



2011 RiboClub Program

Studying RNA one Molecule at a Time

In partnership with the Canadian Society of Biochemistry, Molecular and Cellular Biology (CSBMCB)

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

Sunday, September 18, 2011

CSBMCB Reception:

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| 15:00 – 17:00 | Early Registrations |
| 17:00 – 19:00 | Meeting-launching wine and cheese at 5 pm |
| 17:30 – 18:30 | Concurrent CSBMCB board meeting and the RiboClub organizers meeting |
| 19:00 – 20:00 | Free-time and dinner on your own |

Monday, September 19th

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| 08:00 – 09:00 | Registration |
| 09:00 – 09:10 | Welcoming notes (Sherif Abou Elela) |
| 09:10 – 09:15 | Presentation of Keynote speaker (Martin Simard) |
| 09:15 – 10:15 | Keynote presentation: Small RNAs of <i>C. elegans</i>
Gary Ruvkun, The Massachusetts General Hospital, USA |
| 10:15 – 10:40 | Coffee break |



Session 1:

RNA dependent regulation of translation (Organized by Thomas Duchaine)

Chair: James E. Dahlberg

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| 10:40 – 10:45 | Introduction |
| 10:45 – 11:10 | Limiting Ago proteins restricts RNAi during <i>X. laevis</i> early development
James E. Dahlberg, University of Wisconsin - Madison, USA |
| 11:10 – 11:35 | The GAIT system and the "translational trickle" control mechanism
Paul Fox, Cleveland Clinic Lerner College of Medicine, USA |
| 11:35 – 11:50 | Investigation of the Ribosome-Independent mRNA Targeting and Maintenance on the Endoplasmic Reticulum
Xianying Amy Cui, University of Toronto, Canada |
| 11:50 – 12:05 | Role of antisense ribosomal RNA processing in translational arrest during stress and apoptosis-inducing conditions in <i>Leishmania</i>
Prasad Padmanabhan, Université Laval, Canada |
| 12:05 – 12:20 | Determining the Role of mRNA Structure during Translational Bypassing of Bacteriophage T4 Gene 60
Gabrielle C. Todd, University of Michigan, USA |
| 12:20 – 12:35 | Non-canonical repression of translation initiation through small RNA-recruitment of the RNA chaperone Hfq
Guillaume Desnoyers, Université de Sherbrooke, Canada |
| 12:35 – 13:45 | Lunch, concurrent CSBMCB Annual General Meeting. |

Session 2:

Splicing Decisions under Stress (Organized by Benoit Chabot)

Chair: Benoit Chabot

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| 13:45 – 13:50 | Introduction |
| 13:50 – 14:15 | Diversify and unite: regulating Bcl-x splicing under stress.
Benoit Chabot, Université de Sherbrooke, Canada |
| 14:15 – 14:40 | Distinct ways in the control of alternative splicing by external factors.
Jiuyong Xie, The University of Manitoba, Canada |



- 14:40 – 15:05 Control of alternative splicing by signal-dependent degradation of splicing regulatory proteins.
David Wassarman, University of Wisconsin Madison, USA
- 15:05 – 15:30 Alteration of the coupling between transcription and splicing hits the core of the genotoxic stress response.
Martin Dutertre, Université de Lyon, France
- 15:30 – 16:20 Coffee Break
- Session 3:**
RNA dependent regulation of viral infection (Organized by Martin Pelchat)
Chair: Andrew White
- 16:20 – 16:25 Introduction
- 16:25 – 16:50 Regulation of RNA virus processes by long-range RNA-RNA interactions
Andrew White, York University, Canada
- 16:50 – 17:15 RNA motif-mediated intercellular RNA trafficking
Biao Ding, The Ohio State University, USA
- 17:15 – 17:30 Involvement of PSF in the recognition of HDV RNA promoters by RNA polymerase II
Martin Pelchat, University of Ottawa, Canada
- 17:30 – 17:45 New Aptamers, Neutral Networks, and Next-generation Sequencing: A Fresh Look at HIV Reverse Transcriptase Aptamers
Mark Ditzler, University of Missouri, USA
- 17:45 – 18:00 UPF1: La CRM de la CRM of HIV-1 vRNA export
Lara Ajamian, Lady Davis Institute for Medical Research, Canada
- 18:00 – 18:15 RNA Recognition and Cleavage by CRISPR Endonuclease
Erin Garside, University of Alberta, Canada
- 18:15 – 19:15 Poster competition IA: (Odd numbers)
- 19:15 – 20:15 Poster competition IB: (Even numbers)
- 20:15 – 21:15 Dinner
- 21:15 – 21:25 Presentations of the CSBMCB travel awards



21:25 – 21:30

Presentation of the after dinner speaker
Benoit Chabot

21:30 – 22:15

After-dinner general presentation

How We Got Here: an Informal History of the Structural Biology of RNA
Peter Moore, Yale University, USA



Tuesday, September 20th

7:00 – 8:40 Breakfast

Session 4:

RNA molecules associated with genome stability. (Organized by Raymund J. Wellinger)

Chair: Andrès Aguilera

08:40 – 08:45 Introduction

08:45 – 09:10 Factors and mechanisms connecting mRNP biogenesis and genome instability
Andrès Aguilera, CABIMER, Spain

09:10 – 09:35 Telomerase RNP mechanism in yeast: determining the limits of flexibility within the 1157-nt RNA
David Zappulla, Johns Hopkins University, USA

09:35 – 09:50 Coupling of RNA 3'-end processing with the DNA Damage Response
Jason Kuehner, Tufts University, USA

