# THE ACTIVE SITE DEPARTMENT OF BIOCHEMISTRY NEWSLETTER

#### THE SCHULICH SCHOOL OF MEDICINE & DENTISTRY

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## PEOPLE (AND OTHER) STUFF

Welcome to our newest faculty member, Dr. Brian Dempsey, who started on 1 Sept. Neiven Timothaws in our departmental office is now a full-time staff member (Program Assistant I).

Dr. Rogan presented the "Clinical applications of automated cytogenetic biodosimetry" at a virtual training workshop offered by the International Atomic Energy Agency. He also presented an ePoster "Population-scale biodosimetry for management of ionizing radiation incidents" at the 6th International Symposium on the System of Radiological Protection. This organization provided a novel format for ePosters called the "Learning Toolbox." Check out Dr. Rogan's presentation.

Join us at Biochemistry's annual Dr. Harold B. Stewart Memorial Lecture and Research Showcase on the afternoon of 13 Jan 2023 in the Kingsmill Room, Huron University College. The Lecture will be given by Dr. Elnaz Atabakhsh, Executive Director of the Type I Diabetes Consortium at the Critical Path Institute. The Showcase will feature research posters from our first-year graduate students and our Biochemistry 4999 undergraduate students. More info can be found on the <a href="Stewart Lecture webpage">Stewart Lecture webpage</a>. This event was made possible by the Stewart Family Donation; Biochemistry Graduate Incentive Fund; and joint funding from Research Western, SOGS, and SGPS.

## PUBLICATIONS from the labs and collaborators of...

Dr. Balci (Maximizing diagnoses from reanalysis of clinical exome sequencing data)

Dr. Ball (Filter paper disks for manipulation of recombinant proteins)

Drs. Boffa, Koschinsky (LPA disruption lowers plasma apo(a))

Dr. Brandl (Tra1, transcription, and aging cells)

Drs. Choy, Duennwald, Schild-Poulter (<u>Stress-inducible phosphoprotein 1 and α-synuclein</u>)
Dr. Connaughton (<u>Disease mechanisms in anomalies of kidney and urinary tract</u>) (<u>Genetic</u>

causation in anomalies of kidney and urinary tract) (Genetic variants in ARHGEF6 and anomalies of kidneys and urinary tract)

Dr. DiMattia (NOTCH signaling and MEK in ovarian cancers)

Drs. Duennwald, Heinemann (<u>Histidine & HARS deficiency</u> in Charcot Marie Tooth Disease)

Dr. Edgell (Genetically mobile elements)

Dr. Gloor (Uropygial gland microbiota in free-living and captive songbirds)

Dr. Hallett (Metagenomic-based study of Barbadian reef system, in press)

Drs. Han, Li (Spatial transcriptomic landscape of brain metastasis)

Dr. Hegele (Diagnosis and treatment of hypolipidemia disorders) (Classification of hypercholesterolemia) (Markers of cardiovascular risk) (Lipoprotein(a) variability over time) (PCSK9 inhibition) (LDL receptor mutations and cardiovascular events in familial hypercholesterolemia) (Triglyceride phenotype in heterozygotes with LPL pathogenic variants) (Genesequencing test for Alzheimer's disease) (Genetic testing in hypertriglyceridemia) (Personalized medicine in pediatric familial hypercholesterolemia care) (Characteristics of the ONDRI cohort)

Drs. Heinemann, O'Donoghue (Cellular delivery of thioredoxin reductase 1)

Dr. Hu (Analysis of quality-of-life measurements in cancer) (Small molecules affecting FOXM1 and PPARA pathways in breast cancer) (Taste genes, oral microbial composition, and childhood caries)

Dr. Hudson (Nucleobase modifications in oligonucleotide analogues)

Dr. Junop (DAHP synthase catalysis and regulation)

Dr. Konermann (Structural dynamics of a thermally stressed antibody) (NaCl cluster formation from electrosprayed water)

Dr. Koschinsky (<u>Lipoprotein(a)</u>) (<u>Lipoprotein(a)</u> in atherosclerotic cardiovascular disease and aortic stenosis)

Dr. Lajoie (Matrix-derived microcarrier composition and stromal cells) (Nek2 in neural differentiation)

Dr. Li (Classification of HPV-associated oropharyngeal cancer)

Dr. O'Donoghue (Ancestral archaea, pyrrolysine) JBC Editor's Pick (top 2%)

Dr. Pickering (Glycosaminoglycans in ascending aortic aneurysms)

Dr. Rogan (Radiation exposure determination in an online environment, in press)

Dr. Siqueira (Hyposalivation and dental caries in children and adolescents) (Salivary proteins as dental caries biomarkers) (Periodontal disease in cerebral palsy) (Mass spectrometry-based proteomics for salivary-protein biomarkers discovery and dental caries diagnosis)

Dr. Yeung (Brain effects of adolescent THC exposure)

See publication details.

#### **CONGRATS TO...**

Nadun Karunatilleke for a successful PhD defense and Britney Messam for a successful MSc defense

Corey Fan for receiving the Dr. G. E. Hall Scholarship (highest average in 3rd year; entering 4th year of Honours Specialization Program or double Major)

Dalton Ham & Gabe Onea for best talk and best poster, respectively, at the Biochemistry Fall Symposium

Dan Menyhart for receiving awards for runner-up in the 3-minute thesis and research-poster competitions at the World Congress of the Human Proteome Organization. Dr. Laszlo Gyenis, Kristina Jurcic, & Scott Roffey also contributed to the work that was presented.

Victoria Warner for receiving the Caroline M. and Robert C. Bradley 125th Anniversary Alumni Award (for research potential in final year of Honours Specialization in Biochemistry)

Drs. Hegele, Hudson, & Torchia for 25-year service awards

Dr. Huff for receiving the David Rubinstein Award for research excellence in the field of lipids, lipoproteins, and disease (Canadian Lipid & Vascular Summit)

Dr. Koschinsky for giving the Jean Davignon Distinguished Scientist Lectureship (Canadian Lipid & Vascular Summit)

Dr. Rogan, Eliseos Mucaki, & Ben Shirley for the interview with the editor of F1000 Research for their publication (~1600 views & downloads). The authors were nominated for a Certificate of Recognition from the Minister of Health.

Dr. Rogan & colleagues for their patent "Smart microscope system for radiation biodosimetry"

Dr. Rogan for co-authoring a chapter (Molecular Radiation Biology) in the "Radiobiology Textbook" (Springer, 2023)

The Junop & Shaw labs for their tying entries in the pumpkin contest organized by the BGSA







