

## QRW Programme

### Regenerative Medicine and Tissue Engineering

Thursday 5 September – Friday 6 September, 2019

Rydges Hotel, Queenstown, New Zealand

## Thursday 5 September

Time	Details	Location
<b>Musculoskeletal Regeneration 1</b>		
<b>Chaired by Jill Cornish (University of Auckland) and Nicholas Ashton (University of Utah).</b>		
8.30am – 9.00am	<b>Jill Cornish (R1)</b> <i>sponsored by Abacus dx</i> University of Auckland <i>Innovative new strategies in skeletal regenerative medicine</i>	QT Von Rm
9.00am - 9.15am	<b>Scott Bolam (R2)</b> <i>Sponsored by TrendBio</i> University of Auckland <i>Creating and Evaluating a Novel Sheep Abductor Tendon Tear Model</i>	QT Von Rm
9.15am - 9.45am	<b>Aaron Schindeler (R3)</b> Westmead Children's Hospital, Sydney <i>Gene editing tools for functional genomics and gene editing</i>	QT Von Rm
9.45am – 10.00am	<b>Emma Buckels (R25)</b> University of Auckland <i>Preptin knockout mice have increased bone volume without overt metabolic changes</i>	QT Von Rm
10.00am - 10.30am	<b>Morning Tea</b>	Trade Area
<b>Regenerative Medicine Techniques</b>		
<b>Chaired by Elena De-Juan-Pardo (University of Western Australia).</b>		
10.30am - 11.00am	<b>Matthew Porteus (R4)</b> <i>Sponsored by In Vitro Technologies</i> Stanford University <i>Efficient Engineering of IPS Cells using Genome Editing</i>	QT Von Rm
11.00am- 11.30am	<b>Sally McArthur (R5)</b> Swinburne University of Technology <i>Challenges in characterizing tissues in 4D</i>	QT Von Rm
11.30am - 12.00pm	<b>Anna Brooks (R6)</b> <i>Sponsored by Thermo Fisher Scientific</i> University of Auckland <i>Dissecting cellular heterogeneity of the human adipose tissue-derived stromal vascular fraction using single cell technologies</i>	QT Von Rm
12.00pm - 12.30pm	<b>Alex Dixon (R7)</b> University of Auckland <i>Non-destructive imaging of collagen architecture in biological membranes</i>	QT Von Rm
12.30pm – 1.30pm	<b>Lunch</b>	Trade Area

<b>Neural and Cardiovascular Regeneration</b>		
<b>Chaired by: Haruna Suzuki-Kerr (University of Auckland) and Dawn Coates (University of Otago)</b>		
1.30pm - 2.00pm	<b>Simon O'Carroll (R8)</b> University of Auckland <i>Modulation of chondroitinase sulphate proteoglycans combined with exercise rehabilitation leads to axonal regeneration and functional improvement after spinal cord injury</i>	QT Von Rm
2.00pm - 2.30pm	<b>Andrew Clarkson (R9)</b> University of Otago <i>Use of biomaterials to enhance neural tissue regeneration</i>	QT Von Rm
2.30pm - 3.00pm	<b>Khoon Lim (R10)</b> University of Otago <i>Photo-click Gelatin-Norbornene Hydrogels for Biofabrication of Vascularized Tissue</i>	QT Von Rm
3.00pm - 3.10pm	<b>Anthony Yee-Goh (R26)</b> University of Otago <i>Adipose Stem Cells Versus Cardiac Progenitor Cells: The Better Candidate for Cardiovascular Disease</i>	QT Von Rm
3.10pm – 3.20pm	<b>Alireza Tavakolinejad (R27)</b> <i>Gene and protein expression of endogenous serine proteases and protease inhibitors in alveolar epithelial cells</i>	QT Von Rm
3.20pm – 3.30pm	<b>Steve Waqanivalagi (R28)</b> University of Auckland <i>Non-invasive imaging of pericardium using micro-CT</i>	QT Von Rm
3.30pm - 4.00pm	<b>Afternoon Tea</b>	Trade Area
<b>Biomaterials</b>		
<b>Chaired by Jaydee Cabral (University of Otago) and Leonardo Negron (Callaghan Innovation).</b>		
4.00pm - 4.30pm	<b>Laura Domigan (R11)</b> <i>Sponsored by Abcam</i> University of Auckland <i>Lens protein biomaterials for use in ocular surgery</i>	QT Von Rm
4.30pm - 5.00pm	<b>Sandi Dempsey (R12)</b> Aroa Biosurgery <i>Isolation and Identification of a Trophic Factor for Mesenchymal Stem Cells; a Functional Decorin Protein Fragment Cleaved from Ovine Forestomach Matrix by Macrophage Cells</i>	QT Von Rm
5.00pm - 5.30pm	<b>Mathew Cumming (R13)</b> Plant and Food, Nelson <i>Marine-derived collagen and gelatin: Expanding the ingredients pantry for biomaterial fabrication</i>	QT Von Rm
5.30pm - 5.45pm	<b>Dina Abdelmonein (R29)</b> University of Otago <i>Efficacy and safety of alpha lipoic acid-capped silver nanoparticles for oral application</i>	QT Von Rm
5.45pm – 6.00pm	<b>Sailakshmi Velamoor (R30)</b> AgResearch <i>Investigating the structural assembly of keratins in biological materials using electron microscopy</i>	QT Von Rm
7.00pm - 10.00pm	<b>Social function</b>	<b>The London</b> 36 Shotover Street