09:50 – 10:05 The RNA Helicase DHX36 (RHAU) regulates telomere maintenance by binding to a G4-Quadruplex in the 5' region of human telomerase RNA
Evan Booy, University of Manitoba, Canada

10:05 – 10:50 Coffee break

Session 5A:

Structure and behavior of regulatory RNA (Organized by Philip Johnson)

Chair: Frédéric Allain

10:50 – 10:55 Introduction

10:55 – 11:20 Guanine recognitions by Lin28 zinc-binding domains and SR protein RRM
Frédéric Allain, Institute of Molecular Biology and Biophysics, Switzerland

11:20 – 11:45 Structural and Mechanistic Studies of Riboswitches
Robert T. Batey, University of Colorado at Boulder, USA



11:45 – 12:00 Interdomain allostery promotes assembly of the mRNA complex with PABP and eIF4G
Kalle Gehring, McGill University, Canada

12:00 – 12:15 Critical steps in pseudouridine formation by both stand-alone and complex pseudouridine synthases
Ute Kothe, University of Lethbridge, Canada

12:15 – 12:30 2011 Group Photo

12:30 – 14:00 Lunch

Session 5B:

Structure and behavior of regulatory RNA (Organized by Philip Johnson)

14:00 – 14:15 6S RNA transcriptional regulation controlled by a phylogenetically conserved hairpin switch
Shyam S. S. Panchapakesan, Simon Fraser University, Canada

14:15 – 14:30 Regulation of Pokeweed Antiviral Protein by a small RNA and a transcribed pseudogene
Lydia Burns, York University, Canada

Session 6A:

Nuclear RNA degradation: a new mechanism of gene regulation (Organized by Francois Bachand)

Chair: Domenico Libri

14:30 – 14:35 Introduction

14:35 – 15:00 A comprehensive analysis of exosome targets in yeast *S. cerevisiae*
Domenico Libri, Centre de génétique Moléculaire, France

15:00 – 15:15 The THO complex controls small nucleolar (sno) RNAs expression by promoting the co-transcriptional recruitment of the TRAMP complex
Francois Bachand, Université de Sherbrooke, Canada

15:15 – 15:40 Characterization of antisense mediated transcriptional gene silencing
Francoise Stutz, Université de Genève, Switzerland

15:40 – 16:00 Coffee break



Session 6B:

Nuclear RNA degradation: a new mechanism of gene regulation (Organized by François Bachand)

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| 16:00 – 16:15 | The Fe-sensing Aconitase B protein blocks sRNA-induced mRNA degradation
Julie-Anna M. Benjamin, Université de Sherbrooke, Canada |
| 16:15 – 16:30 | Human PUF mediated deadenylation regulates protein expression and mRNA degradation
Jamie Van Etten, University of Michigan, USA |
| 16:30 – 17:00 | Best student seminar
Introduction by the student's representatives |
| 17:00 - 18:00 | Social time and cocktail |
| 18:00 – 19:00 | Poster competition IIA (Odd numbers) |
| 19:00 – 20:00 | Poster competition IIB: (Even numbers) |
| 20:10 – 22:40 | Banquet |
| 21:40 – 22:00 | Musical Interlude (Part 1) |
| 22:00 – 22:30 | Poster prizes and the blue jacket award |
| 22:40 – 23:00 | Musical Interlude (Part 2) |
| 23:15- | Dance |



Wednesday, September 21st

CSBMCB Annual Awards Presentations:

Chair: Jean-Pierre Perreault

09:00 – 09:10 Introduction

09:10 – 09:35 2011 award
E2Fs transcription factors and cancer cell proliferation: targeting protein or RNA
Gerardo Ferbeyre, Université de Montreal, Canada

09:35 – 10:00 2011 award
TBN
Ben Blencowe, University of Toronto, Canada

Session 7A:

Studying the dynamics of a single RNA molecule in vitro (Organized by Daniel Lafontaine)

Chair: Jody Puglisi

10:00 – 10:05 Introduction

10:05 – 10:30 Dynamics of Translation Initiation
Jody Puglisi, Stanford University School of Medicine, USA

10:30 – 11:10 Coffee Break

11:10 – 11:35 RNA Folding Memory Effects
David Rueda, Wayne State University, USA

11:35 – 11:50 Single molecule FRET study of a purine binding aptamer
Patrick St-Pierre, Université de Sherbrooke, Canada

11:50 – 12:05 Digitalized protein synthesis for ultra high density protein arrays
Satoko Yoshizawa, University of Tokyo, Japan

12:05 – 13:30 Lunch



Session 7B:

Single molecule RNA studies in vivo (Organized by Daniel Zenklusen)

Chair: Rob Singer

- 13:30 – 13:35 Introduction
- 13:35 – 14:00 Single molecule mRNA decay measurements reveal promoter regulated mRNA stability in yeast
Robert Singer, Albert Einstein College of Medicine, USA
- 14:00 – 14:25 Crossing The Gate: Imaging mRNAs with Millisecond Time Resolution Inside Living Cells
David Grünwald, Delft University of Technology, The Netherlands
- 14:25 – 14:40 Single molecule mRNA detection in cells; tools, applications and a little bit of data
Daniel Zenklusen, Université de Montréal, Canada
- 14:40 – 14:55 Tracking the yeast telomerase RNA subunit in live cells: Using MS2-GFP tagging to study the in vivo dynamics of a long-life RNA.
Raymund J. Wellinger, Université de Sherbrooke, Canada
- 14:55 – 15:55 **Student Choice Seminar**
Introduction by the student's representatives
Dicing and Beyond: Regulatory RNA in Humans and Bacteria
Jennifer Doudna, Berkeley University, USA

Departure