



**RiboClub 2018**  
**September 23-27**

RNomics: Big data, analysis and mechanism of action.  
*Hotel et Villégiature Chéribourg*  
*2603 Chemin du Parc*  
*Orford (Magog) Quebec, Canada*

**Sunday, September 23<sup>th</sup>**

|               |                                 |
|---------------|---------------------------------|
| 15:00 – 18:00 | Registration for early arrivals |
| 18:00 – 19:30 | Welcome reception               |
| 19:30 – 21:30 | Opening dinner                  |



## Monday, September 24<sup>th</sup>

- 08:00 – 08:45 Registration
- 08:45 – 08:55 Opening Notes (Sherif Abou Elela)
- 08:55 – 09:00 Presentation of Keynote speaker (**Benoit Chabot**)
- 09:00 – 10:00 **Keynote presentation**  
Hidden treasures of the RNA world: RBPs from moonlighting to riboregulation  
**Matthias W. Hentze**, EMBL Heidelberg, Heidelberg
- 10:00 – 10:30 Coffee break

### **Session 1:** **Transcription and RNA synthesis**

Chair: **Shona Murphy**

- 10:30 – 10:35 Introduction by **Shona Murphy**
- 10:35 – 10:55 Photo-dependent control of transcription elongation  
**Jean-François Nadon**, Université de Sherbrooke, Sherbrooke
- 10:55 – 11:15 Nus factors prevent Rho-dependent transcription termination of CRISPR arrays in diverse bacterial species  
**Joseph Wade**, University at Albany-SUNY, Albany
- 11:15 – 11:35 Influenza A virus cap-snatching profiling reveals inhibition of the cellular response at the earliest steps of infection  
**Martin Pelchat**, University of Ottawa, Ottawa
- 11:35 – 11:55 Common mechanism of transcription termination at coding and noncoding RNA genes in fission yeast  
**François Bachand**, Université de Sherbrooke, Sherbrooke
- 11:55 – 12:15 The mysterious world of pol II CTD kinases  
**Shona Murphy**, University of Oxford, UK
- 12:15 – 14:00 Networking Lunch



## **Session 2: RNP Maturation and Function**

Chair: **Benoit Chabot**

- 14:00 – 14:05 Introduction by **Benoit Chabot**
- 14:05 – 14:25 Early Recognition in the spliceosome  
**Andrew MacMillan**, University of Alberta, Edmonton
- 14:25 – 14:45 Investigating the biological function of an extremely reduced splicing system  
**Stephen Rader**, University of Northern British Columbia, Prince George
- 14:45 – 15:05 Alternative splicing in apoptotic resistance associated with senescence  
**Mathieu Deschênes**, Université de Sherbrooke, Sherbrooke
- 15:05 – 15:25 The exon junction complex undergoes a compositional switch that alters overall mRNP structure and nonsense-mediated mRNA decay activity  
**Guramrit Singh**, The Ohio State University, Ohio
- 15:25 – 15:45 Genome-wide CRISPR-Cas9 interrogation of splicing networks reveals a mechanism for recognition of autism-misregulated neuronal microexons  
**Thomas Gonatopoulos-Pournatzis**, University of Toronto, Toronto
- 15:45 – 16:10 Coffee break

## **Session 3: Transcriptomics and Bioinformatics of Splicing**

Chair: **Jernej Ule**

- 16:10 – 16:15 Introduction by **Jernej Ule**
- 16:15 – 16:35 Big RNA splicing data - challenges and advancements  
**Mathieu Quesnel-Vallières**, University of Pennsylvania, Philadelphia
- 16:35 – 16:55 Multiple spliced alignment and visualization of gene structure alignment  
**Aïda Ouangraoua**, Université de Sherbrooke, Sherbrooke
- 16:55 – 17:15 The exon junction complex shapes the transcriptome by repressing recursive splicing  
**Jernej Ule**, Institute of Neurology, London



- 17:15 – 17:35 Proteome remodeling by neuronal microexons across bilaterian animals  
**Manuel Irimia**, Centre for Genomic Regulation (CRG), Barcelona
- 17:35 – 17:55 What transcriptomes tell us about disease  
**Nuno L. Barbosa Morais**, IMM Lisboa, Lisbon
- 18:00 – 19:30 Dinner
- 19:30 – 20:30 Gairdner event - After Dinner Speaker  
Introduction by Brendan Bell, Université de Sherbrooke  
**Davor Solter**, 2018 Gairdner Award winner
- 20:30 – 21:30 Poster competition IA: (Odd numbers)
- 21:30 – 22:30 Poster competition IB: (Even numbers)
- 22:30 – 24:00 Get Together (Bistro)



