



Newsletter

PAKISTAN ACADEMY OF SCIENCES

Promoting Science, Technology and Innovation for Socio-economic Development

Volume 16, No. 2

APRIL 2021

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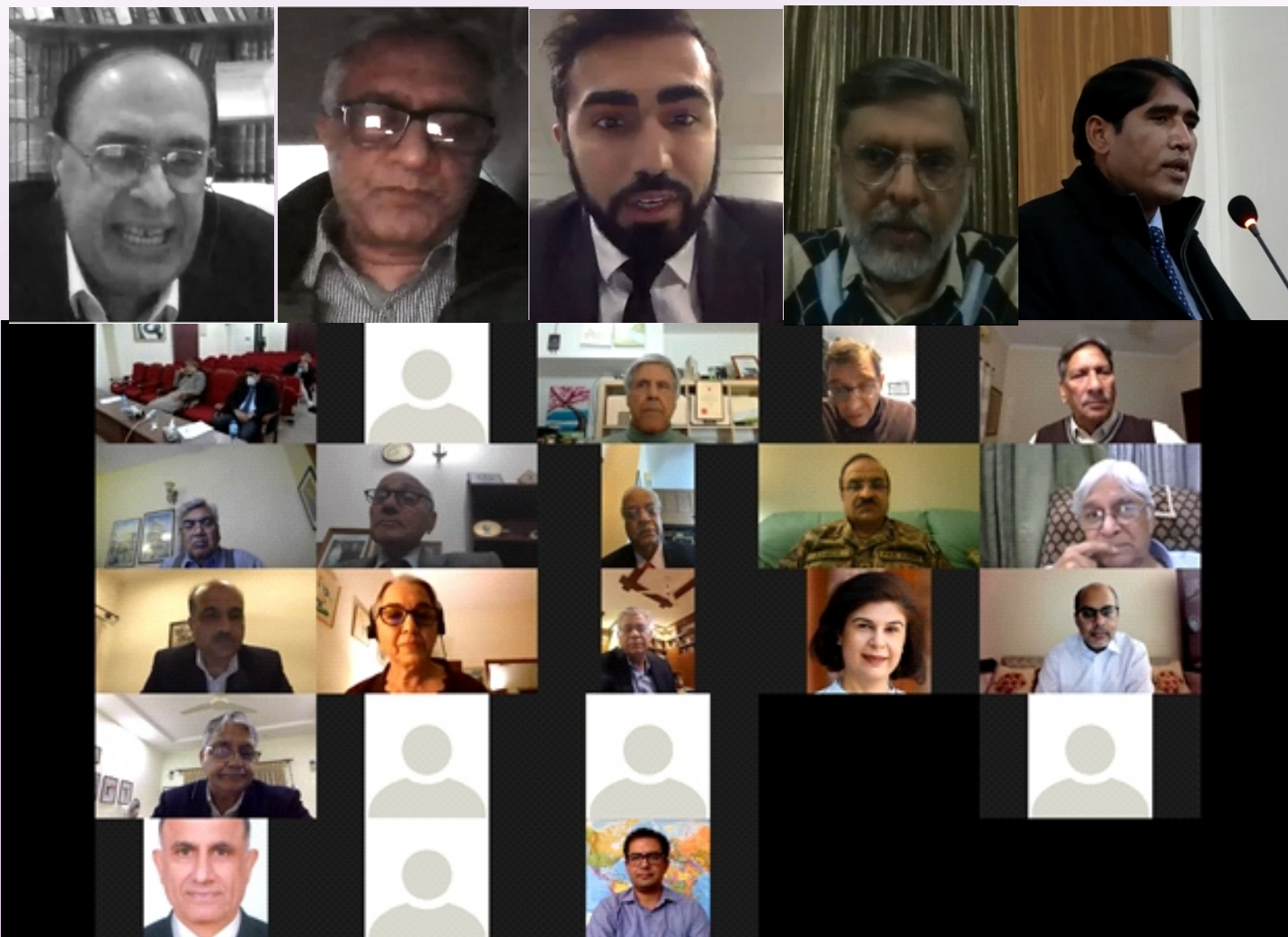
Lessons and Opportunities for COVID-19 Research and Development in Pakistan - A Virtual Round Table February 4, 2021

COVID-19 has changed perceptions and the ways we live our lives. It has put a burden on health care systems and hence we need to strengthen our systems without being dependent on other countries. In this pandemic, economies halted; business suffered, and a lot happened. This was the first year and also the first such major test in Pakistan's history of objectively evaluating what the lessons are, not only for implementation, clinical care, response, but with a focus on what are the gaps and opportunities in the research and development pathway that Pakistan adopted. A lot of efforts were made by the Government especially in the area of providing reliable testing facilities across the country, implementation of smart lockdowns, contact tracings, the establishment of the National Institute of Virology in Sindh, investment in manufacturing ventilators locally, and strengthening of public and private healthcare facilities. The private sector also worked hand in hand with the Government and supported the healthcare systems in the available limited resources. Media outlets were also very responsive and responsible for ensuring prompt sharing of data and providing firsthand information to the public.

