A timely update of global COVID-19 vaccine development

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ABSTRACT

This commentary provides an overview and links to presentations of a recent virtual congress series organized by the International Society for Vaccines (ISV) focused on COVID-19 vaccines. The series provided the academic community and vaccine developers as well as the wider general public with balanced information of the global response and resources for COVID-19 vaccines under development featuring: 1) NGOs and the regulatory perspective, 2) the status of vaccine development efforts, and 3) panel discussions to present and discuss challenges. ISV is a non-profit scientific organization whose members work on all areas relevant to vaccines. ISV plans to host additional virtual symposia including regional meetings and incorporating other topics along with COVID-19 vaccines.

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There is an unprecedented need to develop, manufacture, test and distribute safe and effective vaccines to fully control the COVID-19 pandemic. In particular, the efforts to limit the spread of the virus have severely challenged opportunities for global scientific collaboration and information exchange because scientists cannot come together in traditional meeting venues to hear the latest developments, share ideas, and establish new partnerships in person.

The International Society for Vaccines (ISV) launched a virtual congress series www.ISVCongress.org as the leading platform for key COVID-19 vaccine developers to share their progress and for the global vaccine community to contribute their collective expertise and wisdom about broader aspects of the global pandemic vaccine response. The aims were threefold: (1) to provide timely information about the processes put in place by regulatory agencies and NGOs for COVID-19 vaccine development, (2) to present primary data from groups developing vaccines, and (3) to provide a forum for discussion by experts about key challenges that confront the COVID-19 vaccine development process.

From June to Aug, 2020, the ISV organized three monthly virtual congresses using a live video broadcasting platform. Each congress commenced with an opening session with two leading experts presenting virology updates of SARS-CoV-2 or the global efforts by CEPI, NIH, the Bill & Melinda Gates Foundation, and the US FDA. Then at each congress four major vaccine developers presented their progress; these developers came from institutions in North America, Europe, China, and Australia. The final session of each congress ended with a panel discussion focusing on a key question facing the development of COVID-19 vaccines. The full list of speakers and panelists along with the titles of their talks and panel discussion topics can be found in Table 1.

ISV members, as leaders in the global vaccine field, have played key roles in many COVID-19 vaccine programmes. Several speakers and panelists who participated in the congress series are ISV members or ISV Fellows, for example: David Weiner, John Shiver, Stanley Plotkin, and Stanley Perlman from the US, Denise Doolan from Australia, Anna-Lise Williamson from South Africa, Manon Cox from the US/Netherlands, Sarah Gilbert from the UK, and Xavier Saelens from Belgium.

The timely and detailed information presented at the ISV Virtual Congresses highlighted a promising outlook for the field, that multiple candidate vaccines are moving through the clinical trial pipelines. Added to that, well-organized clinical trial systems and clear regulatory review guidelines are in place. That said, any COVID-19 vaccine will need to safeguard the integrity and quality of the vaccine development process, as well as demonstrate safety and efficacy before it can be finally licensed for general public application. The availability of such vaccines to the global population will ultimately determine whether the COVID-19 pandemic can be fully controlled. The detailed programmes of ISV virtual congresses can...
be found at the ISV Congress website: www.isvcongress.org and the recordings of presentations are available at the YouTube link https://www.youtube.com/channel/UC9f8tD4qOmVEZwqGeuFow

The ISV congress series received unprecedented global attention from both vaccine professionals and the general public. The sum total of registered participants was over 6000 and as many as 1800 participants attended each congress in real-time. Global partners, including both public and private organizations, supported or sponsored the organization of the ISV virtual congresses (www.isvcongress.org). Dr. Nick Jackson from CEPI and Dr. Susan Barnett from the Bill & Melinda Gates Foundation (BMGF) kindly served as senior advisors to our congresses.

In summary, the ISV virtual Congress series has further demonstrated the leadership position of the ISV as the only global organization for vaccine professionals. We welcome more vaccine scientists and developers joining ISV (www.isv-online.org) to enable continued and increased scientific collaboration as we collectively strive to prevent suffering and loss of life from preventable diseases. The ISV will continue organizing and supporting future virtual Congresses that have both a broader focus (such as on influenza and COVID-19 vaccines) and a country/regional focus for meetings organized by partner country-based/regional vaccine societies and groups which will facilitate participation due to language and time zone challenges. While ISV membership is truly international, we also support local societies while simultaneously encouraging vaccine scientists to join ISV for increasing global interactions.

**Disclosure statement**

No potential conflict of interest was reported by the authors.