

RNA

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CONTENTS

Note from the Editors

vii

Mini-Review

Localization of RNAs to the mitochondria—mechanisms and functions

597^{OA}

Surbhi Sharma and Furqan M. Fazal

Articles

High-resolution RNA tertiary structures in Zika virus stem-loop A for the development of inhibitory small molecules

609

Jerricho Tipo, Keerthi Gottipati, and Kyung H. Choi

A comparative analysis of peptide-delivered antisense antibiotics using diverse nucleotide mimics

624^{OA}

Chandradhish Ghosh, Linda Popella, V. Dhamodharan, Jakob Jung, Julia Dietzsch, Lars Barquist, Claudia Höbartner, and Jörg Vogel

High-throughput quantitation of protein–RNA UV-crosslinking efficiencies as a predictive tool for high-confidence identification of RNA-binding proteins

644

JohnCarlo Kristofich and Christopher V. Nicchitta

Pervasive translation of Xrn1-sensitive unstable long noncoding RNAs in yeast

662^{OA}

Sara Andjus, Ugo Szachnowski, Nicolas Vogt, Stamatia Gioftisidi, Isabelle Hatin, David Cornu, Chris Papadopoulos, Anne Lopes, Olivier Namy, Maxime Wery, and Antonin Morillon

Novel RNA molecular bioengineering technology efficiently produces functional miRNA agents

680^{OA}

Gavin M. Traber, Colleen Yi, Neelu Batra, Mei-Juan Tu, and Ai-Ming Yu

(continued)

Cover Illustration: Innate immune receptor for RNA (PDB id: 8DVU; Wang W, Pyle AM. 2022. The RIG-I receptor adopts two different conformations for distinguishing host from viral RNA ligands. Mol Cell 82: 4131–4144.e6). RIG-I, an innate immune receptor for RNA, specifically recognizes the unique molecular features of viral RNA molecules and selectively distinguishes them from closely related RNAs abundant in host cells. Upon binding viral RNA, RIG-I adopts a high-affinity conformation that is conducive to signaling, while host RNA induces an auto-inhibited conformation that stimulates RNA release. RNA is displayed in NDB colors: A—red, C—yellow, G—green, U—cyan; ADP, Mg²⁺ (lime), and Zn²⁺ (purple) ligands are shown in spacefill. RIG-I protein (residues 240–922) is displayed as a wheat-colored ribbon. A 13-residue unmodeled segment is indicated by dashed line. Cover image provided by the Nucleic Acid Knowledgebase (nakb.org). Image generated using ChimeraX (Protein Sci 30: 70–82).

Contents (continued)

A role for SNU66 in maintaining 5' splice site identity during spliceosome assembly 695^{OA}
Kenna Sarka, Sol Katzman, and Alan M. Zahler

Methods

Rational design of oligonucleotides for enhanced in vitro transcription of small RNA 710
Tepei Matsuda, Hiroyuki Hori, and Ryota Yamagami

A scalable and cost-efficient rRNA depletion approach to enrich RNAs for molecular biology investigations 728^{OA}
Amrita Singh, Amy Xue, Justin Tai, Faith Mbadugha, Prisca Obi, Romario Mascarenhas, Antariksh Tyagi, Adamo Siena, and Y. Grace Chen

Quantification of tRNA m¹A modification by templated-ligation qPCR 739^{OA}
Wen Zhang, Hankui Chen, Marek Sobczyk, Daniel Krochmal, Christopher D. Katanski, Mahdi Assari, Amy Chen, Yichen Hou, Qing Dai, and Tao Pan

RNA: Instructions for contributors 748

^{OA}Open Access paper