<b>Friday 6 September</b>		
<b>Time</b>	<b>Details</b>	<b>Location</b>
<b>Musculoskeletal Regeneration 2</b> <b>Chaired by Brya Matthews (University of Auckland).</b>		
8.30am - 9.00am	<b>Warwick Duncan (R14)</b> University of Otago <i>Regeneration for dental implant therapy: clinical requirements and preclinical models</i>	QT Von Rm
9.00am – 9.30am	<b>Nicholas Ashton (R15)</b> University of Utah <i>Targeting Bacterial Biofilms in Translational Research</i>	QT Von Rm
9.30am – 9.40am	<b>Stu Irwin (R31)</b> University of Auckland <i>Limitations of in vivo bioluminescent imaging of S. aureus Xen36 biofilm-based Infection</i>	QT Von Rm
9.40am – 10.00am	<b>Ellison Aldrich (R16)</b> Massey University <i>The Horse as a Model and Translational Stepping Stone in Orthopaedic Research</i>	QT Von Rm
10.00am - 10.30am	<b>Morning Tea</b>	Trade Area
<b>Biofabrication</b> <b>Chaired by Khoon Lim (University of Otago).</b>		
10.30am - 11.00am	<b>Elena De-Juan-Pardo (R17)</b> University of Western Australia <i>Melt electrowriting: An emerging additive biomanufacturing technique for soft tissue engineering</i>	QT Von Rm
11.00am- 11.30am	<b>Tim Woodfield (R18)</b> University of Otago <i>Biofabrication of the Musculoskeletal Tissue Niche: Tissue Spheroid and Bioink Platforms</i>	QT Von Rm
11.30am - 11.45am	<b>Bram Soliman (R32)</b> University of Otago <i>Two-step ruthenium-catalysed bioprinting of low-viscous cell-instructive bioinks as a platform for tissue-specific bioink development</i>	QT Von Rm
11.45am - 12.00pm	<b>Cesar Alcala (R33)</b> University of Otago <i>High fidelity bioprinting of nanocomposite bioinks supporting osteogenic and angiogenic tissue formation</i>	QT Von Rm
12.00pm - 12.10pm	<b>Emily Lam Po Tang (R34)</b> University of Auckland <i>The effects of different buffers on the physico-mechanical properties of gelatin-methacryloyl (GelMA) hydrogels</i>	QT Von Rm
12.10pm – 12.20pm	<b>Minami Yoshida (R35)</b> University of Otago <i>Development and in vitro biocompatibility of 3D printed scaffolds for intervertebral disc tissue engineering</i>	QT Von Rm
12.30pm – 1.30pm	<b>Lunch</b>	Trade Area

<b>Stem Cells</b> <b>Chaired by Billy Sheppard (University of Auckland).</b>		
1.30pm - 2.00pm	<b>Ed Stanley (R19)</b> Murdoch Children's Research Institute <i>Investigating the Immunology of Type 1 Diabetes using Pluripotent Stem Cells</i>	QT Von Rm
2.00pm - 2.30pm	<b>Brya Matthews (R20)</b> University of Auckland <i>Identification and tracking of periosteal progenitors during fracture healing</i>	QT Von Rm
2.30pm – 3.00pm	<b>Dawn Coates (R21)</b> University of Otago <i>Stem cells for regenerative medicine in dentistry</i>	QT Von Rm
3.00pm - 3.15pm	<b>Sarah Meidinger (R36)</b> University of Auckland <i>Developing CRISPR/Cas9 gene-editing methods to generate patient-specific, gene-edited skin substitutes for patients with Epidermolysis bullosa</i>	QT Von Rm
3.15pm - 3.30pm	<b>Zhen Dong (R37)</b> University of Otago <i>Identification of stem cell biomarkers using deer antler as a model of mammalian organ regeneration</i>	QT Von Rm
3.30pm - 4.00pm	<b>Afternoon Tea</b>	Level 5 Lobby
<b>Skin and Wound Healing</b> <b>Chaired by Laura Domigan (University of Auckland).</b>		
4.00pm - 4.30pm	<b>Swee Tan (R22)</b> Gilles McIndoe Research Institute <i>Radical concepts underscore paradigm shifts – from enigmatic infantile haemangioma to cancer</i>	QT Von Rm
4.30pm - 5.00pm	<b>Vaughn Feisst (R23)</b> <i>Sponsored by Mediray</i> University of Auckland <i>Intelligently Engineered Skin</i>	QT Von Rm
5.00pm - 5.15pm	<b>Jaydee Cabral (R38)</b> University of Otago <i>Wound healing biomaterials as cell and drug delivery vehicles</i>	QT Von Rm