

Special Issue

tRNAs in Biology

Message from the Guest Editors

Transfer RNA aminoacylation reactions, as catalyzed by the aminoacyl-tRNA synthetases (aaRSs), are some of the most well-understood enzyme-catalyzed reactions as they have been studied for over half a century. More recently, it has become clear that the aaRSs are involved in many processes outside of tRNA aminoacylation, including bacterial persistence, tRNA transport, and angiogenesis, to name but a few. In some cases, these noncanonical roles impact translational accuracy and efficiency, but in others, they are completely orthogonal to protein biosynthesis. Additionally, the list of macromolecules (proteins, DNA, RNA, etc.) that interact with aaRSs (the aaRS interactome) continues to grow, revealing a web of additional possible alternative functions. Novel species-specific features of aaRSs and related processes may inform our understanding of pathogenicity and be attractive for therapeutic targeting. This Special Issue will focus on the aaRSs and their interaction partners, with an emphasis on their roles beyond direct tRNA aminoacylation. We invite submissions of reviews, research articles, and short communications on topics related to these noncanonical functions.

Guest Editors

Prof. Tamara L. Hendrickson
Wayne State University, Detroit, MI, USA

Prof. Dr. Rebecca W. Alexander
Department of Chemistry, Wake Forest University, Winston-Salem, NC, USA

Dr. Magali Frugier
Strasbourg University, CNRS, Architecture and Reactivity of RNA, Strasbourg, France

Deadline for manuscript submissions

closed (30 July 2020)

G C A T
T A C G
G C A T

Genes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5
Indexed in PubMed



mdpi.com/si/35291

Genes
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
genes@mdpi.com

[mdpi.com/journal/
genes](https://mdpi.com/journal/genes)



G C A T
T A C G
G C A T

Genes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5
Indexed in PubMed



[mdpi.com/journal/
genes](https://mdpi.com/journal/genes)



About the Journal

Message from the Editor-in-Chief

Genes is central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fast-moving field. There is a need for good quality, open access journals in this area, and the *Genes* team aims to provide expert manuscript handling, serious peer review, and rapid publication across the whole discipline of genetics. Starting in 2010, the journal is now well established and recognised. Why not consider *Genes* for your next genetics paper?

Editor-in-Chief

Prof. Dr. Selvarangan Ponnazhagan
Department of Pathology, The University of Alabama at Birmingham,
1825 University Blvd, SHEL 814, Birmingham, AL 35294-2182, USA

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Embase, PubAg, and other databases.

Journal Rank:

JCR - Q2 (Genetics and Heredity) / CiteScore - Q2 (Genetics (clinical))