

International NetRNA Meeting
« RNA in gene control across kingdoms »
Bischenberg Center, May 2-5th 2022

Program

Monday May 2nd

11:00-13:00 *Registration and lunch time*

13:30-13:40 Opening Remarks: Pascale ROMBY

RNA & EVOLUTION Chair: 13:40-14:00 Witold FILIPOWICZ

14:00-14:45 Opening keynote lecture: Thomas CECH *The RNA world research*

14:45-15:15 IUBMB Jubilee Lecture Sarah WOODSON *Making a turnaround in a competitive landscape for RNA-protein interactions*

15:15-15:45 Michael RYCKELYNCK *Ultrahigh-throughput molecular and cellular biology using droplet-based microfluidics*

15:45-16:15 Mathias HENTZE *Exploring the underground of the RBP world: Riboregulation*

16:15-16:45 *Coffee break*

RNA & TRANSCRIPTION Chair: Carine MEIGNIN

16:45-17:15 Albert WEIXLBAUMER *Structural insights into RNA-mediated transcription regulation*

17:15-17:45 Quentin VICENS *The lost city of Z''(-RNA)*

17:45-18:15 Todd BLEVINS *Evolution of the Pol IV targeting machinery that silences transposons in plants*

RNA MACHINERIES IN REGULATION Chair: Laurence DROUARD

18:15-18:45 Günter MEISTER *Regulation of miRNA biogenesis*

18:45-19:15 Benoît MASQUIDA *Anticodon-like loop-mediated dimerization in the crystal structures of HdV-like CPEB3 ribozymes*

19:15-19:45 Tom TUSCHL *Regulatory RNAs and their machineries in response to inflammatory diseases and cancer*

20:00 *Get together-Aperitif*

20:30 *Dinner*

21:30 – 23:00 *Posters*

Tuesday May 3rd

9:00 RNA & CHEMISTRY Chair: Sarah WOODSON

9:00-9:30 **David LILLEY** *The extent of RNA catalysis – are there any limits?*

9:30-10:00 **The NovAliX Keynote Lecture Tsutomu SUZUKI** *Expanding world of tRNA modifications and human diseases*

10:00-10:30 Coffee break

RNA & IMMUNITY Chair: Jean-Luc IMLER

10:30-11:00 **The Jules Hoffmann Keynote Lecture Brenda BASS** *Divergent Roles of Dicer's Helicase Domain in Antiviral Defense*

11:00-11:30 **Joao MARQUES** *Invading viral DNA triggers dsRNA synthesis by RNA polymerase II to activate antiviral RNA interference*

11:30-12:00 **Sébastien PFEFFER** *Regulation of RNA-based antiviral innate immunity*

12:15 Lunch

14:00 RNA & MOLECULAR RECOGNITION Chair: Quentin VICENS

14:00-14:30 **The Urania Therapeutics Keynote Lecture Thomas HERMANN** *Targeting RNA in viral translation*

14:30-15:00 **Jiro KONDO** *RNA structural biomimetics for designing functional molecules*

15:00-15:30 **Peter UNRAU** *A Topologically Clamping RNA Polymerase Ribozyme with DNA dependent RNA polymerase like attributes*

15:30-16:00 **Luc JAEGER** *Emergence of the ribosome by modular evolution*

16:00-16:30 Coffee break

RNA & TRANSLATION Chair: Zoya IGNATOVA

16:30-17:00 **Moran SHALEV-BENAMI** *When the Heat Is On - Turn Up the Ac(4C) - A Near Atomic Resolution Glance into RNA Acetylation*

17:00-17:30 **Daniel WILSON** *David vs Goliath: Ribosome-targeting antibiotics and bacterial resistance mechanisms*

17:30-18:00 **Erik BOETTGER** *Error-prone protein synthesis: aging, life span, and age-related diseases*

18:00-18:30 **Franck MARTIN** *Viral and cellular translation during SARS-CoV-2 infection*

