


MEETING

Thoughts & Opinion

Two leading international congresses in Iran in the era of COVID-19: 21st royan international twin congress, 4th international and 16th Iranian genetics congress

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Abstract

In this report, we look at the challenges posed by the outbreak of COVID-19 and how the Executive Board of these two congresses succeeded in overcoming those challenges and holding two congresses. The approach for a large festival with different virtual setting components provided a suitable solution that led to exemplary achievements and created an appropriate model for future virtual or combined virtual and face-to-face events. These events proved that pandemic problems could not limit the organizers, pushing them to make better use of the facilities and turning this threat into an opportunity.

KEYWORDS

21st Royan International Twin Congress, 4th International and 16th Iranian Genetics Congress, COVID 19

The year 2020 was full of challenges. While the COVID-19 pandemic has affected schedules and programs worldwide, progression in science and technology has not lost its momentum and neither did the research and scientific achievements at Royan Institute and the

Iranian Genetics Association. For the first time and with appropriate adaptation to the current pandemic, both the Royan International Twin Congress and the Genetics Congress 2020 were converted into virtual formats that included specific events, various scientific programs with

keynote speakers, plenary sessions, and viable workshops, all of which maintained the standards and quality of the previous congresses. Thus, the potential exists to further enhance future congresses, regardless of the state of the pandemic.

The Royan International Twin Congress consisted of the 21st Congress on Reproductive Biomedicine (2–4 September 2020) and the 16th International Congress on Stem Cell Biology and Technology (5–6 September 2020) in Tehran, Iran. With special appreciation to the efforts by Dr. Kazemi Ashtiani in 1991, the late founder of Royan Institute, the Royan International Congress was developed with the intent to comprehensively cover recent advances and different aspects of stem cell and reproductive sciences, and enhance international interactions between researchers and practitioners. This year, the COVID-19 pandemic pushed the Royan International Twin Congress to be a virtual event. Conversion of this Congress to a virtual format did not compromise its content or quality; rather, several opportunities presented themselves to both the Executive Board and attendees. In addition, the 16th Virtual Seminar on Nursing and Midwifery was held along with the 21st Royan Virtual International Congress on Reproductive Biomedicine.

The Royan International Virtual Twin Congress was managed by the Organizing Committee, with Dr. Fathi educational deputy of Royan institute, as the Executive Chairperson and Leila Daliri as the Congress Secretariat Executive Manager. Dr. Ahmadi was the Chairperson of the 21st Congress on Reproductive Biomedicine and Dr. Montazeri was the Chairperson of the 16th Congress on Stem Cell Biology and Technology. The scientific committee held extra meetings with specialists and lecturers to extract the central subjects from recent research and useful resources as well as suggesting topics that incorporated the COVID-19 pandemic and its impact on reproductive sciences and stem cell biology and technology.

The Royan International Twin Congress was not the only auspicious event in Iran that successfully adapted to virtual format because of the pandemic. The Genetics Congress 2020 (GC2020), the 16th National Congress, and the 4th International Congress of Genetics were also held jointly by the Iran Genetics Society (IGS) and the Italian Society of Biophysics and Molecular Biology (SIBBM) in Tehran, Iran and provided another example of excellent conversion to a virtual event. The IGS, established more than 50 years ago, is one of the most distinguished associations among Iranian scientific societies, and it holds this Congress every two years.

The success of GC2020 in the 16th National Congress and 4th International Congress of Genetics was attributed to the efforts by its scientific and executive staff. Scientific secretaries of the event were Prof. Seyed Javad Mowla and Prof. Valeria Poli, presidents of the IGS and SIBBM, respectively. Executive secretaries and Commercialization and Scientific program managers were, respectively, Drs. Mohsen Ebrahimi and Maryam Mohajeri. GC2020 was a significant scientific event that consisted of eight up-to-date genetics topics and two very bold and attractive genetics programs. For the first time, two new sections were added to the program.

The first festival of Commercialization of Ideas, Services, and Products in Genetics and Biotechnology and the first National Student Fes-

tival of Genetics were the newcomers to this event, widely welcomed by the audience. The Innovation and Prosperity Fund of Iran, a government financial institute that supports knowledge-based Companies, supported this festival in the commercialization sector and participated in holding the first Iranian scientific-cultural-commercial event in the field of genetics.

