mRNA Vaccine—A Pioneer of COVID-19 Pandemic Termination

Qiang Hu

Executive Chairman, Hunter Medical LLC. Potomac, MD, USA

Abstract

Vaccines are one of the major success stories of modern medicine. The development of vaccines progressed at a fairly slow rate until the last decade when new scientific discoveries and technologies led to innovative gene- based vaccines. Gene-based vaccines are a completely new type of vaccine that are faster and cheaper to produce than traditional vaccines. mRNA vaccines use a different approach that takes advantage of processes that are more efficient, cost-effective and safe. On the basis of these remarkable properties, mRNA vaccines quickly moved forward and within ten years were being used in some early clinical trials for infectious diseases and several types of cancer. The COVID-19 outbreak dramatically accelerated mRNA vaccines, moving them from development to authorized use in a record-setting ten months. In this review, we provide an overview of mRNA vaccine development and its application against the COVID-19 pandemic. As the first approved COVID vaccines, mRNA vaccines have been shown to be safe and mRNA technology will have a tremendous impact, not only on the pandemic, but also on the future treatment of many diseases.

Biography:

Qiang HU has completed his education in Hubei University, Wuhan, China, Biology B.S. Institute of Hydrobiology, Chinese Academy of Sciences, China Hydrobiology, M.S. BenGurion University of the Negev, Beer-Sheva, Israel Phycology Ph.D. Marine Biotechnology Institute, Kamaishi, Japan Biotechnology Postdoc Arizona State University, Tempe, AZ, USA Biotechnology Postdoc.