

SCHEDULE OF SEMINARS & ACTIVITIES

DATE, TIME & VENUE	ACTIVITY
Monday, September 25	
9 a.m. Council Chamber	Courtesy call on Management & Welcome Ceremony
10.30-12.30 Cedi Auditorium	<p>SEMINAR 1: New technologies and building successful biotechnology company: A personal History</p> <ul style="list-style-type: none"> ▪ <i>A Brief History of Biotechnology: From small molecules to recombinant proteins to gene therapies & mRNA Vaccines</i> ▪ <i>Building biotech companies and the Cambridge biotechnology ecosystem</i> ▪ <i>Biotherapeutics for rare diseases</i> ▪ <i>Genzyme and enzyme replacement</i> ▪ <i>Cerberus and therapies for new types of vaccines and antiviral treatment</i>
2-4 p.m. IAC Korean Centre	<p>Faculty Engagement</p> <p>Pitching of biotechnology ideas</p>
Tuesday, September 26	
10-12 a.m. Cedi Auditorium	SEMINAR 2: New trends in personalized and gene therapy
2-4 p.m. Cedi Auditorium	<p>SEMINAR 3: Nucleic acid therapies</p> <ul style="list-style-type: none"> ▪ <i>Chemically modified RNAs</i> ▪ <i>Modified phosphodiester linkages</i> ▪ <i>Modified bases</i> ▪ <i>mRNA vaccines</i> ▪ <i>Lipid nanoparticles</i> ▪ <i>Therapeutic oligonucleotides that affect splicing of pre-mRNA</i> ▪ <i>Duchenne Muscular Dystrophy (Sarepta) – splicing inhibitor</i> ▪ <i>Spinal Muscular Atrophy (Ionis and Biogen) – splicing activator</i> ▪ <i>Therapeutic siRNAs that trigger degradation of target mRNAs</i> ▪ <i>Transthyretin amyloidosis (Alnylam)</i>
Wednesday, September 27	
10-12 a.m. Cedi Auditorium	<p>WEBINAR: Gene therapies for sickle cell disease</p> <ul style="list-style-type: none"> ▪ <i>Sickle Cell Disease</i> ▪ <i>Hematopoietic stem cells and bone marrow transplantation</i> ▪ <i>Retroviral and lentiviral (HIV) vectors for hematopoietic stem cell gene therapy</i> ▪ <i>An early success: Lentiviral gene therapy for X-Linked Severe Combined Immune Disorder (Bubble Boy Disease)</i> ▪ <i>Hematopoietic stem cell gene therapy for Sickle Cell Disease and Beta Thalassemia</i> ▪ <i>Lentiviral vectors expressing a normal β globin gene</i> ▪ <i>Lentiviral vectors expressing a small RNA that inhibits expression of the mRNA encoding Bcl-11A, an inhibitor of expression of the fetal gamma globin gene</i> ▪ <i>Electroporation of CRSPR Cas9 and a guide RNA that cuts and inactivates the red cell-specific enhancer of the Bcl-11A gene, thus stimulating production of gamma globin</i> ▪ <i>Electroporation of a CRSPR Cas9 A \rightarrow G base editor to reverse the sickle mutation in the β globin gene</i>
2-4 p.m. Cedi Auditorium	Student engagement to discuss two papers sent ahead of lecture

Thursday, September 28	
10-12 a.m. Cedi Auditorium	SEMINAR 4: Recombinant proteins and monoclonal antibodies <ul style="list-style-type: none"> ▪ <i>Recombinant therapeutic proteins</i> ▪ <i>Improving the function of therapeutic recombinant proteins</i> ▪ <i>Antibody structure</i> ▪ <i>Production of human monoclonal antibodies for infectious diseases.</i> ▪ <i>Anti-COVID monoclonal antibodies</i> ▪ <i>Inhibitors of Tumor Necrosis Factor alpha</i> ▪ <i>Anti-cancer monoclonal antibodies</i> ▪ <i>Trastuzumab (Herceptin)</i> ▪ <i>Rituximab</i> ▪ <i>Camelid single-chain nanobodies</i>
2-4 p.m. IAC Korean Centre	DISCUSSION: Collaborative grant application and sourcing of funding How to access Prof. Lodish's books
Friday, September 29	
9 a.m. Main Campus & Dave	Campus tour & visit to Seeding Lab equipped laboratories
11 a.m. SBBS Auditorium Forecourt	Closing Ceremony with Cultural Display
Saturday, September 30	Visit to Tafi Monkey Sanctuary, Ote Waterfalls and Canopy Walk, Amedzofe
Sunday, October 1	Departure to Accra