Special Issue

Precision Genome Engineering in Plants

Message from the Guest Editors

Recent advances in genome editing technologies, particularly CRISPR-Cas systems, have revolutionized plant biotechnology by enabling precise modifications in plant genomes. This Special Issue explores the latest breakthroughs in precision genome engineering for crop improvement, functional genomics, and synthetic biology. Topics include novel CRISPR-based tools (e.g., base editing, prime editing, and gene targeting), computational approaches for gRNA design, and applications in enhancing yield, stress tolerance, and nutritional quality. We also highlight challenges such as off-target effects, delivery methods, and regulatory considerations. Contributions cover both model and non-model plant species, emphasizing translational research for sustainable agriculture. By integrating cutting-edge genome editing with traditional breeding, this issue aims to accelerate the development of next-generation crops to address global food security challenges.

Guest Editors

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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

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