SSM11 offers a unique 50-hour training program on drug discovery, development and market access under a multicultural sponsorship in the wonderful setting of Montreal, Quebec. Make plans now for one full week of lively presentations and direct interactions with the Faculty, including Case Studies and Workshops with Industry, covering the whole value chain of medicines, from “idea to market”. SSM11 Faculty members are leaders in their field and contribute to create one of the most innovative and focused programs in drug discovery & development currently offered.

Program
Opening Note

Dear participants to SSM11,

On behalf of the Université de Montréal, it’s a real pleasure for me to welcome you at this 11th edition of the Summer School of medicines. We’re honoured to organize this summer school in collaboration with three of our privileged international academic partners, the University of Barcelona and Université Paul Sabatier in Toulouse and University of Sao Paolo (Brazil).

For several years now, this summer school has represented an important international outreach for us in our mission to train the next generation of scientists in the biopharmaceutical sector. U de Montreal is the 2th largest research U in Canada, with more than 62 thousands students attending, and over 400M Euro in research funding each year. In North America, the region of Montreal is ranked 10th among the major hubs of Biopharmaceutical research. Of the sixinnovative medicines ever developed in Canada and approved by the American FDA, four were developed in the region of Montreal.

Drug discovery is serious business. It has impact on economics, politics, ethics and most importantly on people. Patients who suffer from diseases we don’t yet fully understand. As you will appreciate this week, developing new drugs that are safe and effective is one of the most difficult challenges facing mankind. It involves science, lots of it, in so many different fields that nobody can do it alone in his or her lab. We need specialists that can see the big picture and understand the language of other specialists, their challenges and opportunities, from idea to market.

This is why we are here. To give you the larger picture. Because it is an international school, with faculty and students coming from several countries in the European Union and North America, SSM11 is also an opportunity to make contacts and build your network. Do not hesitate to ask questions either after talks or during the general discussions that will follow at the end each day. Several speakers will stay with us after their talk so see this as an opportunity to meet and discuss with them.

We wish you all the best learning experience possible with SSM11.

Denis deBlois
Chairman, SSM11

For the Scientific and Organizing Committee:

- **Michel Bouvier** (Institute of Research in Immunology and Cancer, Université de Montréal, Canada)
- **Pierre Cordelier** (INSERM 1037, Cancer Research Centre of Toulouse, Toulouse, France)
- **Rémy Poupot** (Université Paul Sabatier, Toulouse, France)
- **Marçal Pastor-Anglada**, Director of the Institute of Biomedicine, Universitat de Barcelona (IBUB)
- **Santi Vázquez**, Faculty of Pharmacy and Food Sciences, Universitat de Barcelona
- **Jordi Quintana** (Universitat Pompeu Fabra, Barcelona, Catalonia, Spain)
- **Claudio M. Costa-Neto** (Ribeirão Preto School of Medicine, University of Sao Paulo, Ribeirão Preto, SP)
SSM11 – UNIVERSITE DE MONTREAL – JUNE 8-15, 2019

Program

SATURDAY, June 8, 2019

Pavilion Jean-Coutu, room S1-111

15:00 – 16:00  Registration

16:00 – 16:15  OFFICIAL OPENING – 11th Summer School on Medicines (SSM11)

Organizing committee

16:15 – 17:15  Keynote Opening Lecture 1 (KNL1): New models of translational research from academia to industry

Michel Bouvier, Director of Institute for research in immunology and cancer (IRIC), Montréal

17:15 – 18:15  Keynote Opening Lecture 2 (KNL2): Recent advances in G protein-coupled receptors as therapeutic targets

Jean-Philippe Pin, Director of Functional Genomic Institute (IGF), Montpellier, France

17:45 – 20:00  Poster Session and Welcome Reception at Pavilion Jean-Coutu
SESSION I: DRUG R&D, AN OVERVIEW FROM TARGET TO MARKET

Chairperson: TBD

9:00 – 10:15 (L1) Overview of drug discovery
Denis deBlois UdeM

10:15 – 10:45 Health break

10:45 – 12:00 (L2) Overview of clinical development
Dan Chiche, Chief Medical Officer, Neomed Institute, Montreal