**Tuesday, September 25<sup>th</sup>**

07:00 – 08:30 Breakfast

**Session 4:  
Ribosome Profiling and transcriptomics**

Chair: **Alan G. Hinnebusch**

08:30 – 08:35 Introduction by Alan G. Hinnebusch

08:35 – 08:55 Identifying translated isoforms from ribosome profiling data  
**Uwe Ohler**, Max Delbrück Center for Molecular Medicine, Berlin

08:55 – 09:15 Dissecting the roles of eIF2 and eIF3 during translation using TCP-seq  
**Thomas Preiss**, The John Curtin School of Medical Research, Canberra

09:15 – 09:35 Reconstituting distinct functions of DEAD-box RNA helicases Ded1, Dbp1, and eIF4A in stimulating translation initiation of structured native yeast mRNAs  
**Alan G. Hinnebusch**, NIH, Bethesda

09:35 – 9:55 Translating the cancer genome one codon at a time and its therapeutic implications  
**Davide Ruggero**, UCSF, San Francisco

09:55 – 10:15 Endogenous rRNA sequence variation can regulate gene expression and phenotype  
**Scott Blanchard**, Weill Cornell Medical College, New York

10:15 – 10:45 Coffee break

**Session 5:  
Translation Mechanisms and Function**

Chair: **Neva Caliskan**

10:45 – 10:50 Introduction by **Neva Caliskan**

10:50 – 11:10 eIF2 $\alpha$  Methylation by PRMT7 is Required for S51 Phosphorylation and Subsequent Stress Granule Formation  
**Jocelyn Côté**, University of Ottawa, Ottawa



- 11:10 – 11:30 Eukaryotic initiation factor 5B (eIF5B) is a regulatory hub for non-canonical translation initiation in glioblastoma progression  
**Joseph A. Ross**, University of Lethbridge, Lethbridge
- 11:30 – 11:50 The conserved translational ATPase YchF interacts with tRNA and the ribosomal A-site for ribosome quality control  
**Harland E. Brandon**, University of Lethbridge, Lethbridge
- 11:50 – 12:10 Small synthetic molecule-stabilized RNA pseudoknot as an activator for –1 ribosomal frameshifting  
**Neva Caliskan**, Helmholtz Institute for RNA-based Infectious Research (HIRI/HZI), Würzburg
- 12:10 – 12:20 Group Photo
- 12:20 – 13:50 Lunch
- 13:00 – 13:50 Virtual computational RNA community meeting

## **Session 6: Translation Regulation**

Chair: **Christine Clayton**

- 13:50 – 13:55 Introduction by **Christine Clayton**
- 13:55 – 14:15 Human La binds the poly(A) tail to promote cap-independent translation  
**Mark Bayfield**, York University, Toronto
- 14:15 – 14:35 The suppressive cap-binding-complex factor 4EIP is required for normal differentiation  
**Christine Clayton**, University (ZMBH), Heidelberg
- 14:35 – 14:55 Investigating nPABP, a mammalian neural poly(A) binding protein that represses mRNA translation  
**Sahil Sharma**, Lady Davis Institute for Medical Research, Montréal
- 14:55 – 15:15 Translation activation by mRNA secondary structures revealed by small RNA regulation  
**Maude Guillier**, CNRS, Paris
- 15:15 – 15:35 Elucidating the interplay between RNA structure and translation during vertebrate embryogenesis  
**Jean-Denis Beaudoin**, Yale University School of Medicine, New Haven



15:35 – 16:00 Coffee Break

**Session 7:  
RNA Degradation**

Chair: **Joel G. Belasco**

16:00 – 16:05 Introduction by **Joel G. Belasco**

16:05 – 16:25 Mechanisms of bacterial mRNA degradation  
**Joel G. Belasco**, New York University School of Medicine, New York

16:25 – 16:45 Posttranscriptional feedback regulation of S-adenosylmethionine production  
**Nicholas K. Conrad**, University of Texas Southwestern Medical Center, Dallas

16:45 – 17:05 Deconvolving the RNA life cycle from high-resolution time-resolved protein-RNA interaction data  
**Sander Granneman**, University of Edinburgh, Edinburgh

17:05 – 17:25 Human antigen R (HuR) mediates cancer-induced muscle wasting by regulating PGC1 $\alpha$ -dependent muscle fiber type specification  
**Imed Gallouzi**, McGill University, Montreal

17:25 – 17:30 Students' Award Introduction (students' representatives)

17:30 – 17:45 Best Talk Award of the RiboWest (introduced by Students' Representative)

17:45 – 18:00 Best Seminar Award (introduced by Students' Representative)

18:00 – 19:00 Poster competition IIA (Even numbers), Cocktail and light snacks

19:00 – 20:00 Poster competition IIB: (Odd numbers), Cocktail and light snacks

20:00 – 21:30 Dinner

21:30 – 24:00 Get Together (Bistro)



