DESCRIPTION

Drug discovery for influenza antivirals

Priorities for combating pandemic influenza include rapid detection and identification, the quick administration of available drugs to treat the infection, the development of new antivirals, and the development of vaccines. Since lead-time may be required to produce an effective vaccine, antivirals would serve as a key first line of defense in containing an outbreak. Diverse antivirals, acting through different mechanisms, would help stay the development of resistant viruses. Thus, drug discovery for influenza antivirals is an important public health-related endeavor.

With chapters contributed by leading international specialists, this guide gets readers up to speed on the latest advances and technologies in diverse approaches to drug discovery, covering:

* Existing antivirals, including broadly effective anti-respiratory virus agents

* The development of high-throughput screening assays
IFN resistance

The development of nucleic acid-based antiviral drugs

Antiviral RNAi strategies targeting influenza virus

Other promising antiviral drug discovery strategies

Combating the Threat of Pandemic Influenza: Drug Discovery Approaches consolidates the latest information on diverse approaches into one comprehensive resource. It is an invaluable, hands-on reference for researchers in medicinal chemistry, pharmaceutical chemistry, drug discovery, biochemistry, virology, microbiology, and public health.

ABOUT THE AUTHOR

Paul F. Torrence, PhD, joined the National Institutes of Health in 1969 and served as Chief of the section on Biomedical Chemistry at the National Institute of Diabetes and Digestive and Kidney Diseases from 1989–1999. From 1999–2007, he was a Professor of Chemistry and Biochemistry at Northern Arizona University where he taught organic, bioorganic, and medicinal chemistry, as well as drug discovery. Professor Torrence’s research pursued drug discovery for the diseases of smallpox, HIV, West Nile Virus, and cancer with grant support from the National Institutes of Health, Department of Defense Congressionally Directed Medical Research Program, the U.S. Army Institute of Infectious Diseases, the Arizona Disease Control Research Commission, Arizona Proposition 301 funds, and Research Corporation. Presently he is Emeritus Professor of Chemistry and Biochemistry at Northern Arizona University.

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