



UNIVERSITY OF TORONTO
FACULTY OF DENTISTRY



CIHR IRSC
Canadian Institutes of Health Research
Instituts de recherche en santé du Canada



Network for Canadian
Oral Health Research
Réseau canadien de recherche
en santé buccodentaire

Technology Transfer and Commercialization (TTC)



30th & 31st July, 2015

University of Toronto
Rotman School of Management
Rotman Desautels Hall
105 St. George Street
Toronto, ON M5S 3E6
Canada

Title: Technology Transfer and Commercialization (TTC) Workshop: Career Paths and Research Funding Opportunities

Dates: July 30 & 31, 2015

Sponsored by: Network for Canadian Oral Health Research (NCOHR)

Hosted by: The Faculty of Dentistry at the University of Toronto

Organized by: Faculty contacts - Professors Paul Santerre and Yoav Finer

Student contact – Dr. Zeeshan Sheikh

Administrative support - Marina Zubkov (admin.biomaterials@dentistry.utoronto.ca)

Purpose: The goal of this two day workshop is to introduce and discuss the potential opportunities that exist by taking a pro-active approach to implementing research commercialization into curriculum and to encourage members of our dental science community to take advantage of this changing research and training environment. Such activity now provides significant new and creative research career pathways for trainees and their research supervisors thanks to new industrial post-doctoral awards and Campus linked accelerators for start up companies. Researchers can capitalize on grant funding opportunities such as investigator/company grants from tri-council programs and strategic provincial innovation programs as well as national programs such as Mitacs. Discussion groups to develop strategies for growth in the area, keynote speakers who will present on case studies related to the dental field, and presentations on Institute driven initiatives and curriculum changes which have been designed with an applied perspective, will be some elements of this unique workshop.

Who should attend: Faculty members looking to expand their funding opportunities or who are looking to achieve translational impact from their research findings, postdoctoral fellows and graduate students expressing an interest in career path alternatives to academia but would like to retain the opportunity of working in a knowledge-based environment, graduate program coordinators who are seeking to refresh their traditional graduate curriculum programs.

Number of attendees: LIMITED space is available for 70 trainees and 20 faculty members.

All trainees approved to attend the workshop are asked to generate a POSTER based on their own research which addresses the following:

- *Title*
- *Authors and affiliation*
- *Introduction explaining the clinical rationale and impact of research on dentistry and oral health.*
- *Hypothesis and objectives*
- *Two key data sets that provide evidence which supports or negates the hypothesis; a discussion which provides the clinical significance of the new data; estimate of the future work and time/resources needed to get the concept or knowledge to clinic.*
- *Acknowledgements and references*

To attend the **2-Day Technology Transfer and Commercialization (TTC) Workshop** and/or

½ Day **[Student Trainee Workshop](#)**, complete and submit an **[APPLICATION FORM](#)**.



Technology Transfer and Commercialization (TTC) Workshop: *Career Paths and Research Funding Opportunities* **Workshop Agenda, Day 1** **July 30, 2015**

Morning Session Chair: Professor Paul Santerre

7:30 to 8:15 Continental Breakfast and Registration. Trainees mount posters.

8:15 to 8:20 Introduction to the Workshop

- Paul Santerre, Professor of Biomaterials, University of Toronto, Director of Research Faculty for Techna at UHN, CSO of Interface Biologics Inc., co-lead for H2i (campus linked accelerator in the Faculty of Medicine).

8:20 to 8:30 Network for Canadian Oral Health Research (NCOHR)



Debora Matthews, Director of NCOHR

Dr. Debora Matthews is Professor and Assistant Dean of Research in the Faculty of Dentistry at Dalhousie University, Halifax. She is Past President of the Canadian Association of Dental Research, and Director of the Network for Canadian Oral Health Research – both of which provide research networking potential crucial to advancing oral health research in Canada. Her research focuses on translating clinical research knowledge into clear and useful formats for clinicians and their patients, and addressing the deficit in oral health experienced by vulnerable populations.

