Preface

It was an enchanting moment in the history of the veterinary profession when the Food and Agriculture Organization of the United Nations (FAO) announced on 28 June 2011 that rinderpest had been globally eradicated and there was no constraint to international trade due to rinderpest. At a time when research communities were gathered under the “Global Rinderpest Eradication Programme (GREP)” for the development of control and eradication strategies for rinderpest, concerns were also raised about another morbillivirus of small ruminants, peste des petits ruminants (PPRV). Since then there have been several noteworthy scientific achievements that present recent conceptual advances, and review current information on the many different facets of PPRV. In this period, recombinant and live attenuated homologous vaccines have become available, which led to a significant reduction in the occurrence of disease in PPR-endemic countries. The availability of proficient diagnostic tests has heightened awareness and importance of the epidemiological potential of the virus, in domestic and wild small ruminants, and in camels. These aspects, along with our understandings on the biology and pathogenesis of PPRV, have been reviewed in our first SpringerBriefs “Molecular Biology and Pathogenesis of Peste des Petits Ruminants Virus” (authored by M. Munir, S. Zohari and M. Berg).

In last few years, there has been a significant stimulation of research activity on several facets of the virus, primarily due to increase in the virus host and geography spectra. The availability of an increasing number of full-genome sequences from all lineages of PPRV has led to an improved taxonomic classification of the virus, enhanced our understanding of evolution, geographic variation, and epidemiology, and stimulated research activity on variation in viral virulence. Recent successful rescue of the virus using reverse genetic technology has the potential to advance our knowledge on fundamental virology, functions and properties of viral proteins, the evaluation of candidate virulence determinants, and engineering of novel and lineage-matched live attenuated vaccines. Studies on the immunobiology of PPRV have also led to the realization that the virus interacts with the host immune system in ways that are similar to other members of the genus morbillivirus. Besides these advancements, clearly a comprehensive research approach is needed to unravel the
complexities of the virus–host interactions and their exploitation for both diagnostic and therapeutic purposes.

In this edited book, *Peste des Petits Ruminants Virus*, my goal has been to assemble a team of renowned scientists who have made seminal contributions in their respective aspect of PPRV research, and to provide a comprehensive and up-to-date overview of PPRV geographical distribution, genome structure, viral proteins, reverse genetics, immunity, viral pathogenesis, clinical and molecular diagnosis, host susceptibility, concurrent infections and future challenges. The last two chapters are dedicated to comprehensively cover and to highlight the ongoing issues on the economic impact of the disease, and current control and management strategies that might ultimately lead to eradication of the disease from the planet. Each chapter is an attempt to create a stand-alone document, making it a valuable reference source for virologists, field veterinarians, infection and molecular biologists, immunologists and scientists in related fields and veterinary school libraries.

Gathering this wealth of information would not have been possible without the commitment, dedication and generous participation of a large number of contributors from all over the world. I am greatly indebted to them for the considerable amount of work and their willingness to set aside other priorities for this project. I must also acknowledge that there are many other colleagues who are active in the field, whose expertise has not been represented in this edition of the book.

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Peste des Petits Ruminants Virus
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2015, VIII, 258 p. 31 illus., 27 illus. in color., Hardcover
ISBN: 978-3-662-45164-9