
PROGRAM—RNA 2010

The Fifteenth Annual Meeting of the RNA Society Seattle, Washington USA June 22 – 26, 2010

Tuesday, June 22

12 noon – 7:00 p.m.	Registration	Meany Lobby
5:00 – 6:00 p.m.	Welcome Reception	By George Café
6:00 – 7:30 p.m.	Dinner	By George Café
8:00 – 10:00 p.m.	Opening & Plenary Session 1 <i>Tim Nilsen, Chair</i>	Meany Theater
8:00 – 8:15 p.m.	Welcome & Opening remarks	
8:15	Joan Steitz	
8:45	Jim Manley	
9:15 – 9:45 p.m.	Kathy Collins	

Wednesday, June 23

8:00 a.m. – 1:00 p.m.	Registration/Information	Meany Lobby
9:00 a.m. – 12 noon	Plenary Session 2 <i>Doug Black, Chair</i>	Meany Theater
9:00	Reinhard Luhrmann	
9:30	Harry Noller	
10:00 – 10:30 a.m.	Break	
10:30	Jon Lorsch	
11:00	David Tollervey	
11:30 – 12 noon	Nahum Sonenberg	
12:30 – 2:00 p.m.	Lunch	By George Café
12:30 – 2:00 p.m.	Board of Directors Lunch Meeting	HUB - 200BC
1:00 – 7:30 p.m.	Poster Installation	HUB - Ballroom & 209AB
2:00 – 7:30 p.m.	Registration/Information	Kane Lobby
2:00 – 5:30 p.m.	Concurrent Session 1 Part 1: Mechanisms of Pre-mRNA Splicing <i>Jean Beggs, Chair</i> Abstracts 1 –7 Part 2: RNA and Disease <i>Lucca Cartegni, Chair</i> Abstracts 8 –14	Kane Hall - 130

Concurrent Session 2 Kane Hall - 120
Ribosomes Structure, Function, and Biogenesis
Marina Rodnina, Chair
 Abstracts 15 – 28

5:30 – 7:30 p.m. Career Development Workshop Kane Hall - 130
Communications Workshop “Putting Your Science to Work”
Peter Fiske

6:30 – 8:00 p.m. Dinner By George Café

7:30 – 8:30 p.m. Junior Scientists Social HUB - Upper Husky Den

8:00 – 10:30 p.m. Poster Session 1 (browsing) HUB - Ballroom & 209AB

(Scout for your favorite posters tonight.
 EVEN NUMBERED posters will be staffed on Thursday,
 ODD NUMBERED posters on Friday.)

(Abstract)	Topic
(112 - 129)	3' End Formation
(130 - 153, 670)	Bioinformatics
(154 - 162)	Chemical Biology of RNA
(163 - 179)	Emerging Methodologies for RNA Science
(180 - 196)	Interconnections Between Gene Expression Processes
(197 - 210, 671)	Mechanisms of RNA Interference
(211 - 244)	Non-coding and Regulatory RNAs
(245 - 246)	Riboregulation in Development
(247 - 273)	Ribosomes
(275 - 278)	RNA and Epigenetics
(279 - 295)	RNA Catalysis
(296 - 325)	RNA Editing and Modification
(326 - 376)	RNA Structure and Folding
(377 - 389)	RNA Transport and Localization
(390 - 415, 668)	RNA Turnover
(416 - 449)	RNA-Protein Interactions
(450 - 472)	RNAs in Diseases
(473 - 497, 669)	RNP Structure, Function and Biosynthesis
(498 - 521)	Small RNAs
(522 - 547)	Splicing Mechanisms
(548 - 604)	Splicing Regulation
(605 - 624)	Translation Regulation
(625 - 650)	tRNA, snoRNA and rRNA
(651 - 667)	Viral RNAs

