



2012 RiboClub Program
New frontiers of RNA biology, diagnostics and therapeutics
24-26 September
In partnership with UMASS Medical School
Hotel et Villégiature Chéribourg
2603 Chemin du Parc
Orford (Magog) Quebec

Sunday, September 23th

15:00 – 18:00 Registration for early arrivals

Monday, September 24th

08:00 – 09:00 Registration

09:00 – 09:10 Welcoming notes (Sherif Abou Elela)

09:10 – 09:15 Presentation of Keynote speaker
Allan Jacobson, University of Massachusetts Medical School, Worcester

09:15 – 10:15 **Keynote presentation:**
Human Proteomics at Scale: SOMAmers and the SOMAscan Platform
Larry Gold, University of Colorado, Boulder

10:15 – 10:40 Coffee break

Session 1:

Identification and characterization of RNA complexes

Chair: James Manley

10:40 – 10:45 Introduction

10:45 – 11:10 Processing of mRNA precursors and links to human disease
James Manley, Columbia University, New York



- 11:10 – 11:35 Biogenesis and function of microRNAs
Eric Lai, Memorial Sloan-Kettering, New York
- 11:35 – 11:50 A Novel Role for SMN as a Translational Regulator
Jocelyn Côté, University of Ottawa, Ottawa
- 11:50 – 12:05 Genome-wide mapping of Staufen1 RNA-binding sites coupled with proteomics reveals an intimate link to Alu elements and an unexpected nuclear role
Emiliano P. Ricci, University of Massachusetts Medical School, Worcester
- 12:05 – 12:20 Selective autophagy mediates homeostatic degradation of DICER and AGO2 and regulates miRNA activity
Derrick Gibbings, University of Ottawa, Ottawa
- 12:20 – 12:35 Hundreds of new protein-protein interactions in the SSU processome identified by high-throughput yeast two-hybrid
Michael Charette, Yale University School of Medicine, New Haven
- 12:35 – 13:45 Lunch

Session 2:

RNA splicing, processing and export

Chair: Melissa Moore

- 13:45 – 13:50 Introduction
- 13:50 – 14:05 PRP8 Regulates Splicing at the Heart of the Spliceosome
Andrew MacMillan, University of Alberta, Edmonton
- 14:05 – 14:20 A minimal spliceosome from an acidophilic red alga
Stephen Rader, UNBC, Prince George
- 14:20 – 14:45 Regulation of splicing through extended spliceosomal contacts
Kristen Lynch, University of Pennsylvania, Philadelphia
- 14:45 – 15:00 Characterization of the Sequence Specificity of Eukaryotic RNA-binding Proteins
Debashish Ray, University of Toronto, Toronto
- 15:00 – 15:25 Nuclear RNP Egress by Nuclear Envelope Budding
Melissa Moore, University of Massachusetts Medical School, Worcester



15:25 – 16:20 Coffee Break

Session 3:

Unexpected functions of non-coding RNA

Chair: Victor Ambros

16:20 – 16:25 Introduction

16:25 – 16:50 MicroRNA pathways link development and stress responses in *C. elegans*
Victor Ambros, University of Massachusetts Medical School, Worcester

16:50 – 17:15 Organization of a transposon silencing compartment
Bill Theurkauf, University of Massachusetts Medical School, Worcester

17:15 – 17:30 A new class of intron-derived long noncoding RNAs
Gordon G. Carmichael, University of Connecticut Health Center,
Farmington

17:30 – 17:45 New insights into small RNA-dependent translational regulation
Eric Massé, Université de Sherbrooke, Sherbrooke

17:45 – 18:00 Investigation of the role of stably accumulating snoRNA-derived
small RNAs in the regulation of splicing
Michelle Scott, Université de Sherbrooke, Sherbrooke

18:00 – 18:15 Expression of pericentric satellites in cancer: an approach to
reveal locus specific misregulation
Dawn M. Carone, University of Massachusetts Medical School, Worcester

18:15 – 19:15 Poster competition IA: (Odd numbers)

19:15 – 20:15 Poster competition IB: (Even numbers)

20:15 – 21:35 Dinner

21:35 – 21:40 Presentations of the travel awards
Eric Masse, Université de Sherbrooke

21:40 – 21:45 Presentation of the after dinner speaker
Benoit Chabot, Université de Sherbrooke

21:45 – 22:45 **After-dinner general presentation**
Joseph Gall, Carnegie Institute of Science, Baltimore



Tuesday, September 25th

07:00 – 08:40 Breakfast

Session 4:

RNA degradation

Chair: Allan Jacobson

08:40 – 08:45 Introduction

08:45 – 09:10 NMD and the dynamic interactions of yeast Upf factors
Allan Jacobson, University of Massachusetts Medical School, Worcester

09:10 – 09:35 mRNA 5'-end Quality Control
Mike Kiledjian, Rutgers University, Piscataway

09:35 – 09:50 Decapping of coding and non-coding RNAs
Jeff Coller, Case Western Reserve University, Cleveland

