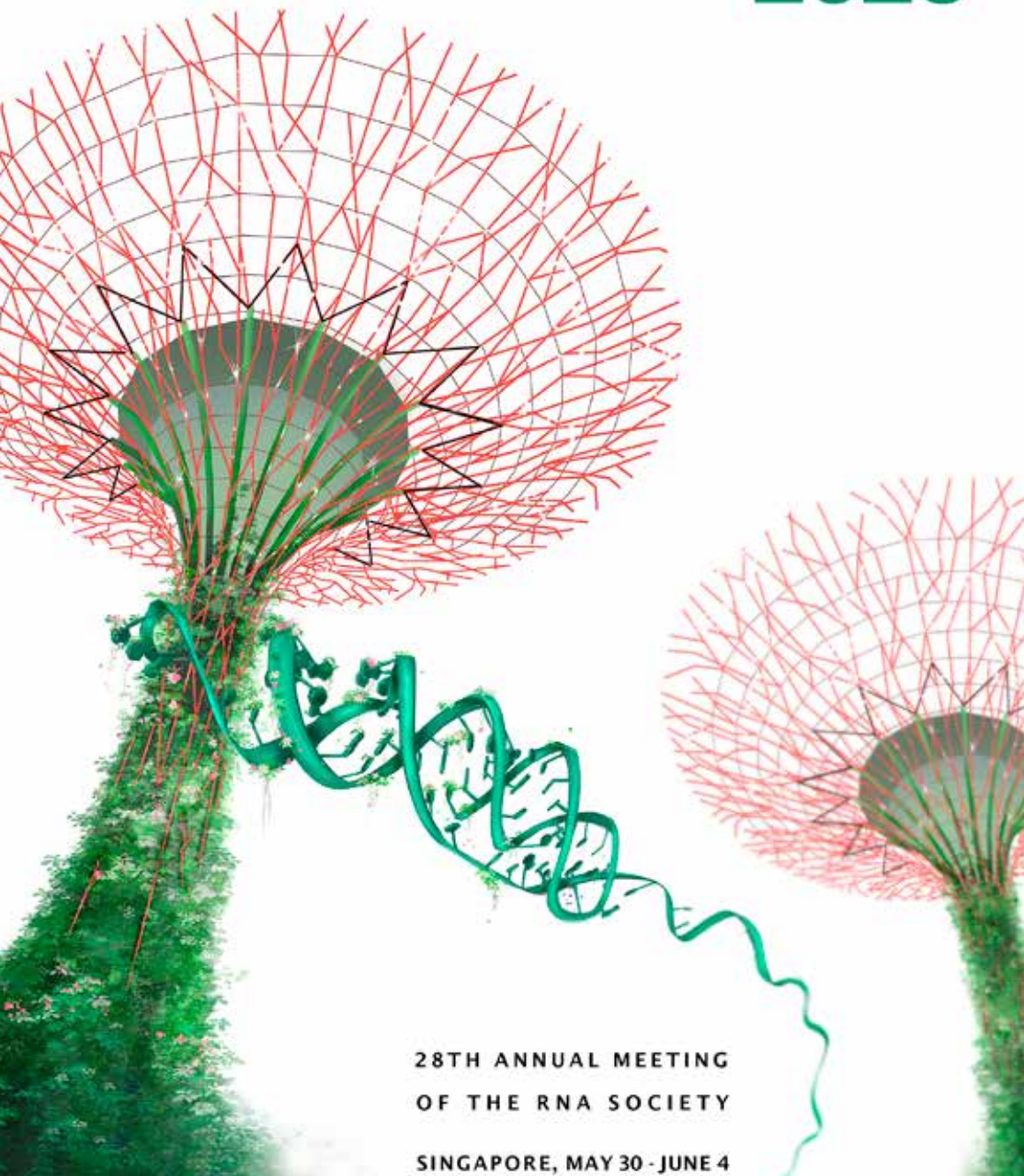




RNA

2023



28TH ANNUAL MEETING
OF THE RNA SOCIETY

SINGAPORE, MAY 30 - JUNE 4



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RNA 2023

The 28th Annual Meeting of the RNA Society



May 30th– June 4th, 2023
Suntec Singapore
Convention and Exhibition Centre
Singapore

MEETING ORGANIZERS

Ling-Ling Chen, (Co-lead), Shanghai Institute of Biochemistry and Cell Biology, CAS, China

Fátima Gebauer, (Co-lead), Centre for Genomic Regulation, Spain

David Bartel, Whitehead Institute, MIT, and Howard Hughes Medical Institute, USA

Douglas Black, University of California Los Angeles, USA

Thomas Preiss, Australian National University, Australia

Yue Wan, Agency for Science, Technology and Research, Singapore



May 30th, 2023

Hello RNA friends and colleagues!

It is my great pleasure to welcome you to RNA 2023. Our Annual Meeting has always been a highlight of membership in the RNA Society, and 2023 is no exception. This year, we celebrate our return to Asia, our ability to meet in person (which we no longer take for granted), our wonderful Society, and, of course, our awesome molecule. Thank you for coming to celebrate with us! I also thank you for your enthusiastic participation as we exchange ideas and share and discuss the latest RNA research. During the conference, we will have opportunities to hear stunning science, network with colleagues, share ideas at the poster sessions, meet the Editors of the *RNA* journal, and discuss what we can all do to promote diversity, equity, and inclusion in the RNA Society.

I want to express my gratitude to the organizers of RNA 2023—David Bartel, Douglas Black, Ling-Ling Chen, Fátima Gebauer, Thomas Preiss, and Yue Wan—for their hard work on behalf of our members. RNA 2023 is yours to enjoy, so please make the most of it.

Sandy

Sandra Wolin
President, RNA Society

The RNA Society

Officers of the RNA Society FY 2023

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NCI - NIH, USA

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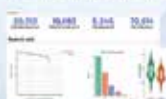
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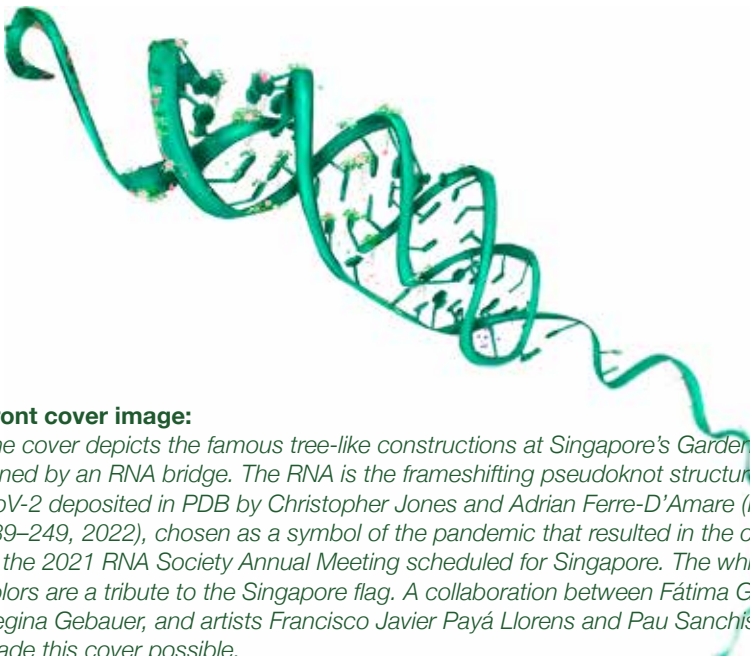
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Front cover image:

The cover depicts the famous tree-like constructions at Singapore’s Gardens by the Bay joined by an RNA bridge. The RNA is the frameshifting pseudoknot structure of SARS-CoV-2 deposited in PDB by Christopher Jones and Adrian Ferre-D’Amare (RNA 28: 239–249, 2022), chosen as a symbol of the pandemic that resulted in the cancellation of the 2021 RNA Society Annual Meeting scheduled for Singapore. The white and red colors are a tribute to the Singapore flag. A collaboration between Fátima Gebauer, Regina Gebauer, and artists Francisco Javier Payá Llorens and Pau Sanchís Tarrazó made this cover possible.

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Lexogen Solutions and Best practices for your RNA-Sequencing experiments

Join Lexogen's Morning Session
at the #RNA2023

📅 June 2, 2023

🕒 7:45 a.m.

📍 Hall 406D

Small treats with
coffee are provided!

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Why nanopore sequencing for RNA analysis?

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GENERAL MEETING GUIDELINES

Citation of abstracts presented during RNA 2023 (in bibliographies or other) is strictly prohibited. Material should be treated as personal communication and is to be cited only with the expressed written consent of the author(s).

Abstracts can be found in the digital meeting program online. Login to Oxford Abstracts with the email address and password used when registering for the meeting.

NO UNAUTHORIZED PHOTOGRAPHY OF ANY MATERIAL PRESENTED DURING THE MEETING.



To encourage sharing of unpublished data at the RNA Society Annual Meeting, taking of photographs and/or videos during scientific sessions (oral or poster), or of posters outside of session hours, is strictly prohibited. Violators of this policy may have their equipment confiscated (cameras, cell phones, etc.) and/or be asked to leave the conference and have their registration privileges revoked without reimbursement.

