ANNUAL PROMOTE RETREAT
Day 1
Tuesday May 4, 2021

9:45 a.m. - 10:00 a.m. Introduction – NSERC CREATE (PROMOTE)

10:00 a.m. - 11:00 a.m.
Competencies and Careers in the Sciences: Rebecca Maymon (McGill University)
This talk will examine the competencies developed during graduate work and how they relate to skills demand trends anticipated over the next few years. We will discuss labour market trends and explore career outcomes in the Sciences. Importantly, we will also review tips and strategies for communicating your competencies and for navigating the labour market.

11:00 a.m. - 12:00 p.m.
7 Strategies for Dealing with Literature Overload: April Colosimo (McGill University)
It is not easy to stay on top of the literature in any field, but in fast moving sciences, it can be particularly challenging. Join this session for tips on getting a handle on those published papers and for reading strategically, to save time and energy.

12:00 p.m. - 12:30 p.m. Lunch Break

12:30 p.m. - 2:00 p.m.
Trainee Research Talks

S. Zakaria
Developing a DNAzyme-based Test for the Detection of Early Colorectal Cancer

D. Isaacs-Bernal
Affinity-Based Delivery System for Controlling the Release of Four Therapeutic Proteins Relevant for Retinal Stem Cell Activation

W. Copp
O6-Alkylguanine DNA Alkyltransferase Mediated Disassembly of a DNA Tetrahedron

S. Diallo-Blais
Optimizing the Stability of Electrochemical DNA-Based Biosensors

D. Hiraki
Development of Software for High-Throughput Screening of Potential Novel Antibiotics Relevant for Retinal Stem Cell Activation

O. Kovecses
Targeting “Undruggable” Transcription Factors Using Therapeutic Oligonucleotides’

2:00 p.m. - 2:15 p.m. Break

2:15 p.m. - 3:30 p.m.
Trainee Research Talks

A. McVean
Small Nucleic Acid-Based Inhibitors (Snubs) of Streptococcus Pyogenes CRISPR-Cas9

S. Yin
New Photostabilizing Compounds for Single Molecule Fluorescence

A. Xue
Rationally Designed 3D Hydrogels Model for LAM Disease In-Vitro

A. Mahmud
Monitoring of Cardiac Disease with Reagent-Free Molecular Pendulum Aptasensors

T. Brown
Sequence-Programmed DNA Crosslinking Hotspots Create Ultra-Stable Nanomaterials for use as a Biological Platform

3:30 p.m. Wrap up day 1
10:00 a.m. - 11:00 a.m.  
**Responsible Conduct of Research 101: Emily Bell (McGill University)**  
This session will present an overview on the topic of responsible conduct of research and research integrity for the bench scientist. We will discuss the threats brought by scientific misconduct using case studies, and we will examine guidance on responsible conduct. We will provide, and generate together, some practical tips on dealing with challenging ethical situations day-to-day at the bench and in the lab.

11:00 a.m. - 12:00 p.m.  
**Genomics and Policy**  
**Genomics and Policy: Ma’n H. Zawati** (McGill University)  
This session will describe the work of a lawyer working on the legal, ethical and policy issues in the field of genomics. More specifically, several issues (consent, return of results, privacy, access, etc.) will be presented across multiple research initiatives to provide the attendees with practical examples of challenges in this field and potential solutions/tools to address them.

12:00 p.m. - 12:30 p.m.  
**Lunch Break**

12:30 p.m. - 2:00 p.m.  
**Trainee Research Talks**

- **J. Chen**  
  Disease Monitoring of Protease Activity Using a Reagentless Molecular Pendulum

- **T. Lyalina**  
  Development of an Electrochemical DNA-Based Biosensor for Monitoring Heart Failure in a Drop of Blood

- **C. Nurmi**  
  Detection of SARS-Cov-2 RNA Using Sequence-Specific RNA Cleaving DNAzyme

- **G. Juneau**  
  Development of an Assay to Evaluate O6-Alkylguanine DNA Alkyltransferase Activity

- **F. Ebanks**  
  The Development of DNA Aptamer-Based Gold Nanoparticle Colorimetric Assays for the Detection of Small Molecules and Proteins

- **A. Sakaya**  
  Unravelling Phase Separation Behavior of A-D-A Conjugated Oligomers in Supported Lipid Bilayers

2:00 p.m. - 2:15 p.m.  
**Break**

2:15 p.m. - 3:30 p.m.  
**Trainee Research Talks**

- **J. Stille**  
  Computer-Aided Design of Riboswitch-Targeting Therapeutics

- **H. Fakih**  
  Sequence Controlled DNA-Polymer Conjugates and their Applications in Drug Delivery

- **S. Hirka**  
  Post-SELEX DNA-Encoded Functionalization of Aptamers

- **B. Hosseinpour**  
  Aptamer Selection and Application in Cancer Therapy

- **L. Abdullahu**  
  Small Molecule-Like Oligonucleotides as Novel Antifungal Reagents Against tRNA 2’-Phosphotransferase (Tpt1)

3:30 p.m.  
**Closing remarks**