RiboClub 2017 in association with the Swiss National Center of Competence in RNA & Disease.

September 24-28

RNPs: the Good, the Bad and the Ugly
Insights into RNA-protein complex assembly and function in health and disease

Hotel et Villégiature Chéribourg
2603 Chemin du Parc
Orford (Magog) Quebec, Canada

Sunday, September 24th

15:00 – 18:00  Registration for early arrivals
18:00 – 19:30  Welcome reception
19:30 – 21:30  Opening dinner
Monday, September 25th

08:00 – 08:45  Registration

08:45 – 08:55  Opening Notes and Announcements (Sherif Abou Elela)

08:55 – 09:10  Welcome Notes by Beat Nobs, Ph.D., Swiss Ambassador to Canada

09:10 – 09:15  Presentation of Keynote speaker (Oliver Mühlemann)

09:15 – 10:15  **Keynote presentation**
From bench to clinical trial: microRNA 122 as an antiviral target for hepatitis C virus
*Peter Sarnow*, Stanford University, Stanford

10:15 – 10:45  Coffee break

**Session 1:**
**Non-coding RNA function**

Chair: Martin Jinek (Host: Benoit Chabot)

10:45 – 10:50  Introduction by *Martin Jinek*

10:50 – 11:05  Mbnl1-dependent mis-regulation and mis-splicing of a conserved myogenic lncRNA in myotonic dystrophy type 1
*Pascal Chartrand*, Universite de Montreal, Montreal

11:05 – 11:30  Non-canonical function of DGCR8 controls mESCs exit from pluripotency
*Constance Ciaudo*, ETH Zurich, Zurich

11:30 – 11:45  microRNAs use different ways to regulate gene expression in animals
*Martin Simard*, Universite Laval, Quebec

11:45 – 12:10  Structure, evolution and targeting of non coding RNAs
*Gabriele Varani*, University of Washington, Seattle

12:10 – 12:35  Structural insights into RNA-guided genome editor nucleases
*Martin Jinek*, University of Zurich, Zurich

12:35 – 14:10  Lunch
Session 2: RNP Maturation and Function

Chair: Andrew McMillan (Host: Brendan Bell)

14:10 – 14:15 Introduction by Andrew McMillan

14:15 – 14:40 Spliceosome profiling and footprinting: New tools for intron discovery and alternative pre-mRNA processing pathway analysis
Melissa Moore, University of Massachusetts Medical School, Worcester

14:40 – 14:55 Exploring the Role of SF3B in Splicing - Through 1 Billion Years
Andrew MacMillan, University of Alberta, Edmonton

14:55 – 15:10 RBM39 physically bridges the U1 and U2 snRNP during splice site definition
Daniel Jutzi, University of Bern, Bern

15:10 – 15:25 Birth, life and death of a miRNA-directed mRNP
Thomas F. Duchaine, McGill University, Montreal

15:25 – 15:40 The splicing factor U2AF1 functions as a translational repressor in the cytoplasm and regulates expression of Interleukin-8.
Murali Palangat, National Institutes of Health, Bethesda

15:40 – 16:10 Coffee break

Session 3: mRNA Processing and Regulation

Chair: Omar Abdel-Wahab (Host Éric Massé)

16:10 – 16:15 Introduction by Omar Abdel-Wahab

16:15 – 16:40 Understanding and Targeting Spliceosomal Gene Mutations in Cancer
Omar Abdel-Wahab, Memorial Sloan Kettering Cancer Center, New York

16:40 – 16:55 Cell type dependent roles of SR Proteins in regulating HIV-1 RNA processing and gene expression: novel targets for therapeutics
Alain Cochrane, University of Toronto, Toronto

16:55 – 17:10 Intergenic trans-splicing catalysed by a bacterial group II intron
Felix LaRoche-Johnston, McGill University, Montreal
Targeted intron retention and excision for rapid gene regulation in response to neuronal activity
**Oriane Mauger**, University of Basel, Basel

**17:10 – 17:25**  
Targeted intron retention and excision for rapid gene regulation in response to neuronal activity  
**Oriane Mauger**, University of Basel, Basel

**17:25 – 18:00**  
Free time

**18:00 – 20:00**  
Dinner

**20:00 – 21:00**  
Poster competition IA: (Odd numbers)

**21:00 – 22:00**  
Poster competition IB: (Even numbers)

**22:00 – --**  
Open Poster Session
Tuesday, September 26th

07:00 – 08:30  Breakfast

Session 4:  
RNA granules, droplets and aggregates

Chair: Frédéric Allain (Host Daniel Lafontaine)

08:30 – 08:35  Introduction by Frédéric Allain

08:35 – 09:00  The solution structure of FUS bound to RNA reveal a bipartite mode of RNA recognition with both sequence and shape specificities  
Frédéric Allain, ETH Zurich, Zurich

09:00 – 09:25  The role of cellular stress in the initiation of FUS pathology  
Magdalini Polymenidou, University of Zurich, Zurich

09:25 – 09:50  RNP granules: how they form, age and cause disease  
Simon Alberti, Max Planck Institute of Molecular Cell Biology and Genetics, Dresden

09:50 – 10:05  The stress granule transcriptome reveals principles of mRNA accumulation in stress granules  
Anthony Khong, University of Colorado, Boulder

10:05 – 10:40  Coffee break

Session 5:  
RNA synthesis and localization

Chair: Catherine Dargemont (Host: Éric Massé)