Thursday, June 24

8:00 a.m. – 1:00 p.m. Registration/Information Meany Lobby

9:00 a.m. – 12 noon Plenary Session 3 Meany Theater
Juli Feigon, Chair

9:00 Brent Graveley

9:30 Alan Lambowicz

10:00 – 10:30	Break	
10:30	Michael Ibba	
11:00	Ronald Breaker	
11:30 – 12 noon	Susan Gottesman	
12:30 – 2:00 p.m.	Lunch	By George Café
12:30 – 2:00 p.m.	Mentor-Mentee Lunch	HUB - 106B, 108, 200ABC, 310
2:00 – 5:30 p.m.	Registration/Information	Kane Hall Lobby
2:00 – 5:30 p.m.	Concurrent Session 3 Alternative Splicing and Splicing Regulatory Networks <i>Don Rio, Chair</i> Abstracts 29 – 42	Kane Hall - 130
	Concurrent Session 4 Part 1: Transfer RNA Metabolism <i>Eric Phizicky, Chair</i> Abstracts 43 – 50	Kane Hall - 120
	Part 2: RNA Modulation of RNA Synthesis <i>Torben Jensen, Chair</i> Abstracts 51 – 56	
6:30 – 8:00 p.m.	Dinner	By George Café
6:30 – 8:30 p.m.	RNA & Society Dinner	Haggett Hall Cascade Dining Room
8:00 – 10:30 p.m.	Poster Session 2 (EVEN numbered posters staffed)	HUB Ballroom & 209AB

Friday, June 25

8 a.m. – 1:00 p.m.	Registration/Information	Meany Lobby
9 a.m. – 12 noon	Plenary Session 4 <i>Elisa Izaurralde, Chair</i>	Meany Theater
9:00	Elena Conti	
9:30	Lynne Maquat	
10:00 – 10:30 a.m.	Break	
10:30	Eckard Jankowsky	
11:00	Adrian Ferre-d'Amare	
11:30 – 12 noon	Daniel Herschlag	
12:30 – 2:00 p.m.	Lunch	By George Café
12:30 – 2:00 p.m.	Meetings Committee Lunch	HUB - 200BC
2:00 – 7:00 p.m.	Registration/Information	Kane Hall Lobby

2:00 – 5:30 p.m.	Concurrent Session 5 Post-processing mRNA Metabolism <i>Jens-Lykke Anderson, Chair</i> Abstracts 57 – 70	Kane Hall - 130
	Concurrent Session 6 RNA Structure, Folding, and Catalysis <i>James Williamson, Chair</i> Abstracts 71 – 84	Kane Hall - 120
5:30 – 7:00 p.m.	Career Development Workshop Grant Writing	Kane Hall - 130
6:30 – 8:00 p.m.	Dinner	By George Café
8:00 – 10:30 p.m.	Poster Session 3 (ODD numbered posters staffed)	HUB - Ballroom & 209AB

Saturday, June 26

8:00 a.m. – 1:00 p.m.	Registration/Information	Meany Lobby
9:00 a.m. – 12:00 noon	Plenary Session 5 <i>Tim Nilsen, Chair</i>	Meany Theater
9:00	Rob Singer	
9:30	Christopher Burge	
10:00 – 10:30 a.m.	Break	
10:30	David Bartel	
11:00	Eric Sontheimer	
11:30 – 12 noon	Phil Zamore	
12:30 – 2:00 p.m.	Lunch	By George Café
2:00 – 5:30 p.m.	Registration/Information	Kane Hall Lobby
2:00 – 5:30 p.m.	Concurrent Session 7 Regulation of 3' End Processing and RNA Localization <i>Ulrike Kutay, Chair</i> Abstracts 85 – 97	Kane Hall - 120
	Concurrent Session 8 RNA silencing pathways <i>James Dahlberg, Chair</i> Abstracts 98 – 111	Kane Hall - 130
5:30 – 6:30 p.m.	Awards Ceremony	Meany Theater
7:00 – 8:00 p.m.	Reception	HUB - Ballroom
8:00 – 11:00 p.m.	Banquet and Dance	HUB - Ballroom

ABSTRACT LISTING

(Note: Numbers refer to abstract numbers, not page numbers)

WEDNESDAY, JUNE 23, 2010: 2:00 PM – 3:45 P.M.

