



A Report on the 2nd International West Asia and North Africa (WANA) Congress on Applied Biotechnology

With goodwill and determination, the Royan Institute, affiliated with the Academic Center for Education, Culture, and Research (ACECR) of the Islamic Republic of Iran, was founded by the late Dr. Saeed Kazemi Ashtiani. The Royan Twin Congress was initiated by Dr. Kazemi and his colleagues to foster a strong consensus among scientists worldwide and to provide a platform for active engagement in sharing and exchanging scientific knowledge and experiences with leading academic institutions, universities, and prominent researchers.

Following the remarkable achievements of the Royan Twin Congresses, the WANA Congress (West Asia & North Africa) was established by the WANA Scientific Network (WSN) as a subsidiary of the Royan Twin Congress. This congress, encompassing the WANA region (approximately 25 countries), was founded under multilateral scientific collaboration to facilitate the exchange of knowledge and perspectives. These efforts culminated in arranging the 1st International WANA Congress, which focused on “Exploring New Approaches and Key Challenges in Reproductive and Infertility Treatments.



In May 2023, the 2nd International WANA Congress, in collaboration with the Royan Institute for Biotechnology in Isfahan and the Royan Research Institute as the scientific and executive boards, was held in the beautiful and historic city of Isfahan, renowned for its rich cultural heritage and architectural splendor. The scientific chair of this congress was Professor Mohammad Hossein Nasr-Esfahani, and the executive chair was Dr. Mehdi Hajian. This international event took place on Wednesday and Thursday, May 10–11, 2023, at the Ibn Sina Hall, Isfahan University of Medical Sciences, under the auspices of the Royan Institute. The event attracted over 300 participants, including distinguished international and domestic scholars, scientists, and policymakers.

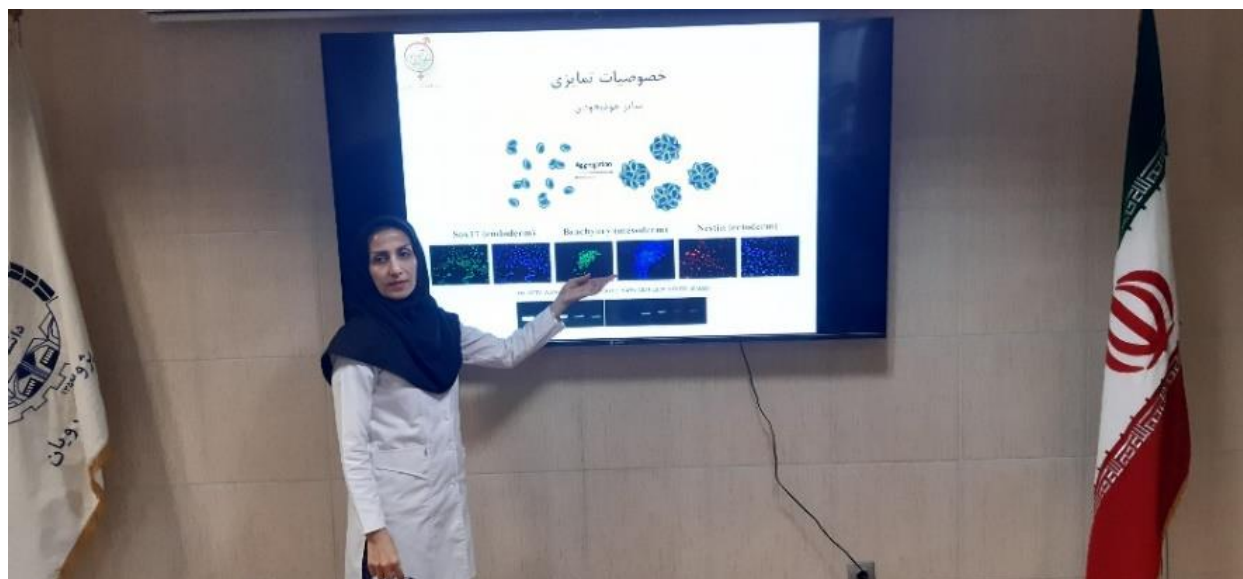
Organized under the auspices of the Royan Institute and ACECR, this congress served as a premier platform for scientific exchange and collaboration in biotechnology. The congress catered to a diverse group of professionals, including physicians, scientists, specialists, and undergraduate and postgraduate students, with interests or expertise in the fields of Urology, Obstetrics and Gynecology, Reproductive Radiology, Genetics, Embryology, Reproductive Health, Midwifery, Epidemiology, Laboratory Sciences, Reproductive Biology, Developmental Biology, Medical Biotechnology, Applied Cellular Sciences, and Cellular and Molecular Biology.



