2015 RiboClub Program
New frontiers in RNA biology and human diseases
21-23 September
In partnership with the Institut de Génétique Moléculaire de Montpellier
Hôtel et Villégiature Chéribourg
2603 Chemin du Parc
Orford (Magog) Québec

Sunday, September 20th, 2015
15:00 – 18:00   Registration for early arrivals
18:00 – 19:30   “Jazzy” welcome cocktail
19:30 – 21:30   Special opening dinner

Monday, September 21st, 2015
08:00 – 09:00   Registration
09:00 – 09:10   Welcome notes (Sherif Abou Elela)
09:10 – 09:15   Presentation of Keynote speaker (Benoit Chabot)
09:15 – 10:15   **Keynote presentation**
Mechanism-based antisense therapy targeting splicing or NMD
**Adrian Krainer**, Cold Spring Harbor Laboratory, New York

10:15 – 10:30   Coffee break

**Session 1:**
RNA processing and decay

Chair: Witold Filipowicz (Host: François Bachand)

10:30 – 10:35   Introduction

10:35 – 11:00   Mechanism and regulation of miRNA-mediated repression in cultured cells
and mouse retina
**Witold Filipowicz**, Friedrich Miescher Institute for Biomedical Research, Basel
11:00 – 11:25  Messenger RNA regulation by the piRNA pathway in drosophila  
Martine Simonelig, Institut de Génétique Humaine, Montpellier

11:25 – 11:50  Starting from the end: From eukaryotic mRNA decay mechanisms to diseases  
Bertrand Séraphin, IGBMC, Illkirch

11:50 – 12:03  The eIF4E-binding protein 4E-T is a component of the mRNA decay machinery that bridges the 5’ and 3’ termini of target mRNAs  
Marc R. Fabian, McGill University, Montreal

12:03 – 12:16  A polyadenylation-dependent 3’ end maturation pathway is required for the synthesis of the human telomerase RNA  
François Bachand, Université de Sherbrooke, Sherbrooke

12:16 – 12:29  Two-in-one RNA maturation: tRNA modification and tRNA folding by one enzyme  
Ute Kothe, University of Lethbridge, Lethbridge

12:29 – 12:42  Ribozymes and siRNAs targeting the Gag RNA of HIV for gene and drug therapy  
Anne Gatignol, Lady Davis Institute for Medical Research, Montreal

12:42 – 13:45  Lunch

Session 2:  
New frontiers in non-coding RNA biology

Chair: Bryan R. Cullen (Host: Michelle Scott)

13:45 – 13:50  Introduction

13:50 – 14:15  Viruses and microRNAs  
Bryan R. Cullen, Duke University, Durham

14:15 – 14:40  Role of non-coding RNAs in mammalian genomic imprinting  
Robert Feil, IGMM, Montpellier

14:40 – 14:53  Pol II CTD Tyr1 phosphorylation: a nuclear quality control to limit pervasive transcription?  
Jean-Christophe Andrau, IGMM, Montpellier

14:53 – 15:06  Single molecule characterization of eRNA localization and function  
Daniel Zenklusen, Université de Montréal, Montréal
15:06 – 15:19 On the availability of microRNA-induced silencing complexes, saturation of microRNA-binding sites, and stoichiometry  
Vinay K. Mayya, McGill University, Montreal

Martin Simard, Université Laval, Quebec

15:32 – 15:45 New partners for TLC1 RNA  
Raymund Wellinger, Université de Sherbrooke, Sherbrooke

15:45 – 16:00 Coffee Break

**Session 3:**  
RNA localization and transport

Chair: Michael Kiebler (Host: Brendan Bell)

16:00 – 16:05 Introduction

16:05 – 16:30 The role of RNA-binding proteins in dendritic mRNA localization  
Michael Kiebler, LMU, Munich

16:30 – 16:55 Systematic analysis of the sub-cellular localization of mRNAs coding for motor proteins  
Edouard Bertrand, IGMM, Montpellier

