

RNA

A PUBLICATION OF THE RNA SOCIETY

VOL. 31, NO. 10



OCTOBER 2025

CONTENTS

Communications

- Promiscuous RNA editing in lncRNA *roX1* is generally nonadaptive 1357
Jiyao Liu, Qiuhua Xie, Wanzhi Cai, Hu Li, Yuange Duan, and Ling Ma

RNA Therapeutics

- Two-step target recognition for the competitive inhibition activity of an anti-VEGF aptamer 1368
Koh Takeuchi, Takumi Ueda, Misaki Imai, Miwa Fujisaki, Masanari Tsujimura, Yuji Tokunaga, Yutaka Kofuku, and Ichio Shimada

RNA and Gene Expression

- m⁶A methylation inhibits recruitment of the *Dand5* 3'UTR to the left–right determinant *Bicc1* 1379^{OA}
Benjamin Rothé, Mateusz Mendel, Simon Fortier, and Daniel B. Condam
- Caenorhabditis elegans* FBF-1 and FBF-2 C-terminal intrinsically disordered regions differentially regulate RNA-binding affinity 1391
Hope R. Hawthorne, Chen Qiu, and Traci M. Tanaka Hall
- Comparative analysis of convergent and divergent T7 RNA polymerase promoters for the synthesis of dsRNA in vivo and in vitro 1403^{OA}
Sebastian J. Ross, John A. Ray, Peter M. Kilby, and Mark J. Dickman
- Molecular basis for the interactions of eIF2 β with eIF5, eIF2B, and 5MP1 and their regulation by CK2 1419
Paul A. Wagner, Meimei Song, Paul Doran, Ayşenur Şeker, Ralf Ficner, Bernhard Kuhle, and Assen Marintchev

(continued)

Cover Illustration: Human tRNA splicing endonuclease (TSEN) complex bound to pre-tRNA^{Arg} (PDB id: 7UXA; Hayne CK, Butay KJ, Stewart ZD, Krahn JM, Perera L, Williams JG, Petrovitch RM, Deterding LJ, Matera AG, Borgnia MJ, Stanley RE. 2023. Structural basis for pre-tRNA recognition and processing by the human tRNA splicing endonuclease complex. Nat Struct Mol Biol 30: 824–833). Cryo-EM structure of the TSEN protein assembly with pre-tRNA^{Arg} provides insights into the recognition and splicing of an intron that must be removed from the pre-tRNA before translation. The pre-tRNA^{Arg} is depicted by a red ribbon, with bases and Watson-Crick base pairs represented as color-coded blocks: A/A-U in red, C/C-G in yellow, G/G-C in green, U/U-A in cyan; the TSEN subunits are shown as gold ribbons. Cover image provided by X3DNA-DSSR, an NIGMS National Resource for structural bioinformatics of nucleic acids (R24GM153869; skmatics.x3dna.org). Image generated using DSSR and PyMOL (Lu XJ. 2020. Nucleic Acids Res 48: e74).

Solution structure determination and biophysical characterization studies of 7SK RNP and 7SL SRP RNAs	1436
<i>Michael H. D'Souza, Higor S. Pereira, Scott Tersteeg, Gunjan Vasudeva, M. Quadir Siddiqui, Temi Agunlejika, Liam Kerr, Dylan Girodat, and Trushar R. Patel</i>	
Accurate in silico predictions of modified RNA interactions to a prototypical RNA-binding protein with λ-dynamics	1460^{OA}
<i>Murphy Angelo, Yash Bhargava, Elzbieta Kierzek, Ryszard Kierzek, Ryan L. Hayes, Wen Zhang, Jonah Z. Vilseck, and Scott Takeo Aoki</i>	
Stress granules promote quiescence by enhancing p21 levels and reducing phospho-Rb	1472^{OA}
<i>Anthony Khong, Nina Ripin, Luisa Macedo de Vasconcelos, Victor Passanisi, Sabrina Spencer, and Roy Parker</i>	
40S ribosomal subunits scan mRNA for the start codon by one-dimensional diffusion	1488^{OA}
<i>Hironao Wakabayashi, Mingyi Zhu, Elizabeth J. Grayhack, David H. Mathews, and Dmitri N. Ermolenko</i>	
Bacterial/archaeal protein-only RNase P: complementation in <i>Escherichia coli</i> uncovers coevolution of protein-only RNase P and precursor tRNA structures in <i>Aquifex aeolicus</i>	1503
<i>Swetlana Davydov, Nadine B. Wäber, Markus Gößringer, Paul Klemm, Isabell Rennar, Marcus Lechner, and Roland K. Hartmann</i>	
Profiling RNA subcellular localization in situ by TATA-seq	1523
<i>Junjie Li, Chu Xu, Xiao Jiang, Xing Huang, Dan Ye, and Lulu Hu</i>	
Corrigendum	
Corrigendum: Copy number determination of sperm-borne small RNAs implied in the intergenerational inheritance of metabolic syndromes	1536
<i>Lisa König, Victoria Guggenberger, Kristeli Eleftheriou, Zsuzsanna Pinter, Alessandro Marotto, Christoph R. Kreutz, Mark Wossidlo, Virginie Marchand, Yuri Motorin, and Matthias R. Schaefer</i>	
RNA: Instructions for contributors	1537

^{OA}Open Access paper