

## SUNDAY

- 2:00 pm - 9:00 pm Arrival and Check-in (Office Closed 6:00 pm - 7:00 pm)
- 6:00 pm Dinner
- 7:30 pm - 7:40 pm Welcome / Introductory Comments by GRC Site Staff
- 7:40 pm - 9:30 pm **NUCLEAR RNA METABOLISM: THE TRANSCRIPTION CONNECTION**
- Discussion Leader: **Alberto R. Kornblihtt** (University of Buenos Aires, Buenos Aires, Argentina)
- 7:40 pm - 8:00 pm **Alberto R. Kornblihtt** (University of Buenos Aires, Buenos Aires, Argentina)  
"Chromatin, transcriptional elongation and alternative splicing"
- 8:00 pm - 8:10 pm Discussion
- 8:10 pm - 8:30 pm **Karla M. Neugebauer** (Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany)  
"Splicing on chromatin"
- 8:30 pm - 8:40 pm Discussion
- 8:40 pm - 9:00 pm **Stephen Buratowski** (Harvard Medical School, Boston, MA)  
"Coupling transcription with chromatin and mRNA processing"
- 9:00 pm - 9:05 pm Discussion
- 9:05 pm - 9:25 pm **Tracy Johnson** (University of California-San Diego, CA)  
"Coordinating post-transcriptional gene control with histone modification"
- 9:25 pm - 9:30 pm Discussion

## MONDAY

- 7:30 am - 8:30 am Breakfast
- 9:00 am - 12:30 pm **BIOINFORMATICS: GENE EXPRESSION AND RNAOMICS**
- Discussion Leader: **Chris Burge** (Massachusetts Institute of Technology, Cambridge, MA)
- 9:00 am - 9:20 am **Chris Burge** (Massachusetts Institute of Technology, Cambridge, MA)  
"Splicing factors in epithelial-mesenchymal transition and myotonic dystrophy"
- 9:20 am - 9:30 am Discussion
- 9:30 am - 9:50 am **Gary P. Schroth** (Illumina, Inc., Hayward, CA)  
"Analysis of the complete transcriptome in paraffin-embedded human tumor samples"
- 9:50 am - 10:00 am Discussion
- 10:00 am Coffee Break / Group Photo (10:15 am)
- 10:30 am - 10:50 am **Ben Blencowe** (University of Toronto, Canada)

"Alternative splicing regulatory networks in development and disease"

10:50 am - 11:00 am Discussion

11:00 am - 11:20 am **Brenton R. Graveley** (University of Connecticut Health Center, Farmington, CT)

"Dynamics and diversity of the *Drosophila* transcriptome"

11:20 am - 11:30 am Discussion

11:30 am - 11:40 am **Tyson Clark** (Pacific Biosciences, Menlo Park, CA)

"Direct (and indirect) single-molecule, real-time RNA sequencing"

11:40 am - 11:45 am Discussion

11:45 am - 11:55 am **Guramrit Singh** (University of Massachusetts Medical Center, Worcester, MA)

"Genome-wide exon-junction complex occupancy sites in human cells"

11:55 am - 12:00 pm Discussion

12:00 pm - 12:20 pm **Marco Blanchette** (Stowers Institute for Medical Research, Kansas City, MO)

"The exon-junction complex differentially marks a subset of spliced junctions on specific mRNAs in *Drosophila*"

12:20 pm - 12:30 pm Discussion

12:30 pm Lunch

1:30 pm - 4:00 pm Free Time

4:00 pm - 6:00 pm Poster Session I

6:00 pm Dinner

7:30 pm - 9:30 pm

## **RNA-PROCESSING DYSFUNCTIONS IN DISEASE**

Discussion Leader: **Jane Wu** (Northwestern University Medical School, Chicago, IL)

7:30 pm - 7:50 pm **Jane Wu** (Northwestern University Medical School, Chicago, IL)

"The role of RNA binding proteins in tauopathy and TDP-43 proteinopathy"

7:50 pm - 8:00 pm Discussion

8:00 pm - 8:20 pm **Adrian Krainer** (Cold Spring Harbor Laboratory, Cold Spring Harbor, NY)

"Antisense correction of *SMN2* pre-mRNA splicing in the CNS for SMA therapy"

8:20 pm - 8:30 pm Discussion

8:30 pm - 8:50 pm **Mariano García-Blanco** (Duke University, Durham, NC)

"Post-transcriptional dysfunction and disease-associated RNPs"

8:50 pm - 9:00 pm Discussion

9:00 pm - 9:20 pm **Masatoshi Hagiwara** (Tokyo Medical and Dental University, Tokyo, Japan)

"Visualization and manipulation of RNA splicing to cure human diseases"

9:20 pm - 9:30 pm Discussion

## TUESDAY

7:30 am - 8:30 am Breakfast

9:00 am - 12:30 pm **NON-CODING RNAs**

Discussion Leader: **Witold Filipowicz** (Friedrich Miescher Institute for Biomedical Research, Basel, Switzerland)