As with previous congresses, support from both national and international collaborators and sponsors was significant. This scientific and financial support is an investment in both parties' promotion and growth, and this collaboration will be continued despite the COVID-19 pandemic. This experience proves that relationships between sponsors and large scientific institutes and research centers, such as Royan Institute and the IGS, are based on mutual correspondence, commitment, and understanding to enhance world health and peace. This foundation can withstand a global crisis such as the COVID-19 pandemic.

EXECUTIVE TREND

The inevitable air of uncertainty that accompanied this pandemic hindered the decision to hold a virtual Royan Congress and allowed only two months to arrange the details of this Congress. The deadline for abstract submissions was subsequently tighter than usual, which decreased the number of submissions compared to previous events. However, the submitted abstracts for the Congress had a substantial number of participants despite two weeks to advertise and one week for submissions. The submissions for each Congress were published in the abstract book.

In addition to significant attendance and sponsor assistance, the congress participants are the motivation, driving force, and ultimate target of the Congress. Compared with previous years, the number of participants increased, likely due to the online Congress breaking the economic, distance and time barriers for individuals who could not travel. The total number of registered online individuals was 824, and, thanks to the live Instagram clips, there were approximately 1400 views each day of the five days of the Congress that was handled with Mr. Jangkhah and his colleagues as virtual education affair in Royan institute.

The attraction of this Congress was the variety of the plenary sessions with international speakers. The Supplementary Tables S1, S2, and S3 provide a summary of the plenary sessions. Speakers delivered their presentations through live sessions or broadcasted presentations, while the participants asked their questions through a chat function. The Royan Congress also featured a pre-congress workshop on Managing the Variability of Controlled Ovarian Stimulation Protocols and Luteal Phase Support in High Responders (September 1). Due to the compressed number of contents, the workshop was held separately from the Congress so that the audience would be able to attend without finding the schedule tiring.

GC2020 had a unique and different approach. Due to the pandemic conditions and the program's virtual mode, the organizers decided to hold their programs as a one-month marathon in four separate sections, entitled "GC2020 Quadruple". The advantage of this method

was that the presenters had a better experience with solving possible problems. The virtual format enabled the organizers to provide the best possible presentations to the audience. On the other hand, the audience in such an extensive and detailed event had the opportunity to adequately focus on the components of each event and to take advantage of all sessions.

In the first section, four workshops were conducted entirely online for three days and were attended by many domestic and foreign participants. Participants communicated with the instructor online during the workshop presentation and were able to fully exploit the workshop through an ample Q&A session. The level of satisfaction registered was very high, providing a great model for the next occasions.

School students are considered a huge asset and great potential in various fields of science and technology, and investments are being made worldwide. Accordingly, the first National Student Genetics Festival was the second GC2020 step, which was designed and implemented to introduce genetics to school students and find unique talents among them. Sections of this festival included scientific lectures, student article presentations, virtual tours to visit knowledge-based companies in genetics and biotechnology, student competitions, and educational programs for teachers. This section was met with an unparalleled welcome by Iranian students, teachers, professors, and researchers, and provided the basis for future events and programs of this type.

The Commercialization Festival's purpose was to bridge the gap between research and industry and familiarize the students entering genetic studies with possible job opportunities. Students were introduced to commercializing ideas during specialized symposia and became acquainted with the founders of high-tech enterprises. Additionally, industry owners had the opportunity to find high-tech start-ups for investment. Technical discussions on the challenges of providing genetics products and services in Iran, introducing support institutions, Capital Café (presenting new ideas to investors), Success Story (presented by industry activists), and specialized commercialization workshops were five attractive parts of this GC2020 quadruple's third step, all of which performed successfully.

In the fourth and final step, GC2020 also experienced one of the strongest scientific judging teams that included approximately 70 members of the Iranian Scientific Committee and 30 international members from different specialties in the field of genetics. Over a period of 30 days, the team reviewed and judged more than 500 abstracts of scientific papers, which resulted in the selection of 143 oral presentations and 381 posters during three consecutive days. Compared to the previous meetings, we had a much more extensive list of top-ranking invited speakers from Italy, Iran, the USA, Canada, Belgium, Sweden, Germany, Switzerland, the Netherlands, and Spain. Prof. Valeria Poli and Prof. Salvatore Oliviero helped propose some attractive topics for plenary sessions, including the Non-coding RNAs in the health and disease session, which attracted the most influential audience. Also, the animal genetics sessions were very active and dynamic this year, with heated Q&A debates in each session. The virtual format helped us to attract a more international audience for the

plenary sessions. Most of the audience participated from Italy because of a general invitation by SIBBM. Due to the high volume of contents, five simultaneously active virtual halls were established to execute the GC2020 Scientific Section (see Supplementary Tables S4, S5 and S6).