12:00 – 13:00 Lunch

13:00 – 14:00 (L3) Molecules and money: Overview of business development
TBA

14:00 – 15:00 (L4) Novel, non obvious, useful? Intellectual property as a discovery engine
Steven Lam, Partner and Patent Agent at ROBIC, S.E.N.C.R.L. / LLP

15:00 – 15:15 Health break

15:15 – 15:45 Plenary discussion with speakers

15:45 – 17:30 Participant Mini-Symposium: Oral and poster presentations
SESSION II: DRUG DISCOVERY

Chairperson: TBD

8:45 – 9:30 (L5) Targeting TNF-alpha to overcome treatment resistance in melanoma
Bruno Segui, Centre de recherches en cancérologie de Toulouse

9:30 – 10:15 (L6) Drug discovery – Small molecule
Rodolfo Lavilla, U de Barcelona - Institute of Biomedicine (IBUB)

10:15 – 10:30 Health break

10:30 – 11:15 (L7) Chemical biology
Jordi Quintana, U Pompeu Fabra, Barcelona

11:15 – 12:00 (L8) Beyond the pill: Systems Pharmacology in Drug Discovery
Rafael Najmanovich, UdeM

12:00 – 13:00 Lunch

13:00 – 13:45 (L9) Antibody-drug conjugate: development and manufacturing challenges
Yves Durocher, National Research Council of Canada

13:45 – 14:30 (L10) Oncolytic virus for cancer therapy: from cellular determinants to mathematical modeling of infection
P Cordelier, INSERM, Toulouse

14:30 – 14:45 Health break

14:45 – 15:30 (L11) Hot topic / Beyond the pill
Remy Poupot, U Paul Sabatier, Toulouse

15:30 – 16:00 Plenary discussion with speakers

16:00 – 17:00 Visit of IRIC Drug Discovery Platforms (HTS– Medicinal chemistry – Histology–Cytometry)
SESSION III: NONCLINICAL DEVELOPMENT

Chairperson: TBD

8:45 – 9:30  (L12) Drug-like properties for optimal drug delivery
Grégoire Leclair, UdeM

9:30 – 10:15  (L13) Membrane proteins in drug-transporter interactions
Marçal Pastor-Anglada, U de Barcelona - Institute of Biomedicine (IBUB)

10:15 – 10:30  Health break

10:30 – 11:15  (L14) Toxicology / Non clinical safety evaluation
Violetta Dimitriadou, VP Scientific Operations, IRIC-Commercialization of Research (IRICoR), Montreal

11:15 – 12:00  (L15) Translational research - Stem cell expansion strategy for cancer treatment
Anne Marinier, Institute for resesarch in immunology and cancer (IRIC), Montréal

12:00 – 13:00  Lunch

13:00 – 13:45  (L16) Beyond the Pill – Modeling and simulation to optimize PK / PD relationship
Fahima Nekka, UdeM

SESSION IV: CASE STUDY – TRANSLATIONAL RESEARCH AND PROOF OF CONCEPT

Chairperson: Denis deBlois

13:45 – 14:15  Case presentation and outline of challenges

14:15 – 14:30  Health break

14:45 – 16:00  Group session (students work in small teams)

16:00 – 17:00  Each team reports / General discussion
SESSION VI: CLINICAL DEVELOPMENT & POST-MARKETING FOLLOW-UP

Chairperson: TBD

8:45 – 9:45  (L17) Learning studies: First-in-Man (Phase I)
Marc Lefebvre, Founder Algorithme Pharma

9:45 – 10:45 (L18) Learning studies: Proof of concept studies (Phase II)
TBA

10:45 – 11:00 Health break

11:00 – 11:45 (L19) Confirmatory studies (Phase III)
TBA

11:45 – 12:15 Plenary discussion with speakers

12:15 – 13:15 Lunch

13:15 – 14:15 (L20) Pharmacovigilance and Risk Management
Yola Moride, UdeM

SESSION VII: CASE STUDY II – REGULATORY STRATEGIES

Chairperson: Patrick Colin, PCC Inc.