Concurrent Session 1, Part 1: Kane Hall 130

Part 1: Mechanisms of pre-mRNA Splicing

Jean Beggs, Chair

Abstracts 1 – 7

- 1 Dynamic and Ordered Assembly of Single Spliceosomes**
Aron Hoskins, Larry Friedman, Sarah Gallagher, Eric Anderson, Richard Wombacher, Virginia Cornish, Jeff Gelles, Melissa Moore
 - 2 Monitoring Pre-mRNA and Spliceosome Dynamics in Real-Time using Single Molecule Fluorescence Microscopy**
Ramya Krishnan, Mario Blanco, Christine Guthrie, John Abelson, Nils Walter
 - 3 Dynamics of spliceosome assembly in living cells**
Martina Huranova, Ivan Ivani, Ales Benda, Ina Poser, Martin Hof, Yaron Shav-Tal, Karla Neugebauer, David Stanek
 - 4 A Functional Role of Prp16 in the First Catalytic Step in Proofreading the Branchpoint Sequence**
Hsueh-Lien Liu, Chi-Kang Tseng, Chang-Hung Lin, Soo-Chen Cheng
 - 5 Genome-wide in vivo RNA binding sites of key spliceosomal protein Prp8 identified using CLIP-seq**
Jennie Li, Wenzheng Zhang, Rui Zhao
 - 6 Implications Of The RNA Interactions Of Brr2p**
Daniela Hahn, Grzegorz Kudla, Sander Granneman, David Tollervey, Jean Beggs
 - 7 Widespread Recognition of 5' Splice Sites by Base-Pairing to U1 snRNA Involving Bulged Nucleotides**
Xavier Roca, Martin Akerman, Adrian Krainer
-

WEDNESDAY, JUNE 23, 2010: 3:45– 5:30 P.M.

Concurrent Session 1, Part 2: Kane Hall 130

RNA and Disease

Lucca Cartegni, Chair

Abstracts 8 – 14

- 8 Disease-Associated Mutations that Lead to Structural Rearrangements in Untranslated Regions of RNA**
Matthew Halvorsen, Lauren Neulander, Joshua Martin, Alain Laederach
- 9 RNA Splicing Changes in Mouse Models of SCA1**
Smita Agrawal, Huda Zoghbi, Harry Orr
- 10 Role of RNA Processing in the Pathogenesis of Amyotrophic Lateral Sclerosis**
Magdalini Polymenidou, Clotilde Lagier-Tourenne, Kasey Hutt, Tiffany Liang, Shuo-Chien Ling, Gene W. Yeo, Don W. Cleveland
- 11 Small Molecule Modulation of HIV-1 RNA Metabolism**
Raymond Wong, Alan Cochrane
- 12 Minor introns are differentially spliced in cells derived from SMA patients**
Nawal Boulisfane, Henry Neel, Florence Rage, Johann Soret, Remy Bordonne
- 13 Antisense Correction of SMN2 Splicing in the Central Nervous System of Mouse Models of Spinal Muscular Atrophy**
Yimin Hua, Kentaro Sahashi, Gene Hung, Frank Rigo, Marco Passini, C. Frank Bennett, Adrian Krainer

- 14 **Induction of antagonistic soluble Receptor Tyrosine Kinases by Intronic PolyA Activation**
Sandra Vorlova, Erik Henke, Luca Cartegni

WEDNESDAY, JUNE 23, 2010: 2:00 PM – 5:30 P.M.

