

Preface

Viruses were discovered at the very end of the nineteenth century, and although many known viruses to date cause no harm to humans, some of them, like Ebola virus, influenza or the human immunodeficiency virus (HIV) for example, are among the most fearful pathogens affecting humankind. Moreover, viruses have the ability to affect large areas or populations in short periods of time causing epidemic outbreaks that in occasions may become pandemic. Out of the 11 most important epidemics affecting the world in the last 14 years, 9 have been caused by viruses.

Latin America is an extensive region populated by more than 600 million inhabitants, containing an exuberant biological richness constituting one of the most diverse ecological regions on Earth. Since the 1980s the Latin America region has been affected, like the rest of the world, by the HIV, but also by the hemorrhagic manifestation of dengue. More recently the region was affected by a large outbreak of chikungunya and currently the region is battling to control the Zika epidemic. All these emerging viral diseases add to the more “classical” endemic viruses such as papilloma, viral hepatitis and those causing respiratory and gastrointestinal infections. Moreover, the region is under the constant threat of the emergence or reemergence of highly pathogenic human viruses such as yellow fever or Mayaro, some of which are currently silent under well-established Amazonia sylvatic cycles. Another threat is the introduction of viruses from elsewhere such as the Middle East Respiratory Syndrome (MERS).

Through the 22 chapters of this book, some of the most respected virologists working in Latin America provide their views of the state-of-the-art of virology in the region. They address issues that range from history to biology, pathogenesis, epidemiology, prevention and treatment of the most important human viral diseases in the region. Almost in every case, the answer to an emerging disease in the region has been reactive, even though lessons from past epidemic experiences, in combination with the current epidemiological, medical and scientific knowledge, should allow for a more proactive, early and, therefore, more efficient reaction. It is the hope of the Latin American community of virologists to generate original and valuable scientific knowledge that will not only impact the universal knowledge, but that

will also provide effective tools to alleviate the current burden caused by viral diseases in the region and to be better prepared for future contingencies.

We like to express our gratitude to all the authors who so generously and enthusiastically contributed their chapters. We hope that their work reaches and informs graduate students, scientists and public health authorities with updated, authoritative and useful information about the virology endeavor in Latin America, and no less important, that they inspire a new generation of scientists to become virologists!

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