In this regard, Pakistan Academy of Sciences (PAS) and the Aga Khan University, Karachi jointly organized this Virtual Round Table with the explicit aimed to deliberate and focused on reviewing what we have learnt to date in the COVID-19 response in Pakistan and its implications for what needs to be done to strengthening research and development in major gap areas.

The Speakers were Prof. Dr Khalid Mahmood Khan (President PAS), Prof. Dr. Zulfiqar A Bhutta (Founding Director, Institute for Global Health and Development, The Aga Khan University, Karachi), Hon. Dr Faisal Sultan (Special Assistant to the Prime Minister for Health, Government of Pakistan) Hon. Prof. Dr. Atta ur Rehman (Chairman of the Prime Minister of Pakistan's Task Force on Science & Technology), Prof. Dr Assad Hafeez (Vice Chancellor, Health Services Academy, Islamabad), Maj. Gen. Aamer Ikram, (Executive Director, National Institute of Health, Islamabad), Dr. Zahra Hasan (Professor, Pathology and Laboratory Medicine, The Aga Khan University, Karachi), Dr. Zain ul Abedin (Director Research & Development Higher Education Commission, Islamabad, Pakistan), and Prof. Dr. Tasawar Hayat (Secretary General, PAS). Few Fellows also participated in the Round Table discussion.

The agenda of the round table was divided into specific areas, such as knowledge of epidemiology and burden, ability to diagnose, characterize and manage, and important time for participants to think tanks to see what is needed from a natural perspective.



Government's Science Response

Besides the immediate and much needed response from the Health Department, the Government's Science Division was equally prompt in taking initiatives to address this global pandemic.

The Science Division augmented the national initiatives of expanding testing facilities (through a grant from the British Government) and undertaking various clinical trials, specially to ascertain the changing strain of the corona virus, which is now the recent most challenge. It is believed that the available vaccines will have moderate effect on the mutating virus as the extent of efficacies is still unknown. To get a clearer picture we need to further expand the testing facilities, across the nation; and to be better positioned to fight, we need to develop indigenous facilities of vaccine development. This will not increase decrease the projected financial burden of vaccinating the masses, but also will encourage national manufacturers into developing the required infrastructures.

Conclusion and Way Forward

It is imperative that Pakistan must strengthen its national capacities not only for surveillance but also for monitoring. This can be achieved through a concerted effort and development of a national strategy and an action plan whereby there is active collaboration amongst the public, private, researchers, and academia. It is also important to provide universities and colleges with supportive research opportunities so that research advancement can happen in the Country especially in the area of STEM education. Pakistan does need investments in indigenous vaccines development with an equal focus on biotechnology to safeguard its national security. The roles of national oversight bodies need to be relooked for the Country to be better positioned to support and be prepared for any such pandemic in the future. The Pakistan Academy of Sciences can play an important role in helping bridge the science to policy chasm and act as a platform for honest and transparent debate on the subject. A major next step would also relate to pandemic planning and this workshop could serve as a stepping stone for that planning process.

Additional Members of Council of the Academy

In addition to office bearers of Council of the Pakistan Academy of Sciences published in January 2021 issue of Newsletter, additional members of the Council are: Members nominated by Ministry of Science & Technology (MoST), Ministry of Education (MoE) and Higher Education Commission (HEC).



Prof. Dr. Hafeez R. Horani
Member, MoST



Prof. Dr. Hassan Amir Ali Shah
Member, MoE



Prof. Dr. Muhammad Arslan
Member, HEC

Special Lecture on Equality in Education February 9, 2021



Pakistan Academy of Sciences (PAS) organized a special lecture on “Equality in Education” on February 09, 2021, in the PAS Auditorium. Dr. Hazir Ullah, Associate Professor Sociology & Director ORIC, Quaid-i-Azam University Islamabad was invited as a Guest Speaker. He spotlighted the existing education inequities in Pakistan. He stressed that education is a basic human right and must be equally accessible to all citizens, irrespective of social class, gender, ethnicity, race, or rural and urban divide as a public good. He argued that the government of Pakistan should focus on the equity of education in society.

