

Special Issue

Advance in Non-invasive Prenatal Testing: Ten Years of cfDNA-Based Screening and Diagnosis

Message from the Guest Editors

The presence of circulating cell-free DNA (cfDNA) from the placenta in maternal circulation was first demonstrated by Lo et al. Since its commercial launch in 2011, cfDNA-based non-invasive prenatal testing (NIPT) has permitted screening for T21, T18, and T13 with high specificity and sensitivity in both high- and low-risk populations. Using genome-wide cfDNA-based screening, all 24 chromosomes can be assessed, and rare fetal autosomal aneuploidies and segmental aneuploidies, such as deletions and duplications, can be revealed. NIPT has also been applied to determine fetal sex, fetal rhesus D (RhD), genotyping, and more recently for the identification of inherited monogenic disorders. This issue will focus on understanding the advances in non-invasive prenatal testing, from chromosome aneuploidies to monogenic disorders.

Guest Editors

Dr. Luigia De Falco

AMES-Centro Polidiagnostico Strumentale, Srl, 80013 Naples, Italy

Dr. Erica Soster

Labcorp Women's Health and Genetics, Westborough, MA 01581, USA

Deadline for manuscript submissions

closed (15 September 2025)

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/115927

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
Experimental Cancer Therapeutics, 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))