TOP APPRECIATION AND AWARDS

Like for previous meetings, the best abstracts, oral and poster presentations, audiences, and poster readers in each field were selected and awarded with a certificate and prize. The GC2020 had three extra awards: the first national Farzaneh award for the best Iranian scientist and researcher woman in the field of genetics was awarded in memory of the late Dr. Parvaneh Farzaneh; the National Genetics Award of Iran comprised of nine categories of young and leading researchers in seven different categories of genetics; and three awards from SIBBM for best papers of the Congress.

STRENGTHS AND WEAKNESSES

The positive point of these events was the critical management of the Royan Institute's organizing committees and the Iran Genetics Society. Undoubtedly, these two events were the most cohesive and prosperous Iran international congresses in 2020, which was confirmed by the vast number of online attendees and subsequent offline views. Although the challenges posed by the outbreak of COVID-19 were unprecedented, the Executive Board of GC2020 succeeded in overcoming those challenges and managed to add the Student Festival and the Commercialization Festival for the first time in the Iranian Genetics Association history.

Considering these were the first experiences of entirely virtual congresses in Iran, the outcome was a success and has demonstrated that this method offers several advantages over face-to-face meetings. Perhaps the greatest advantage was its broader outreach. Difficulties of traveling during a crisis could be a significant hurdle for potential international speakers; however, because of the online format, international speakers could participate. Many individuals attended from various international and domestic locations. Notably, the sanctions aimed at Iranian institutions have affected many aspects of science, including financial and international communications. However, the online Congress induced a little stress and pressure on the executive committees; it circumvented the financial limitations and costs, eased the communication, and solved the problem posed by international traveling prohibitions.

Nonetheless, the Royan Congress abstracts were accepted as poster presentations only, with no oral presentations since the participants had only very limited time to prepare. This was a drawback of the Congress and should be addressed in future events. Moreover, the attendees' virtual experience directly depends on access to a fast and stable internet connection, which is a disadvantage in some regions. Despite the obstacles, feedback provided by the participants indicated

an overall satisfactory event, highlighting the resilience of the Iranian scientific community.

ACHIEVEMENTS

One of the highlights from this year's Royan International Twin Congress was underscoring the commercialization of stem cell and regenerative medicine products. In line with this goal, a plenary session on Innovation in Healthcare was held, with founders of successful companies active in the field from Iran and the U.K. among the panel members. They discussed start-up processes and development of these companies and provided encouragement and insight to those willing to take a step further into the market. Furthermore, a debate roundtable on stem cell products was held, which discussed regulatory policies and challenges in transitioning a product from bench to bedside.

Moreover, the Innovation and Prosperity Fund of Iran, a government financial Institution that assists knowledge-based companies, supported the Commercialization Festival of GC2020. This support was aligned with the recent emphasis on the domestication of products in Iran, which still stands despite the ongoing pandemic. The pandemic and its associated problems could not limit the GC2020, which was confirmed by the addition of two new sections to this event by the organizers. Despite the limitations, the organizers were able to manage a complete festival in the field of genetics and biotechnology for school students, professors, industry activists, and companies that offer products and services in this area. GC2020 proved that pandemic problems could not limit the organizers, pushing them to enhance the efficacy of using the facilities and turning this threat into an opportunity.

Large festivals with various virtual setting components require a multi-stage performance method to offer appropriate solutions and create suitable models for future virtual or combined virtual and face-to-face events. On the other hand, the success of these two online events in science and commercialization showed that borders and limitations could not prevent scientists and technology activists from attending.

PROSPECTIVE

Despite the issues that surround the COVID-19 pandemic, which was the primary reason for holding a virtual Congress, the opportunity for people to participate in scientific meetings without having to spend money or time to travel, even post-pandemic, could be a silver lining. This approach could be integrated into face-to-face congresses to give rise to hybrid events that combine the features unique to non-virtual events with the benefits of virtual events.

CONFLICT OF INTEREST

The authors have declared that there is no conflict of interest.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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