USE OF SOCIAL MEDIA

The official hash tag of the 28th Annual Meeting of the RNA Society is **#RNA23**. Meeting participants are encouraged to share the amazing science they experience at RNA 2023 on social media platforms; however, please respect the following rules when using the #RNA23 hash tag on Twitter, or when talking about the meeting on other social media platforms:

1. Be polite and respectful of others and their work in your messaging.
2. Do not transmit photographs of slides or posters - under any circumstance.
3. Do not transmit photographs of conference attendees without their verbal consent.
4. Requests from presenters to refrain from sharing content of their talks and/or posters on social media must be respected and adhered to. Presenters may label their talk slides and/or posters with "DO NOT POST."

COVID-19 POLICY FOR RNA 2023

During RNA 2023, the RNA Society will follow all local/state/country guidelines related to efforts to reduce the transmission of COVID-19. Please respect your colleagues who prefer to mask and/or request comfortable social distancing. If you believe you may be infected with COVID-19, please test yourself and take necessary precaution to reduce spread, including masking and, if necessary, entering quarantine. Maintaining the health and safety of all RNA 2023 meeting participants, Suntec staff, and residents of Singapore is the priority of the RNA Society.

Exhibitors



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From vaccines to therapeutics**

Thursday 1 June, 12:55–13:55
Level 4, Hall 406D

Come visit us at
the Moderna Booth
to learn more about
mRNA medicines

PROGRAM SCHEDULE

TUESDAY, MAY 30

12:00 – 18:00 **Registration**

Hall 403/404 Foyer

15:00 – 17:45 **Opening Session, sponsored by BioNTech**

Hall 406 CX

Welcome

Keynote 1: Ramesh Pillai, University of Geneva

Keynote 2: Britt Glaunsinger, UC Berkeley and HHMI

Keynote 3: Yigong Shi, Westlake University

18:30 – 21:00 **Reception**

Flower Field Hall & Waterview Room, Gardens by the Bay Flower Dome

Gardens will stay open until 23:00 for your enjoyment.

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WEDNESDAY, MAY 31

- 07:45 – 08:45 **Seminar sponsored by Oxford Nanopore Technologies**
Hall 406 D
- 08:00 – 19:00 **Registration**
Hall 403/404 Foyer
- 09:00 – 10:35 **Plenary Session 1: RNA Modification, sponsored by BioNTech**
Chair: Eva Novoa, Center for Genomic Regulation (CRG)
Hall 406 CX
- 10:35 – 11:05 **Coffee Break**
Hall 404/405 XE
- 11:05 – 12:40 **Plenary Session 2: Viral RNA and Innate Immune Response**
Chair: Noam Stern-Ginossar, Weizmann Institute of Science
Hall 406 CX
- 12:40 – 14:10 **Lunch**
Hall 404/405 XE
- 12:40 – 14:10 **RNA Ambassadors Reception**
Hall 404/405 XE
- 12:55 – 13:55 **Seminar sponsored by BioNTech**
Hall 406 D
- 14:10 – 16:00 **Concurrent Session 1: Regulation of Translation and Transcription, sponsored by BioNTech**
Chair: Traude Beilharz, Monash University
Hall 406 CX
- Concurrent Session 2: Ribozymes, Riboswitches and the Origins of Life, sponsored by Moderna**
Chair: Peter Unrau, Simon Fraser University
Hall 406 D
- Concurrent Session 3: Splicing Regulation**
Chair: Xavier Roca, National University of Singapore
Hall 405 B
- 16:00 – 16:30 **Coffee Break**
Hall 404/405 XE
- 16:30 – 18:35 **Plenary Session 3: Long Non-coding and Regulatory RNAs**
Chair: Igor Ulitsky, Weizmann Institute of Science
Hall 406 CX

WEDNESDAY, MAY 31 (continued)

Meet the *RNA* Editors - A quick introduction to our Editors and the many benefits of publishing in *RNA*

18:35 – 20:00 **Dinner**
Hall 404/405 XE

18:35 – 20:00 **Meetings Committee Dinner/Meeting**
Meeting Room 323

19:30 – 20:30 **Junior Scientists Social**
Meeting Room 334-336

20:00 – 23:00 **Poster Session 1**
Even numbered posters present 20:00 to 21:30 and odd numbered posters present 21:30 to 23:00.
Hall 403

20:00 to 21:00 **Meet the *RNA* Editors**
Stop by to talk to our Editors about how to publish your work in *RNA*



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THURSDAY, JUNE 1

07:45 – 08:45 **Seminar sponsored by Immagina**

Hall 406 D

08:00 – 16:00 **Registration**

Hall 403/404 Foyer

09:00 – 10:35 **Plenary Session 4: Small RNAs and other Non-coding RNAs**

Chair: Ana Eulalio, Imperial College London

Hall 406 CX

10:35 – 11:05 **Coffee Break**

Hall 404/405 XE

11:05 – 12:40 **Diversity, Equity & Inclusion Panel: Inclusion Everywhere All at Once: From Awareness to Action**

Organized by the RNA Society DEI Committee

Chairs: Shobha Vasudevan, MGH-Harvard Medical School and Suja

Jagannathan, Univ of Colorado Anschutz Medical Campus

Panelists: Mai Baker, Hebrew Univ of Jerusalem; Doreen Lugano, Univ

of Texas Medical Branch; Shovamayee Maharana, Indian Institute of

Science; Kehinde Ross, Liverpool John Moores Univ; Polly Leilei Chen,

National Univ of Singapore

Hall 406 CX

12:40 – 14:10 **Lunch**

Hall 404/405 XE

Mentoring Lunch

Organizer: Nancy Greenbaum, Hunter College, CUNY

Hall 404/405 XE

12:55 – 13:55 **Seminar sponsored by Moderna**

Hall 406 D

14:10 – 16:15 **Plenary Session 5: Technologies I**

Chair: Gene Yeo, University of California, San Diego

Hall 406 CX

16:15 **Free evening**

FRIDAY, JUNE 2

07:45 – 08:45 **Seminar sponsored by Lexogen**

Hall 406 D

08:00 – 19:00 **Registration**

Hall 403/404 Foyer

09:00 – 10:35 **Plenary Session 6: The Ribosome and mRNA Translation, sponsored by Moderna**

Chair: Nicholas Guydosh, NIH - National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

Hall 406 CX

10:35 – 11:05 **Coffee Break**

Hall 404/405 XE

11:05 – 12:40 **Plenary Session 7: RNA-binding Proteins**

Chair: Yanli Wang, Institute of Biophysics, Chinese Academy of Sciences

Hall 406 CX

12:40 – 14:10 **Lunch**

Hall 404/405 XE

12:55 – 13:55 **Seminar sponsored by Eclipsebio**

Hall 406 D

14:10 – 16:00 **Concurrent Session 4: RNP Granules and Phase Transitions, sponsored by Moderna**

Chair: Tetsuro Hirose, Osaka University

Hall 406 CX

Concurrent Session 5: Technologies II, sponsored by BioNTech

Chair: Yue Wan, Genome Institute of Singapore

Hall 406 D

RNA Junior Scientists Career Panel: Navigating a Career in Industry: Advice from Biotech and Big Pharma Professionals

Organized by the RNA Society Junior Scientist Group

Moderator: Jimin Yoon, KAIST

Panelists: Jonas Tholen, Genentech; Libby Snell, Oxford Nanopore

Technologies; Haining Lin, Moderna; Shunichi Kashida, xFOREST

Therapeutics; G. Brett Robb, New England Biolabs

Hall 405 B

16:00 – 16:30 **Coffee Break**

Hall 404/405 XE

16:30 – 18:35 **Plenary Session 8: RNA Splicing**
Chair: Wojciech Galej, European Molecular Biology Laboratory (EMBL)
Hall 406 CX

18:35 – 20:00 **Dinner**
Hall 404/405 XE

18:35 – 20:00 **Board of Directors Dinner/Meeting**
Meeting Room 335-336

20:00 – 23:00 **Poster Session 2**
Even numbered posters present 20:00 to 21:30 and odd numbered
posters present 21:30 to 23:00.
Hall 403

20:00 to 21:00 **Meet the *RNA* Editors**
Stop by to talk to our Editors about how to publish your work in *RNA*

SATURDAY, JUNE 3

07:45 – 08:45 **Seminar sponsored by Agilent Technologies, Inc.**
Hall 406 D

08:00 – 19:00 **Registration**
Hall 403/404 Foyer

09:00 – 10:35 **Plenary Session 9: RNA Structure and Folding**
Chair: Chun Kit Kwok, City University of Hong Kong
Hall 406 CX

10:35 – 11:05 **Coffee Break**
Hall 404/405 XE

11:05 – 12:40 **Plenary Session 10: RNA in Disease and Therapeutics,
sponsored by Moderna**
Chair: Eric Wang, University of Florida
Hall 406 CX

12:40 – 14:10 **Lunch**
Hall 404/405 XE

12:55 – 13:55 **Seminar sponsored by MGI**
Hall 406 D

14:10 – 16:00 **Concurrent Session 6: RNA Transport and Localized RNA
Regulation, sponsored by Moderna**
Chair: Marina Chekulaeva, Max Delbrück Center for Molecular Medicine
Hall 406 CX

**Concurrent Session 7: RNA Processing and Turnover,
sponsored by BioNTech**

Chair: Lynne Maquat, University of Rochester
Hall 406 D

16:00 – 16:20

Coffee Break
Hall 404/405 XE

16:20 – 18:30

Awards Ceremony and Closing Remarks
Hall 406 CX

19:00 – 23:30

Reception
Concourse 2 & 3

Gala Dinner/Dance
Concourse 2 & 3

SUNDAY, JUNE 4

Conference concludes



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The banner features a stylized illustration of a scientist in a white lab coat and pink headphones, holding a purple folder, standing next to a large blue DNA double helix structure. The background is a solid blue color.

