

عنوان مقاله:

The Role of Systems Biology and Synthetic Biology in Appearing and Managing COVID-۱۹

محل انتشار:

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خلاصه مقاله:

Studies reveal that viruses play important roles in the origins of cellular life and the evolution of all mammals for example. COVID-۱۹ as a modified brutal virus has affected daily life and is slowing down the global economy. This pandemic has killed thousands of sick or infected people, Therefore, the main purpose of the current study stems from the question that how COVID-۱۹ was created and how it will be solved. To conduct the present research, ۲۶ English articles were chosen from among ۵۷ articles published from ۲۰۰۰ to ۲۰۲۰ based on their relation to viral diseases and the availability of the full text in PubMed, Science Direct, ProQuest, and Google Scholar databases. To study the new coronavirus, its genetic sequence should be accessible for us. As understood, synthetic biology takes advantage of the knowledge obtained from systems biology analysis and the conceptual tools made for such purposes. Computational modeling is an amalgam of systems and synthetic biology. These approaches develop systems toxicology as well as stand out in predicting and evaluating the immunogenicity of vaccines as well as improving vaccine formulations through a definite immunological marker. Due to acrimonious and costly episodes of human life and viral diseases such as SARS, MERS, and COVID-۱۹, human beings need national security that can be provided by restoring health care services and educating more health care professionals is more effective than training the military. Dealing with such an issue demands vast knowledge of biotechnology, cell, and molecular biology expertise, and competent approaches based on bioinformatics technology that contains systems biology and synthetic biology. Therefore, such scientific fields need to be highly developed in developing countries to keep their immunity and national security under warranty encountering any biological invasion, most specifically of viral types

کلمات کلیدی:

Pandemic viral diseases, COVID-۱۹, Systems Biology, Synthetic Biology, Bioterrorism, Vaccine

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