16:55 – 17:20 Spatial and temporal control of the maternal-to-zygotic transition in Drosophila  
Howard Lipshitz, University of Toronto, Toronto

17:20 – 17:33 Characterization of a new cis-acting signal required for the Anxa2 mRNA axonal localization by SMN  
Florence Rage, IGMM, Montpellier

17:33 – 17:46 Systematic characterization of the subcellular distribution properties of human RNA binding proteins  
Eric Lécuyer, IRCM, Montreal

17:46 – 17:59 RNP complex purification, characterization, and Improvement of RNA Mango  
Peter Unrau, Simon Fraser University, Vancouver

18:00 – 19:00 Poster competition IA: (Odd numbers)
19:00 – 20:00  Poster competition IB: (Even numbers)
20:00 – 21:00  Dinner

21:00 – 21:05  Presentations of the travel awards
Michelle Scott, Université de Sherbrooke, Sherbrooke

21:25 – 21:30  Presentation of the after dinner speaker
Raymund Wellinger, Université de Sherbrooke, Sherbrooke

21:30 – 22:30  After-dinner general presentation
The Miracle
Paul McKellips, One Health Research, Washington D.C

Tuesday, September 22nd, 2015

07:00 – 08:40  Breakfast

Session 4:
Translation apparatus and regulatory mechanisms of protein synthesis

Chair: Nahum Sonenberg (Host: Martin Bisaillon)

08:40 – 08:45  Introduction

08:45 – 09:10  Translational control by the eIF4E homolog, 4EHP
Nahum Sonenberg, McGill University, Montreal

09:10 – 09:35  Structure and function of viral RNAs that manipulate or co-opt host
cell machinery
Jeffrey Kieft, University of Colorado, Denver

09:35 – 10:00  Messenger RNA surveillance revealed by biochemistry and ribosome
profiling
Rachel Green, John Hopkins University School of Medicine,
Baltimore

10:00 – 10:25  Rocaglamide A converts RNA helicase eIF4A into a sequence-specific translational repressor
Nicholas Ingolia, University of California, Berkeley

10:25 – 11:04  Coffee break
11:04 – 11:17  Aven recognition of RNA G-quadruplexes regulates translation of the mixed lineage leukemia proto-oncogenes
Stéphane Richard, McGill University, Montreal

11:17 – 11:30  The search for natural protein RNA covalent interactions
Nabanita De, Harvard University, Boston

Session 5A:
Transcriptome detection, prediction and annotation

Chair: Alain Jacquier (Host: Benoit Chabot)

11:30 – 11:35  Introduction

11:35 – 12:00  Quality control of transcription start site selection by nonsense-mediated-mRNA decay
Alain Jacquier, Institut Pasteur, Paris

12:00 – 12:25  Large-scale discovery of RNA binding sites and assigning of functions to RNA binding proteins
Gene Yeo, UC San Diego, La Jolla

12:25 – 12:35  2015 Group Photo

12:35 – 13:35  Lunch

13:35 – 14:00  Special presentation: funding news and information from The Natural Sciences and Engineering Research Council of Canada
Sylvie Roy, NSERC

Session 5B:
Transcriptome detection, prediction and annotation

Chair: Alain Jacquier (Host: Benoit Chabot)

14:00 – 14:25  Widespread alternative and aberrant splicing revealed by lariat sequencing
Jeffrey Pleiss, Cornell University, New York

14:25 – 14:38  Finding and characterizing noncoding RNAs in bacteria
Jonathan Perreault, Institut Armand-Frappier, Laval

14:38 – 14:51  Polycomb repressive complex 2 (PRC2) interacting non-coding RNAs
Athanasios Zovoilis, Harvard Medical School, Boston
14:51 – 15:09  Student’s Best Seminar Award
Introduced by student representatives

15:09 – 15:39  Alumnus of the Year Award
Introduced by student representatives
Live cell imaging of ANCHOR tagged viruses, from high content screening to deep in-cell localization.
Franck Gallardo, NeoVirTech SAS Advanced Technological Institute for Life Sciences

