Influenza Bioinformatics Resources

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Abstract: Influenza virus continues to be a global threat to human and animal health. There are many databases available which share Influenza genetic sequence and metadata and the bioinformatic tools to analyse the data. Here, we review the most important resources: World Health Organization (WHO) has conducted Global influenza virological surveillance through WHO's GISRS (Global Influenza Surveillance and Response System) for over half a century. National Influenza Centres of the GISRS and other national influenza reference laboratories collaborating actively with GISRS provide data for FluNet [1] which is a global web-based tool for influenza virological surveillance first launched in 1997. World Organisation for Animal Health (OIE) and Food and Agriculture Organization of the United Nations (FAO) in 2005, jointly established a network of expertise on animal influenza, OFFLU [2], to support and coordinate global efforts to prevent, detect and control important influenzas in animals. GISAID is a collaborative international database of influenza sequences with tools for sharing and analysis of data. The GISAID [3] provides since 2008 the open access EpiFlu™ database, which is governed by an enforceable sharing mechanism, to offer the public an alternative, to traditional public-domain archives such as GenBank. Influenza Research Database (IRD)/fludb.org [4] is funded by US NIAID (National Institute of Allergy and Infectious Diseases) and supports the research efforts of influenza scientists. IRD provides a diverse set of integrated data sets and novel bioinformatics tools for analysis and visualization of data sets.

Keywords: GISRS; FluNet; OFFLU; GISAID; IRD

References

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