The congress secretariat members.

Following the COVID-19 pandemic, which altered the landscape of global events, the congress adopted a hybrid format to accommodate wider participation and overcome logistical challenges. Building upon the legacy of previous Royan international events, the 2nd International WANA Congress welcomed 10 eminent scholars from the WANA region who shared their pioneering research and clinical achievements across various biotechnology disciplines. The congress also featured presentations by high-ranking officials, who emphasized the importance of fostering international collaboration and translating scientific knowledge into economic value.

A pre-congress workshop titled "Basic to Advanced Eukaryotic Cell Culture" was held at the 2nd International WANA Congress. This workshop, scientifically chaired by Dr. Fereshteh Karamali and administratively managed by Ms. Lina Lachinani, was designed for students and researchers to enhance their knowledge and skills in eukaryotic cell culture techniques. The workshop took place from May 6 to May 9, 2023, at the Royan Institute for Biotechnology in Isfahan, specifically within the Stem Cell Laboratory of the center. It provided participants with hands-on training and theoretical insights into fundamental and advanced aspects of eukaryotic cell culture.



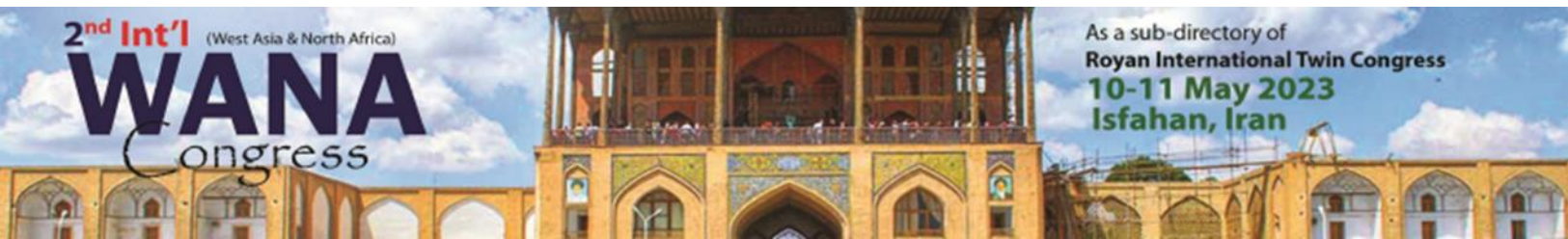
Pre-congress workshop.



In the opening ceremony, Dr. Hassan Moslemi Naeni, the head of ACECR; Professor Abdolhossein Shahverdi, the president of the Royan Institute; and Professor Mohammad Hossein Nasr-Esfahani, chairperson of the congress gave their speeches.



The opening Ceremony of the 2nd International WANA Congress.



During the opening ceremony, Professor Nasr-Esfahani received a prestigious Lifetime Achievement Award for his exceptional contributions to biotechnology, presented by Dr. Hossein Rabbani, General Director of the Office for Patterning & Elites Glorification.



Professor Nasr-Esfahani receiving his award.