8:30 to 9:30 Startups and Industry Collaborations with University Research Programs
(45min + 15min Q&A)



Mike Kehoe, President and CEO of Keystone Dental, Inc.

Mr. Mike Kehoe has over 30 years experience in the commercialization of medical devices in the ophthalmic and oral health care industries. He has founded companies in both Canada and the United States and successfully transferred technology from public and private institutions. He is currently President and CEO of Keystone Dental, Inc., a company which develops, manufactures and markets dental implants and prosthetic accessories, and tissue regenerative biomaterials for use in oral surgery. The company's headquarters are in Burlington, Massachusetts and the firm has manufacturing and distribution facilities in Irvine, California and Verona, Italy.



Technology Transfer and Commercialization (TTC) Workshop: *Career Paths and Research Funding Opportunities* **Workshop Agenda, Day 1 (cont'd)** **July 30, 2015**

9:30 to 10:30 Mitacs Programs, Case Studies
Overview of Mitacs (20 minutes)
Description of two case study projects (20 minutes per presentation):



Fiona Cunningham, Director, Business Development

Fiona completed her PhD at the University of Toronto, in the department of Biochemistry. Prior to joining the Mitacs Ontario Business Development team, Fiona held a Field Application Specialist position with a life science research company called New England Biolabs, where she advised scientists on DNA and Enzyme based research tools to facilitate their research. Now in her current role as a Director of Business Development with Mitacs, Fiona connects University Professors, graduate students and postdoctoral fellows with industry to tackle mutually interesting research challenges.



Jillian Hatnean, Business Development Specialist

Dr. Jillian Hatnean (Windsor, ON) received a B.Sc. Honours Biochemistry with Thesis from the University of Windsor (2006), Ph.D. in Chemistry at Windsor (2011) and a PDF (2013) at UofT. She has been the Mitacs Business Development Specialist for 1.5 years, currently based in Toronto, keeping her roots in academia while promoting Mitacs mandate to drive innovation in Canada through collaborative research projects with academia and industry.

10:30 to 10:45 Coffee Break

10:45 to 11:45 NSERC Programs
Overview of NSERC translation portfolio
Description of two case study projects (20 minutes per presentation):



Alexandra Reid, Research & Innovation Development Officer. Agente de développement de la recherche et de l'innovation., NSERC Ontario Regional Office, . Le Bureau régional du CRSNG de l'Ontario

As a Research and Innovation Development Officer for the NSERC Ontario Regional office in Mississauga, Sandy is responsible for promoting NSERC's Research Partnership Programs, including the evaluation of Engage grant applications. She assists companies, universities and colleges in Ontario to achieve successful research collaborations.



Technology Transfer and Commercialization (TTC) Workshop: *Career Paths and Research Funding Opportunities* **Workshop Agenda, Day 1 (cont'd)** **July 30, 2015**

11:45 to 12:45 Ontario Centers of Excellence

An example of a provincial network supporting research commercialization (typical funding programs and the youth entrepreneurial agenda):



Laura Yu, Business Development Manager, Central Ontario Region

Laura is Business Development Manager at the Ontario Centres of Excellence. She develops and manages industry-academic projects and start-up opportunities. Her areas of interest are in advanced health technologies, energy and clean tech, social innovation, small business management, entrepreneurship, and developing global linkages in the start-up ecosystem.

Afternoon Session Chair: Dr. Zeeshan Sheikh

12:45 to 2:30 Lunch and Breakout Sessions

Questions for discussion:

- Are we preparing our students for knowledge translation careers?
- Are researchers motivated to engage in commercial translation?
- What role should Universities and program departments/Faculties play in translation?
- What role should industry play in integration with post-secondary institutions?

