

Influenza antivirals: efficacy and resistance

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The inaugural conference of the Antiviral Group of the International Society for Influenza and other Respiratory Virus Diseases (ISIRV-AVG) was organised in conjunction with the Oswaldo Cruz Foundation (FIOCRUZ) in Rio de Janeiro, Brazil, in November 2011. The purpose of the meeting was to increase awareness of the antivirals available for combating influenza, of their efficacy and effectiveness in different situations, of policies for use against pandemic and seasonal influenza, and of the limitations posed by development of resistance.

The focus on Latin America was reflected in just under half of the 130 participants being from that region. Delegates were drawn from clinical, laboratory and policy backgrounds at national and international level. In his opening address, Dr Paulo Gadelha, President of FIOCRUZ, drew attention to the importance of the conference for Public Health and its timeliness in the aftermath of the 2009 pandemic and continued threat of H5N1.

Three symposium sessions provided a comprehensive review of the current state of the art and recent developments of newer antivirals, development of resistance and future perspectives on alternative antiviral strategies to combat influenza (reflected in the contributions to these Proceedings). Six workshop sessions provided a forum for more detailed discussion of particular aspects. These included national policies for the use of antivirals and the challenges faced during the emergent 2009 pandemic, the importance of effective surveillance of antiviral susceptibility and the relative merits of different assays for detection and characterisation of resistance mutations, and of their *in vivo* consequences in terms of clinical and epidemiological significance (summarised in the Overview of the Conference).

These discussions provided a backdrop for a WHO Expert Group meeting on surveillance of antiviral susceptibility, which followed the conference.

Interactive demonstrations facilitated discussion of the use of a reference panel of resistant and sensitive viruses (provided by the ISIRV-AVG) in susceptibility monitoring, of methods for IC₅₀ determination and statistical analyses of antiviral susceptibility data, and of databases for collation and sharing of phenotypic and genetic data. Information presented in the various sessions was also complemented by 25 poster presentations on various themes.

Future perspectives were provided by updates on the progress of new antivirals to regulatory approval, review of other potential targets and the structural data now available to assist in the design of alternative antivirals. The meeting concluded on a very positive note with a presentation illustrating the efforts of numerous small pharmaceutical companies to develop novel antivirals against influenza.

We thank the various organisations who provided generous sponsorship for the conference, which allowed provision of travel grants to assist twenty delegates to attend. We thank, in particular, DeSouza Associates and Fiocruz for excellent organisation of the conference. Finally, we thank the speakers and chairpersons for excellent presentations and stimulating discussion and all the attendees for their enthusiastic and spirited participation.

Conflicts of interest

The authors have no conflicts of interest to declare.