Preface

The aim of this book is to educate the readers about the process of viral replication with the help of comprehensive information. It offers a compilation of descriptive reviews regarding the mechanisms of viral replication as implemented to several viruses of crucial significance to animal or human disease. Particularly, the book covers following topics: West Nile Virus: basic principles, replication mechanism, immune response and significant genetic determinants of virulence; elucidation of the immune evasion strategies employed by various viruses with special reference to classical swine fever virus; Influenza A Virus multiplication and the cellular SUMOylation System; viral replication techniques: manipulation of ER stress response pathways and promotion of IRES-Dependent Translation; Hepatitis B virus genetic diversity: disease pathogenesis; and antiviral replication agents. The aim of this book is to serve as a valuable source of reference for scholars, investigators, students and professors associated to the distinct fields of virology, as well as for individuals possessing greater knowledge and expertise regarding these fields, who are keen on updating their knowledge through descriptive reviews.

Various studies have approached the subject by analyzing it with a single perspective, but the present book provides diverse methodologies and techniques to address this field. This book contains theories and applications needed for understanding the subject from different perspectives. The aim is to keep the readers informed about the progress in the field; therefore, the contributions were carefully examined to compile novel researches by specialists from across the globe.

Indeed, the job of the editor is the most crucial and challenging in compiling all chapters into a single book. In the end, I would extend my sincere thanks to the chapter authors for their profound work. I am also thankful for the support provided by my family and colleagues during the compilation of this book.

Editor