QRW Programme

Stem Cells & Regenerative Medicine Satellite Day 1

28 August – 29 August, 2016

Rutherford Hotel, Nelson, New Zealand

Sunday 28 August		
Time	**Details**	**Location**
	Welcome	
8.55am - 9.00am	**Assoc Prof Tim Woodfield (University of Otago Christchurch)**	**Riwaka Room**
	Session 1: Opportunities/challenges for Translational Regenerative Medicine for bone repair **Chaired by Assoc Prof Tim Woodfield (University of Otago Christchurch), Prof Jillian Cornish (University of Auckland)**	
9.00am - 9.30am	**Prof Richard OREFFO (RM1)** University of Southampton, UK *Translating skeletal stem cells and environmental niches for bone regeneration: from bench to clinic.*	**Riwaka Room**
9.30am -10.00am	**Prof Justin COOPER-WHITE (RM2)** University of Queensland, AUS *Mimicking developmental drivers of osteogenic commitment in perivascular stem cells for bone regeneration*	**Riwaka Room**
10.00am-10.30am	**Morning Tea**	**Maitai 1**
	Session 2: Opportunities/challenges for Translational Regenerative Medicine for cartilage and bone repair **Chaired by Prof Justin Cooper-White (**University of Queensland**), Dr Jelena Rnjak-Kovacina (U University of New South Wales)**	
10.30am - 11.00am	**Prof Wayne McILWRAITH (RM3)** Colorado State University, USA *Translational regenerative medicine in articular cartilage repair*	**Riwaka Room**
11.00am - 11.30am	**Assoc Prof Tim WOODFIELD (RM4) Sponsored by Thermo Fisher Scientific** University of Otago Christchurch, NZ *3D BioPrinting and BioAssembly of Tissue Organoids for Regeneration of Cartilage and Bone*	**Riwaka Room**
11.30am - 12.00am	**Prof Jillian CORNISH (RM5)** University of Auckland, NZ *Biological Strategies for Promoting Bone Healing for Translational Regenerative Medicine*	**Riwaka Room**
12.00am - 12.30am	**Prof Xuebin YANG (RM6)** University of Leeds, UK *The Effect of a Novel HDAC inhibitors on Osteogenic and Adipogenic Differentiation of Human Adipose Derived Stem Cells*	**Riwaka Room**

12.30pm-1.30pm	**Lunch**	**Maitai 1**
<u>Session 3: New Frontiers in Biomaterials and stem cell delivery for functional tissue engineering</u> **Chaired by Prof Richard Oreffo (University of Southampton), Prof Wayne McIlwraith (Colorado State University)**		
1.30pm – 2.00pm	**Dr Jelena RNJAK-KOVACINA (RM7)** University of New South Wales, AUS *Biomimetic approaches toward tissue vascularisation*	**Riwaka Room**
2.00pm - 2.30pm	**Dr Nuno ALVES (RM8)** Polytechnic Institute of Leiria, Portugal *Hybrid additive manufacturing systems for the production of 3D structures for osteochondral tissue regeneration*	**Riwaka Room**
2.30pm - 2.50pm	**Dr Vitor CORRELO (RM9)** University of Minho, Portugal *Engineering cell-adhesive hydrogels for Tissue Engineering purposes*	**Riwaka Room**
2.50pm-3.10pm	**Dr Khoon LIM (RM 10)** University of Otago Christchurch, NZ *Novel Visible Light Crosslinked Bioinks for 3D BioPrinting in Tissue Engineering and Regenerative Medicine.*	**Riwaka Room**
3.10pm-3.30pm	**Dr Cameron BROWN (RM11)** University of Oxford, UK *Understanding and exploiting structure-function relationships in naturally-derived materials*	**Riwaka Room**
3.30pm-4.00pm	**Afternoon tea**	**Maitai 1**
<u>Session 4: New Frontiers in Biomaterials and stem cell delivery for functional tissue engineering</u> **Chaired by Prof Xuebin Yang (University of Leeds), Dr Vitor Corello (University of Minho)**		
4.00pm - 4.30pm	**Prof Yin XIAO (RM12)** Queensland University of Technology, AUS *Osteoimmunology in the development of bone Biomaterials*	**Riwaka Room**
4.30pm - 4.50pm	**Dr David MUSSON (RM13)** University of Auckland, NZ *Evaluating biomaterial augments for improving tendon-bone healing*	**Riwaka Room**
4.50pm - 5.10pm	**Dr Jaydee CABRAL (RM14)** University of Otago, NZ *Development and characterization of chitosan/ dextran-based hydrogels for adult stem cell delivery*	**Riwaka Room**
5.10pm-5.30pm	**Panel Discussion:** *What are the global challenges in accelerating translational Regenerative Medicine? Should regulation be more rigorous or less rigorous?*	**Riwaka Room**
6.00pm-7.30pm	**Poster Session/Mixer**	**Maitai 2**

