



Advances in Virology

Special Issue on

Emerging and Reemerging Infectious Diseases

CALL FOR PAPERS

In the last decade, a significant increase in the emergence of infectious diseases has been observed. Several of these pathogens, such as different arboviruses (dengue, chikungunya, and Zika viruses) and Ebola viruses, have important public health implications. This increased incidence of infectious diseases is a complex interface of host-pathogen-environment and is influenced by international trade and the changing distribution of disease vectors.

Zoonotic viral diseases are maintained in complex life cycles in nature through biological transmission between reservoir species and susceptible vertebrate hosts. These cycles usually remain undetected until humans encroach on a natural focus or the virus escapes this focus via a secondary vector or vertebrate host as a result of some ecologic change. Diseases then emerge into human population or naïve animal population, from areas where they never have been observed before, suddenly appearing with a pathogenesis newly described (emerging disease), or already known diseases and their pathogens suddenly reappear in areas where they were not recorded for a long period of time, sometimes with a known epidemic pattern or in a larger proportion or increased pathogenicity (reemerging disease).

Emerging and reemerging zoonotic diseases, caused by arboviruses (e.g., yellow fever, dengue, and chikungunya) and filoviruses (e.g., Ebola and Marburg), altogether worldwide represent an enormous challenge and growing public health, given the increasing mobility of the population (travel and trade) and the pathogen genetic plasticity and evolution.

Etiological agents of zoonotic viral diseases generally incubate asymptotically in wild reservoirs and then follow different and often complex transmission mechanisms to reach human populations and other permissive animal hosts. Reservoirs and host vertebrates often have vast ranges, which pose especially big challenges to the developing world where their study and related public health programs are often limited. In the aftermath of the unique Ebola outbreak in West Africa and of the still ongoing Zika virus outbreak in the South America, Brazil, never reported before, their pandemic extensions, biosurveillance, and preparedness are implemented worldwide, demonstrating the global concern and growing awareness of the need for research into and intervention in zoonotic diseases.

Authors are invited to submit original research as well as review articles in areas of viral zoonotic diseases.

Potential topics include, but are not limited to:

- ▶ Biosurveillance of pathogen wildlife, one health approach
- ▶ Spatial and temporal epidemiology: unveiling hazard and vulnerability
- ▶ Virus genetics (phylogenetics, next generation sequencing) and multiple infection: understanding the molecular basis of pathogen complex
- ▶ Genetics and ecology of reservoirs and vectors: the host-pathogen complex
- ▶ Pathogenesis: infection patterns (natural, chronic, subclinical, etc.) and mechanism of transmission (direct, indirect, etc.)
- ▶ Molecular pathogenesis

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/av/erid/>.

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First Round of Reviews

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