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Our RNA Australia Training Hub PhD Program will launch in 2024 and will prepare students for careers in RNA related academia, industry, or government. A combination of coursework and research, the duration of the program is four years for full-time students. Students are expected to conduct original research in their chosen field of study, under the guidance of a supervisory team embedded in one of the universities participating in RNA Australia.

The first year of the program uniquely includes novel coursework, which provides students with the necessary skills and knowledge in RNA technology to undertake their research project. Coursework will include topics such as RNA specific biotechnology, RNA product design and development, quality assurance, communication skills and policy development, ethics and legal studies. Students will also attend cross-institutional seminars, workshops, and conferences to expand their knowledge and network with other researchers in the RNA consortium. PhD training in Australia is rigorous and demanding, but this program aims to provide students with an opportunity to make a significant contribution to the rapidly expanding RNA industry and to develop skills that are valuable in many different career paths in the expanding RNA ecosystem in Australia.



INVITATION TO MEMBERSHIP

The RNA Society gathers worldwide experts in all things RNA. Since 1993, the Society has promoted RNA education and research all over the world, and encouraged interdisciplinary and inclusive collaborations. Join this community to network with the greatest RNA scientists, and advance your research and career!

The RNA Society welcomes new members from all disciplines, careers and professional stages, and appreciate the unique perspectives all of our members contribute to the organization. We are an inclusive and diverse community that focuses on scientific excellence and collaboration.

Members work in numerous areas of RNA science including, but not limited to:

Bioinformatics/ Computational Biology	RNA & Disease	RNA Quality Control/ Surveillance
Heterochromatin Silencing	RNA Binding Proteins	RNA Viruses & Viral
Integration of Nuclear Gene Expression Processes	RNA Catalysis	RNA Mechanisms
Methods/Protocol Development	RNA Dynamics	RNAi & miRNA
Noncoding RNA (e.g. tRNA, lncRNA, piRNA)	RNA Editing	RNP Biosynthesis, Structure and Function
Ribonucleases	RNA High-throughput Analysis	Splicing & Alternative Splicing Mechanisms
Ribosomes & Translational Regulation	RNA Maturation	Telomerase
	RNA-Protein Interactions	
	RNA Stability/Degradation	
	RNA Structure & Folding	
	RNA Therapeutics	
	RNA Transport & Localization	

Benefits of RNA Society membership include:

- Complementary personal subscription to the RNA Society journal, ***RNA***
- Reduced Author Page Charges for publishing in ***RNA***
 - Discounted manuscript publication fees - \$1,000 (\$1,500 for non-members)
 - Reduced Open Access fees - \$2,000 (\$3,750 for non-members)
 - Unlimited FREE color figures
- Reduced registration fees to attend the RNA Society Annual Meeting – a savings of \$300–\$400
- Professional Development opportunities for junior scientists, including our successful Mentoring Program
- Free job posting on the RNA Society website
- As a member of the RNA Society you are eligible to apply for:
 - RNA Society-sponsored annual Awards & Prizes
 - RNA Society sponsorship of an RNA-related conference you organize
 - Research presentation fellowships (waiving registration fees to attend the RNA Society Annual Meeting)
 - Childcare, dependent care and disability allowances to attend the RNA Society Annual Meeting
 - RNA Salon Program sponsorship of recurring RNA events in your area
- And, best of all, being part of an active and supportive international community of RNA researchers!

RNA Society membership fees are highly competitive with reduced rates for student and post-doctoral researchers. Multi-year and lifetime memberships are also available at further discounted rates.

**Visit the RNA Society website at www.rnasociety.org
for more information and to apply today.**

RNA SOCIETY AWARDS

Applications due September 30th

All along your career path, the RNA SOCIETY has an award for you!



The RNA Society Awards Program celebrates the achievements of **trainees, faculty** and **research scientists** with 11 awards in 8 categories. Help us recognize **scientific excellence, diversity** in RNA science, **mentoring** and **leadership** by applying (or nominating) an RNA Society member today at RNASociety.org/Awards.

2023 RNA SOCIETY AWARDS

THE RNA SOCIETY LIFETIME ACHIEVEMENT IN SCIENCE AWARD



Marlene Belfort

The RNA Society Lifetime Achievement in Science Award acknowledges the outstanding contributions of an RNA researcher on the general scientific community. Each year, the RNA Society Board of Directors seeks nominations to identify a recipient based on their long-time research achievements. The award is presented at the Annual RNA Meeting, where the recipient gives a special address to the RNA Society.

Previous winners include Joan Steitz (2003), Harry Noller (2004), John Abelson (2005), Christine Guthrie (2006), Walter Keller (2007), Norm Pace (2008), Thomas Cech (2009), Fritz Eckstein (2010), Witold Filipowicz (2011), Olke Uhlenbeck (2012), Phillip Sharp (2013), Reinhard Lührmann (2014), Anita Hopper (2015), Eric Westhof (2016), Lynne Maquat (2017), Jean Beggs (2018), Adrian Krainer (2019), Matthia Hentze (2020), Melissa Moore (2021), and Gideon Dreyfus (2022).

*Congratulations to **Marlene Belfort**, Distinguished Professor, Director of the Life Sciences Initiative, and Senior Advisor of the RNA Institute, University of Albany, for her selection as the winner of the 2023 RNA Society Lifetime Achievement in Science Award. Dr. Belfort is recognized for her long history of innovative and foundational discoveries in the area of intron biology. Dr. Belfort is also a founding member of the RNA Society and was a member of its inaugural Board of Directors.*

THE RNA SOCIETY LIFETIME ACHIEVEMENT IN SERVICE AWARD



Benoît Chabot

The RNA Society Lifetime Service Award is given in appreciation of outstanding dedication and service to the RNA Society and greater RNA community. Each year, the RNA Society Board of Directors seeks nominations and selects the recipient of this award based on exemplary contributions and commitment to fulfilling the mission of the RNA Society and promoting RNA research and education world-wide.

Previous winners include Tim Nilsen (2003), Chris Greer (2004), Jean Beggs (2005), Olke Uhlenbeck (2006), Marvin Wickens (2007), Eric Westhof (2008), Anita Hopper (2009),

Lynne Maquat (2010), Evelyn Jabri (2011), Brenda Peculis (2012), Ann Marie Micenmacher (2014), David Lilley (2015), Andrea Barta (2016), Andrew Feig (2017), Elizabeth Tran (2018), Jim McSwiggen (2019), Sarah Woodson (2020), Juan Valcárcel (2021), and Anna Marie Pyle (2022).

*Congratulations to **Benoît Chabot**, Professor in the Department of Microbiology, University of Sherbrooke, for his selection as the winner of the 2023 RNA Society Outstanding Service Award. Dr. Chabot is being recognized for his exemplary leadership and commitment in serving the RNA Society and greater RNA research community.*

THE ELISA IZAUURALDE AWARD FOR INNOVATION IN RESEARCH, TEACHING AND SERVICE



Amanda Hargrove

The Elisa Izaurralde Award for Innovation in Research, Teaching and Service was established in 2019 to celebrate the life and achievements of Dr. Elisa Izaurralde, former Director of the Department of Biochemistry at the Max Planck Institute for Developmental Biology in Tubingen, Germany, and a generous friend and colleague to the RNA community. The award is presented to an early career researcher who embodies Elisa's dedication to science and employs innovative approaches to their research, teaching and service. This award is open to early career scientists (5–15 years post-PhD) who hold an independent research position at an academic institution.

Previous winners include Lori Passmore (2020), Gene Yeo (2021) and Luisa Cochella (2022).

*Congratulations to **Amanda Hargrove**, Associate Professor of Chemistry and Biochemistry at Duke University, for being selected to receive the 2023 Elisa Izaurralde Award. Dr. Hargrove is an international leader in the field of small molecule-RNA interactions and is also celebrated for her teaching, mentoring and efforts to increase retention of historically excluded individuals in STEM.*

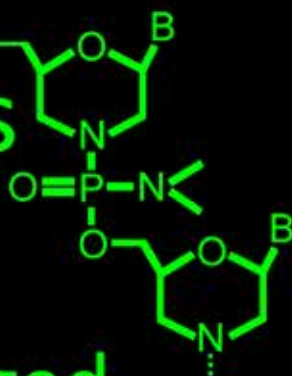
THE RNA SOCIETY MID-CAREER AWARD

The RNA Society Mid-Career Award is given in recognition of scientists who have made significant contributions to their field in the first 15 years of their career as an independent investigator.

Previous winners include Karla Neugebauer (2017), Nils Walter (2017), Erik Sontheimer (2018), Ailong Ke (2019), Jernej Ule (2020), Ling-Ling Chen (2021) and Julius Brennecke (2022).

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Nicholas Ingolia

*Congratulations to **Nicholas Ingolia**, Associate Professor of Molecular & Cell Biology at the University of California - Berkeley, for his selection as the recipient of the 2023 RNA Society Mid-Career Award. Dr. Ingolia's advances in developing quantitative genome-wide approaches are celebrated as particularly innovative in advancing mechanistic studies of post-transcriptional gene regulation.*

THE RNA SOCIETY EARLY CAREER AWARD



Jinwei Zhang

The RNA Society Early Career Award is given in recognition of scientists who have made significant contributions to their field in the first 7 years of their career as an independent investigator.

