

Sunday, September 26

- 3:00 pm Check-in
- 6:00 pm Reception (Lobby)
- 7:00 pm Dinner
- 8:00 pm Welcome and opening remarks
- 8:05 pm Session 1: RNA switches in the lab and in the clinic**
Chair: Ron Breaker
- 8:05 pm **Ronald Breaker**, HHMI/Yale University
Structured non-coding RNAs in bacteria: Prospects for drug development
- 8:35 pm **Bruce Sullenger**, Duke University
Translating RNA Switches into the Clinic
- 9:05 pm Refreshments available in Bob's Pub

Monday, September 27

7:30 am Breakfast

9:00 am Session 2: siRNA therapy
Chair: Mark Kay

9:00 am **Joanne Kamens**, RXi Pharmaceuticals
Design of chemically modified RNAi compounds with spontaneous cellular uptake

9:30 am **Beverly L. Davidson**, University of Iowa
Evaluating the safety of RNAi-based therapeutics for HD

10:00 am **Mark A. Kay**, Stanford University School of Medicine
Mammalian tRNA-derived small RNAs: A newly discovered class of small RNAs are regulated during liver regeneration and hepatic cancer

10:30 am Break

11:00 am Session 3: RNA delivery
Chair: Mark Davis

11:00 am **Daniel G. Anderson**, Massachusetts Institute of Technology
Development of biomaterials and synthetic siRNA delivery systems

11:30 am **James Thompson**, Quark Pharmaceuticals
Development of the first systemically-administered synthetic siRNA

12:00 pm **Mark E. Davis**, California Institute of Technology
Systemic delivery of siRNA to solid tumors via targeted nanoparticles

12:30 pm Lunch

2:00 pm Session 4: Non-coding RNAs
Chair: Beverly Davidson

2:00 pm **Jeannie Lee**, HHMI/Harvard University
The X as model for ncRNA regulation of the epigenome

2:30 pm **Svitlana Berezhna**, The Scripps Research Institute
Lipid droplets and P-bodies roles in dual interaction of cellular RNAi with Hepatitis C viral RNA

3:00 pm **Leonard Lipovich**, Wayne State University
Long non-coding RNA molecules in mammalian gene regulation: Regulatory networks of coding and non-coding transcriptomes

3:30 pm Break

4:00 pm **Panel Discussion:** *Accelerating the pace of RNA translational research:
Navigating the public-private partnership landscape*

Moderator: Bruce Sullenger

Panelists: Mark Davis
Peter Sarnow
Ryszard Kole
James Thompson

5:15 pm Poster Reception

7:00 pm Dinner

8:00 pm Refreshments available in Bob's Pub

Tuesday, September 28

- 7:30 am Breakfast
- 9:00 am Session 5: RNA-protein complexes**
Chair: Tom Steitz
- 9:00 am **Alexander Mankin**, University of Illinois at Chicago
Inducible antibiotic resistance: Role of rRNA in the mechanism of induction
- 9:30 am **Gene W. Yeo**, University of California, San Diego
RNA binding protein networks in neurodegeneration and cancer
- 10:00 am **Thomas A. Steitz**, HHMI/Yale University
The roles of RNA in ribosome function
- 10:30 am Break
- 11:00 am Session 6: Viral RNA**
Chair: Raul Andino
- 11:00 am **Peter Sarnow**, Stanford University
Modulation of Hepatitis C Virus and Insig1 RNA abundances by MicroRNA 122
- 11:30 am **Daniela Castanotto**, City of Hope
Small non-coding RNAs in disease pathogenesis and therapy
- 12:00 pm **Raul Andino**, University of California, San Francisco
Antiviral immunity in Drosophila: Systemic RNAi and viral suppressores
- 12:30 pm Lunch
- 1:00 pm Tour (optional - meet at reception)
- 2:15 pm Session 7: Aptamers/RNA selection**
Chair: Bruce Sullenger
- 2:15 pm **Benjamin D. Heuberger**, Massachusetts General Hospital
Selecting for a sequence-general RNA-based RNA-helix recognition motif
- 2:45 pm **William Rockey**, University of Iowa
Targeting silence with RNA aptamers
- 3:15 pm **Tianjiao Wang**, Iowa State University
Development of therapeutic aptamers targeting Ebola VP35
- 3:45 pm Break

- 4:15 pm** **Session 8: Small-molecule/RNA interactions**
Chair: Matt Disney
- 4:15 pm **Nadia Kulshina**, Fred Hutchinson Cancer Research Center
Recognition of the bacterial second messenger c-di-GMP by its cognate riboswitch
- 4:45 pm **Matthew D. Disney**, University of Buffalo
Progress toward the rational and modular design of ligands targeting RNA
- 5:15 pm Poster Reception
- 7:00 pm Dinner
- 8:00 pm** **Session 9: RNA splicing**
Chair: Anna Marie Pyle
- 8:00 pm **Ryszard Kole**, AVI BioPharma
Modulation of RNA splicing by oligonucleotides: From concept to clinical trials
- 8:30 pm **Anna M. Pyle**, HHMI/Yale University
Group II introns: Agents of molecular evolution and tools for genetic design
- 9:00 pm Refreshments available in Bob's Pub

Wednesday, September 29

7:30 am Breakfast

9:00 am Session 10: Novel applications for RNA targeting
Chair: Jennifer Doudna

9:00 am **Eli Gilboa**, University of Miami School of Medicine
How to convert disseminated tumors into “immunological pathogens”

9:30 am **Paul T. Toran**, Boston University
A novel molecular tool for the next generation of basic RNA research, clinical diagnostics and genetic therapeutics

10:00 am **Jennifer Doudna**, HHMI/University of California, Berkeley
RNA-mediated viral immunity in bacteria: Molecular mechanisms and potential applications

10:30 am Snacks and Departure (Lunch available in servery starting at 11:30 am)

11:00 pm First shuttle to Dulles

11:45 pm Second shuttle to Dulles

12:30 pm Last shuttle to Dulles