

NCOHR SUMMER RESEARCH INSTITUTE 2026

PROGRAM AGENDA

Regenerative Orthodontics: Gingival Stem Cells, Hydrogels & LIPUS

Hosted by the Mike Petryk School of Dentistry, University of Alberta / TEB Lab

DATES	24 – 26 August 2026 · 3 Consecutive Days	
TIME	8:00 – 11:00 AM MDT, Daily	
VENUE	KHRA LI-490, Dianne and Irving Kipnes Health Research Academy, University of Alberta, Edmonton, AB	
AUDIENCE	Undergraduate & graduate students in dentistry, biomedical sciences, and oral health research	
KEYNOTE	Dr. Shankargouda Patil, BDS, MDS, PhD — Professor & Director of Translational Science and Digital Health Innovation, Roseman University of Health Sciences, USA	
REGISTRATION	Free — limited spots available. Contact: Mohsen Gholizadeh (mgholiza@ualberta.ca) https://forms.gle/MBwZ8EVPStfovj8aA	



Dr. Shankargouda Patil

Keynote Speaker · Roseman University of Health Sciences, USA

This visit has been funded in part by the Walter Mackenzie Visiting Speaker Fund, Faculty of Medicine & Dentistry

DAY 1

Root Resorption & Micro CT · 24 August 2026

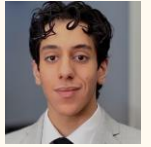
8:00 – 8:10 AM	Welcome and Opening <i>Speaker: Dr. Tarek El-Bialy</i>	
8:10 – 8:20 AM	Welcome Address for the NCOHR Summer Research Institute Workshop <i>Speaker: Dr. Leigha Rock</i>	
8:20 – 8:40 AM	Orthodontically Induced Inflammatory Root Resorption: Etiology, Diagnosis and Management <i>Speaker: Mohsen Gholizadeh</i>	
8:40 – 9:00 AM	TSOC Models <i>Speaker: Dr. Saleh Al-Daghreer</i>	
9:00 – 9:20 AM	MicroCT Imaging Principles <i>Speaker: Ava Nasr Esfahani</i>	
9:20 – 9:40 AM	Networking Breakfast (Coffee, Tea, Light Food)	
9:40 – 10:00 AM	Essentials of Scientific Research <i>Speaker: Dr. Shankargouda Patil</i>	
10:00 – 10:20 AM	Mechanobiology of Root resorption- from orthodontic Force to tissue regeneration <i>Speaker: Dr. Tejas Pol</i>	
10:20 – 10:45 AM	Regenerative Applications in Clinical Orthodontics for Root Resorption with a Novel NanoMetallic Silver Oxide Hydrogel <i>Speaker: Dr. Andrew Willoughby</i>	



10:45 – 10:55 AM

Day 2 Preview

Speaker: Malik Yassin

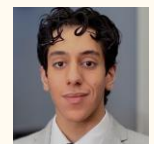
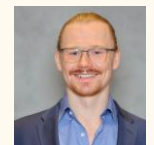
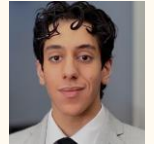


10:55 – 11:00 AM

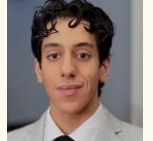
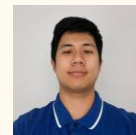
Panel Discussion and Q&A (Day 1)

DAY 2

Tissue Collection & Hydrogels · 25 August 2026



8:00 – 8:10 AM	Day 1 Recap & Goals <i>Speaker: Malik Yassin</i>
8:10 – 8:30 AM	Isolation and Characterization of Gingival Fibroblasts (GFs) <i>Speaker: Dr. Tarek El-Bialy</i>
8:30 – 8:50 AM	From Patient-Derived Tissue to Primary Cells: Tissue Processing and Isolation for Regenerative Dental Research <i>Speaker: Jesse Kim & Rose (Shaghayegh) Rafiei</i>
8:50 – 9:15 AM	Talk 1: Hydrogel-Cell Integration and Drug Loading in Orthodontics <i>Speaker: Dr. Brian Webb</i>
9:15 – 9:35 AM	Networking Breakfast (Coffee, Tea, Light Food)
9:35 – 10:00 AM	Talk 2: Autologous Cell Sources for Gingival and Orthodontic Tissue Engineering <i>Speaker: Dr. Brian Webb</i>
10:00 – 10:30 AM	Achieving Publication Success: Tips for High-Impact Journal Submissions <i>Speaker: Dr. Shankargouda Patil</i>
10:30 – 10:45 AM	Day 3 Preview <i>Speaker: Malik Yassin</i>
10:45 – 11:00 AM	Q&A and Wrap-Up (Day 2)

DAY 3*Tissue Engineering & LIPUS · 26 August 2026***8:00 – 8:10 AM****Day 2 Recap & Goals***Speaker: Malik Yassin***8:10 – 8:30 AM****Cell Culture and Expansion Practices: Maintaining Primary Dental Cells for Experimental Applications***Speaker: Jesse Kim & Kailey Koo***8:30 – 8:50 AM****Immunohistochemistry Overview and Characterization of Hard Dental Tissues***Speaker: Frank Yang & Rose (Shaghayegh) Rafiei***8:50 – 9:10 AM****Clinical Cases with Severe Orthodontically Induced Tooth Root Resorption Treated with LIPUS***Speaker: Dr. Tarek El-Bialy***9:10 – 9:30 AM****Networking Breakfast (Coffee, Tea, Light Food)****9:30 – 9:50 AM****LIPUS Technology & Operation***Speaker: Cristian Scurtescu***9:50 – 10:10 AM****Patient Experience with LIPUS During Orthodontic Treatment***Speaker: Maryam Shahrokhi Sardoo***10:10 – 10:25 AM****LIPUS & Next Steps***Speaker: M-Nour Zouikli***10:25 – 10:45 AM****Current Concepts and Future Prospects of AI in Dentistry***Speaker: Dr. Shankargouda Patil*



UNIVERSITY
OF ALBERTA

TEB LAB

10:45 – 11:00 AM

Q&A and Group Photos

CONTACT / REGISTRATION

Mohsen Gholizadeh · mgholiza@ualberta.ca

Registration is FREE — limited spots available, reserve yours early!

Hosted by the Mike Petryk School of Dentistry, University of Alberta / TEB Lab, in partnership with the Network for Canadian Oral Health Research (NCOHR)

