shape Influences Polarization: A Computational Modelling Approach</b> <i>K.S. Eroumé</i> , MERLN, Maastricht University, Maastricht
16	<b>Towards Redifferentiation of Dedifferentiated Tenocytes: Function of Native Tendon ECM</b> <i>A. Dede Eren</i> , Biomedical Engineering, Eindhoven University of Technology, Eindhoven
17	<b>Early-Stage Macroporosity Enhancement In Calcium Phosphate</b>

	<b>Cements By Inclusion Of Polyvinylpyrrolidone Particles As A Porogen: Fine Tuning Particle Size And Molecular Weight</b> <i>I. Lodoso-Torrecilla</i> , Regenerative Biomaterials, Radboud UMC; Nijmegen
18	<b>Combining 3D-Printing of a Physiological-Temperature Setting Calcium Phosphate Paste with Melt Electrowritten Microfiber Meshes for Reinforcing Interfaces in Engineered Osteochondral Grafts</b> <i>P. Diloksumpan</i> , Equine Sciences, Utrecht University, Utrecht
19	<b>AntimiR-221 Activated Hydrogels enhance Cartilage Repair by Endogenous Cells In Vivo</b> <i>A. Lollo</i> , Dep. of Orthopaedics, Erasmus MC, Rotterdam
20	<b>Supramolecular Polymers for Islet Cell Transplantation</b> <i>D. Mumcuoglu</i> , Biomed. Engin., Eindhoven University of Technology, Eindhoven
<b>16.40 – 17.00</b>	<b>Coffee Break</b>

<b>17.00 – 18.00</b>	<b><i>NBTE members Annual Meeting</i></b>
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<b>18.15 – 20.30</b>	<b><i>Dinner</i></b>
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<b>20.30 – 21.30</b>	<p style="text-align: center;">Invited lecture</p> <p style="text-align: center;"><b><i>Title: Biomaterials discovery: a personal tale from tribulations to trials</i></b></p> <div style="text-align: right;">  </div> <p style="text-align: center;"><b>Prof. Dr. Morgan Alexander</b></p> <p style="text-align: center;">Professor of Biomedical Surfaces at the School of Pharmacy, University of Nottingham</p>
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<b>21.30 –</b>	<b><i>Party time!</i></b>
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**Friday, 30<sup>th</sup> November**

<b>09.00 – 10.00 (8+2 min)</b>	<b>Oral Presentations Chair: Iris Pennings</b>
21	<b>In Silico Model of Proximal-Tubule-on-a-Chip as the Basic Functional Unit of a Renal Assist Device</b> <i>J. King</i> , MERLN, Maastricht University, Maastricht
22	<b>Sterilization of Thermo-Sensitive Polyisocyanopeptide Polymers and Hydrogels</b> <i>R.C op 't Veld</i> , Dep. of Biomaterials, Radboudumc, Nijmegen
23	<b>Cartilage Tissue Engineering by Combining GDF-2 Grown Articular Cartilage Progenitor Cells and Microfiber Meshes Fabricated via Melt Electrowriting</b> <i>F. Abinzano</i> , Dep. of Orthopedics, UMC Utrecht, Utrecht
24	<b>High-throughput Testing Of Cell-biomaterial Interactions In 3D</b> <i>M.G. Fois</i> , MERLN, Maastricht University, Maastricht
25	<b>Cell Migration on Topography Gradient</b> <i>L. Ge</i> , Biomed. Engin., UMC Groningen, Groningen
26	<b>The Influence of Hemodynamic Loading on Paracrine Macrophage-Directed Tissue Regeneration</b> <i>S.E. Koch</i> , Soft Tissue Engineering and Mechanobiology, Eindhoven University of Technology, Eindhoven

