



The 10th Annual **RNA** Center Retreat

November 4, 2022 – O.C. Marsh Auditorium, YSB
Organized by Nadya Dimitrova and Loren Wilson

8:00 – 9:00 AM	Registration & Breakfast (Marsh Lobby)
9:00 – 9:15 AM	Welcome (Marsh Auditorium) Karla Neugebauer (MB&B, Director of the Yale RNA Center)
Session I (Marsh Auditorium) Chair: Dagmar Zigackova	
9:15 – 9:40 AM	Haifan Lin (Cell Biology) Uniting the genome: Novel functions of the Piwi-piRNA pathway in the germline
9:40 – 10:05 AM	Salil Garg (Laboratory Medicine) Enhancer RNA regulation of embryonic stem cell states
10:05 – 10:30 AM	Zachary Smith (Genetics) Regulatory transitions in the LINE-1 life cycle
10:30 – 11:30 AM	Poster Session I (Odd) & Coffee (Marsh Lobby)
Session II (Marsh Auditorium) Chair: Damir Musaev	
11:30 – 11:55 AM	Sigrid Nachtergaele (MCDB) Gene expression regulation by RNA modifications
11:55 – 12:20 PM	Paul Turner (EEB) Evolutionary constraint in RNA-virus adaptation
12:20 – 1:20 PM	Lunch (Marsh Lobby)
Session III (Marsh Auditorium) Chair: Austin Draycott	
1:20 – 1:45 PM	Wendy Gilbert (MB&B) Illuminating thousand-fold regulation of translation to engineer mRNA medicines
1:45 – 2:10 PM	Pedro Miura (UConn Health) Coordinated Alternative Splicing and Alternative Polyadenylation
2:10 – 2:35 PM	Diane Krause (Laboratory Medicine) m ⁶ A modification in Acute Megakaryoblastic Leukemia
2:35 – 3:35 PM	Poster Session II (Even) & Coffee (Marsh Lobby)
Session IV (Marsh Auditorium) Chair: Ethan Strayer	
3:35 – 4:00 PM	Farren Isaacs (MCDB) Designing synthetic genetic elements to decode & domesticate organisms
4:00 – 4:25 PM	Brenton Graveley (UConn Health) RNA Genomics
4:25 – 4:50 PM	Antonio Giraldez (Genetics) Mechanisms of post-transcriptional regulation during embryonic development
4:50 – 5:00 PM	Closing Remarks (Marsh Auditorium)
5:00 – 6:00 PM	Reception (Science Hill Courtyard)

Posters Presentations

Poster Session I, 10:30 – 11:30 AM, Odd numbers

Poster Session II, 2:30 – 11:30 AM, Even numbers

1	Tianshuo Liu	Self-splicing introns are novel antifungal drug targets: Discovery and Targeting
2	Matt Midy	Engineering Aptamers by Directed Evolution from Natural Riboswitch Scaffolds
3	Rajesh Kar	Role of MTH1 and cellular heterogeneity in melibiose utilization by yeast
4	Sudheesh Alikka Parambil	Guardians of the Immortals: Innate nucleic acid immunity in <i>Schmidtea mediterranea</i>
5	Paulina Podszyslaw-Bartnicka	Role of RNA binding proteins in adaptation of CML cells to hypoxia
6	Gaelle Talross	A non-coding RNA upregulated by hunger in the fly olfactory system
7	Madeleine Mankowski	Mettl3 represents a novel therapeutic target for norovirus infection
8	Liz Li	Dissecting the Functional Elements in Long Non-coding RNA PVT1
9	Haejeong Lee	Elucidating codon dependent mRNA stability regulation
10	Kathryn Barth	Switching the ligand specificity of a ykkC variant riboswitch
11	Christian Fagre	Improved approaches for quantitative and comprehensive mapping of RNA pseudouridylation
12	Seth Lyon	OLE RNP complex is involved in alternative energy source utilization in <i>Bacillus halodurans</i>
13	Neil White	Natural Riboswitches Selective for Lithium and Sodium
14	Krishnakali Dasgupta	Role of PIWI proteins in planarian germline regulation
15	Andrew Verdesca	Forever Young: Characterizing Somatic and Sexual Aging in the Negligibly-Senescent Planarian <i>S. mediterranea</i>
16	Rachel Gilmore	Surprising transcriptomic signatures of Prader-Willi Syndrome model neurons
17	Kyrrillos Abdallah	Effects of RNA modifications on cap-independent ribosome recruitment by human 5' UTRs
18	Josh Beale	The RNA Modifications of MALAT1
19	Diana Martínez-Saucedo	Altered RNA splicing causes pancreatic cancer and exposes a therapeutic vulnerability
20	Natasha Pinto Medici	Altered RNA splicing causes pancreatic cancer and exposes a therapeutic vulnerability
21	Dorothy Fang	Investigating the role and regulation of the N1-methyladenosine (m ¹ A) modification on mRNA
22	Christopher King	Triple Helical DNA is Abundant in Bacteria
23	Lianhuan Wei	Non-canonical translation factor EIF2A enhances SARS-CoV-2 programmed -1 ribosomal frameshifting
24	Nils Neuenkirchen	Cryo-EM structure of the <i>de novo</i> DNA methyltransferase Dnmt3C/Dnmt3L
25	Leah Connor	Acetyl-methyllysine marks histone H4 in regulated chromatin
26	Lauren Thornton	Characterization of Local Translation in Vascular Mechanotransduction
27	Prajwal Boddu	Altered RNA processing due to cancer-associated splicing factor mutations
28	Lucas Weba Soares	Unusual characteristics of the raiA motif, a bacterial noncoding RNA
29	Rahul Gupta	IF-smRNA-FISH Indicates Potential lncRNA Contribution to Transcriptional Factories
30	Madeline Mayday	Acute megakaryoblastic leukemia fusion protein RBM15-MKL1 promotes leukemia cell survival via mRNA-mediated enhancement of Wnt signalling
31	Md Afjalus Siraj	Activation of the ERK by altered RNA splicing in cancer
32	Mark Williams	Larp1 as a translation effector for mTORopathies?
33	Chrishan Fernando	Investigating the role of the OLE RNP complex in regulating bacterial metal ion homeostasis
34	Brahmami Patel	Allostery in the Assembly of the U1 snRNP
35	Charles Vejnar	Computational Tools for Genomics - Combining RNA & ATAC in single-cells
36	Sabrina Grunseich	Directed Evolution of a Purine Salvage Ribozyme from a ykkC Riboswitch Scaffold
37	Ethan Strayer	NaP-TRAP captures 5' UTR dependent translational regulation in the developing zebrafish embryo and human cell lines.
38	Dasha Zigackova	β -globin gene sequence directs "all-or-none" pre-mRNA processing
39	Matthew Wang	Understanding the role of aberrant alternative RNA splicing in Osimertinib resistance in lung cancer
40	Loren Wilson	Uncovering the Role of RNA Modifications in the Paraspeckle
41	Kevin Tse	Dissecting LINE-1 biology in endogenous cellular contexts
42	Maegan Watson	Aberrant translation in mTORC1-linked neurological disorders
43	Arcadia Kratkiewicz	Chromatin analysis reveals distinct regulation of gene expression in planarian stem cells
44	Nicolas Dias	Where did we go wrong? Congenital abnormality phenotypes at the single-cell level