Summary of Abstracts for the Poster Session Aug 28th

No.	Title	Presenter	Institutions
RM15	Finding the Links between Knee Injuries and Osteoarthritis	Leung, S.[1], Musson, D.[2], McGlashan, S.[3], Cornish, J.[2], Anderson, I.[1], Shim, V.[1]	[1]Auckland Bioengineering Institute, University of Auckland, NZ, [2]Department of Medicine, Faculty of Medical and Health Sciences, University of Auckland, NZ, [3]Department of Anatomy and Medical Imaging, Faculty of Medical and Health Sciences, University of Auckland, NZ
RM16	Bioprinting of complex cell-encapsulated hydrogels with high spatial resolution via visible light photo-crosslinking and digital light processing	K.S. Lim[1], R. Levato[2], P.F. Costa[2,3], M.D. Castilho[2], K. van Dorenmalen[2,3], F.P.W. Melchels[4], D. Gawlitta[5], J. Malda[2,6], T.B.F. Woodfield[1]	[1]Christchurch Regenerative Medicine and Tissue Engineering (CReaTE) Group, Dept. of Orthopaedics Surgery and Musculoskeletal Medicine, University of Otago Christchurch, New Zealand. [2]Dept. of Orthopaedics, University Medical Center Utrecht, The Netherlands. [3]Utrecht Biofabrication Facility, University Medical Center Utrecht, The Netherlands. [4]Institute of Biological Chemistry, Biophysics and Bioengineering, Heriot-Watt University, Edinburgh, United Kingdom

			[5]Dept. of Oral and Maxillofacial Surgery and Special Dental Care, University Medical Center Utrecht, The Netherlands. [6]Dept. of Equine Sciences, Utrecht University, Utrecht, The Netherlands.
RM17	Bioassembly of complex multicellular tissues: an automated 3D microtissue assembly system for tissue-engineering and high throughput screening.	Mekhileri, N.V.[1], Schon, B.[1], Lim, K.S.[1], Mutreja, I.[1], Hooper, G.[1], Woodfield, T.B.F[1]	[1]Department of Orthopaedic Surgery, Centre for Bioengineering & Nanomedicine, University of Otago, Christchurch, New Zealand
RM18	Covalent incorporation of heparin improves chondrogenic tissue formation in gelatin based hydrogels designed for cartilage tissue engineering.	Gabriella Brown[1], Bram Soliman[1], Sarah Bertlein[2], Khoon Lim[1], Gary Hooper[1], Jürgen Groll[2], Tim Woodfield[1].	[1] Christchurch Regenerative Medicine and Tissue Engineering (CReaTE) Group, Department of Orthopaedic Surgery & MSM, University of Otago, Christchurch, New Zealand; [2]Department for Functional Materials in Medicine and Dentistry, University of Würzburg, Pleicherwall 2, 97070 Würzburg, Germany
RM19	Photo-curable Thiol-ene Gelatin Based Hydrogels as Bioinks for Bioprinting	Soliman, B.G.[1], Brown, G.C.J.[1], Lim, K.S.[1], Woodfield, T.[1]	[1] Christchurch Regenerative Medicine and Tissue Engineering (CReaTE) group, Department of Orthopaedic Surgery, University of Otago,

			Christchurch, New Zealand.
RM20	Gelatin - Magnesium Carbonate nanocomposite hydrogels for improved osteogenic differentiation of mesenchymal stem cells	Mutreja, I.[1], Lim, K.S.[1], Maradze, D.[2], Liu, Y.[2], Hooper, G.[1], Woodfield, T.B.F[1]	[1]Department of Orthopaedic Surgery, Centre for Bioengineering & Nanomedicine, University of Otago, Christchurch, New Zealand. [2]Loughborough University, Centre of Biological Engineering, Wolfson School of Mechanical and Manufacturing Engineering, United Kingdom
RM21	Self-assembling peptide supports osteoblast growth	Park, Y-E.[1], Rodriguez, L.[2], Brimble, M.[2], Naot, D.[1], Musson, D.[1], Cornish, J.[1]	[1]Bone and Joint Research Group, Department of Medicine, University of Auckland, NZ; [2]Department of Chemical Sciences, School of Biological Science, University of Auckland, NZ
RM22	Kinematic model of the hindlimb of the rat for functional assessment after peripheral nerve injury	Amado, S.[1], Ferreira, N.M.[1], Alves, N.[1], Morouço, P.[1]	[1]Centre for Rapid and Sustainable Product Development, Polytechnic Institute of Leiria, Portugal
RM23	Mathematical concepts to be used in biofabrication	Martins-Ferreira, N.[1], Amado, S.[1], Alves, N.[1], Morouço, P.[1]	[1]Centre for Rapid and Sustainable Product Development, Polytechnic Institute of Leiria, Portugal