Previous winners include Wendy Gilbert (2017), Gene Yeo (2017), Andrei Korostelev (2018), Maria Barna (2019), Igor Ulitsky (2020), Schraga Schwartz (2021) and Nicholas Guydosh (2022).

*Congratulations to **Jinwei Zhang**, Senior Investigator at the National Institutes of Health, the winner of the 2023 RNA Society Early Career Award. Dr. Zhang is recognized for his contributions in understanding the structure and mechanisms of noncoding RNA and associated RNPs in gene regulation and human diseases.*

THE RNA SOCIETY AWARD FOR EXCELLENCE IN INCLUSIVE LEADERSHIP

The Inclusive Leadership award was established in 2021 to recognize outstanding leadership that promotes the training and/or professional development of underrepresented scientists and greater inclusion of RNA researchers within our scientific community. This award is open to all current members of the RNA Society having a demonstrated record of promoting diversity and inclusion in RNA science. Activities can include, but are not limited to, achievements in research mentorship of underrepresented scientists, development of programs or initiatives that promote inclusion in the RNA scientific community, and/or long-standing advocacy and/or commitment to scientific inclusion and opportunities for all.

2021 Impact Factor
(Clarivate Analytics, 2022) **46.297**



Editor Emeritus: Gang Pei
Editor-in-Chief: Dangsheng Li

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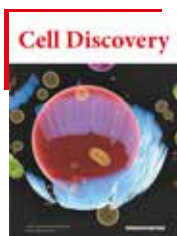
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Editor-in-Chief: Dangsheng Li

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Featured Papers



SARS-CoV-2 Z-RNA activates the ZBP1-RIPK3 pathway to promote virus-induced inflammatory responses

Cell Research (2023)33:201–214; <https://doi.org/10.1038/s41422-022-00775-y>



A novel protein RASON encoded by a lncRNA controls oncogenic RAS signaling in KRAS mutant cancers

Cell Research (2023)33:30–45; <https://doi.org/10.1038/s41422-022-00726-7>



Comparison of viral RNA–host protein interactomes across pathogenic RNA viruses informs rapid antiviral drug discovery for SARS-CoV-2

Cell Research (2022)32:9–23; <https://doi.org/10.1038/s41422-021-00581-y>



RNA m⁶A modification orchestrates a LINE-1–host interaction that facilitates retrotransposition and contributes to long gene vulnerability

Cell Research (2021)31:861–885; <https://doi.org/10.1038/s41422-021-00515-8>



Predicting dynamic cellular protein–RNA interactions by deep learning using in vivo RNA structures

Cell Research (2021)31:495–516; <https://doi.org/10.1038/s41422-021-00476-y>



Wendy Gilbert

Previous winner was Anita Corbett (2022).

*Congratulations to **Wendy Gilbert**, Associate Professor of Molecular Biophysics and Biochemistry at Yale University, for being selected as the recipient of the 2023 RNA Society Award for Excellence in Inclusive Leadership. Dr. Gilbert is celebrated for her advocacy on behalf of underrepresented groups in academia and science.*

THE RNA SOCIETY OUTSTANDING CAREER RESEARCHER AWARD



Sara Olson

The RNA Society Outstanding Career Researcher Award was established in 2021 to recognize the exceptional contributions of career research scientists in advancing the field of RNA. The award is open to all career researchers who performs his/her/their scientific role in the framework of a larger research group. Examples of career RNA researchers eligible for this award include Research Assistants, Research Associates, Technicians, Lab Managers, Staff Scientists, or those in equivalent positions.

Previous winner was Arthur Zaugg (2022).

*Congratulations to **Sara Olson**, Research Associate in the lab of Dr. Brenton Graveley, University of Connecticut, for being selected to receive the 2023 RNA Society Outstanding Career Researcher Award. Ms. Olson is recognized for her contributions in characterizing alternative and recursive RNA splicing in *Drosophila* and her work with the modENCODE, ENCODE and ENCORE collaborative projects.*

THE RNA SOCIETY/COLD SPRING HARBOR LABORATORY PRESS AWARD FOR RESEARCH EXCELLENCE BY AN UNDERREPRESENTED SCIENTIST



The RNA Society/Cold Spring Harbor Laboratory Press Award for Research Excellence by an Underrepresented Scientist is sponsored by Cold Spring Harbor Laboratory Press (CSHLP), a long-time partner of the RNA Society and publisher of RNA, the official journal of the Society. This award was established in 2021 to recognize exceptional contributions

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Advances in Kidney Cancer Research

June 24-27, 2023 | Austin, TX

Conference Cochairs: Othon Iliopoulos, M. Celeste Simon, Cheryl Lyn Walker, and Qing Zhang

Second JCA-AACT Precision Cancer Medicine International Conference

June 28-30, 2023 | Kyoto, Japan

Conference Cochairs: Hiroyoshi Nishikawa and Charles Swanton

AACT-AHNS Head and Neck Cancer Conference: Innovating through Basic, Clinical, and Translational Research

July 7-8, 2023 | Montréal, QC, Canada

Conference Cochairs: Joseph A. Califano, Maura L. Gillison, Sana D. Karam, and Jose P. Zavallos

ASCO/AACT Methods in Clinical Cancer Research Workshop

July 23-29, 2023 | La Jolla, California

Workshop Codirectors: Manuel Hidalgo, Julie M. Vose and Thomas M. Braun

CRI-ENCI-AACT Seventh International Cancer Immunotherapy Conference: Translating Science Into Survival

September 20-23, 2023 | Milano, Italy

Conference Cochairs: Pier Francesco Ferrucci, Christoph Huber, Padmanee Sharma, and Arlene H. Sharpe

Pancreatic Cancer

September 2-30, 2023 | Boston, MA

Conference Cochairs: Christine A. Iacobuzio-Donahue, Anirban Maitra, Rosalie C. Sears and Jen Jen Yeh

The Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved

September 29-October 2, 2023 | Orlando, FL

Conference Cochairs: Ronny A. Bell, Gloria D. Coronado, Sophia H. L. George, Augusto C. Ochoa, Renee Reams, and Tiffany A. Wallace

Tumor Immunology and Immunotherapy

October 1-4, 2023 | Toronto, ON, Canada

Conference Cochairs: Phillip D. Greenberg, Pamela S. Ohashi, Andrea Schietinger, and Mario Sznol

AACT-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics

October 11-15, 2023 | Boston, MA

Conference Cochairs: Timothy A. Yap, Tim F. Greten and E.G. Elisabeth de Vries

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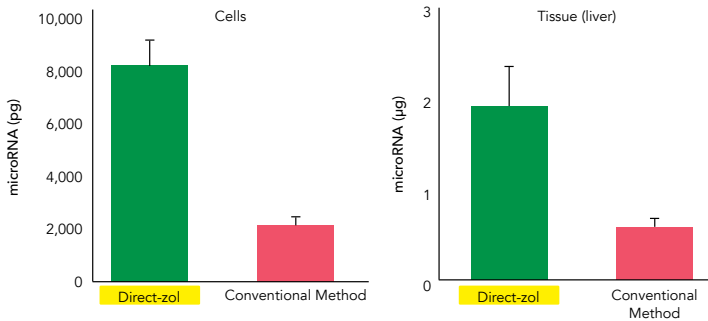


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Sezen Meydan

to RNA research by a scientific trainee who is underrepresented in biomedical research. This award is open to all qualifying graduate students and post-doctoral fellow trainees (or equivalent).

Previous winner was Jillian Ramos (2022).

*Congratulations to **Sezen Meydan**, currently a Postdoctoral Fellow in the laboratory of Dr. Nicholas Guydosh at the NIH, for being selected as the 2023 awardee of the RNA Society/Cold Spring Harbor Laboratory Press Award for Research Excellence by an Underrepresented Scientist. Dr. Meydan is recognized for her mechanistic studies on mRNA translation both as a graduate student and a post-doctoral researcher.*

THE RNA SOCIETY/COLD SPRING HARBOR LABORATORY PRESS DISTINGUISHED RESEARCH MENTOR AWARD



Doug Turner

The RNA Society/Cold Spring Harbor Laboratory Press Distinguished Research Mentor Award is supported by Cold Spring Harbor Laboratory Press (CSHLP), a long-time partner of the RNA Society and publisher of RNA, the official journal of the Society. This award was established in 2021 to recognize outstanding mentorship by our members and to highlight the importance of fostering the academic and professional development of trainees in RNA research. This award is open to all current and Full Members of the RNA Society with a track record of active and impactful mentoring; mentoring can be broadly considered to include any activity that contributes to the sustained vibrancy and growth of the RNA scientific community.

Previous winner was Susan Gerbi (2022).

*Congratulations to **Doug Turner**, Professor of Chemistry at the University of Rochester for being selected to receive the 2023 RNA Society/Cold Spring Harbor Laboratory Press Distinguished Research Mentor Award. Dr. Turner is recognized for excellence in mentoring, having advised nine postdoctoral research associates and over 50 graduate students during his distinguished career studying RNA structure prediction.*

THE RNA SOCIETY/SCARINGE YOUNG SCIENTIST AWARD

The RNA Society/Scaringe Young Scientist Awards were established to recognize the achievements of young scientists engaged in RNA research and to encourage them to continue to pursue a career in RNA science. In 2004 and 2005, the RNA Society/Scaringe Award was given to the student author(s) of the best paper published during the previous year in *RNA* the official journal of the RNA Society, as selected by the Editors. The winners of the 2004 and 2005 awards were Stefano Marzi and Ramesh Pillai, respectively. In 2006, eligibility for this award was opened up to all junior scientists (Graduate Students and Post-doctoral Fellows) who have made significant research contributions to the area of RNA. The award includes full support to attend the RNA Society Annual Meeting and a small cash prize.



