Molecular pathogenesis of virus infections

Virus and prion diseases remain a major public health threat, in both developed and developing countries. The worldwide HIV pandemic is but one example of a newly emerged virus disease; other potential threats come from exotic viruses such as SARS, Ebola and Hantaan viruses. Older human viruses such as influenza, papilloma, herpes and the hepatitis viruses still cause major health problems. Furthermore, as well as causing acute infections, some viruses may also establish persistent infections which can lead to the development of chronic diseases, including cancer. This symposium book covers central factors that influence the pathogenicity of virus and prion infections. Topics range from innate and adaptive immune responses and virus evasion of host defences to details of selected virus–host interactions, including those involving dengue virus, HIV, influenza viruses, coronaviruses, hepatitis C virus, herpesviruses, papillomaviruses, African swine fever virus and poxviruses.

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of Viruses (ICTV) named this novel coronavirus as SARS-CoV-2 [4]. So far, the SARS-CoV-2 infection is still spreading, and this virus poses a serious threat to public health, though joint prevention and quarantine mechanisms in almost all provinces of mainland China have been confirmed to be enacted. Due to a lack of specific antiviral treatments and pressure of clinical treatment, thousands of severe cases have died every day worldwide. In this review, we discuss the virology, clinical and molecular epidemiology, diagnosis, pathogenesis, and potential therapeutics for treatment of this infect... Both viruses caused a productive infection of the entire respiratory tract and epithelial cells in the lungs were the major target. Compared to the swine virus, the AIV produced lower virus titers and fewer antigen positive cells at all levels of the respiratory tract.Â [Show full abstract] further understand the molecular pathogenesis of the 2009 pandemic H1N1 influenza virus, we profiled cellular microRNAs of lungs from BALB/c mice infected with wild-type 2009 pandemic influenza virus A/Beijing/501/2009 (H1N1) (hereafter referred to as BJ501) and mouse-adapted influenza virus A/Puerto Rico/8/1934 (H1N1) (hereafter referred to as PR8) for comparison.