



**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, Université de Montréal, Montréal
- 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, Université Laval, Québec
- 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



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 Alfonso, 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, University 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
- 15:10 – 15:25 Localized mRNA translation regulates metastatic invasion.
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
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