Jonas Tholen

Previous Graduate Student winners include Jeff Barrick (2006), Malte Beringer (2007), Qi Zhang (2008), Jeremy Wilusz (2009), John Calarco (2010), Jasmine Perez (2011), Chenguang Gong (2012), Tatjana Trcek Pulic (2012), Wenwen Fang (2013), David Weinberg (2014), Samuel Sternberg (2015), Katherine Warner (2015), Ryan Flynn (2016), Nian Liu (2016), Malik Chaker-Margot (2017), Madeline Sherlock (2018), Boxuan Zhao (2018), Michael Chen (2019), Max Wilkinson (2019), Robert Battaglia (2020), Junuka Athukoralage (2021), Jonathan Bohlen (2021), and Sanna Klompe (2022).



Charles Bou-Nader

Previous Post-doctoral Fellow winners include Megan Talkington (2006), Zefeng Wang (2007), Alexei Aravin (2008), Shobha Vasudevan (2009), Luciano Marraffini (2010), Hani Zaher (2011), Kotaro Nakanishi (2012), Dipali Sashital (2012), Je-Hyun Yoon (2013), Jinwei Zhang (2014), Olga Anczukow-Camarda (2015), Schraga Schwartz (2015), Basil Greber (2016), Thi Hoang Duong Nguyen (2016), Zhipeng Lu (2017), Fuguo Jiang (2018), Xuebing Wu (2019), Furqan Fazal (2020), Sebastian Fica (2020), Anna Loveland (2021), Kathrin Leppek (2021), and Margaret Rodgers (2022).

*Congratulations to the winners of the 2023 RNA Society/Scaringe Young Scientist Awards: Graduate Student **Jonas Tholen**, from the lab of Dr. Wojciech Galej at the EMBL in Grenoble France, for his work on the structural basis of branch site selection during pre-mRNA splicing, and Postdoctoral Fellow **Charles Bou-Nader**, in the lab of Dr. Jinwei Zhang at the NIH, for his structural studies on understanding RNA-protein recognition.*

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THE ECLIPSE AWARD FOR INNOVATION IN HIGH THROUGHPUT BIOLOGY



Han Altae-Tran

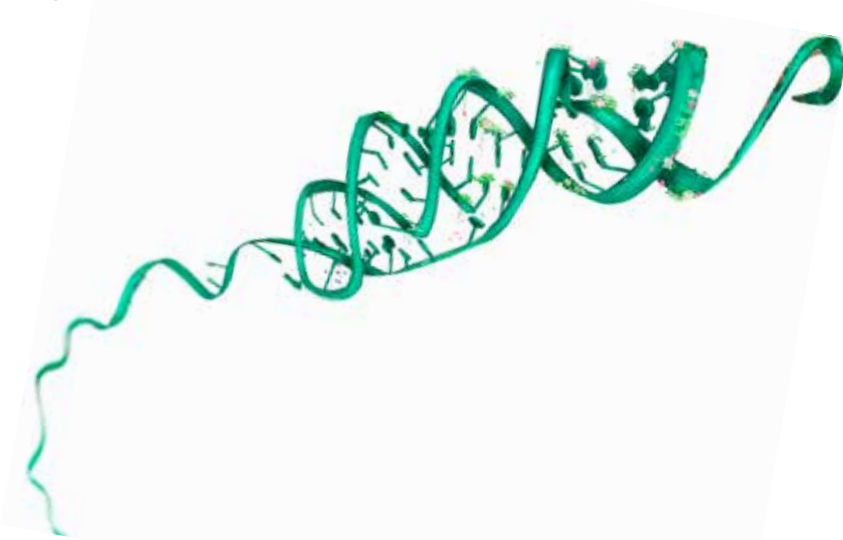
The Eclipse Award for Innovation in High Throughput Biology was established in 2021 to recognize research achievements by junior researchers in the growing areas of high throughput experimentation and analysis. This award, sponsored by Eclipse BioInnovations Inc., is open to all Graduate Students and Post-doctoral Fellows and is awarded based on research accomplishments in the broad area of high throughput RNA biology. The award includes full support to attend the RNA Society Annual Meeting, a small cash prize and the opportunity to interview with Eclipse BioInnovations Inc. leadership and perform an internship at their worksite in San Diego, California.

Previous winners were Oguzhan Begik (2022) and Aldema Sas-Chen (2022).



Shira Weingarten-Gabbay

*Congratulations to the winners of the 2023 Eclipse Award for Innovation in High Through-put Biology: Graduate Student **Han Altae-Tran**, from the lab of Dr. Feng Zhang at the Broad Institute of MIT and Harvard, for his computational approaches to identifying novel RNA-programmable proteins, and **Shira Weingarten-Gabbay**, a Postdoctoral Fellow in the labs of Dr. Pardis Sabeti (Broad Institute of MIT and Harvard) and Dr. Charles Rice (Rockefeller University) for her use of massively parallel reporter assays to discover novel genomic elements regulating gene expression in viruses and human cells.*





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ORAL ABSTRACT LISTING

Plenary 1: RNA Modification, sponsored by BioNTech

Wednesday, May 31, 9:00 to 10:35, Hall 406 CX

Session Chair: Eva Novoa

PL1-1 Decoding the epitranscriptome at single molecule resolution

Eva Maria Novoa, Oguzhan Begik, Morghan Lucas, Ivan Milenkovic, Anna Delgado-Tejedor, Sonia Cruciani, Leszek Pryszcz, Rebeca Medina, Laia Llovera, Gregor Diensthuber, Huanle Liu, Alexane Ollivier

PL1-2 Exclusion of m⁶A from splice-site-proximal regions by the exon junction complex dictates m6A topologies and mRNA stability

Anna Uzonyi, David Dierks, Ronit Nir, Oh Sung Kwon, Ursula Toth, Isabelle Barbosa, Cindy Burel, Alexander Brandis, Walter Rossmanith, Hervé Le Hir, Boris Slobodin, Schraga Schwartz

PL1-3 Structural basis of assembly and substrate binding of human RNA m6A writer complexes

Jinbiao Ma

PL1-4 Discovery of a molecular glue to link RNAs with proteins

Maik Wolfram-Schauerte, Katharina Höfer

PL1-5 Pseudouridine synthase 3 (PUS3) exclusively modifies tRNA by cooperative target recognition through its subunits

Leon Kleemann, Ting-Yu Lin, Sebastian Glatt, Sebastian A. Leidel

PL1-6 Profiling messenger RNA modifications in archaea

Yueh-Lin Tsai, Nan Dai, Ryan T. Fuchs, Kristin A. Fluke, Brett Burkhardt, G. Brett Robb, Thomas J. Santangelo, Ivan R. Corrêa Jr.

Plenary 2: Viral RNA and Innate Immune Response

Wednesday, May 31, 11:05 to 12:40, Hall 406 CX

Session Chair: Noam Stern-Ginossar

PL2-1 SARS-CoV-2 uses a multipronged strategy to block host protein synthesis

Noam Stern-Ginossar

PL2-2 Functional viromic screens uncover novel regulatory RNA elements

Soo-Jin Jung, Jenny J. Seo, Jihye Yang, Da-Eun Choi, V. Narry Kim

PL2-3 Pseudouridine prevalence in Kaposi's sarcoma-associated herpesvirus transcriptome reveals an essential mechanism for viral replication

Timothy Mottram, Katherine Harper, Elton Vasconcelos, Chinedu Anene, Adrian Whitehouse

PL2-4 Molecular basis of specific viral RNA recognition and 5' end-capping by the Chikungunya virus nsP1

Dahai Luo, Kuo Zhang, Michelle Law, Yaw Bia Tan, Yee-Song Law, Trinh Mai Nguyen

PL2-5 Sequence specificity of RIG-I/IFN signaling

Magdalena Wolczyk¹, Jacek Szymański¹, Ivan Trus¹, Agnieszka Bolembach¹, Nila Roy Choudhury, Ceren Könüç, Zara Naz, Elżbieta Nowak, Christos Spanos, Katarzyna Mleczo-Sanecka, Juri Rappsilber, Gracjan Michlewski

PL2-6 An RNA editing-independent function of ADAR1 inhibits PKR activation in mice.

Ketty Sinigaglia, Anna Cherian, Dragana Vukic, Janka Melicherova, Pavla Linhartova, Lisa Zerad, Stanislav Stejskal, Radek Malik, Jan Prochazka, Nadège Bondurand, Radislav Sedlacek, Mary A. O'Connell, Liam P. Keegan

Concurrent 1: Regulation of Translation and Transcription

Wednesday, May 31, 14:10 to 16:00, Hall 406 CX

Session Chair: Traude Beilharz

C1-1 PAPOLB-mediated cytoplasmic polyadenylation in round-spermatids is widespread and essential for the morphogenic switch in spermiogenesis.