The congress featured multiple thematic sessions and panel discussions, highlighting advancements and challenges in applied biotechnology. International and national scientists and scholars delivered keynote speeches on Applied Biotechnology topics: Farm Animal Industry in Biotechnology, Cell, Gene, and Molecular Therapy, Experimental and Regenerative Biomedicine, and Assisted Reproductive Technology (ART). The session on “Applied Biotechnology in Farm Animal Industry” was chaired by Dr. Rasoul Kowsar and Dr. Farnoosh Jafarpour, with notable presentations from Dr. Abolfazl Shirazi on “Using OPU-IVT in Cattle and Buffalo and the Challenges Ahead” and Prof. Mustafa Numan Bucak on “Embryo Transfer Technology in Bovine”.

The session on “Applied Biotechnology in Cell, Gene, and Molecular Therapy”, chaired by Professor Hamid Gourabi and Dr. Kianoush Dormiani, included groundbreaking presentations. Professor Hossein Baharvand discussed “Generation of Transplantable Caudal Midbrain Dopaminergic Progenitors for Treatment of Parkinson's Disease”, and Dr. Kamran Azim explored “Applications of Modern DNA Sequencing Technologies in Medicine and Biotechnology”. Other presentations included Dr. Mohsen Basiri on “Targeting Placental Alkaline Phosphatase with Chimeric Antigen Receptor T-Cells”, Dr. Asma Gul on “Psychological Stress Manipulates Stretch-Induced Piezo-1 Signaling: A Gateway to Cancer Progression”, and Professor Hamid Gourabi on “The Current Status of Gene Therapy in the World”.

The “Applied Biotechnology in Assisted Reproductive Technology (ART)” session was chaired by Professor Mahnaz Ashrafi and Dr. Mehdi Ahmadi. Highlights included a presentation by Professor Mohammad Hossein Nasr-Esfahani titled “Present and Future of Biotechnology in ART” and Dr. Ahmad Alrahel's discussion on “The Role of Stem Cells in Azoospermia Treatment”.

Two sessions were dedicated to “Commercialization in Biotechnology”, with the first chaired by Dr. Parvaneh Afsharian and Dr. N. Kolahchi. Key presentations included Dr. Fatemeh Ejeian talking about “Dental Stem Cells Banking as a Biological Insurance” and Dr. Yaser Tahamtani speaking about “Zebrafish Technology for Developing New Pharmaceutical Products”. The second commercialization session was chaired by Professor Mohammad Hossein Nasr-Esfahani and Professor Mostafa Ghanei, featuring presentations by Mrs. Maryam Mokari on “Integration of Engineering and Medical Knowledge to Aid in the Treatment of Infertility”, Mrs. Mina Masoudi on “The Role of the Reliability of Medical Devices in Improving Infertility Treatment Using ART”, Dr. Ensieh Hajizadeh Saffar on “Advanced Therapy Medicinal Products Regulatory and Quality Control Issues”, and Mr. Mohammad Mehdi Moghadasian on “The Law of Production Leaps and Financing Models in Technological Projects”.

The session on “Applied Biotechnology in Experimental and Regenerative Biomedicine” was chaired by Dr. Ensieh Hajizadeh Saffar, Dr. Masoud Vosough, and Dr. Elahe Masaeli. Dr. Sulaiman Al-Hashmi presented on “3-O-Acetyl-Beta-Boswellic Acid Loaded Scaffold for Skin Tissue Engineering”, Dr. Ayman Al Haj Zen on “High Content Imaging of Vascular Regeneration for Mechanism Understanding and Drug Discovery”, and Dr. Irfan Khan on “Applications of Adult Stem Cells for Management of Low Back Pain”.



The scientific sessions over the 2nd International WANA Congress.



The closing ceremony included several key presentations summarizing the congress's achievements. Dr. Rouhollah Fathi delivered the report for WANA Scientific Network (WSN), while Dr. Mostafa Ghanei discussed Biotechnology in Iran. Dr. Mehdi Hajian provided the Executive Report of the WANA Congress, emphasizing the collaborative and scientific successes of the event.