2:45 to 3:45 CIHR Driven Research and its Translation

The storyline of three CIHR-funded researchers from different dental schools in Canada who have driven entrepreneurial innovation out of their research programs:



Walter Siqueira, Clinician Scientist at Western University (Schulich), Saliva Matters Inc. (chitosan nano-particles for the release of bioactive agents to reduce dental calculus formation)

Dr. Walter Siqueira is one of the first and only dental clinician - scientists in Canada conducting salivary proteome research. His research has focused on how saliva could be used to improve the health of patients, both as a diagnostic tool and as a therapeutic one. His current interests focus on developing a synthetic protein or peptide with all the protective characteristics of acquired enamel pellicle, to use in a toothpaste or mouthwash to improve the protective outcome. His research is funded by CIHR, NSERC and CFI grants, ITI foundation (Switzerland) and research contracts with national and international companies. In addition, Dr. Siqueira hold the prestigious title of CIHR New Investigator.



Technology Transfer and Commercialization (TTC) Workshop: *Career Paths and Research Funding Opportunities*

Workshop Agenda, Day 1 (cont'd) July 30, 2015



John E. Davies, University of Toronto, Canada, Director of the Bone-Interface Group, Faculty of Dentistry and Institute of Biomaterials and Biomedical Engineering, Founding President of Tissue Regeneration Therapeutics Inc.

Dr. John E. Davies is a Full Professor at IBBME and Faculty of Dentistry at the University of Toronto. He is also the founding President of Tissue Regeneration Therapeutics Inc., an established Toronto-based mesenchymal stem cell company. His DSc was awarded for his bone biomaterials research. He has edited 2 books and also published over 200 scientific papers and book chapters.



Jake Barralet, is Vice Chair (Research) and Alan Thompson Chair in Surgical Research, in the Department of Surgery and full Professor in the Faculty of Dentistry at McGill University.

Dr. Jake Barralet is a Materials Engineer specializing in Biomaterials. He worked for Smith and Nephew before going into academia at the University of Birmingham then joining McGill in 2004. He is co-director of the new Surgical Innovation concentration in Experimental Surgery and the Bioentrepreneurialism course in the Faculty of Dentistry. He serves on the editorial board of 6 biomaterials journals, the board of directors of the Canadian Society for Pharmaceutical Sciences and the Scientific Advisory Board of the Controlled Release Society.

3:45 to 4:45 Institute of Musculoskeletal Health and Arthritis (IMHA) Agenda and Advocacy Groups engaged in translation.

Presentation on where CIHR and IMHA are heading over the next decade-with a focus on translation (SPOR, project and foundation grants, etc.)



Hani El-Gabalawy, Scientific Director of IMHA, University of Manitoba

Dr. Hani El-Gabalawy is the Scientific Director of the CIHR Institute of Musculoskeletal Health and Arthritis. He is also a Professor of Medicine and Immunology and a senior clinician scientist at the University of Manitoba. An internationally recognized rheumatologist, his research has focused on the mechanisms initiating and sustaining joint inflammation in rheumatoid arthritis (RA). He has published landmark studies on synovial biology, the pathogenesis of early arthritis, and has recently established a unique First Nations cohort to study gene-environment interactions in the pre-clinical phase of arthritis

5:00 to 6:30 Networking Event and Student Poster Discussion and Judging

Evening free (Group leaders from breakout sessions to prepare reports for Day 2.)
Consider a walk through MaRS, City of Toronto's entrepreneurial research incubator



Technology Transfer and Commercialization (TTC) Workshop: *Career Paths and Research Funding Opportunities* **Workshop Agenda, Day 2** **July 31, 2015**

Morning Session Chair: Professor Paul Santerre

8:00-8:30am Continental Breakfast

8:30 to 9:30 Keynote Speaker: Raphael Hofstein, MaRS Innovation



Raphael (Rafi) Hofstein joined MaRS Innovation as President and CEO in June 2009

Dr. Raphael Hofstein received his PhD and Master of Science degrees in Life Sciences and Chemistry from the Weizmann Institute of Science in Rehovot, Israel. His Bachelor of Science degree in Chemistry and Physics from the Hebrew University in Jerusalem.

