BioMed Research International

Special Issue on
Next-Generation Sequencing and Neurological Diseases

CALL FOR PAPERS

Next-generation sequencing (NGS) technologies represent a significant breakthrough in the field of human genetics. The diversity of NGS methods, ranging from DNA-sequencing (gene panels, whole-exome, and whole-genome) to RNA-sequencing has facilitated the investigation of the genetic material of patients. These technologies have accelerated the identification of new disease-causing genes, have enlarged the phenotypic spectrum of known genes, and are now entering molecular diagnostic laboratories.

The nervous system is very complex, and normal function of this system depends on the correct performance of thousands of genes. Therefore, a large number of genetic diseases affect the function of the nervous system. Most of these neurological diseases are rare Mendelian disorders, but a significant number of these diseases are considered complex and are caused by a presumed interplay between several genetic and environmental factors. In the past few years, NGS technologies have enabled the identification of variants associated with this group of heterogeneous diseases and therefore increased the understanding of the etiology of many neurological disorders.

This special issue is intended to present and discuss the use of NGS technologies in the study or diagnosis of neurological diseases.

Potential topics include, but are not limited to:

- NGS technologies for the clinical diagnosis of neurological diseases
- Identification of novel/known gene mutations using NGS technologies highlighting the clinical and genetic heterogeneity of neurological diseases
- Bioinformatics analysis methods for NGS data analysis

Authors can submit their manuscripts via the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/bmri/neurology/ngsn/.

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