Concurrent Session 2: Kane Hall 120

Ribosomes Structure, Function, and Biogenesis

Marina Rodnina, Chair

Abstracts 15 – 28

- 15 **Molecular Model Of Two Eukaryotic 80S Ribosome Based On A 5.5 Å Cryo-EM Map**
Alexander Jarasch, Jean-Paul Armache, Elizabeth Villa, Andreas Anger, Thomas Becker, Shashi Bhushan, Fabrice Jossinet, Michael Habeck, Johannes Soeding, Thorsten Mielke, Otto Berninghausen, Eric Westhof, Daniel Wilson, Roland Beckmann
- 16 **The Way to Ribosome GTPase Crystal Structure and The Structure of Elongation Factor G Bound to Ribosome**
Yong-Gui Gao, Maria Selmer, Albert Weixlbaumer, Ann Kelley, Venki Ramakrishnan
- 17 **Insights into Translational Termination from Crystal Structures of the 70S Ribosome Bound to Release Factor**
Hong Jin, Albert Weixlbaumer, Cajetan Neubauer, Rebecca Voorhees, Sabine Petry, Ann Kelley, David Loakes, Venki Ramakrishnan
- 18 **The Crystal Structure of the Signal Recognition Particle in Complex with its Receptor**
Sandro Ataide, Nikolaus Schmitz, Ailong Ke, Jennifer Doudna, Nenad Ban
- 19 **Two Steps for mRNA Selection During Translation Initiation in Bacteria**
Pohl Milon, Marina Rodnina
- 20 **Stm1 Promotes Translation Repression By Stalling 80S Ribosomes In *Saccharomyces cerevisiae*.**
Vidya Balagopal, Roy Parker
- 21 **The HCV IRES Pseudoknot Positions the Initiation Codon on the 40S Ribosomal Subunit**
Katherine Berry, Shruti Waghay, Jennifer Doudna
- 22 **Translational Enhancement by 5' Untranslated Regions**
Wendy Gilbert, Maria Rojas Duran, Mary Thompson
- 23 **A first protein inventory of human ribosome biogenesis reveals an essential function of exportin 5 in 60S subunit export**
Thomas Wild, Peter Horvath, Emanuel Wyler, Barbara Widmann, Ivo Zemp, Gabor Csucs, Elsebet Lund, Ulrike Kutay
- 24 **Quantitative Proteomic analysis of Ribosome Assembly and Turnover *In Vivo***
Zahra Shajani, Michael Sykes, Edit Sperling, James Williamson
- 25 **Cryo-EM Structure of a Small Ribosomal Subunit Assembly Intermediate from *Saccharomyces cerevisiae***
Bethany Strunk, Cherrisse Loucks, Min Su, Justin Schilling, Melody Campbell, Georgios Skiniotis, Katrin Karbstein
- 26 **Evolutionarily Conserved Function of *RRP36* in Early Cleavages of the Pre-ribosomal RNA and Production of the 40S Ribosomal Subunit**
Marie GERUS, Chrystelle BONNART, Michèle CAIZERGUES-FERRER, Yves HENRY, Anthony HENRAS
- 27 **Defining the Pathway of Cytoplasmic Maturation of the 60S Ribosomal Subunit**
Kai-Yin Lo, Zhihua Li, Cyril Bussiere, Stefan Bresson, Edward Marcotte, Arlen Johnson
- 28 **A New U3 snoRNA:pre-rRNA Base-pairing Interaction in Yeast Revealed by *in Vivo* Chemical Probing**
Laura Dutca, Susan Baserga

THURSDAY, JUNE 24, 2010: 2:00 – 5:30 P.M.
Concurrent Session 3: Kane Hall 130
Alternative Splicing and Splicing Regulatory Networks
Don Rio, Chair
Abstracts 29 – 42