Dr. Hofstein was the founder and served as chair of Hadasit BioHolding Ltd., a publicly-traded holding company (10 start-ups under management) on the Tel Aviv Stock Exchange (TASE) since 2005. Other directorships held on TASE publicly-traded companies include: Bioline RX (drug development); Exalenz (medical devices); and Evogene (agri-bio).

9:30 to 10:00 Investment Accelerator Fund (IAF)



Michelle McBane, Investor Director, Investment Accelerator Fund (iaf.marsdd.com)

Michelle has over 18 years of combined operational and venture capital experience. She joined VenGrowth in 2003, prior to which she was an analyst with Toronto-based Primaxis Technology Ventures, helping an investee company attract over \$4 million in venture capital financing. Additionally, Michelle spent 12 years in progressively senior roles with DuPont Canada

10:00 to 11:20 Vignettes of Commercialization



Paul Gratzer, Associate Professor, School of Biomedical Engineering at Dalhousie University and the CEO and Co-Founder of DeCell Technologies Inc.

Dr. Paul Gratzer is an Associate Professor in the School of Biomedical Engineering at Dalhousie University and the CEO and Co-Founder of DeCell Technologies Inc. located in Halifax, NS, Canada. DeCell Technologies Inc. is an emerging biomedical device manufacturer of advanced tissue products for use in wound healing and surgical reconstructions. The technology core to DeCell was developed over 20 years of research conducted by Dr. Gratzer and commercialization began in 2012 with the incorporation of DeCell Technologies Inc."

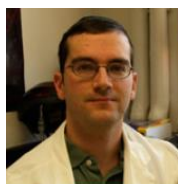


Technology Transfer and Commercialization (TTC) Workshop: *Career Paths and Research Funding Opportunities*

Workshop Agenda, Day 2 (cont'd) July 31, 2015



Kyle Battiston is a recent PhD graduate from the Institute of Biomaterials and Biomedical Engineering from the lab of Dr. Paul Santerre and co-founder of KSP2
Dr. Kyle Battiston's PhD research in the area of biomaterials and immune cell interactions involved the discovery of a family of polymers that limit inflammation when interacting with white blood. This research discovery is now being translated commercially by KSP2 as a polymeric coating for implanted biomedical devices to enable their long-term function in the body.



Michael Glogauer, Clinician Scientist, University of Toronto

Dr. Michael Glogauer is a dental clinician scientist who utilizes the oral cavity to study mucosal immunology and osteoimmunology. His combined training has resulted in research that includes significant knowledge translation programs in oral disease surveillance, innate immune competence and alveolar bone grafting. His work has been supported by CIHR, OCE and industry support.



Duane Hewitt, a former grad student and start up entrepreneur with Apollonia Health Inc., a partner with microbiologist Dennis Cvitkovitch

Duane Hewitt is a drug development scientist with over fifteen years of experience in the biotechnology industry including ten years living in the US. His work experience runs the gamut from Big Pharma (Schering-Plough) to a CRO (Xenogen Biosciences) to Academia (UMass-Amherst, McMaster) to multiple startups (VaxInnate, Viron, DNA Digital, Apollonia Health). Currently with Apollonia Health Mr. Hewitt is a Program Manager working in Research and Product Development as well as anything else that might be thrown his way.

11:20 to 11:30 Coffee Break



Technology Transfer and Commercialization (TTC) Workshop: *Career Paths and Research Funding Opportunities*

Workshop Agenda, Day 2 (cont'd) July 31, 2015

11:30 to 12:15 University of Toronto, Ontario's Campus Linked Accelerator (CLA)



Karen Sievwright is Executive Director of the University of Toronto's Banting and Best Centre for Innovation and Entrepreneurship

Dr. Karen Sievwright has a PhD in materials science and an MBA. Over the last thirteen years she has held senior roles in the not-for-profit sector, including Director of Research, MMO; Director of Research, Toronto Region Research Alliance; and President and Executive Director, HalTech Regional Innovation Centre. As Executive Director of the University of Toronto's Banting and Best Centre for Innovation and Entrepreneurship (BBCIE) – she oversees Canada's largest cluster of university-based entrepreneurs consisting of nine accelerators and incubators that has generated more than 200 companies and reaches more than 7,500 student entrepreneurs per year.