Rachael Turner, Angavai Swaminathan, Jessica Dunleavy, Julien Legrand, Paul Harrison, Robin Hobbs, Moira O'Bryan, Traude Beilharz

C1-2 Nuclear release of EIF1 globally regulates alternative translational isoforms during mitosis

Jimmy Ly, Kehui Xiang, David Bartel, Iain Cheeseman

C1-3 Drug-induced eRF1 degradation promotes readthrough and reveals a new branch of ribosome quality control

Lukas-Adrian Gurzeler, Marion Link, Yvonne Ibig, Isabel Schmidt, Olaf Galuba, Julian Schönbett, Christelle Gasser-Didierlaurant, Christian Parker, Xiaohong Mao, Francis Bitsch, Markus Schirle, Philipp Couttet, Frederic Sigoillot, Jana Ziegelmeüller, Anne-Christine Uldry, Niko Schmiedeberg, Jürgen Reinhardt, Oliver Mühlemann

C1-4 Programmable induction of stop codon readthrough using CRISPR-dCas13 system

Lekha E Manjunath, Sandeep M Eswarappa

C1-5 Dissecting human translation initiation mechanisms and maximizing therapeutic protein production through Direct Analysis of Ribosome Targeting (DART)

Cole J.T. Lewis, Austin S. Draycott, Shivani Bhandarkar, Carson C. Thoreen, Wendy V. Gilbert

C1-6 Spatiotemporal differences in codon recognition—due to changes in tRNA modifications—drive translational regulation during brown adipogenesis

Jun Yu Ip, Indrik Wijaya, Li Ting Lee, Cheryl Chan, Cui Liang, Peter C Dedon, Huili Guo

C1-7 Transcription directionality is licensed by Integrator at active human promoters

Jiao Yang, Jingyang Li, Yunkun Dang, Fan Lai

Concurrent 2: Ribozymes, Riboswitches and the Origins of Life

Wednesday, May 31, 14:10 to 16:00, Hall 406 D

Session Chair Peter Unrau

C2-1 The importance of modular RNAs in the early RNA World

Peter Unrau

C2-2 The propagation of ribozyme function in an evolving RNA World

David Horning, Nikos Papastavrou, Ankana Kakoti, Grant Bare, Gerald Joyce

C2-3 Human lantern ribozymes: smallest known self-cleaving ribozymes

Zhe Zhang, Xu Hong, Peng Xiong, Junfeng Wang, Yaoqi Zhou, Jian Zhan

C2-4 Crystal structure of *Escherichia coli* thiamine pyrophosphate-sensing riboswitch in the apo state

Hyun Kyung Lee, Yun-Tzai Lee, Haley Wilt, Chelsie E. Conrad, Ping Yu, Lixin Fan, Jinwei Zhang, Genbin Shi, Xinhua Ji, Yun-Xing Wang, Jason Stagno

C2-5 Cryo-EM reveals dynamics of Tetrahymena group I intron self-splicing

Zhaoming Su, Bingnan Luo, Chong Zhang, Sunandan Mukherjee, Eugene Baulin, Janusz Bujnicki

C2-6 Optimization of ribozyme-activated RNA trans-splicing and application for dual AAV-based gene therapy for large therapeutic genes

Sean Lindley, Fnu Priyanka, Kadiam Subbaiah, Pornthida Poosala, Tamlyn Thomas, Douglas Anderson

C2-7 Ligand and transcription factor NusA differentially modulate 30S subunit recruitment by a translational riboswitch controlled mRNA

Elizabeth Franklin, Adrien Chauvier, Nils Walter

Concurrent 3: Splicing Regulation

Wednesday, May 31, 14:10 to 16:00, Hall 405 B

Session Chair: Xavier Roca

C3-1 SRRM2 confers phase-separation properties to regulate GC-rich splicing events in the nucleus center

Shaohai Xu, Donald Yuhui Sim, Cheryl Weiqi Tan, Xavier Roca

C3-2 SRSF5 mediates the crosstalk between nuclear speckles and paraspeckles during cellular stress

Michaela Müller-McNicoll

C3-3 SF3B1 regulates alternative splicing of cell cycle genes

Mai Baker, Mayra Petasny, Tamar Guedj, Maayan Salton

C3-4 Genome-wide screens reveal functional interlays between transcription, mRNA splicing, and polyadenylation in regulated gene expression

Yajing Hao, Changwei Shao, Xiang-Dong Fu

C3-5 Identified RBM17 (SPF45)–SAP30BP interaction promotes non-canonical splicing in a subset of human short introns

Kazuhiro Fukumura, Luca Sperotto, Stefanie Seuß, Hyun-Seo Kang, Rei Yoshimoto, Michael Sattler, [Akila Mayeda](#)

C3-6 Rescuing SYNGAP1 haploinsufficiency by redirecting alternative splicing

Runwei Yang, Xinran Feng, Alejandra Arias-Cavieres, Robin Mitchell, Ashleigh Polo, Kaining Hu, Marcelo Nobrega, Christian Hansel, Alfredo Garcia III, [Xiaochang Zhang](#)

C3-7 Exon-resolution functional genomics uncovers critical protein-regions for cellular function

Meisheng Xiao, Arun Prasath Damodaran, Kun Xing, Ethan Dickson, Tyler On, Robert Weatheritt, Michael Aregger, [Thomas Gonatopoulos-Pournatzis](#)

Plenary 3: Long Non-coding and Regulatory RNAs

Wednesday, May 31, 16:30 to 18:35, Hall 406 CX

Session Chair: Igor Ulitsky

PL3-1 Regulation of senescent cell survival by a GBA pseudogene

Filipa Marques, [Igor Ulitsky](#)

PL3-2 Unravelling the sequence-function code of long noncoding RNAs with high-resolution high-throughput CRISPR

[Tina Uroda](#), Hugo A. Guillen-Ramirez, Rory Johnson

PL3-3 Systemic movement of long noncoding RNA ELENA1 attenuates leaf senescence under nitrogen deficiency

[Steven Le Hung Cheng](#), Nam-Hai Chua

PL3-4 SAFB restricts TAD boundaries associated with L1 chimeric RNAs

Yaqiang Hong, Luyao Bie, Tao Zhang, Xiaohan Yan, Guangpu Jin, Zhuo Chen, Yang Wang, Xiufeng Li, Xiaohua Shen, Wei Xie, [Nian Liu](#)

PL3-5 G-quadruplex and RNA:DNA triplex structures: Epigenetic Yin and Yang at the Kras promoter

[SoYoung Jo](#), Andreas Greifenstein, Lisa Lange, Pit Preckwinkel, Holger Bierhoff

PL3-6 N6-methyladenosine in 7SK small nuclear RNA underlies RNA Polymerase II transcription regulation

Yuzhi Wang, Conner Traugot, Jodi Bubenik, Tianqi Li, Peike Sheng, Nicholas Hiers, Lu Li, Jiang Bian, Maurice Swanson, [Mingyi Xie](#)

PL3-7 Genetic compensation between ribosomal protein paralogs mediated by a cognate circular sisRNA in Drosophila

[Amanda Yunn Ee Ng](#), Jun Wei Pek

PL3-8 Synapse-enriched long non-coding RNAs drive synaptic plasticity and memory formation

[Timothy Bredy](#), Wei-Siang Liau, Sachithrani Madugalle

Plenary 4: Small RNAs and other Non-coding RNAs

Thursday, June 1, 09:00 to 10:35, Hall 406 CX

Session Chair: Ana Eulalio

PL4-1 Unravelling the role of microRNAs in bacterial pathogen – host interaction
Ana Eulalio

PL4-2 A direct protein-protein interaction network of cytoplasmic Drosophila piRNA pathway factors
Harpreet Kaur Salgania, Jutta Metz, [Mandy Jeske](#)

PL4-3 Transfer RNA halves are present as nicked tRNAs in both human and bacterial cells: evidence that nicked tRNAs regulate expression of an RNA repair operon
[Xinguo Chen](#), Sandra Wolin

PL4-4 CSDE1 regulates slicing-dependent miR-486 function in erythropoiesis
[Pavan Kakumani](#), Tony Chen, Yunkoo Ko, Louis-Mathieu Harvey, Chanseok Shin, Kristin Hope, Martin Simard

PL4-5 Single-cell transcriptomics reveal two distinct modes of action of microRNAs during hematopoietic stem cell differentiation.
Dmitry Kretov, Isha Walawalkar, Simon Moxon, [Daniel Cifuentes](#)

PL4-6 The widespread influence of ZSWIM8 on microRNAs in mouse embryonic development
[Charlie Shi](#), Lara Elcavage, Joanna Stefano, Benjamin Kleaveland, David Bartel

Plenary 5: Technologies I

Thursday, June 1, 14:10 to 16:15, Hall 406 CX

Session Chair: Gene Yeo

PL5-1 STAMPing RNA binding protein-RNA networks
Gene Yeo

PL5-2 TREX: a method for identifying proteins that bind to specific RNA regions in living cells
Faraz Mardakheh

PL5-3 Systematic characterization of RNAs associated with the cytoplasmic processing body using TRIBE-STAMP method
[Zhiyuan Sun](#), Xiaozhen Wen, Liang Fang, Wei Chen

PL5-4 Nascent transcript-targeted proximity omics enables high-resolution microdissection of splicing speckles and reveals new molecular players in dilated cardiomyopathy
[Evan Kania](#), Aidan Fenix, Alessandro Bertero, Charles Murry, David Shechner

PL5-5 Full-length spatial transcriptomics reveals the unexplored isoform diversity of the myocardium post-MI

Etienne Boileau, Xue Lie, Isabel Naarmann-de Vries, Christian Becker, Ramona Casper, Janine Altmüller, Florian Leuschner, Christoph Dieterich

