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2ⁿᵈ International Conference on
Influenza

September 12-13, 2016   Berlin, Germany

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Improved molecular surveillance and new therapeutic responses to the influenza virus using mass spectrometry

The influenza virus is one of the deadliest pathogens known to man, responsible for the death of the equivalent of 1 in 1000 humans who have ever lived. Seasonal influenza accounts for about 3 to 5 million cases of severe illness requiring hospitalization and 250,000 to 500,000 deaths worldwide each year. A worldwide surveillance network, overseen by the WHO, assesses circulating strains and makes recommendations for the annual vaccine formulation ahead of the flu season in both the northern and southern hemisphere. Yet unforeseen evolutionary events, and growing resistance to current antiviral inhibitors, can lead the population unprotected. Furthermore, limitations in current screening technologies can delay and negatively impact on the implementation of effective infection controls. New molecular based surveillance technologies employing advanced mass spectrometry and bioinformatic approaches offer advantages for the characterization of circulating strains, the study of viral evolution and the identification and development of new antiviral inhibitors, including those based on natural products. This presentation will review these approaches that have attracted interest from global surveillance laboratories and have broader application to the study of other biopathogens which threaten human health.

Biography

Kevin Downard has obtained his Postdoctoral studies and held a subsequent academic position at the Massachusetts Institute of Technology after completing his PhD degree from the University of Adelaide, Australia. For the past 18 years he has held Professorial academic positions in the USA and Australia. He has over 100 publications including two books and is internationally recognized in his field.

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Notes:

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