Afternoon Session Chair: Professor Yoav Finer

12:15 to 2:15 Lunch and Presentation of Breakout Group Outcomes from Day 1 (Q&A)

2:15 to 2:30 Break and Set Up Breakout Sessions

2:30 to 4:30 Breakout Sessions

Models of co-curricular entrepreneur activity

- What type of programs (culture; network and mentoring; incubation; competitions, etc.)?
- What would be the priority steps to recommend?
- Resources?

4:30 to 4:50 Brief Reporting from Breakout Sessions

4:50-5:00pm Closing Comments

- Professor Paul Santerre

5:00-6:30pm Networking Event



Technology Transfer and Commercialization (TTC) Workshop: *Career Paths and Research Funding Opportunities*

Workshop Agenda

Organizing Committee



Professor J. Paul Santerre has published >155 peer reviewed publications and is a listed inventor on >55 patents in the area of polymers, biodegradation, surface modification and drug delivery. He is a co-founder of Interface Biologics Inc. (formed in 2001 with medical technologies being sold and developed in Canada, Europe and the US) and currently the director for Physical Science Faculty in Techna at the University Hospital Network/University of Toronto. He has been appointed an International Fellow of

Biomaterials Science and Engineering (FBSE) (2004), a Fellow of the American Institute for Medical and Biological Engineering (2009), a Fellow of the American Association for the Advancement of Science (2011), and a Fellow of the Canadian Academy of Health Sciences (2013). He has received several awards for his innovation and industry related activity including the Julia Levy Award from the Canadian Society for Chemical Industry for translation of knowledge to product, the Natural Sciences and Engineering Research Council of Canada's Synergy Award in 2012, and the 2014 Manning prize (Canada's top Entrepreneurship/Innovator award).



Professor Yoav Finer

Dr. Yoav Finer, DMD, PhD, FRCD(C) is the George Zarb/Nobel Biocare Chair in Prosthodontics at the Faculty of Dentistry, and cross-appointed to the University's interdisciplinary Institute of Biomaterials and Biomedical Engineering. A graduate of U of T's specialty program in Prosthodontics, and the collaborative Ph.D. Program

Dentistry/IBBME in Biomedical Engineering, Dr. Finer maintains a part-time private practice limited to prosthodontics.

Dr. Finer's main areas of research include composite resin biodegradation, bacterial role and host-biomaterial interactions and the development of biomaterials and techniques for implant supported prostheses. His research has been well supported by the Canadian Institutes of Health Research (CIHR), National Institutes of Health (NIH) and industry.



Technology Transfer and Commercialization (TTC) Workshop: *Career Paths and Research Funding Opportunities*

Workshop Agenda

Organizing Committee (cont'd)



Student contact - Dr. Zeeshan Sheikh, Dip.DH, BDS, MSc, PhD

Dr. Sheikh is a post-doctoral fellow working with Dr. Michael Glogauer at the Faculty of Dentistry, University of Toronto. He received a Diploma in dental hygiene (2001) and Bachelor's degree in dentistry, BDS (2004). He continued to work as a dental surgeon in hospitals and private practices for 2 years before proceeding to obtain an MSc degree in dental and biomaterials from Queen Mary, University of London (QMUL) in 2007. He obtained his PhD from McGill University, Faculty of Dentistry (2014). His research expertise lies in the fabrication of synthetic bone graft substitutes for maxillofacial and orthopedic applications.



Administrative support - Marina Zubkov

Marina is a Financial and Administrative Officer at the Department of Biomaterials, Faculty of Dentistry, University of Toronto