<b>10.00 – 10.20</b>	<b>Coffee break</b>
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<b>10.20 – 10.50</b>	<b>Rapid fire Poster Presentations (1 min sharp, one slide) Chair: To be announced</b>
P1-P27	<p><b>B. van Loo</b>, Developmental BioEngin., University of Twente, Enschede  <b>J. Zhang</b>, Biomechanical Engineering, University of Twente, Enschede  <b>D.S. Natsir Kalla</b>, ACTA, Vrije Universiteit Amsterdam  <b>M. Riool</b>, Inst. for Complex Molec. Sys., TU/E, Eindhoven  <b>M. Diba</b>, Inst. for Complex Molec. Sys., TU/E, Eindhoven  <b>D.J Hof</b>, RIMLS, Radboud UMC, Nijmegen  <b>G.F. Vasse</b>, Biomedical Engineering, UMC Groningen, Groningen  <b>L. Ribovski</b>, Biomedical Engineering, UMC Groningen, Groningen  <b>D.G. Petre</b>, Dep. of Biomaterials, Radboud UMC, Nijmegen  <b>H.I. Güngördü</b>, Dep. of Biomaterials. Radboud UMC, Nijmegen  <b>J. Jin</b>, ACTA, Vrije Universiteit Amsterdam, Amsterdam  <b>C. Kelder</b>, ACTA, Vrije Universiteit Amsterdam, Amsterdam  <b>K.A.G.T. van Kampen</b>, MERLN, Maastricht University, Maastricht  <b>F. Stein</b>, Biomechanical Engin., University of Twente, Enschede  <b>P. Sutthavas</b>, MERLN, Maastricht University, Maastricht  <b>A. Zengin</b>, MERLN, Maastricht University, Maastricht  <b>V. Vignali</b>, Biomedical Engineering, UMC Groningen, Groningen  <b>N. M. Hamelmann</b>, Biomol. Nanotechn., University of Twente, Enschede  <b>F. Giacomini</b>, MERLN, Maastricht University, Maastricht  <b>M.R. Elzes</b>, Biomol. Nanotechn., University of Twente, Enschede  <b>Y. Alaoui Selsouli</b>, MERLN, Maastricht University, Maastricht  <b>P. Padmanaban</b>, Biomechanical Engin., University of Twente, Enschede  <b>J. Liang</b>, Biomaterials Sci. &amp; Techn., University of Twente, Enschede  <b>N. Golafshan</b>, Dep. of Orthopaedics, UMC Utrecht, Utrecht  <b>M. L. Terpstra</b>, Dep. of Orthopaedics, UMC Utrecht, Utrecht</p>

	<b>C. C.L. Schuurmans</b> , Pharmaceutics, Utrecht University, Utrecht <b>K. Sivasubramaniyan</b> , Dep. of Orthopaedics, Erasmus MC, Rotterdam
<b>10.50 – 11.00</b>	<b>Short presentation on new website format and function</b> <i>Aurélie Carlier, Patrick van Rijn</i>
<b>11.00 – 12.30</b>	<b>Poster presentations and drinks</b>

<b>12.30 – 13.30</b>	<b>Lunch Break</b>
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<b>13.30 – 14.20 (8+2 min)</b>	<b>Oral Presentations</b> <b>Chair: Irene Lodoso Torrecilla</b>
27	<b>Development of a Nanofabricated Bone-on-a-Chip as Regeneration Model</b> <i>V.P. Galván</i> , MERLN, Maastricht University, Maastricht
28	<b>An Ex Vivo Osteochondral Plug Culture Platform to Study Bone Ingrowth</b> <i>N.A.P. van Gestel</i> , Biomed. Engin., Eindhoven University of Technology, Eindhoven
29	<b>Nano-Ghosts As Novel System For Targeted Delivery Of RNA Interference And Stimulation Of Cartilage Repair</b> <i>J. Oieni</i> , Dep. of Orthopaedics, Erasmus MC, Rotterdam
30	<b>Angiogenic Sprouting of Spheroids Jammed Within a Granular Medium.</b> <i>V.D. Trikalitis</i> , Biomechanical Engineering, University of Twente, Enschede
31	<b>Preliminary Study on the Formation of Mesoporous Glasses in the SiO<sub>2</sub>/CaO/P<sub>2</sub>O<sub>5</sub> System and Their Recrystallization Behaviour</b> <i>M. Schumacher</i> , MERLN, Maastricht University, Maastricht

<b>14.20 – 14.50</b>	<b>Coffee break</b>
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<b>14.50 – 15.40 (8+2 min)</b>	<b>Oral Presentations</b> <b>Chair: Vasileios Trikalitis</b>
32	<b>Development of a Multifunctional Antimicrobial Supramolecular Biomaterial</b> <i>M.G.J. Schmitz</i> , Biomedical Engineering, Eindhoven University of Technology, Eindhoven
33	<b>Selecting Living Human Mesenchymal Stem Cells with an Increased Proliferation Using a TWIST1 RNA-based Probe</b> <i>C. Voskamp</i> , Dep. of Orthopaedics, Erasmus MC, Rotterdam
34	<b>Follistatin Effects in Migration, Vascularization and Osteogenesis In Vitro and Bone Repair In Vivo</b> <i>S. Fahmy-Garcia</i> , Dep. of Orthopedics, Erasmus MC, Rotterdam
35	<b>Selective Targeting of Cancer Cells with Phenylboronic Acid Nanogels</b> <i>G. Zu</i> , Biomedical Engineering, UMC Groningen Groningen
36	<b>Optimization of a Macroporous Microwell-array Device for Transplantation of Pancreatic Islets</b> <i>R.H.W. de Vries</i> , MERLN, Maastricht University, Maastricht

<b>15.40</b>	<b>Announcement of the chair, poster and presentation awards</b>
<b>16.00</b>	<b>Closure of the meeting</b>

**THANK YOU!**

**SEE YOU NEXT YEAR!**