18:30-19:00 **Timor BAASOV** *Ribosomal RNA as a Target for Catalytic Antibiotics and for the Treatment of Genetic Diseases*

20:00 Dinner / 21:30 – 23:00 Poster session

Wednesday May 4th

9:00 RNA & BACTERIA Chair: Pascale ROMBY

9:00-9:30 **The SFBBM Keynote Lecture Pascale COSSART** *Amazing bacterial RNA-mediated regulations in m.f.o.!*

9:30-10:00 **Wolfgang HESS** *RNA-binding proteins and sRNA-based regulation in cyanobacteria*

10:00-10:30 Coffee break

10:30-11:00 **Ben LUISI** *Dynamic ribonucleoprotein complexes in the control of bacterial gene expression*

11:00-11:30 **Dieter SOLL** *tRNAs decoding with errors*

11:30-12:00 **Felix RITORT** *RNA force spectroscopy*

12:30 Lunch

14:00 RNA & DECODING Chair: Matthias ERLACHER

14:00-14:30 **The EMBO Keynote Lecture Marina RODNINA** *Decoding and recoding of genetic information by the ribosome*

14:30-15:00 **The UFA Keynote Lecture Zoya IGNATOVA** *Ribosomal stalling and alterations of translation dynamics in disease*

15:00-15:30 **Mark HELM** *RNA modifications: how to find and how to use*

15:30-16:00 **Juliette GODIN** *tRNA deamination: a key process to regulate brain development*

16:00-16:30 Coffee break

16:30-17:00 **Sebastian LEIDEL** *Chemical modifications of tRNA wobble uridines mediate virulence of yeast in vivo*

17:00-17:30 **Jörg VOGEL** *The promises and challenges of programmable RNA antibiotics*

17:30 CLOSING SESSION Chair: Catherine FLORENTZ

17:45-18:15 **Eric WESTHOF** *Interactions between Gs and Us*

18:15-19:00 Closing keynote lecture: John MATTICK *RNA, the epicentre of genetic information*

19:30: Aperitif followed by Dinner

Thursday May 5th

Breakfast (7h-8h45) and End of meeting

ABSTRACTS OF POSTERS

ARLUISON Véronique	1
The amyloid region of Hfq riboregulator promotes RNAs annealing	1
BAHENA-CERON Roberto	2
Translational control in Staphylococcus aureus: role of rRNA and tRNA modifications in stress adaptation.	2
BALDACCINI Morgane	3
Identification and characterization of human Dicer partners during infection by Sindbis virus	3
BARRIENTOS Laura	4
Transcription termination factor Rho, a novel player in Staphylococcus aureus stress adaptation	4
BELLET Matthieu	5
Localization of viral RNAs during infection in Drosophila melanogaster	5
BESSON Benoît	6
Arbovirus-vector protein interactomics identifies Loquacious as a co-factor for dengue virus replication in Aedes mosquitoes	6
BLAGOJEVIC Aleksandar	7
Localization and function of the AGO1 protein in A.thaliana	7
CAKIL Oktay	8
Diacylglycerol kinase kappa (DGKk) dysregulation in Fragile X Syndrome pathology and therapy	8
CHARBONNIER Mathilde	9
ZinS role in the adaptation of Staphylococcus aureus to metal-dependent immune strategies	9
ISEL Catherine	10
High-throughput droplet-based analysis of influenza A virus genetic reassortment by single-virus RNA sequencing	10
COUDRAY Léna	11
YacP, an example of the functional and structural diversity of NYN domain nucleases	11
DA COSTA Paulo J	12
Unveiling a non-canonical translation initiation mechanism of Tau mRNAs in Alzheimer's Disease	12
FALCOU Cassandra	13
Characterization of the circular pre-rRNAs in thermophile archaea - Thermococcus barophilus	13
FELGINES Luisa	14
Evolution of the Pol IV-CLSY complex required for transposon silencing in plants	14
FLETCHER Sabrina	15
Uncovering key elements involved in the internalization of extracellular dsRNA in insects	15

