Special Issue

Horizontal Gene Transfer in Bacteria

Message from the Guest Editor

Bacterial genomes are highly dynamic. Unlike eukaryotes, which evolve by gradual mutation, bacteria have the ability to acquire entire sets of genes through horizontal gene transfer mechanisms, which accelerates their diversification, adaptation and survival in changing environments. Analysis of an increasing number of the bacterial genome sequences helped realize the importance of gene transfer in the bacterial world. The newly acquired genetic information may encode new metabolic properties, including pathogenesis, environmental adaptation and symbiotic lifestyle, as well as resistance to antimicrobials, now recognized as one of the biggest threats to public health. In addition, gene transfer shapes the genetic dynamics of bacterial populations within microbiota and, consequently, affects the interactive equilibrium they establish with their plant or animal host. This Special Issue in *Genes* on "Horizontal Gene Transfer in Bacteria" will address the mechanisms by which bacterial species acquire new genetic material and associated functions, providing an overview of recent developments in specialized research topics and critical perspectives on upcoming challenges.

Guest Editor

Dr. Christian Lesterlin

Molecular Microbiology and Structural Biochemistry (MMSB), University of Lyon 1, CNRS, INSERM, UMR5086, F-69367 Lyon, France

Deadline for manuscript submissions

closed (30 June 2020)

GCAT
TACG
GCAT

Genes

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.5
Indexed in PubMed

mdpi.com/si/28732

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

mdpi.com/journal/genes

MDPI

GCAT
TACG
GCAT

Genes

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.5
Indexed in PubMed

mdpi.com/journal/genes

MDPI

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))