09:50 – 10:05 A new model for mRNA decapping activation in yeast
Feng He, University of Massachusetts Medical School, Worcester

10:05 – 10:50 Coffee break

Session 5:

Structure and function of the translational apparatus

Chair: Andrei Korostelev

10:50 – 10:55 Introduction

10:55 – 11:20 Molecular Architecture of a Late 40S Ribosome Assembly Intermediate
Georgios Skiniotis, University of Michigan, Ann Arbor

11:20 – 11:45 Translation-dependent mRNA decay in neurons
Alicia Bicknell, University of Massachusetts Medical School, Worcester

11:45 – 12:00 An oxygen-regulated switch in the protein synthesis machinery
James Uniacke, University of Ottawa, Ottawa



- 12:00 – 12:15 Elongation Factor G Undergoes an Extensive Structural Rearrangement during Ribosomal Translocation
Dmitri N. Ermolenko, University of Rochester Medical Center, Rochester
- 12:15 – 12:30 2012 Group Photo
- 12:30 – 15:00 Lunch and outdoors activity (Mount Orford)
- 15:00 – 15:15 Ribosome's little helpers: Piecing together the functional role of two poorly understood universally conserved GTPases
Hans-Joachim Wieden, University of Lethbridge, Lethbridge
- 15:15 – 15:30 Mechanistic insights into translation termination
Andrei Korostelev, University of Massachusetts Medical School, Worcester

Session 6:

Going both ways with RNA imprinting

Chair: Craig Mello

- 15:30 – 15:35 Introduction
- 15:35 – 16:00 Surveillance of transcription and persistent silencing of foreign sequences in the *C. elegans* germline
Craig Mello, University of Massachusetts Medical School, Worcester
- 16:00 – 16:25 XIST RNA in Chromosome Regulation and Architecture: Implications for the Repeat Genome
Jeanne Lawrence, University of Massachusetts Medical School, Worcester
- 16:25 – 16:40 The slicing activity of miRNA-specific Argonautes is essential for the miRNA pathway in *C. elegans*
Martin Simard, Laval University, Quebec
- 16:40 – 16:45 **Alumnus of the year seminar**
Presented by the students representatives
- 16:45 – 17:10 Alumnus of the year seminar
Cooperative microRNA-directed mRNA deadenylation
Thomas Duchaine, McGill University, Montreal
- 17:10 – 18:10 Social time (complimentary cocktail)



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| 18:10 – 19:10 | Poster competition IIA (Odd numbers) |
| 19:10 – 20:10 | Poster competition IIB: (Even numbers) |
| 20:10 – 22:40 | Banquet |
| 21:40 – 22:05 | Musical Interlude (Part 1) |
| 22:05 – 22:15 | Poster prizes François Bachand, Université de Sherbrooke |
| 22:15 – 22:25 | RNA Group and Blue jacket award Benoit Chabot, Université de Sherbrooke |
| 22:25 – 22:35 | Announcement of the next year RiboClub and seminars schedule Sherif Abou Elela, Université de Sherbrooke |
| 22:35 – 23:05 | Musical Interlude (Part 2) |
| 23:00 – | Dance |

Wednesday, September 26th

07:00 – 09:00 Breakfast

Session 7:

Pathogenic RNAs, disease biomarkers and small molecule discovery

Chair: Maurice Swanson

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| 09:00 – 09:05 | Introduction |
| 09:05 – 09:30 | The Expanding Universe of RNA-Mediated Disease Maurice Swanson, University of Florida, Gainesville |
| 09:30 – 09:55 | Rational Design of Small Molecules Targeting RNA from Sequence Matt Disney, The Scripps Research Institute, Jupiter |
| 09:55 – 10:20 | Identifying small molecules for the treatment of orphan diseases Ellen Welch, PTC Therapeutics Inc., South Plainfield |



- 10:20 – 10:50 Coffee Break
- 10:50 – 11:05 Nuclear Fragile X Mental Retardation protein localizes in Cajal bodies
Alain Dury, Université laval, Quebec

Session 8:

The complex interplay between mRNA decay, translation and disease

Chair: Maurice Swanson

- 11:05 – 11:10 Introduction
- 11:10 – 11:35 Regulation of local mRNA translation by the fragile x mental retardation protein and microRNAs
Gary Bassell, Emory University, Atlanta
- 11:35 – 12:00 Identification and characterization of 3'-5' exonucleases required for dengue virus replication
Alex Ward, Duke-NUS Graduate Medical School, Singapore
- 12:00 – 13:25 Lunch
- 13:25 – 13:40 An eIF4E-binding protein promotes mRNA decapping and is required for PUF repression
Aaron Goldstrohm, University of Michigan School, Ann Arbor
- 13:40 – 14:40 Regulatory RNAs in *Bacillus subtilis*
Wade C. Winkler, University of Maryland, College Park
- Student Choice Seminar**
Introduction by the student's representatives

Departure