Advances in the Understanding of Biological Sciences Using Next Generation Sequencing (NGS) Approaches

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Editors

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Preface

Next Generation Sequencing has been leveraged primarily in the current era as a de facto for linking the biological hypothesis with the elucidation of the genes, biological pathways, and mechanistic evolution of certain traits and lineage specific evolutionary adaptations. Keeping in pace with the recent developments in the NGS technologies, several tools and techniques have been developed widely addressing questions of critical importance across the bacterial, fungal, and plant communities. Advances in the Understanding of the Biological Sciences using the Next Generation Sequencing is a compiled catalogue of such findings, where several NGS technologies ranging from the genomics, transcriptomics, metagenomics, single cell genomics, QTL, patho-genomics, and patho-transcriptomics have been applied to delineate the mystery of the associated mutations, biological pathway transitions, transcriptional fluxes, and patterns of host associated or adaptations to certain climatic conditions. The aims and scope of this book focus more on the biological underpinning to initiate the cross talks across the traits acquired or lost during the course of evolution. The structured framework of this volume provides the applicative point of view of the NGS technologies and demonstrates the conceptual way of linking the experimentation with the NGS technologies, to aid in researchers to place their biological hypothesis in a larger context.

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Broadway, NSW, Australia Gaurav Sablok, Ph.D.

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