- 29 An alternative large subunit of U2AF regulates tissue-specific alternative splicing events in the Drosophila testes**
Jefferson Taliaferro, Nehemiah Alvarez, Marco Blanchette, Donald Rio
- 30 HnRNP L versus hnRNP L-like: Mutational Analysis of Functional Domain Structure and Identification of Target Genes by RNA-Sequencing and CLIP**
Oliver Rossbach, Marco Preussner, Inna Grishina, Silke Schreiner, Monika Heiner, Lee-Hsueh Hung, Albrecht Bindereif
- 31 NMR Structure Of hnRNP L In Complex With RNA**
Markus Blatter, Christophe Maris, Frédéric Allain
- 32 FOX2 is a Mitogen Responsive Alternative Splicing Factor**
Paul Boutz, Mohini Jangi, Scott Carlson, Forest White, Phillip Sharp
- 33 Genetic Ablation of Fox-1 in the Brain Modifies Alternative Splicing of Neuronal Target Exons and Results in Dentate Gyrus Hyperactivity and Spontaneous Seizures**
Lauren Gehman, Peter Stoilov, Jamie Maguire, Lily Shiue, Manuel Ares Jr., Istvan Mody, Douglas Black
- 34 Ptbp2 Represses Exon Splicing Events In The Mouse Brain And Is Required For Postnatal Survival**
Donny Licatalosi, John Fak, Aldo Mele, Chaolin Zhang, Robert Darnell
- 35 Comprehensive determination of an ESRP-regulated epithelial splicing network that is suppressed during the Epithelial-Mesenchymal Transition**
Kimberly Dittmar, Claude Warzecha, Juw Won Park, Shihao Shen, Karine Amirikian, Peng Ziang, Yi Xing, Russ Carstens
- 36 Using RNAi and RNA-Seq to Identify Alternative Exons Regulated by Individual RNA Binding Proteins and their Associated Regulatory Motifs**
Li Yang, Angela Brooks, Michael Duff, Kasper Hansen, Susan Celniker, Sandrine Dudoit, Steven Brenner, Brenton Graveley
- 37 Reconstruction of Splicing Regulatory Networks from High Throughput Transcriptome Data**
Panagiotis Papasaikas, Arvind Rao, Peter Huggins, A. Javier Lopez
- 38 Systematic analysis of the role of neural-specific alternative exons in the regulation of a protein-protein interaction network**
Jonathan Ellis, Miriam Barrios-Rodiles, John Calarco, Qun Pan, Daniel Tong, Jeffrey Wrana, Benjamin Blencowe
- 39 Functional Interactions Between Splicing Factors and Chromatin Remodelers in S. pombe Revealed by Genome-wide Epistatic Mini-array Profiling**
Kristin Patrick, Nevan Krogan, Christine Guthrie
- 40 A High-Throughput, Reverse Genetic Approach to Identify Global Connections with the Pre-mRNA Splicing Pathway**
Laura-Oana Bud, Nevin Sabet, Jeffrey Pleiss
- 41 Pre-mRNA splicing enhances co-transcriptional H3K36 trimethylation**
Sergio de Almeida, Ana Grosso, Jean-Christophe Andrau, Frederic Koch, Pierre Ferrier, Maria Carmo-Fonseca
- 42 Transcription and Splicing of Large Human Genes**
Jarnail Singh, Richard Padgett

THURSDAY, JUNE 24, 2010: 2:00 – 3:45 P.M.

Concurrent Session 4: Kane Hall 120

Part 1: Transfer RNA Metabolism

Eric Phizicky, Chair

Abstracts 43 – 50

- 43 Structural basis for translational fidelity ensured by transfer RNA lysidine synthetase**
Kotaro Nakanishi, Luc Bonnefond, Satoshi Kimura, Tsutomu Suzuki, Ryuichiro Ishitani, Osamu Nureki
- 44 A Tale of Two Editing Domains: Molecular Basis of Substrate Specificity of Bacterial Prolyl-tRNA Synthetase and YbaK**
Sandeep Kumar, Mom Das, Christopher Hadad, Karin Musier-Forsyth
- 45 Kinetic And Thermodynamic Framework For Gln-tRNA^{Gln} Synthesis By a Two-Step Pathway in Archaea**
Hari Bhaskaran, John Perona
- 46 A Novel Role for tRNA^{His} guanylyltransferase (Thg1) Family Enzymes in Mitochondrial 5'-tRNA Editing**
Maria Abad, Yicheng Long, Jonatha Gott, Michael Gray, Jane Jackman
- 47 Box C/D snoRNA-directed rRNA modification is enhanced by additional conserved base-pairing adjacent to the methylation target sites**
Rob van Nues, Sander Granneman, Grzegorz Kudla, Kate Sloan, Matthew Chicken, David Tollervey, Nicholas Watkins
- 48 Bacterial Proteins Pnkp and Hen1 Constitute a Novel RNA Repair and Modification System**
Chio Mui Chan, Chun Zhou, Raven Huang
- 49 The Rapid tRNA Decay Pathway Monitors the Structural Integrity of Mature tRNAs**
Joseph Whipple, Elizabeth Lane, Sonia D'Silva, Eric Phizicky
- 50 Genome-Wide Investigations of Translating mRNAs to Study the Cellular Functions of the tRNA Retrograde Pathway in *S. cerevisiae***
Hui-Yi Chu, Anita Hopper
-

THURSDAY, JUNE 24, 2010: 3:45 – 5:00 P.M.

