The perpetual challenge of emerging and re-emerging infectious diseases in Egypt

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Emerging and re-emerging infections are very real and major problem that comprise a substantial fraction of all consequential human infections. In Egypt and elsewhere, emerging and re-emerging infectious diseases increasingly threaten public health and contribute substantially to the escalating costs of health care. There have been several outbreaks of emerging and re-emerging infections in Middle East including Egypt in recent years. They include Avian Influenza (H5N1), severe acute respiratory syndrome (SARS), pandemic H1N1 influenza, Dengue and Chikungunya viral infections, hand, foot and mouth disease due to Enterovirus 71, the most recent MER CoV, tuberculosis infection, infection with hepatitis C virus - now recognized as a leading cause of chronic liver disease and cirrhosis in Egypt and health care infections due to multiple resistant organisms. The factors causing emergence and re-emergence are still not well understood and insufficient efforts have been made to meet this challenge. Both human activity and climatic changes appear to be key factors in the emergence and reemergence of infections in this area. Uncontrolled urbanization arising from mass rural-to-urban migration creates vast urban slums. Slum dwellings which are overcrowded poorly ventilated, without proper potable water supplies or sewerage systems are often the foci of outbreaks of respiratory and waterborne infections. Despite extraordinary advances in development of countermeasures (diagnostics, therapeutics, and vaccines), the ease of World travel and increased global interdependence have added layers of complexity to containing these infectious diseases that affect not only the health but the economic stability of societies. Our country needs to put in place a comprehensive plan to meet the challenge of emerging diseases. A multidisciplinary approach is required and the strategies involved should not merely confine to medical and health strategies. Strategies should also include social and behavioral, economic and political solutions. Health-based strategies would include improving surveillance, early detection and control of the spread of infectious diseases and the formulation of rapid response plans at national, regional and global levels.

Biography
Gamal El Sawaf is a Professor of Microbiology and Immunology, Medical Research Institute- Alexandria University - Egypt. He is a nationally recognized leader in infectious diseases. He graduated from the Faculty of Medicine, Alexandria University in 1979. He got his PhD in 1993 and his Post-doctoral training course in the Laboratory of Infectious Diseases (Cattedra Di Clinica Delle Malattie Infettive) University of Rome–Tor Vergata. He was rising through the academic ranks to Associate Professor in 1998 and to Professor in 2003. He was appointed the Head of Microbiology Department in 2008 and the Director of the Medical Technology Center in 2010 and finally, the Dean of MRI in 2011 till the end of 2014. His main fields of research activities are in the clinical aspects pathogenesis and therapy of HCV, HIV and HHV-6 infection, and epidemiology and molecular characterization of hepatitis viruses in Egypt. He has acted as a referee for a variety of national and international scientific journals and acted as a referee of research projects of the Alexandria University and of the STDF projects. He is a member of the American Society of Microbiology, The Egyptian Society of Microbiology and Egyptian Society of Immunologists. He is a Project Leader of several research programs on HCV, HHV and TB. His complete lists of publication are available upon request.

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