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Evolution, Composition and Regulation of Supernumerary B Chromosomes

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Message from the Guest Editors

Supernumerary B chromosomes are dispensable genetic elements found in many plants, animals, and fungi. Since their discovery, they have been a source of puzzlement, as they occur in some members of a population and are absent from others. When they do occur, they are often harmful, and there appears to be no obvious reasons for their existence. Cytogeneticists have long wrestled with questions about the biological existence of these enigmatic B chromosomes, including their lack of any adaptive properties, apparent absence of functional genes, their origin, sequence organization and co-evolution as nuclear parasites. Emerging technologies are now enabling researchers to step up a gear, to look beyond the previous limits of the horizon, and to uncover the secrets of these 'silent' elements. Investigations into their DNA composition, transcriptional activity and effects on the host transcriptome profile are beginning to uncover new information. Contributing authors come from a wide range of species, and different systems, and their thematic output will give a broad view and a step forward to understanding this perplexing biological story.



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Special Issue



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Message from the Editor-in-Chief

Genes are central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fastmoving 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.

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