The 2nd International WANA Congress on Biotechnology was a landmark event, fostering interdisciplinary collaboration and innovation in biotechnology. It provided a comprehensive platform for advancing scientific knowledge, exploring commercialization opportunities, and addressing global challenges in healthcare, agriculture, and industry. The congress underscored the transformative potential of biotechnology and its role in shaping a sustainable and prosperous future.



The closing ceremony of the 2nd International WANA Congress.

Advertisement plays a crucial role in the announcement and promotion of any congress, and this is especially significant for scientific congresses. Therefore, our colleagues in the virtual section worked with great dedication and precision in this regard. Mr. Mehdi Zarbakhsh and Mr. Mohammad Sadegh Lotfi were responsible for designing the posters and advertising sheets for the congress. Additionally, Mr. Yasin Shakeri and Miss Pegah Shayegh handled the announcements and advertisements across various social media platforms, including Instagram, Twitter, WhatsApp, and Rubika. According to our data, the number of views for posts on Instagram was approximately 9,800, and the total number of views reached 11,500. Furthermore, the total number of transferred messages, including questions and answers, exceeded 400. These efforts contributed significantly to spreading awareness and information about the congress. Moreover, Mr. Ali Moqimi-Khorasgani played a pivotal role in coordinating the printing of posters and banners in collaboration with the Isfahan Municipality. This collaboration ensured that the 2nd International WANA Congress advertisements were displayed throughout Isfahan City and at universities and scientific centers across Isfahan Province. His efforts greatly enhanced the visibility and outreach of the congress in the local community. Additionally, Mr. Nima Tanhaei Vesh, responsible for the Telegram channel and Instagram page of the Royan Biotechnology Research Institute, played a vital role in disseminating information and engaging with the scientific community through various online platforms. His continuous efforts on social media were crucial in establishing effective communication and outreach to a broader audience, particularly among those unable to attend the congress in person. Within the executive team of Royan Biotechnology Research Institute in Isfahan, Mr. Seyed Hamed Khodaei and Mr. Ahmad Jafari were also indispensable in managing the operational tasks of the congress. With their hard work, dedication, and attention to detail, they played a key role in ensuring the smooth execution of the event. Their invaluable contributions were vital to the success of the congress, and their efforts were evident in every stage of the event's organization. All these collective efforts, from the design and dissemination of materials to the on-the-ground execution, made the 2nd International WANA Congress a resounding success. These achievements were the result of seamless collaboration and coordination between all the members of the team, who worked tirelessly to bring this significant scientific event to fruition.

We would like to extend our special thanks to our colleagues whose invaluable presence and support were critical in successfully launching this round of the congress. We also appreciate the Royan Board Members who played key roles throughout the process. Furthermore, we would like to express our deepest gratitude to all the faculty members of the Royan Institute for Biotechnology and all the staff members of the institute in Isfahan for their dedicated efforts and support. We also appreciate everyone who contributed in any way to the success of the Congress, ensuring its smooth operation and wide-reaching impact. Their efforts have been essential to the success of this event.



The memorial picture at the closing ceremony of the 2nd International WANA Congress.

The congress would not have been possible without the significant spiritual and financial contributions of numerous organizations and institutions, including The Biotechnology Development Headquarters of the Vice Presidency for Science and Technology, Isfahan Municipality, Isfahan City Council, Isfahan Provincial Governorate, The Health Tourism Development Center of Islamic Countries, Isfahan Department of Education, Isfahan University of Medical Sciences, ACECR, Islamic Azad University-Isfahan Branch, and Isfahan Province Elite Foundation. The Biotechnology Development Headquarters of the Vice Presidency for Science and Technology, the Royan Stem Cell Research Center, Behrad Royesh Royan Company, Pouyesh and Rouyesh Fertility Clinic in Isfahan were the sponsors of this event, playing a pivotal role in its successful execution.



Sponsors of the 2nd WANA International Congress.