

RNA

A PUBLICATION OF THE RNA SOCIETY

VOL. 21, NO. 8



AUGUST 2015

CONTENTS

Letter to the Editor

- MS2 coat proteins bound to yeast mRNAs block 5' to 3' degradation and trap mRNA decay products: implications for the localization of mRNAs by MS2-MCP system 1393^{OA}
Jennifer F. Garcia and Roy Parker

Report

- Splicing remodels the let-7 primary microRNA to facilitate Drosha processing in *Caenorhabditis elegans* 1396
Vanessa Mondol, Byoung Chan Ahn, and Amy E. Pasquinelli

Articles

- In vivo characterization of the *Drosophila* mRNA 3' end processing core cleavage complex 1404
Daniel Michalski and Mindy Steiniger
- Studies of alternative isoforms provide insight into TDP-43 autoregulation and pathogenesis 1419
Simon D'Alton, Marcelle Altshuler, and Jada Lewis
- Global miRNA expression and correlation with mRNA levels in primary human bone cells 1433^{OA}
Navya Laxman, Carl-Johan Rubin, Hans Mallmin, Olle Nilsson, Tomi Pastinen, Elin Grundberg, and Andreas Kindmark
- The structure of the SOLE element of *oskar* mRNA 1444^{OA}
Bernd Simon, Pawel Masiewicz, Anne Ephrussi, and Teresa Carlomagno
- Mutations of ribosomal protein S5 suppress a defect in late-30S ribosomal subunit biogenesis caused by lack of the RbfA biogenesis factor 1454
Stefan Nord, Monika J. Bhatt, Hasan Tükenmez, Philip J. Farabaugh, and P. Mikael Wikström
- The Lsm1-7-Pat1 complex promotes viral RNA translation and replication by differential mechanisms 1469
Jennifer Jungfleisch, Ashis Chowdhury, Isabel Alves-Rodrigues, Sundaresan Tharun, and Juana Díez

(continued)

Cover Illustration: Homology model of the mammalian 80S ribosome based on cryoelectron microscopy maps (Protein Data Bank code: 4cxh; Budkevich TV, Giesebrecht J, Behrmann E, Loerke J, Ramrath DJ, Mielke T, Ismer J, Hildebrand PW, Tung CS, Nierhaus KH, et al. 2014. Regulation of the mammalian elongation cycle by subunit rolling: a eukaryotic-specific ribosome rearrangement. *Cell* 158: 121–131). Image details show proteins, spacefilling representation, elongation factor TU—purple, 40S ribosomal protein S23—violet; RNA, ribbon representation, tRNA—brown, 18S rRNA-H5-H14—turquoise, 18S rRNA-H8—red, 18S rRNA-H44—purple, 28S rRNA-H89—green, 28S rRNA-H95—olive, mRNA—yellow. The image was generated with the Discovery Studio Visualizer. Cover image provided by the Jena Library of Biological Macromolecules—JenaLib (jenalib.fli-leibniz.de).

Increased efficiency of evolved group I intron spliceozymes by decreased side product formation <i>Zhaleh N. Amini and Ulrich F. Müller</i>	1480 ^{OA}
--	--------------------

Insights into transcription termination of Hfq-binding sRNAs of <i>Escherichia coli</i> and characterization of readthrough products <i>Teppei Morita, Masaki Ueda, Kento Kubo, and Hiroji Aiba</i>	1490 ^{OA}
--	--------------------

Methods

PAT-seq: a method to study the integration of 3'-UTR dynamics with gene expression in the eukaryotic transcriptome <i>Paul F. Harrison, David R. Powell, Jennifer L. Clancy, Thomas Preiss, Peter R. Boag, Ana Traven, Torsten Seemann, and Traude H. Beilharz</i>	1502 ^{OA}
---	--------------------

Genome-wide detection of high abundance <i>N</i> ⁶ -methyladenosine sites by microarray <i>Yue Li, Yang Wang, Zhaolei Zhang, Alicia Viridiana Zamudio, and Jing Crystal Zhao</i>	1511
--	------

RNA: Instructions for contributors	1519
---	------

^{OA}Open Access paper