PL5-6 Biochemical-free enrichment or depletion of RNA classes in real-time during nanopore direct RNA sequencing with RISER

Alexandra Sneddon, Agin Ravindran, Nadine Hein, Nikolay Shirokikh, Eduardo Eyras

PL5-7 Spatiotemporally resolved in situ sequencing of RNA translation and metabolism

Xiao Wang

PL5-8 A nucleotide-resolution RNA translation map of the human genome

Sonia Chothani, Eleonora Adami, Anissa Widjaja, Sivakumar Viswanathan, Sarah Langley, Nathan Harmston, Lena Ho, Stuart Cook, Owen Rackham, Sebastian Schafer

Plenary 6: The Ribosome and mRNA Translation

Friday, June 2, 09:00 - 10:35, Hall 406 CX

Session Chair: Nicholas Guydosh

PL6-1 Genome-wide regulation of ribosome stalling during oxidative stress

Sezen Meydan, Géssica Barros, Vanessa Simões, Gustavo Silva, Nicholas Guydosh

PL6-2 Principles of human pre-60S assembly in the nucleolus and the nucleus

Arnaud Vanden Broeck, Sebastian Klinge

PL6-3 A comprehensive rRNA variation atlas in health and disease

Daphna Rothschild, Teodorus Susanto, Jeffrey Spence¹, Naomi Genuth, Nasa Sinnott-Armstrong, Jonathan Pritchard, Maria Barna

PL6-4 RPL3L: a special ribosome in the heart and heart failure

Michael Murphy, Xuebing Wu

PL6-5 Stops making sense - lessons from the tRNA anticodon stem

Leos Valasek

PL6-6 Systematic discovery of thousands of ORFs in ~700 human viruses

Shira Weingarten-Gabbay, Matthew Bauer, Charles Rice, Pardis Sabeti

Plenary 7: RNA-binding Proteins

Friday, June 2, 11:05 - 12:40, Hall 406 CX

Session Chair: Yanli Wang

PL7-1 How do Acrs prevent DNA cleavage by Cas9?

Wei Sun, Suting Dengxie, Jiuyu Wang, Yanli Wang

PL7-2 Role of the RNA binding protein ZAP in mRNA quality control at the ER

Britnie Santiago, Akruti Shah, [Colin Wu](#)

PL7-3 A PPR protein-based FRET sensor for RNA

[Charles Bond](#), Brady Johnston, Nicholas Marzano, Mark Agostino, Bishnu Paudel, Ian Small, Antoine van Oijen

PL7-4 A bridge through time: Pin4 links rapid post-transcriptional and transcriptional stress responses to maintain energy homeostasis in *S. cerevisiae*

[Michaela Ristova](#), Vadim Shchepachev, Katie Bexley, David Tollervey

PL7-5 Integrative language model for RBP-RNA interactions reveals general rules for binding specificity and functions of RBPs

[Yue Hu](#), Zefeng Wang

PL7-6 Npl3 functions in mRNP assembly by recruitment of mRNP components to the transcription site and their transfer onto the mRNA

Philipp Keil, Alexander Wulf, Nitin Kachariya, Samira Reuscher, Kristin Hühn, Ivan Silbern, Janine Altmüller, Mario Keller, Ralf Stehle, Kathi Zarnack, Michael Sattler, Henning Urlaub, [Katja Sträßer](#)

Concurrent 4: RNP Granules and Phase Transitions

Friday, June 2, 14:10 to 16:00, Hall 406 CX

Session Chair: Tetsuro Hirose

C4-1 Exploring the role of architectural noncoding RNAs in building and functioning of phase-separated membraneless organelles

[Tetsuro Hirose](#), Tomohiro Yamazaki, Hiro Takakuwa, Kensuke Ninomiya

C4-2 An improved hybridization-proximity labeling technology provides new insights into RNA-containing membraneless compartments

[Karen Yap](#), Hong Chung Tek, Eugene Makeyev

C4-3 Structural insights into protein-RNA interactions within biomolecular condensates using UV cross-linking and mass spectrometry

[Frederic Allain](#), Tebbe de Vries, Clara Inghelram, Maria Bikaki, Chris Sarnowski, Yinan Ni, Yaning Han, Leonidas Emmanouilidis, Giacomo Padroni, Izabela Smok, Alexander Leitner

C4-4 Germline-specific DEAD-box RNA helicase Vasa sequesters transposon mRNAs in nuage via phase separation requiring RNA binding and self-association

[Hiroya Yamazaki](#), Yurika Namba, Shogo Kuriyama, Kazumichi M. Nishida, Asako Kajiya, Mikiko C. Siomi

C4-5 Hero11 is a novel nucleolar disordered protein essential for mouse development

Riko Okabe, Kotaro Tsuboyama, Yukihide Tomari, [Shinichi Nakagawa](#)

C4-6 Stress induced ribonucleoprotein (RNP) granules increase macromolecular diffusion

[Ying Xie](#), Tiewei Liu, David Gresham, Liam Holt

C4-7 Limiting mRNA interactions driven by complementary sequences is required for homotypic mRNA assembly and drosophila fertility

Tatjana Trcek, Siran Tian, Ziqin Ye, Silvi Rouskin

Concurrent 5: Technologies II

Friday, June 2, 14:10 to 16:00, Hall 406 D

Session Chair: Yue Wan

C5-1 Identifying alternative RNA structures using nanopore direct RNA sequencing

Yue Wan

C5-2 Co-transcriptional structure tracking detects dynamic base pairing of nascent RNA *in vivo*.

Leonard Schärfer, Karla Neugebauer

C5-3 Toward spatial single-cell RNA recording using reprogrammed tracrRNAs

Chunlei Jiao, Chase Beisel, Cynthia Sharma

C5-4 Identification of m6A RNA modifications using nanopore direct RNA-Seq data at single molecule resolution

Christopher Hendra, Ploy Pratanwanich, Yuk Kei Wan, Sho Goh, Alexandre Thiery, Jonathan Göke

C5-5 NaP-TRAP, a novel massive parallel reporter assay to quantify translation control

Ethan Strayer, Jean-Denis Beaudoin, Srikar Krishna Gopinath, Charles Vojnar, Haejeong Lee, Antonio Giraldez

C5-6 Discovery of novel 5'-capped cellular transcripts bound by viral RNA binding protein IFIT1 using PAR-dCLIP

Samantha Lisy, Katherine Rothamel, Yelena Perevalova, Manuel Ascano

C5-7 Identification of novel regulators of the immunogenicity of unedited cellular dsRNA

Jacki Heraud-Farlow, Scott Taylor, Adriana Escudero, Ankita Gupte, Alistair Chalk, Miguel Fidalgo, Diana Guallar, Kaylene Simpson, Carl Walkley

Plenary 8: RNA Splicing

Friday, June 2, 16:30 to 18:35, Hall 406 CX

Session Chair: Wojciech Galej

PL8-1 Human LUC7 proteins impact splicing of two major subclasses of 5' splice sites

Connor J. Kenny, Michael P. McGurk, Christopher B. Burge

PL8-2 The RNA binding properties of a unique alternative splicing factor PRPF39

Francesca De Bortoli, Sara Espinosa, Collette Wright, McKayla Riney, Hei-Yong G. Lo, Matthew Taliaferro, Rui Zhao

PL8-3 SAP30BP globally regulates transcription and co-transcriptional pre-mRNA splicing through activating CDK11

Changshou Wang, Lin Xu, Chen Du, Hao Yun, Keyun Wang, Hui Liu, Mingliang Ye, Jing Fan, Yu Zhou, [Hong Cheng](#)

PL8-4 RBM10-mediated alternative splicing controls bladder cancer cell proliferation and apoptosis

Tobias Hoffmann, Angel Guerra, Ana Maldonado, Cristina Segovia, Miriam Marqués, Lars Dyrskjot, Francisco X Real, [Juan Valcárcel](#)

PL8-5 Cryo-EM of dimerized, human spliceosomal B complexes provides novel insights into the molecular organization and function of B complex proteins during assembly of the pre-catalytic spliceosome

[Zhenwei Zhang](#), Vinay Kumar, Olexandr Dybkov, Cindy Will, Henning Urlaub, Holger Stark, Reinhard Lührmann

PL8-6 Structural basis of branching during RNA splicing

[Daniel Haack](#), Boris Rudolfs, Cheng Zhang, Dmitry Lyumkis, Navtej Toor

PL8-7 How to recognize and disassemble an intron-lariat spliceosome

[Matthias Vorländer](#), Patricia Rothe, Justus Kleifeld, Lalitha Veleti, Daria Riabov-Bassat, Laura Fin, Alexander Williams, Luisa Cochella, Clemens Plaschka

PL8-8 Structural insights into CD2BP2-mediated assembly of the spliceosomal U4/U6.U5 tri-snRNP

Sarah Schneider, Irina Brandina, Daniel Peter, Angélique Fraudeau, Jonas Tholen, [Wojciech Galej](#)

Plenary 9: RNA Structure and Folding

Saturday, June 3, 09:00 to 10:35, Hall 406 CX

Session Chair: Chun Kit Kwok

PL9-1 Revealing RNA G-Quadruplex function and regulation: a combined chemical and biochemical approach

Chun Kit Kwok

PL9-2 RNA structure landscape of *S. cerevisiae* introns

[Ramya Rangan](#), Rui Huang, Oarteze Hunter, Phillip Pham, Manuel Ares, Jr., Rhiju Das