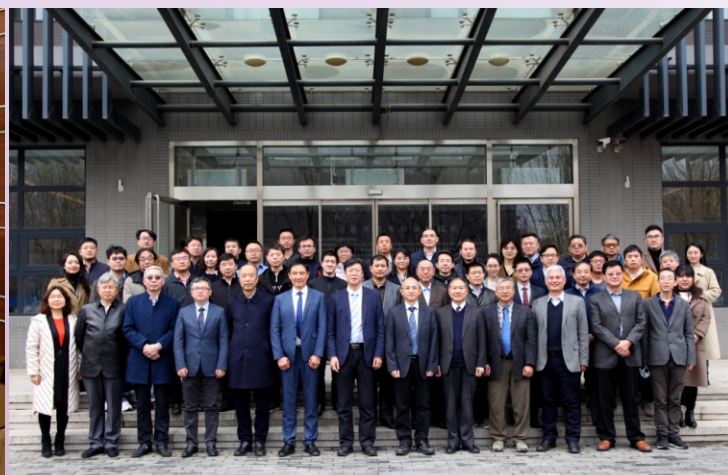
Dr. Hazir Ullah stressed Fair and Inclusive education

for the welfare of our society. A fair and inclusive educational system ensures access to high-quality education and provides opportunities for personalized learning, personal and social development. He emphasized that the government should respond to the needs of disadvantaged categories (girls, students from lower socioeconomic and rural backgrounds). He demanded a single School System of high quality in addition to a single national curriculum.

In the end, Prof. Dr. Tasawar Hayat, Secretary General PAS, thanked the invited speaker for his impressive presentation.

China-Pakistan High-level Webinar on Earth Science Cooperation

March 18, 2021



China-Pakistan Joint Research Center on Earth Science (CPJRC) in collaboration the Pakistan Academy of Sciences (PAS) successfully held "China-Pakistan High-level Webinar on Earth Science Cooperation" on March 18, 2021 with the theme of Sustainable Development of CPEC: Vision for China-Pakistan Science and Technology Cooperation in Earth Sciences. As the co-organizers of this meeting, Institute of Tibetan Plateau Research (ITP), Chinese Academy of Sciences (CAS) hosted the on-site venue in Beijing with the Institute of Mountain Hazards and Environment (IMDE) of CAS. More than 300 participants from both countries attended the meeting by attracting over one thousand audiences via live stream.

Prof. Dr. Qasim Jan, Immediate Past President of Pakistan Academy of Sciences (PAS), delivered a welcome address and presided over the Opening Ceremony. Prof. Dr. Zhang Yaping, Vice president of CAS, expressed his wishes that the scientists from China and Pakistan could work together to address the important and urgent regional environment issues and better serve for the development of China-Pakistan Economic Corridor (CPEC) through CPJRC platform. Mr. Nong Rong, Chinese Ambassador to Pakistan, Mr. Ruan Xiangping, Senior

Counsel of Department of International Cooperation of MOST, Dr. Tariq Banuri, Chairman of HEC and Dr. Arshad Mahmood, Secretary for MOST, Pakistan delivered their warm addresses and expressed their hopes that CPJRC will contribute to the regional and local sustainable development through S&T cooperation. Prof. Dr. Tasawar Hayat, Sec. Gen. PAS offered vote of thanks.

Two keynote talks are from ITP/CAS. Prof. Dr. CHEN Fahu, Director of ITP/CAS gave a presentation titled "Changing in Climate, glacier and hydrology and their impacts in Upper Indus Basin (UIB)", introducing the joint research on glacier and water cycle change in Pakistan. Prof. DING Lin, Deputy Director of ITP/CAS, talked about the progresses and challenges in geoscience collaboration between China and Pakistan.

Prof. Dr. CUI Peng, Director-General of CPJRC, emphasized that CPJRC would push forward the Sino-Pakistan S&T cooperation to a new level by carrying out practical cooperation and supporting the regional sustainable development from the earth science aspect, in order to celebrate the 70th anniversary of diplomatic relations between the two countries.