Concurrent Session 4: Kane Hall 120

Part 2: RNA Modulation of RNA Synthesis

Torben Jensen, Chair

Abstracts 51 – 56

- 51 Molecular Recognition and Transcriptional Regulation by the Lysine Riboswitch**
Andrew Garst, Robert Batey
- 52 The Glycolytic Pathway: a Paradigm to Study Hidden Transcription in Yeast**
Helen Neil, Frank Feuerbach, Christophe Malabat, Rajani Gudipatti, Alain Jacquier
- 53 Differential Role of the Two *Bacillus subtilis* 6S RNAs**
Benedikt Beckmann, Roland Hartmann
- 54 Controlling the activity of the host P-TEFb by the HIV Tat**
Lisa Muniz, Beata Jady, Bettina Ughy, Sylvain Egloff, Tamas Kiss
- 55 Recruitment and dissociation of Nrd1 CID at RNA Polymerase II C-terminal domain**
Karel Kubicek, Hana Cerna, Richard Stefl
- 56 The 5'-3' exonuclease Rat1p functions during transcription elongation**
Torben Heick Jensen, Silvia Jimeno-González, Francisco Malagon, Line Haaning

FRIDAY, JUNE 25, 2010: 2:00 – 5:00 P.M.

Concurrent Session 5: Kane Hall 130

Post-processing mRNA Metabolism

Jens-Lykke Anderson, Chair

Abstracts 57 – 70

- 57 **Genome-wide Exon Junction Complex Occupancy Sites in Human Cells**
Guramrit Singh, Alper Kucukural, Zhiping Weng, Melissa Moore
- 58 **Drosophila Exon-Exon Junction Complexes (EJC) assemble only on a subset of spliced mRNAs**
Nazmul Haque, Marco Blanchette
- 59 **SMG6 Interacts with the Exon Junction Complex via Two Conserved EJC-binding Motifs (EBMs), which are Required for Nonsense-mediated mRNA Decay**
Isao Kashima, Stefanie Jonas, Elisa Izaurrealde
- 60 **mRNP Disassembly by the Upf1 ATPase Allows Turnover of mRNPs Targeted for NMD**
Tobias Franks, Guramrit Singh, Jens Lykke-Andersen
- 61 **Translational readthrough antagonizes 3' UTR length-dependent Upf1 recruitment and NMD**
J. Robert Hogg, Stephen Goff
- 62 **The Convergence of Two Negative Post-Transcriptional Pathways Elicits Activation of Gene Expression**
Rachid Karam, Ivone Bruno, Lulu Huang, Anjana Bhardwaj, Miles Wilkinson
- 63 **Rampant and Regulated Alternative Splicing in *S. cerevisiae***
Tadashi Kawashima, Stephen Douglass, Matteo Pellegrini, Guillaume Chanfreau
- 64 **Widespread Co-Translational Degradation of Cellular mRNAs by the Herpesviral SOX Protein Involves the Cellular Xrn1 Ribonuclease**
Sergio Covarrubias, Marta Gaglia, Gagandeep Kumar, Britt Glaunsinger
- 65 **A Split Active Site Couples Cap Recognition by Dcp2 to Activation**
Stephen Floor, Brittnee Jones, Gail Hernandez, John Gross
- 66 **Functional Cross-talk between the Poly(A) Polymerase Trf4p and the RNA Helicase Mtr4p in the TRAMP Complex during Adenylation and Unwinding**
Huijue Jia, Xuying Wang, Fei Liu, James Anderson, Eckhard Jankowsky
- 67 **Structure of Mtr4 reveals features of the DEXD helicases involved in exosome-mediated RNA degradation**
John Weir, Jendrik Hentschel, Elena Conti
- 68 **Analysis of *E. coli* RNase E and RNase III Activity *in vivo* Using High-density Tiling Arrays**
Mark Stead, Sarah Marshburn, Lourdes Pe a Castillo, Debashish Ray, Harm Van Bakel, Tim Hughes, Sidney Kushner
- 69 **The La Domain of La-Related Protein-4 (LARP4) Binds Poly(A) and its Variant PAM2 Motif Interacts With PABP to Promote mRNA Stability**
Ruiqing Yang, Sergei Gaidamakov, Amanda Crawford, Richard Maraia
- 70 **Stacking Interactions in PUF-RNA Complexes**
Yvonne Koh, Laura Opperman, Yeming Wang, Chen Qiu, Leah Gross, Traci Hall, Marvin Wickens
-

FRIDAY, JUNE 25, 2010: 2:00 – 5:00 P.M.