PL9-3 Noncoding RNA structure and recognition in stress response and immunity

Jinwei Zhang

PL9-4 In vivo single-molecule analysis reveals COOLAIR RNA structural diversity

Minglei Yang, Pan Zhu, Jitender Cheema, Rebecca Bloomer, Pawel Mikulski, Qi Liu, Yueying Zhang, Caroline Dean, [Yiliang Ding](#)

PL9-5 Determining RNA motifs' 3D structure and dynamics using RNA nanostructures

Bret Lange, [Joseph Yesselman](#)

PL9-6 A generalizable scaffold-based approach for structure determination of small RNA elements by CRYO-EM

Conner Langeberg, Matthew Szucs, Madeline Sherlock, Jeffrey Kieft

Plenary 10: RNA in Disease and Therapeutics

Saturday, June 3, 11:05 to 12:40, Hall 406 CX

Session Chair: Eric Wang

PL10-1 RBFOX2 modulates a metastatic signature of alternative splicing in pancreatic cancer

Amina Jbara, Kuan-Ting Lin, Chani Stossel, Zahava Siegfried, Haya Shqerat, Adi Amar-Schwartz, Ela Elyada, Maxim Mogilevsky, Maria Raitsev-Gurevich, Jared L. Johnson, Tomer M. Yaron, Ofek Ovadia, Gun Ho Jang, Miri Danan-Gothold, Lewis C. Cantley, Erez Y. Levanon, Steven Gallinger, Adrian Krainer, Talia Golan, Rotem Karni

PL10-2 CRISPR-Cas9-based interrogation of unconventional translome reveals functional cryptic opening reading frames in human cancer

Caishang Zheng, Yanjun Wei, Han Xu, Scott Kopetz, Yiwen Chen

PL10-3 Circular RNAs are translated after RNA editing, encode multiple proteins and contribute to Alzheimer's disease

Justin Welden, Andrea Arizaca Maquera, Giorgi Margvelani, Sandra Miranda Sardón, Noémie Robil, Pierre de la Grange, Peter Nelson, Stefan Stamm

PL10-4 Using circular RNA as a therapeutic strategy for psoriasis in mice

Si-Kun Guo, Chu-Xiao Liu, Yi-Feng Xu, Xiao Wang, Fang Nan, Ling Li, Shan Nan, Yang Li, Ling-Ling Chen

PL10-5 Revealing Patterns in RNA Recognition

Amanda Hargrove

PL10-6 RNA- and RBP-mediated supply chain issues in disease

Eric Wang

Concurrent 6: RNA Transport and Localized RNA Regulation

Saturday, June 3, 14:10 to 16:00, Hall 406 CX

Session Chair: Marina Chekulaeva

C6-1 Massively parallel identification of zipcodes in primary cortical neurons

Marina Chekulaeva

C6-2 CMT_r cap-adjacent 2'-O-ribose mRNA methyltransferases are required for localization of untranslated mRNA to synapses and reward learning

Matthias Soller, Yanying Wu, Karthik Nallasivan, Nathan Archer, Zsuzsa Bodi, Dan Hebenstreit, Scott Waddell, Rupert Fray, Irmgard Haussmann

C6-3 Intron retention in neurite development and degeneration

Richard Taylor, Fursham Hamid, Corinne Houart

C6-4 Uncovering a new functional role for nuclear speckles in processing of RNA/DNA hybrids by mRNA export factors

Tobias Williams, Vihandha Wickramasinghe

C6-5 RNA export through the nuclear pore complex is directional

Asaf Ashkenazy-Titelman, Mohammad Atrash, Alon Boocholez, Noa Kinor, Yaron Shav-Tal

C6-6 Mitochondrial protein heterogeneity stems from the stochastic nature of co-translational protein targeting in cell senescence

Abdul Haseeb Khan, Matheus Viana, Brian Zid, Aidan Brown, Tatsuhisa Tsuboi

C6-7 Spatial distribution of three ARGONAUTES regulates the stamen phasiRNA pathway

Hinako Tamotsu, Koji Koizumi, Reina Komiya

Concurrent 7: RNA Processing and Turnover

Saturday, June 3, 14:10 to 16:00, Hall 406 D

Session Chair: Lynne Maquat

C7-1 A Co-transcriptional regulatory mechanism tightly controls gene expression during stress in budding yeast

Sofia Esteban Serna, Peter Swain, Sander Granneman

C7-2 Basis of gene-specific transcription attenuation by the Integrator complex

Amena Nabih, Kevin Sabath, Christian Arnold, Rim Moussa, David Domjan, Judith Zaugg, Stefanie Jonas

C7-3 Rbbp6 anchors mRNA 3' end processing to nuclear speckles

Yoseop Yoon, Yongsheng Shi

C7-4 Transcriptome profiling of inverted Alu repeats reveals p53 suppression during 3' UTR shortening

Jayoung Ku, Sujin Kim, Hyunsu Do, Jinju Han, Yoosik Kim

C7-5 Integrative omics indicate FMRP sequesters mRNA from translation and deadenylation in human neuronal cells

Tatsuaki Kurosaki, Shuhei Mitsutomi, Alexander Hewko, Nobuyoshi Akimitsu, Lynne Maquat

C7-6 Functional implications of the interaction of the SARS-CoV-2 nucleocapsid protein with factors involved in nonsense-mediated mRNA decay

Megha Mallick, Volker Böhm, Guangpu Xue, Niels Gehring, Sutapa Chakrabarti

C7-7 Delay then activate: roles for UPF2 as a brake and accelerator in NMD

Joseph Chapman, Alice Youle, Keir Neuman, J. Robert Hogg



The 29th Annual Meeting of the RNA Society

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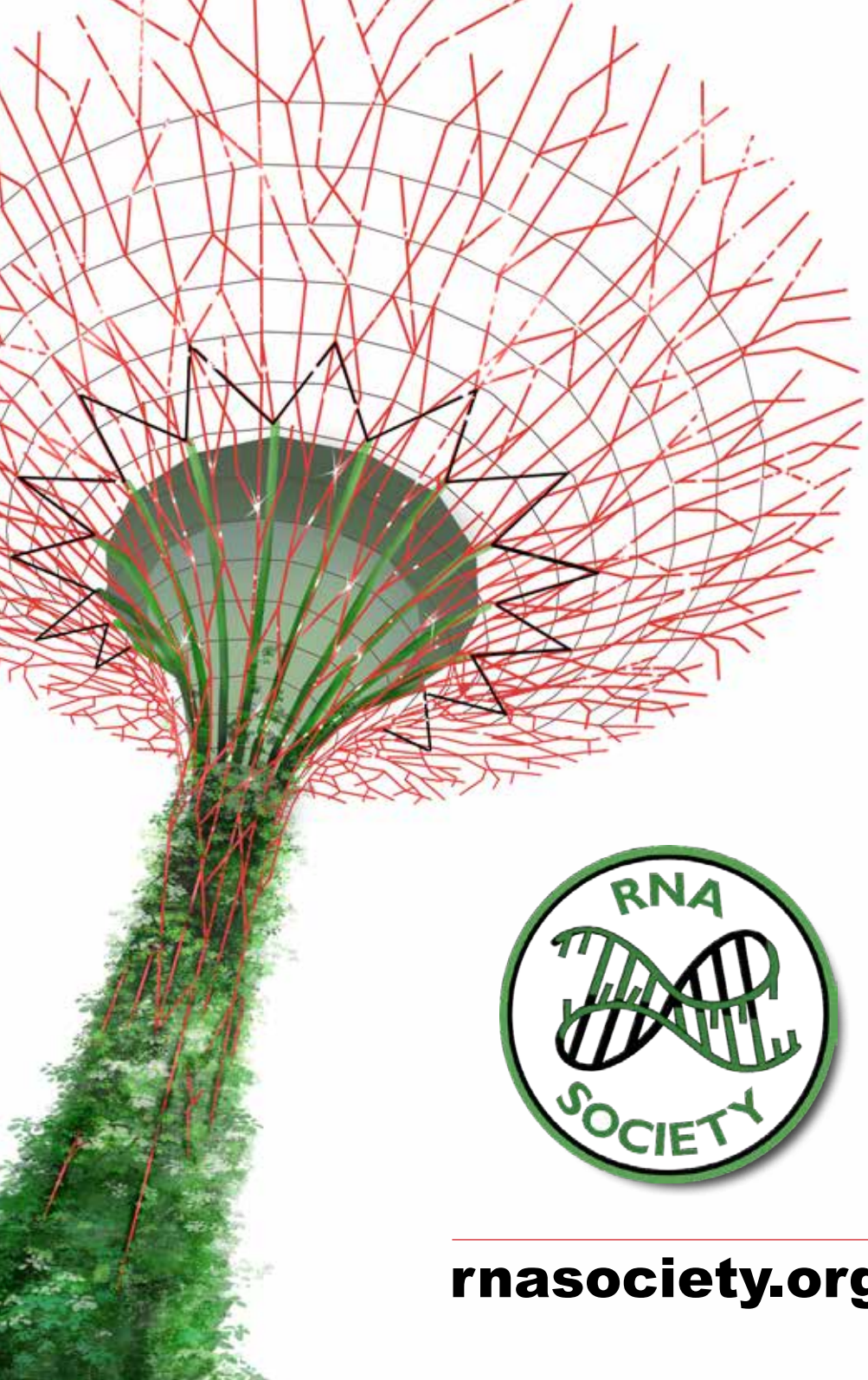
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