14:15 – 14:45 Case presentation and outline of challenges

14:45 – 15:00 Health break

15:00 – 16:00 Group session (students work in small teams)

16:15 – 17:00 Each team reports / General discussion
Pavilion Jean-Coutu, room S1-111

INDUSTRIAL SYMPOSIUM - DEEP LEARNING IN CURRENT BIOPHARMACEUTICAL DRUG DEVELOPMENT

Chairperson: Jean-Pierre Moreau, Recherche Continuum, Montreal

9:00   Opening Remarks – Jean-Pierre Moreau, Recherche Continuum

9:15   Proof of concept Comprehensive Ex-vivo Neurological Assay  
       Lois Miraucourt, CIToxLAB, Laval

9:50   Metatox: Meta Learning for assessing toxicity-related drug safety  
       Therence Bois, InVivoAI, Montreal

10:15  Break

10:50  Recent advances in Ion Channel research  
       Benjamin Butterfield, Nova Research Labs, New Orleans

11:20  Neomed, opportunities for the advancement of Drug Development in Quebec  
       Donald Olds, Neomed Institute, Montreal

11:50-13:30 Lunch

13:30  Natural veterinary models of disease  
       Eric Troncy, Universite de Montreal, St-Hyacinthe

14:05  Preclinical & Clinical development of Etripamil for Paroxysmal Systolic Ventricular Tachycardia  
       Philippe Douville, Milestone Pharmaceuticals, Montreal

14:30  Break

14:55  Introduction to keystone speakers  
       Denis deBlois, Chairman SSM11

15:00  Ceramide Nanoliposomes: A Case Study  
       Mark Kester, Nanostar Institute, Virginia USA

15:50  Preclinical and Clinical Development of Palovarotene for ultra-rare Bone Diseases  
       Michael Harvey, VP Drug Development, Clementia Pharma, Montreal

16:45  Networking cocktail
FRIDAY, JUNE 14, 2019

Pavilion Jean-Coutu, room S1-111

9:00 – 9:45  (L21) Working with the FDA and other government agencies on clinical trials
Mark Kester, Nanostar Institute, Virginia USA

SESSION VIII : CASE STUDY III – STAKEHOLDERS’ PERSPECTIVES (Part 1)

Chairperson: Denis deBlois

9:45 – 10:15  Case presentation and outline of challenges
10:15 – 11:00 Group session (students work in small teams)
11:00 – 11:15 Health break

SESSION IX: MARKET ACCESS

Chairperson: TBA

11:15 – 12:00  (L22) Pharmaco-economics 101
Alice Dragomir, McGill U
12:00 – 13:00 Lunch
13:00 – 13:45  L(23) Third payer perspective : Health technology assessment
Sylvie Bouchard, Director of drug evaluation, INNESS
13:45 – 14:30  (L24) Market access – Industry perspective
TBA
14:30 – 15:00 Plenary discussion with speakers
15:00 – 15:15 Health break

CASE STUDY – STAKEHOLDERS’ PERSPECTIVES (Part 2)

15:15 – 16:15 Each team reports / General discussion
16:15 – 17:15  (L25) Company A
Alumni of the Graduate Diploma in Drug development, Faculty of pharmacy, UdeM
SATURDAY, JUNE 15, 2019

Pavilion Jean-Coutu, room S1-111

9:00 – 10:00  (L26) Beyond the Pill – AI meets drug R&D
   Steven Sanche, Los Alamos National Laboratory, USA

SESSION X : START-UP CREATION, INVESTMENT & BUSINESS DEVELOPMENT

   Chairperson: Steven Klein, Université de Montréal, Québec

   10:00 – 10:30  Health break

   10:30 – 11:15  (L27) Start-up Creation, From the Bench to the Bedside, the journey of a faculty entrepreneur
   Mark Kester, Nanostar Institute, Virginia USA

   11:15 – 12:00  (L28) Venture capital perspective
   TBA

   12:00 – 13:00  Lunch

SESSION XI: CLOSING CONFERENCE

   13:00 – 14:00  (L29) TBA

SESSION XII: CARING ABOUT CAREERS: NAVIGATING THE ECOSYSTEM OF BIOPHARMA

   Chairperson: Michelle Savoie, Université de Montréal, Québec

   14:00 – 14:30  (L30) Career development in the biopharmaceutical sector
   TBA

   14:30 – 15:00  Plenary discussion with SSM11 faculty

   15:00 – 15:15  SSM11 Wrap-up, Closing comments and Overture towards SSM12