Concurrent Session 6: Kane Hall 120

RNA Structure, Folding, and Catalysis

James Williamson, Chair

Abstracts 71 – 84

- 71 **High-Throughput Mapping of RNA-RNA Interactions in Living Yeast**
Grzegorz Kudla, Sander Granneman, Daniela Hahn, Jean Beggs, David Tollervey

- 72 Femtoscale RNA Structure Analysis by SHAPE and Ultra-Sensitive Capillary Electrophoresis**
Jacob Grohman, Sumith Kottogoda, Nancy Allbritton and Kevin M. Weeks
- 73 Structural and Functional Studies of Cooperative Ligand Binding by the Glycine Riboswitch**
Alexander Serganov, Lili Huang, Dinshaw Patel
- 74 Kinetics of Metabolite-activated *glmS* Riboswitch Self-cleavage in Yeast**
Peter Watson, Martha Fedor
- 75 A *trans*-Acting Riboswitch Controls Expression of the Virulence Regulator PrfA in *Listeria monocytogenes***
Edmund Loh, Olivier Dussurget, Jonas Gripenland, Karolis Vaitkevicius, Teresa Tiensuu, Pierre Mandin, Francis Repoila, Carmen Buchrieser, Pascale Cossart, Jörgen Johansson
- 76 Self-cleaving ribozymes in retrotransposition**
Dana Ruminski, Chiu-Ho Webb, Nathan Riccitelli, Andrej Luptak
- 77 The Structural Basis of RNA-Catalyzed RNA Polymerization**
David Shechner, David Bartel
- 78 Single-Molecule Analysis of Mss116-Mediated Group II Intron Folding**
Krishanthi Karunatilaka, Amanda Solem, Anna Pyle, David Rueda
- 79 ATP Utilization by the DEAD-Box Protein CYT-19 During Refolding of a Misfolded Group I Intron Ribozyme**
Inga Jarmoskaite, Rick Russell
- 80 Recognition of Oligo(A) RNA by a Viral RNA Clamp**
Rachel Mitton-Fry, Jimin Wang, Suzanne DeGregorio, Thomas Steitz, Joan Steitz
- 81 Structural Basis For Substrate Placement By An Archaeal Box C/D Ribonucleoprotein Particle**
Ruiying Wang, Song Xue, Rebecca Terns, Michael Terns, E. Stuart Maxwell, Hong Li
- 82 A New Trick by RNA: Quaternary Self-assembly in Prohead RNA of Bacteriophage ϕ 29**
Fand Ding, Changrui Lu, Anderson Dwight, Paul Jardine, Shelley Grimes, Ailong Ke
- 83 Structure of a bacterial ribonuclease P holoenzyme in complex with tRNA**
Nicholas Reiter, Amy Osterman, Alfredo Torres-Larios, Kerren Swinger, Tao Pan, Alfonso Mondragon
- 84 Structural Organization of P3 Domains of Eukaryotic RNases P/MRP**
Anna Perederina, Olga Esakova, Chao Quan, Elena Khanova, Andrey Krasilnikov

SATURDAY, JUNE 26, 2010: 2:00 – 5:00 P.M.

