

3rd Advanced Materials and 3D Printing in Medicine Workshop

Christchurch, New Zealand | 15-16th April 2023
University of Otago Christchurch, Rolleston Lecture Theatre, 2 Riccarton Ave



Saturday 15 April – Sunday 16 April 2023

Saturday 15 (Day 1) – 8:50am – 4:30pm

Sunday 16 (Day 2) – 08:30am – 2:30pm

University of Otago, Christchurch

2 Riccarton Avenue, Christchurch Central City, Christchurch 8011

Ground Floor, Rolleston Lecture Theatre



Day One - Saturday 15th April			
0830-0850	Registration desk open		
0850-0900	Welcome		Talk Title:
0900-0930	Prof Jason Burdick	Bowman Endowed Professor, BioFrontiers Institute, Chemical and Biological Engineering, University of Colorado Boulder (USA)	Advances in Suspension Bath Printing to Process Biomedical Hydrogels
0930-1000	A/Prof Jinah Jang	Convergence IT Engineering, Life Science, and School of Convergence Science and Engineering, Pohang University of Science and Technology POSTECH (South Korea)	Bioprinting Technology for Advanced Future Therapeutics
1000-1030	A/Prof Shrike Zhang	Zhang Lab for 3D bioprinting, organ-on-a-chip, regenerative engineering, and bioanalysis, Harvard Medical School/Brigham and Women's Hospital (USA)	Expanding the Capacities of 3D Bioprinting through Methodological Advancements
1030-1100	Morning Tea		
1100-1130	A/Prof Khoon Lim	Light Activated Biomaterials Group, School of Medical Sciences, Charles Perkins Centre, University of Sydney (Australia) / University of Otago Christchurch (New Zealand)	Spatio-temporal modulation of physical cues using a combination of macromolecular chemistry and biofabrication approaches
1130-1200	Prof Heungsoo Shin	Department of Bioengineering, Hanyang University (South Korea)	Engineering multi-cellular spheroids using bioinspired materials for tissue engineering applications
1200-1300	Lunch		
1300-1330	Prof Wai-yeo Yeong	School of Mechanical & Aerospace Engineering, Deputy Director, HP-NTU Digital Manufacturing Corporate Lab, Nanyang Technological University (Singapore)	Bioprinting of cells-electronics interface for tissue engineering
1330-1400	Prof Tim Woodfield	Christchurch Regenerative Medicine and Tissue Engineering (CReaTE) Group, Dept. of Orthopaedic Surgery, Centre for Bioengineering & Nanomedicine, University of Otago Christchurch (New Zealand)	Regenerative Manufacturing of Bioactive Materials: From Low Modulus Titanium Implants to Platform Bioinks and Biosesins for Biofabrication
1400-1430	Prof Hala Zreiqat	Payne-Scott Professor, Director of the ARC Training Centre for Innovative BioEngineering, University of Sydney (Australia)	Advances in high-resolution 3D printing of bioceramics and hurdles in translation to clinical applications.
1430-1500	Afternoon Tea		
1500-1530	Dr Serena Duchi	Department of Surgery, The University of Melbourne-ACMD @ St. Vincent's Hospital Melbourne (Australia)	In situ cartilage tissue engineering: A path towards clinical translation
1530-1600	A/Prof Mark Fear	Burn Injury Research Unit, University of Western Australia/Fiona Wood Foundation (Australia)	Developing intraoperative 3D-bioprinting to restore skin tissue after injury
1600-1630	Technical & Clinical Panel Discussion - Day 1	What to print or not to print – is that the question? Challenges to progress widespread technology adoption and clinical translation?	
Day Two - Sunday 16th April			
0830-0900	Prof Jurgen Groll	Chair for Functional Materials in Medicine and Dentistry, Institute for Functional Materials & Biofabrication, University Wurzburg (Germany)	Talk Title: ECM-Inspired Structural Motifs as Biomaterial Design Criterium towards Topographic Immunomodulation
0900-0930	Prof Justin Cooper-White	Head of School of Chemical Engineering, University of Queensland, Director of the Australian National Fabrication Facility-Queensland Node (Australia)	Time to get Hairy and Open the Window! – Encoding Interactions and Printability into Biomaterials
0930-1000	Prof Simon Cool	Director, University of Queensland Advanced Cell Therapy Manufacturing Initiative, School of Chemical Engineering, (Australia)	Development of advanced glycosaminoglycan-based devices for enhanced tissue regeneration
1000-1030	Morning Tea		
1030-1050	Dr Christoph Meinert	CEO, Gelomics Pty Ltd (Brisbane, Australia)	Semisynthetic extracellular matrices for 3D cell and organoid culture
1050-1110	CELLINK, BioINX		
1110-1140	Technical and Industry Panel Discussion - Day 2	Priorities to address technical, industry and regulatory roadblocks in translation of Regenerative Medicine and Biofabrication to clinical success	
1140-1240	Lunch		
1240-1420	3D Printing industry displays & demonstration	CELLINK, BioINX, AXT	All delegates will move in allocated groups around each of the industry display/ demonstration booths every 30min
1420-1430	Closing		