9:00 am - 9:20 am **Witold Filipowicz** (Friedrich Miescher Institute for Biomedical Research, Basel, Switzerland)

"Function and metabolism of miRNAs in mammalian cells including neurons"

9:20 am - 9:30 am Discussion

9:30 am - 9:50 am **Shobha Vasudevan** (Massachusetts General Hospital Cancer Center, Boston, MA)

"Regulated post-transcriptional gene expression by microRNPs"

9:50 am - 10:00 am Discussion

10:00 am Coffee Break

10:30 am - 10:50 am **Javier F. Cáceres** (MRC Human Genetics Unit, Edinburgh, Scotland)

"Regulation of miRNA biogenesis in differentiation and cancer"

10:50 am - 11:00 am Discussion

11:00 am - 11:20 am **Anastasia Khvorova** (RXi Pharmaceuticals, Worcester, MA)

"Applications of RNAi compounds in molecular diagnostics and therapeutics"

11:20 am - 11:30 am Discussion

11:30 am - 11:40 am **Richard Gregory** (Children's Hospital, Harvard University, Boston, MA)

"Post-transcriptional control of let-7 miRNA expression in development and disease"

11:40 am - 11:45 am Discussion

11:45 am - 11:55 am **Prasanth V. Kannanganattu** (University of Illinois, Urbana, IL)

"Nuclear-retained non-coding RNA regulates alternative splicing by modulating SR splicing factor phosphorylation"

11:55 am - 12:00 pm Discussion

12:00 pm - 12:20 pm **Auinash Kalsotra** (Baylor College of Medicine, Houston, TX)

"MicroRNAs coordinate an alternative splicing network during mouse postnatal heart development"

12:20 pm - 12:30 pm Discussion

12:30 pm Lunch

1:30 pm - 4:00 pm Free Time

4:00 pm - 6:00 pm	Poster Session II
6:00 pm	Dinner
7:30 pm - 9:30 pm	<b>RNA/RNP STRUCTURE</b>
	Discussion Leader: <b>Jennifer A. Doudna</b> (University of California-Berkeley, CA)
7:30 pm - 7:50 pm	<b>Jennifer A. Doudna</b> (University of California-Berkeley, CA) "Regulatory RNA biogenesis during viral defense in bacteria"
7:50 pm - 8:00 pm	Discussion
8:00 pm - 8:20 pm	<b>Erik Sontheimer</b> (Northwestern University, Evanston, IL) "A nuclear siRNP required for male fertility in <i>Drosophila</i> "
8:20 pm - 8:30 pm	Discussion
8:30 pm - 8:50 pm	<b>Myriam Gorospe</b> (National Institute on Aging, NIH, Baltimore, MD) "RNA-binding proteins antagonize microRNA to control topoisomerase IIa levels"
8:50 pm - 9:00 pm	Discussion
9:00 pm - 9:10 pm	<b>Nicholas Reiter</b> (Northwestern University, Evanston, IL) "Structure of a bacterial ribonuclease P holoenzyme in complex with tRNA"
9:10 pm - 9:15 pm	Discussion
9:15 pm - 9:25 pm	<b>Jason Casolari</b> (Stanford University, Stanford, CA) "Identification of motor-associated mRNAs: Microarray and live-cell super-resolution microscopy of localized mRNA dynamics"
9:25 pm - 9:30 pm	Discussion

## WEDNESDAY

7:30 am - 8:30 am	Breakfast
9:00 am - 12:30 pm	<b>RNA TURNOVER</b>
	Discussion Leader: <b>Eric M. Phizicky</b> (University of Rochester, Rochester, NY)
9:00 am - 9:20 am	<b>Eric M. Phizicky</b> (University of Rochester, Rochester, NY) "The rapid tRNA decay pathway monitors the structural integrity of mature tRNAs"
9:20 am - 9:30 am	Discussion
9:30 am - 9:50 am	<b>Jeff Coller</b> (Case Western University, Cleveland, OH) "The role of mRNA decapping in translating and non-translating RNA"
9:50 am - 10:00 am	Discussion
10:00 am	Coffee Break
10:30 am - 10:50 am	<b>Manuel Ares</b> (University of California-Santa Cruz, CA) "A complex pre-mRNA structure regulates polyamine levels through

alternative splicing and NMD"

10:50 am - 11:00 am Discussion

11:00 am - 11:20 am **William F. Marzluff** (University of North Carolina, Chapel Hill, NC)  
"The specific TUTases involved in histone mRNA degradation"

11:20 am - 11:30 am Discussion

11:30 am - 11:50 am **Chenguang Gong** (University of Rochester Medical Center, Rochester, NY)  
"Staufen1 and mRNA decay"