FÜRTIG Boris	16
RNA modifications stabilize the tertiary structure of tRNA ^{fMet} by locally increasing conformational dynamics	16
GEORG Jens	17
sRNAs are just random sequences!?! (with a meaningful promoter)	17
GILMER Orian	18
Toward the 3D structure of the HIV-1 genomic RNA 5' untranslated region during replication late phase events	18
GRAILLE Marc	19
TRMT112, a single protein activating several enzymes modifying RNAs involved in protein synthesis	19
HAN Lijuan	20
An RNAi independent antiviral activity of the Arabidopsis thaliana DCL2	20
HARDION Charlotte	21
Dynamics and diversity of tRNA pools during cortical development	21
HUSSER Claire	22
Selection of enzyme inhibiting aptamers by ultrahigh-throughput microfluidic screening	22
IMLER Jean-Luc	23
cGAS-like receptor-dependent antiviral immunity in drosophila	23
JAGODNIK Jonathan	24
RNA-DRaCALA, a method for analyzing RNA aptamer-ligand binding: unexpected specificity for ppGpp or pppGpp	24
KEHRLI Janine	25
Development of a modified RNA-based fluorescent SAM biosensor	25
KLAHOLZ Bruno	26
RNA chemical modifications in the Human Ribosome visualized by high-resolution cryo-EM	26
KOHL Maximilian	27
Translation initiation at ambiguous start sites: Determinants of start codon selection in bacterial mRNAs	27
KOMPATSCHER Maria	28
RNA derivatives as a tool to characterize tRNA ^{GlyUCC} amino acylation and decoding	28
LABORDE Mathieu	29
Oxygen-dependent expression regulation and function of Shigella SPATes	29
LIAO Zhen	30
How Escherichia coli cells learn to live with impaired regulatory networks?	30

MARTIN Franck	31
Blocking translation to rescue ALS/FTD phenotypes associated with C9ORF72 repeat expansion	31
MERCIER Noémie	32
Characterization of the interactions between icaR mRNA and regulatory RNAs in <i>Staphylococcus aureus</i>	32
PASQUIER Charline	33
Regulation of endogenous dsRNA sensing upon stress in human cells	33
PITOLLI Martina	34
Functional exploration of the <i>Plasmodium</i> tRNA import machinery	34
POUCLET Aude	35
Combining NGS approaches to identify targets of the NYN domain endoribonuclease DNE1	35
PROVETI OLMO Roenick	36
Neofunctionalization and positive selection led to the origin and retention of loqs2: a antiviral dsRNA binding protein in <i>Aedes</i> mosquitoes	36
ROL MORENO Javier	37
The GC-rich element within the 5'UTR of β -catenin mRNA modulates translation	37
ROUSSEAU Claire	38
Antiviral immunity in <i>Drosophila melanogaster</i> : Modulation of the interactome of Dicer-2 upon infection	38
SALIS Vincent	39
Selective ribophagy in plants	39
SERAPHIN Bertrand	40
The <i>S. cerevisiae</i> m6A-reader Pho92 impacts meiotic recombination by controlling key methylated transcripts	40
SIMONNOT Quentin	41
Identification and characterisation of conserved protein interaction motifs of the TUTase URT1	41
TANZER Andrea	42
Evolution of RNA Editing Sites in Filamin Genes	42
VOß Björn	43
Thorough Data Analysis for RNA-RNA Interactomics	43
WACKER Anna	44
Regulatory RNA Elements in SARS Coronavirus-2 – a structural biology approach	44
WIELAND Maximiliane, MORICI Martino	45
The cyclic octapeptide antibiotic argyrisin B inhibits translation by trapping EF-G on the ribosome during translocation	45