10:40 – 10:45  Introduction by Catherine Dargemont

10:45 – 11:10  The mRNA journey from chromatin to nuclear pore complex  
Catherine Dargemont, Paris Diderot University, Paris

11:10 – 11:35  Two distinct transcription termination modes dictated by promoters  
Helge Großhans, Friedrich Miescher Institute for Biomedical Research, Basel
11:35 – 11:50 Novel cytoplasmic foci contain oxidized RNA in diverse organisms
William Zerges, Concordia University, Montreal

11:50 – 12:05 Revealing features of mRNP organization using super-resolution microscopy
Srivathsan Adivarahan, Université de Montréal, Montréal

12:05 – 12:30 2017 Group Photo

12:30 – 14:00 Lunch

Session 6:
RNA modification and editing (Epitranscriptomics)

Chair: Thomas Preiss (Host: Sherif Abou Elela)

14:00 – 14:05 Introduction by Thomas Preiss

14:05 – 14:30 A deaminase and a methyltransferase that act co-dependently to edit and modify tRNA at a single site
Juan Alfonzo, Ohio State University, Columbus

14:30 – 14:55 Investigating the function of 5-methylcytosine in coding and noncoding RNA
Thomas Preiss, Australian National University, Acton

14:55 – 15:10 RNA modification and RNA folding? How the methyltransferase TrmA interacts with tRNA
Ute Kothe, Université of Lethbridge, Lethbridge

15:10 – 15:50 Coffee Break

15:50 – 16:20 Alumnus of the Year Presentation
Discovery of noncoding RNAs in bacteria
Jonathan Perreault, Institut Armand-Frappier, Laval

16:20 – 16:40 Best Seminar Award (introduced by Students Representative)
16:40 – 17:20 Social time (complimentary cocktail)

17:20 – 18:20 Poster competition IIA (Odd numbers)

18:20 – 19:20 Poster competition IIB: (Even numbers)

19:20 – 21:00 Dinner

21:00 – 22:00 After Dinner Speaker
Research in life sciences: hypothesis or discovery-driven?
Ueli Schibler, University of Geneva Medical School, Geneva
Wednesday, September 27th

07:00 – 08:45  Breakfast

Session 7:  
Regulated RNA degradation

Chair: Oliver Mühlemann (Host: Raymund Wellinger)

08:45 – 08:50  Introduction by Oliver Mühlemann

08:50 – 09:15  Isolation and characterization of an NMD mRNP from yeast provides mechanistic insight into recognition and rapid degradation of nonsense-containing mRNAs  
Kristian Baker, Case Western Reserve University, Cleveland

09:15 – 09:40  Role of mRNA Decay Protein AUF1 in Muscle Stem Cell Differentiation and Disease  
Robert J Schneider, NYU School of Medicine, New York

09:40 – 10:05  Comparing “normal” and NMD-sensitive mRNPs and their behaviour in translation termination  
Oliver Mühlemann, University of Bern, Bern

10:05 – 10:30  Control of Cell Cycle Checkpoint Activation and Genome Stability by the RNA-Binding Protein TIAR  
Georg Stöcklin, University of Heidelberg, Mannheim

10:30 – 11:00  Coffee Break

11:00 – 11:25  The FAM46C gene encodes a cytoplasmic non-canonical poly(A) polymerase and acts as an onco-suppressor in multiple myeloma  
Andrzej Dziembowski, Institute of Biochemistry and Biophysics, Warsaw

11:25 – 11:40  Ribosome Shut-Down by 16S rRNA Fragmentation in Stationary-Phase  
Escherichia coli  
Hannes Luidalepp, University of Bern, Bern
Session 8: Translation regulation

Chair: Martine Collart (Host: Michelle Scott)

11:40 – 11:45  Introduction by Martine Collart

11:45 – 12:10  Ccr4-Not is at the core of the gene expression circuitry
Martine Collart, University of Geneva Medical School, Geneva

12:10 – 12:35  Transcriptional and translational responses to amino acid starvation: no homology required
Juan Mata, University of Cambridge, Cambridge

12:35 – 14:15  Lunch

14:15 – 14:40  The multifaceted roles of ribosome-associated ncRNAs (rancRNAs)
Norbert Polacek, University of Bern, Bern

14:40 – 14:55  Eukaryotic initiation factor 5B (eIF5B) promotes cell survival in glioblastoma multiforme
Joseph Ross, University of Lethbridge, Lethbridge

14:55 – 15:10  Structural and functional insights into human re-initiation complexes
Melanie Weisser, Institute for Molecular Biology and Biophysics ETH, Zurich

Marc-Étienne Huot, Université Laval, Québec City

15:25 – 16:00  Coffee Break

16:00 – 17:00  Students’ Choice Seminar
Advances in Nonenzymatic Template-Directed Primer Extension
Introduction by student representatives
Jack Szostak, Harvard University, Cambridge

17:00 – 18:00  Free time
18:00 – 20:00  Banquet

20:00 – 20:05  Presentations of the travel awards
Éric Massé, Université de Sherbrooke

20:05 – 20:10  Poster prizes
Michelle Scott, Université de Sherbrooke

20:10 – 20:20  RNA Group Note and Progress
Jean-Pierre Perreault, Université de Sherbrooke

20:30 – ..  Special Presentation of Quebec Folk Music and Dance
“Le Vent du Nord”

Thursday, September 28th

07:00 – 09:30  Breakfast and Departure

For the most updated program and abstracts,
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