Session 6:
Splicing regulation

Chair: Karla Neugebauer (Host: Sherif Abou Elela)

15:39 – 15:44  Introduction

15:44 – 16:09  Co-transcriptional splicing: full speed ahead!
Karla Neugebauer, Yale School of Medicine, New Haven

16:09 – 16:22  Duality of a transcription factor : SOX9 regulates alternative splicing independently of its transcriptional activity
Peggy Raynaud, CRBM, Montpellier

16:22 – 16:35  Staufen1 regulates alternative splicing events associated with myotonic dystrophy type I through intronic inverted alu repeat elements
Jocelyn Cote, University of Ottawa, Ottawa

16:35 – 16:55  Coffee Break

16:55 – 17:20  Connecting DNA damage to the alternative splicing of apoptotic and DNA repair genes
Benoit Chabot, Université de Sherbrooke, Sherbrooke

17:20 – 17:33  Evidence for independent evolution of pre-mRNA spliced-leader (SL) trans-splicing in the tunicates
Kenneth E. M. Hastings, McGill University, Montreal

17:33 – 17:58  Role of a neuronal-specific alternative splicing regulatory network in autism spectrum disorders
Mathieu Quesnel-Vallieres, University of Toronto, Toronto

18:00 – 19:00  Poster competition IIA (Odd numbers)
19:00 – 20:00  Poster competition IIB: (Even numbers)
20:00 – 21:30  Banquet
21:30 – 22:00  Entertainment break (Part 1)
22:00 – 22:20  Poster prizes
François Bachand, Université de Sherbrooke
22:20 – 22:25  RNA Group and Blue jacket award
Benoit Chabot, Université de Sherbrooke
22:25 – 23:10  Entertainment break (Part 2)
23:10 – ……  Dance

Wednesday, September 23rd, 2015
07:00 – 08:30  Breakfast

Session 7A:
RNA driven pathologies
Chair: Jamal Tazi (Host: Jean-Pierre Perreault)
08:30 – 08:35  Introduction
08:35 – 09:00  Durable control of viral rebound with a new drug ABX464 targeting Rev – mediated viral RNA biogenesis
Jamal Tazi, IGMM, Montpellier
09:00 – 09:25  Alternative splicing regulatory networks in development and their disruption in disease
Thomas Cooper, Baylor College of Medicine, Houston
09:25 – 09:50  The RNA helicase DDX39B regulates alternative splicing of the interleukin-7 receptor exon 6 and is a novel susceptibility gene for Multiple Sclerosis
Mariano Garcia-Blanco, University of Texas Medical Branch, Galveston
09:50 – 10:03  Controlling virus infection using Small Molecule Modulation of RNA Splicing
Alan Cochrane, University of Toronto, Toronto
10:03 – 10:16  The impact of modulating STAT3 expression and activity on cancer-induced cachexia  
**Imed-Eddine Gallouzi**, McGill University, Montreal

10:16 – 10:29  Altered activity and telomere association of premature aging disease-associated variants in the human telomerase “insertion in fingers” domain  
**Chantal Autexier**, Lady Davis Institute, Montreal

10:29 – 11:15  Coffee break

**Session 7B:**  
RNA driven pathologies

Chair: Jamal Tazi (Host: Jean-Pierre Perreault)

11:15 – 11:40  Regulation of erythropoiesis by mRNA-binding proteins  
**Wenqian Hu**, Massachusetts Institute of Technology, Massachusetts

11:40 – 12:05  Mechanistic dissection of UsnRNP biogenesis and its role in disease  
**Utz Fischer**, University of Würzburg, Würzburg

12:05 – 12:30  RNA-targeted treatment for myotonic dystrophy  
**Charles Thornton**, University of Rochester, Rochester

12:30 – 13:35  **Student Choice Seminar**  
Introduction by the student representatives  
Non-Watson-Crick base pairs, RNA architectural modules and recognition fidelity in translation  
**Eric Westhof**, Institut de Biologie Moléculaire et Cellulaire, Strasbourg

13:35 – 14:45  Lunch

**Departure**