11:50 am - 12:00 pm Discussion

12:00 pm - 12:20 pm **Sandra Wolin** (Yale University, New Haven, CT)  
"Noncoding RNA biogenesis and quality control"

12:20 pm - 12:30 pm Discussion

12:30 pm Lunch

1:30 pm - 4:00 pm Free Time

4:00 pm - 6:00 pm Poster Session III

6:00 pm Dinner

7:00 pm - 7:30 pm Business Meeting

(Nominations for the next Vice Chair; Fill out Conference Evaluation Forms; Discuss future Site & Scheduling preferences; Election of the next Vice Chair)

7:30 pm - 9:30 pm

## **RNA TRANSPORT AND LOCALIZATION**

Discussion Leader: **Anita K. Hopper** (Ohio State University, Columbus, OH)

7:30 pm - 7:50 pm **Anita K. Hopper** (Ohio State University, Columbus, OH)  
"tRNA subcellular dynamics"

7:50 pm - 8:00 pm Discussion

8:00 pm - 8:20 pm **Susan R. Wentz** (Vanderbilt University, Nashville, TN)  
"From nuclear mRNA export to translation"

8:20 pm - 8:30 pm Discussion

8:30 pm - 8:50 pm **Robert H. Singer** (Albert Einstein College of Medicine of Yeshiva University, Bronx, NY)  
"Following single mRNAs from synthesis to decay in living cells"

8:50 pm - 9:00 pm Discussion

9:00 pm - 9:20 pm **Kimberly L. Mowry** (Brown University, Providence, RI)  
"Motor-driven RNA transport in the cytoplasm"

9:20 pm - 9:30 pm Discussion

## **THURSDAY**

7:30 am - 8:30 am Breakfast

9:00 am - 12:30 pm **RNA SPLICING CATALYSIS, REGULATION, AND FIDELITY**

Discussion Leader: **Douglas L. Black** (University of California-Los Angeles, CA)

9:00 am - 9:20 am **Douglas L. Black** (University of California-Los Angeles, CA)  
"Mechanisms and programs of neuronal alternative splicing"

9:20 am - 9:30 am Discussion

9:30 am - 9:50 am **Juan Valcárcel** (Centre for Genomic Regulation, Barcelona, Spain)  
"Mechanisms of alternative splicing regulation and their impact on cell proliferation"

9:50 am - 10:00 am Discussion

10:00 am Coffee Break

10:30 am - 10:50 am **Xiang-Dong Fu** (University of California-San Diego, CA)  
"SRPK-mediated EGF signaling in regulated splicing"

10:50 am - 11:00 am Discussion

11:00 am - 11:20 am **Melissa Moore** (University of Massachusetts Medical Center, Worcester, MA)  
"Into the CoSMoS: The dynamics of spliceosome assembly one molecule at a time"

11:20 am - 11:30 am Discussion

11:30 am - 11:50 am **Anna Marie Pyle** (Yale University, New Haven, CT)  
"Catalysis of pre-mRNA splicing: Insights from the group II intron active site"

11:50 am - 12:00 pm Discussion

12:00 pm - 12:10 pm **Michael Dye** (University of Oxford, Oxford, UK)  
"Co-transcriptional cleavage and degradation of intronic RNA"

12:10 pm - 12:15 pm Discussion

12:15 pm - 12:25 pm **Kristen W. Lynch** (University of Pennsylvania, Philadelphia, PA)  
"Connecting cell signaling with splicing"

12:25 pm - 12:30 pm Discussion

12:30 pm Lunch

1:30 pm - 4:00 pm Free Time

4:00 pm - 6:00 pm Poster Session IV

6:00 pm Dinner

7:30 pm - 9:30 pm **TRANSLATIONAL CONTROL**

Discussion Leader: **Fátima Gebauer** (Centre for Genomic Regulation, Barcelona, Spain)

7:30 pm - 7:50 pm **Fátima Gebauer** (Centre for Genomic Regulation, Barcelona, Spain)

	"Post-transcriptional control of X-chromosome dosage compensation in <i>Drosophila</i> "
7:50 pm - 8:00 pm	Discussion
8:00 pm - 8:20 pm	<b>Jonathan S. Weissman</b> (University of California-San Francisco, CA) "Genome-wide analysis of translation with nucleotide resolution using ribosome profiling"
8:20 pm - 8:30 pm	Discussion
8:30 pm - 8:50 pm	<b>Wendy Gilbert</b> (Massachusetts Institute of Technology, Cambridge, MA) "Adapting to altered translomes through functional specialization of ribosomes"
8:50 pm - 9:00 pm	Discussion
9:00 pm - 9:20 pm	<b>Rachel Green</b> (Johns Hopkins University, Baltimore, MD) "Quality control on the ribosome in bacteria and eukaryotes"
9:20 pm - 9:30 pm	Discussion

## FRIDAY

7:30 am - 8:30 am	Breakfast
9:00 am	Departure

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