

Anti-Viral Vaccine Strategies in the Era of Pandemics: Lessons Learned From COVID-19

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Abstract

Disease outbreaks have ravaged humanity at many levels and sometimes have changed the course of history. RNA viruses (Influenza, Coronaviruses and others) have been main responsible of the deadliest pandemics during the last hundred years. Since 2003, two global outbreaks of coronaviruses have been observed and currently we are in the third coronavirus-associated pandemics (COVID-19). The current SARS-CoV-2 virus is showing higher infection fatality rate compared to SARS-CoV-1 and MERS and, only in 8 months 20 Million have been infected worldwide with over 3/4 Million of deaths. Despite interventional strategies such as physical distancing, barrier methods and anti-viral drugs therapies, etc. Pandemic manifestations continue to surge around the world. Development of an effective immunoprophylactic and/or immunotherapeutic vaccine remains one of the best options in reducing the morbidity and mortality associated with pandemics. In this talk, I will be presenting the traditional and modern strategies used to control pandemics with more focus on what we are learning from the current race to produce COVID-19 vaccine. Also, I will highlight how the development of preemptive a pan-coronavirus vaccine will be the most important therapy against potentially future new emerging coronaviruses that will cause more deadly human pandemics.

Medicine. He was the Head of Immunology/Serology/HLA Department at Pathology and Clinical Laboratory Medicine, KFMC and joint Assistant Professor of Immunology at the King Saud Ibn AbdulAziz University. He obtained his Ph.D. in BioMedical Sciences from the University Catholic of Louvain, Brussels, Belgium. Dr Chentoufi has done postdoctoral fellowship at McGill University, Montreal, Canada and was appointed as specialist at the University of California Irvine-Medical Center, Irvine, California, USA. Dr. Chentoufi is an independent Immunologist, with a national and international reputation in vaccine development against viral infectious diseases. Dr. Chentoufi is actively involved in a number of professional societies, he serve as associate editors in many scientific journals and has more than 50 publications in high impact factor journals.

Speaker Publications:

1. "Glucocorticoids down-regulate dendritic cell function in vitro and in vivo"
2. "Natural regulatory T cells control coronary arteriolar endothelial dysfunction in hypertensive mice"
3. "New concepts in herpes simplex virus vaccine development: notes from the battlefield"
4. "Proinsulin expression by Hassall's corpuscles in the mouse thymus"
5. "Isolation and characterization of proinsulin-producing medullary thymic epithelial cell clones"

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Biography:

Dr. Chentoufi is a Diplomate of the American Board of Medical laboratory Immunology D(ABMLI). He is CEO and Consultant Immunologist at SKLM-Seeding Knowledge in Laboratory