Concurrent Session 7: Kane Hall 120

Regulation of 3' End Processing and RNA Localization

Ulrike Kutay, Chair

Abstracts 85 – 97

- 85 Live Cell Imaging of Cell Cycle Dependent Telomerase RNA Dynamics.**
Franck Gallardo, Laterreur Nancy, Emmanuelle Querido, Pascal Chartrand, Raymund Wellinger
- 86 Yeast Telomerase: Towards a New Model for Ku Heterodimer - TLC1 RNA Interaction**
Jennifer Pflingsten, Andrew Dalby, Thomas Cech
- 87 Histone locus bodies: Novel components involved in histone pre-mRNA processing and cell cycle regulation**
William Marzluff, Brandon Burch, Anne White, Deirdre Tatomer, Ashley Godfrey, Pam Gasdaska, Zbigniew Dominski, Robert Duronio
- 88 Structure of the Homodimerization Domain of CstF-50**
María Moreno-Morcillo, Cameron Mackereth, Lionel Minvielle-Sebastia, Sébastien Fribourg
- 89 Structural Basis of UGUA Recognition by the Human Cleavage Factor I_m (CFI_m) and Implications for a Regulatory Role in mRNA 3' Processing**
Qin Yang, Gregory Gilmartin, Sylvie Doublé

- 90 **A Non-splicing Function For U1 snRNP Required For Producing Full-length Transcript**
Daisuke Kaida, Michael Berg, Gideon Dreyfuss
- 91 **HnRNP1/C2 Tetramer Measures RNA Length prior to RNA Export from the Nucleus**
Asako McCloskey, Mutsuhito Ohno
- 92 **Structural and functional analysis of the mRNA export factors Dbp5 and Gle1**
Ben Montpetit, Nathan Thomsen, Kara Helmke, Markus Seeliger, James Berger, Karsten Weis
- 93 **Gle1 is a Versatile Regulator of DEAD-Box Proteins in mRNA Export and Translation**
Timothy Bolger, Susan Wentz
- 94 **Role of the ESCRT II complex in microtubule-dependent mRNA localization in *Xenopus***
Michael Blower, Joshua Plant
- 95 **Identification of Localized mRNAs by Purification of Motor Proteins and Microarrays**
Jason Casolari, Patrick Brown
- 96 **ZBP1 Recognition Of The β -actin Zipcode Induces RNA Looping**
Jeffrey Chao, Vivek Patel, Yury Patskovsky, Matthew Levy, Steven Almo, Robert Singer
- 97 **The "G-quartet" RNA binding site of the Fragile X Mental Retardation Protein is a novel zipcode for dendritic mRNA transport**
Murugan SUBRAMANIAN, Florence RAGE, Ricardos TABELT, Eric FLATTER, Jean-Louis MANDEL, Hervé MOINE

SATURDAY, JUNE 26, 2010: 2:00 – 5:00 P.M.

Concurrent Session 8: Kane Hall 130

RNA Silencing Pathways

James Dahlberg, Chair

Abstracts 98 – 111

- 98 **Self vs. non-self discrimination during CRISPR immunity against horizontal gene transfer**
Luciano Marraffini, Erik Sontheimer
- 99 **Competition among small RNAs in *Escherichia coli***
Kyung Moon, Susan Gottesman
- 100 **Active RNA Cycling on Hfq**
Aurelie Fender, Johan Elf, E. Gerhart Wagner
- 101 **Comparative RNA-seq Reveals Small RNA Diversity within the Hyperthermophilic Genus *Pyrobaculum***
David Bernick, Patrick Dennis, Aaron Cozen, Andrew Uzilov, Lauren Lui, Todd Lowe
- 102 **Dicer's Helicase Domain Mediates Processive Cleavage of dsRNA in Response to Specific Duplex Termini**
Noah Welker, Tuhin Maity, Xuecheng Ye, Joseph Aruscavage, Ammie Krauchuk, Qinghua Liu, Brenda Bass
- 103 **The Inside-Out Mechanism of Dicers from Budding Yeasts**
David Weinberg, Kotaro Nakanishi, Dinshaw Patel, David Bartel
- 104 **The double stranded RNA-dependent ATPase DRH-3: Insight into its Role in RNA silencing in *Caenorhabditis elegans***
Christian Matranga, Anna Pyle
- 105 **RDE-8 is a Novel Protein with a Conserved RNase Domain Required for RNAi-related Pathways in *Caenorhabditis elegans***
Hsin-Yue Tsai, Chun-Chieh Chen, James Moresco, Weifeng Gu, John Yates III, Craig Mello
- 106 **Structural Basis For 5'-Nucleotide Base-Specific Recognition Of Guide RNA By hAGO2**
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