

Preface

Advances in genome sequencing and supporting informatic technologies largely focus on DNA coding and noncoding regions of the genome. Other areas of interest include single-nucleotide polymorphisms, copy number sequence variations, epigenome and evolutionary conserved genome variations. Specific coding genome alterations and variations information are now widely used in diagnosing wide ranging genetic conditions. It is also rolled into therapeutic applications, specifically targeted therapy.

Perhaps the most intriguing and challenging part of the genome is the transcriptional factors that work closely with the complex RNA systems and the ribosomal peptide assembly platforms. There is now huge amount of data and information available on diversity of RNA structure and function. Some of this information has found its way into clinical genomics and applied plant genomics. However, there is lot more to understand and learn from the complex RNA systems.

The present issue includes two articles related to the RNA homeostasis. The article on the role of RNA interacting proteins in modulating plant-microbe interactions is an impressive example of applied plant genomics. The article on oomycete class of microorganisms deserve appreciation as it highlights the relevance of plant genomics in the context of natural food wastage caused by infecting or invading microorganisms. Authors draw attention to the importance of oomycete genome sequences, coupled with proteomic and transcriptomic (RNA) analyses, for understanding the oomycete genome biology, particularly the metabolism and pathogenic capability. The other article related to the common X-linked fragile X-syndrome (FRAXA) highlights the importance of RNA homeostasis essential for the assembly of the FMRP ribonucleoprotein complexes.

The current volume includes three articles relevant for understanding the complex genomic and molecular mechanisms underpinning the electrophysiological manifestations in developmental malformations related to the potassium ion channel discordance (channelopathy), application of yeast genetics for unraveling the complexities of amyloid and prion protein dementia largely ignored as opposed to the Alzheimer's dementia, and molecular mechanisms of antibiotic drug resistance relevant for the discovery of novel and next generation genome driven antibiotic drugs.

It is anticipated that readers and investigators would find the varied selection of articles in this issue stimulating and relevant to their respective areas of interest. It is possible that some of the articles could be expanded and reproduced as a thematic volume. Your views, reviews, and critical appraisal would undoubtedly help the Editor and Publisher in making an informed decision.

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