**Wednesday, September 26<sup>th</sup>**

07:00 – 08:30      Breakfast

**Session 8:  
Eukaryotic Non-Coding RNA**

Chair: **René F. Ketting**

08:30 – 08:35      Introduction by **René F. Ketting**

08:35 – 08:55      Tissue-based map of the snoRNome  
**Michelle Scott**, Université de Sherbrooke, Sherbrooke

08:55 – 09:15      A nested 2-level cross-validation ensemble learning pipeline suggests a negative pressure against crosstalk snoRNA-mRNA interactions in *Saccharomyces Cerevisiae*  
**Antoine Paul Soulé**, McGill University, Montreal

09:15 – 09:35      Molecular mechanisms driving small RNA pathways in germ cells  
**René F. Ketting**, Institute of Molecular Biology gGmbH, Mainz

09:35 – 09:55      Evf2 ultraconserved enhancer (UCE) lncRNA regulates UCE target gene selection and activity through cohesin recruitment and cis and trans mechanisms  
**Jhumku D. Kohtz**, Northwestern University & Stanley Manne Children's Research Institute, Chicago

09:55 – 10:15      Mechanisms regulating dyskerin SUMOylation and effects of X-linked dyskeratosis congenita mutations on dyskerin function  
**Chantal Autexier**, McGill University, Montreal

10:15 – 10:35      ADAR1 RNA editing mediated dsRNA sensing in innate immunity  
**Jin Billy Li**, Stanford University, Stanford

10:35 – 11:05      Coffee Break





**Session 9:  
Bacterial Non-Coding RNA**

Chair: **Cari Vanderpool**

- 11:05 – 11:10 Introduction by **Cari Vanderpool**
- 11:10 – 11:30 Determinants of target prioritization and regulatory hierarchy for the bacterial small RNA SgrS  
**Cari Vanderpool**, University of Illinois at Urbana-Champaign, Champaign
- 11:30 – 11:50 A systems approach to bacterial cell stress and small non-coding RNAs  
**Eric D. Brown**, McMaster University, Hamilton, Canada
- 11:50 – 12:10 Real-time Imaging of Cotranscriptional Folding During Transcription Elongation  
**Jonathan Grondin**, Université de Sherbrooke, Sherbrooke
- 12:10 – 14:00 Lunch
- 13:15 – 14:00 Business meeting

**Session 10:  
RNA-Seq, System Biology and Networks**

Chair: **Jack D. Keene**

- 14:00 – 14:05 Introduction by **Jack D. Keene**
- 14:05 – 14:25 Efficient regulatory circuits by a protein and a small RNA encoded in a single gene  
**Hanah Margalit**, The Hebrew University of Jerusalem, Jerusalem
- 14:25 – 14:45 Post-transcriptional Regulation in RAS-induced malignant cells  
**Jack D. Keene**, Duke University Medical Center, Durham
- 14:45 – 15:05 Dissecting the role of SINE non-coding RNAs in aging and amyloid pathology: An integrative RNA genomics approach  
**Athanasios Zovoilis**, University of Lethbridge, Lethbridge
- 15:05 – 15:25 Widespread & functional RNA circularization in localized prostate cancer  
**Sujun Chen**, Princess Margaret Cancer Center, Toronto
- 15:25 – 15:55 Coffee Break



**Session 11:  
New Methods for Bioinformatics and Transcriptomics**

Chair: **Lydia L. Sohn**

- 15:55 – 16:00 Introduction by **Lydia L. Sohn**
- 16:00 – 16:20 Inferring the targets of RNA-binding proteins  
**Quaid Morris**, University of Toronto, Toronto
- 16:20 – 16:40 Mechano-NPS: An electronic method to mechanically phenotype cells  
**Lydia L. Sohn**, University of California, Berkeley
- 16:40 – 17:00 Cataloguing recurrent long-range interactions in RNA structures exhibits embedded hierarchies in network families  
**Vladimir Reinharz**, Institute of Basic Science, Ulju-gun
- 17:00 – 17:20 Fission yeast transcriptional heterogeneity surveyed by single cell RNA sequencing  
**Samuel Marguerat**, MRC London Institute of Medical Sciences, London
- 17:20 – 18:20 **Students' Choice Seminar**  
Ribosome heterogeneity in translating the genetic code  
Introduction by student representatives  
**Maria Barna**, Stanford University, Stanford
- 18:20 – 20:30 Banquet
- 20:30 – 20:35 Presentations of the travel awards  
**Éric Massé**, Université de Sherbrooke
- 20:35 – 20:40 Poster prizes  
**Michelle Scott**, Université de Sherbrooke
- 20:40 – 20:45 Blue Jacket Award  
**Benoit Chabot**, Université de Sherbrooke
- 20:45 – 20:55 RNA Group Notes and Progress  
**François Bachand**, Université de Sherbrooke
- 21:00 – .. Special Presentation of Quebec Folk Music and Dance



**Thursday, September 27<sup>th</sup>**

07:00 – 09:30      Breakfast and Departure.