Pandemic Preparedness: Science and Countermeasures

AASSA-PAS WEBINAR I

Sub-theme: SDGs and Pandemics

April 27, 2021

Pakistan Academy of Sciences (PAS) and the Association of Academies and Societies of Sciences in Asia (AASSA) with the support of InterAcademy Partnership (IAP) organized an AASSA-PAS Webinar I on “SDGs and Pandemics” on April 27, 2021, in the Pakistan Academy of Sciences. H.E. Senator Shibli Faraz, Federal Minister for Science and Technology inaugurated the Webinar.

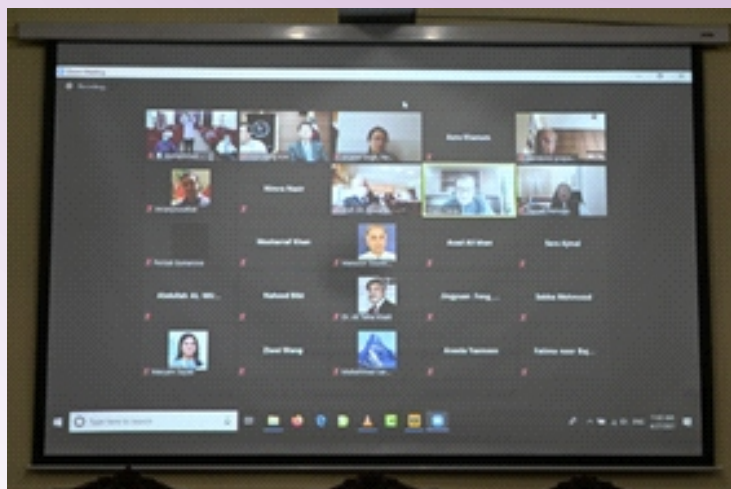
Prof. Khalid Mahmood Khan, President Pakistan Academy of Sciences presented the welcome address. He emphasized the importance of media and sharing of data to counter the emerging pandemic potential. He mentioned that many lives were lost as a result of this pandemic. He highlighted the importance of follow-up of SOPs and the adoption of measures dictated by the local government and health regulatory bodies to cope with the issue of the spread of the pandemic.

In his online address, the Minister of Science & Technology, Senator H.E. Shibli Faraz appreciated the efforts of PAS and AASSA for timely taking up the important issue of Pandemics. He inaugurated the webinar and mentioned that among the most pressing issues in preparing for the global response to a pandemic situation are the design, development, manufacture, and dissemination of vaccines. The response to this pandemic has shown that when leading vaccine manufacturers are fully

engaged in a global response, it might be possible for them to manufacture substantial doses of vaccine on timelines faster than envisioned previously.

Prof. Dr. Tasawar Hayat, Secretary General, PAS Islamabad paid gratitude to the Federal Minister, H.E. Senator Shibli Faraz on behalf of the organizing committee, AASSA, and the - PAS. He thanked Senator Shibli Faraz for his virtual (online) participation in the webinar. He appreciated the efforts of Prof. Khalid Mahmood (President PAS), Prof. Yoo Hang Kim (President AASSA) Prof. Zabta Khan Shinwari (Chief Organizer of the Webinar), resource persons, speakers, and the whole organizing committee. He thanked all the speakers and participants for their inputs & contributions and announced that PAS will soon publish a special issue on the proceedings of the current webinar series and a policy document as to how to respond to pandemics.

Under the sub-theme “SDGs and Pandemics”, a total of 10 lectures were presented by the leading experts, of which three (03) lectures were presented by international speakers from three countries namely Turkey, Dubai, and Nepal, and seven (07) lectures by Pakistan speakers. Prof. Dr. Masoom Yasinzai (Rector IIUI), Islamabad served as the moderator for this webinar.



Prof. Muzaffer Seker, President TUBA, Turkey discussed the efforts of TUBA to prevent COVID-19 and the assessment report of the COVID-19 survey conducted by TUBA in collaboration with researchers and scientific experts. He emphasized that the recommendations should be reliable and applicable to work and fight together against this epidemic. Prof. Anjana Singh, Nepal, discussed the origin of COVID-19 and the impact of the COVID-19 Pandemic on Women in Nepal. She proposed recommendations to prevent the downfall of productivity due to the increased risk of epidemic. Ms. Maryam Sayab, Project Development Manager, Asian Council of Science Editors (ACSE) convoluted the role of ACSE in facilitating the publishing and engaging scholarly community. Prof. Syed Ghulam Musharraf discussed various types of viruses to comparatively discuss COVID-19. He elaborated that people with diseases have more exposure to COVID-19 due to a weak immune system. Dr. Muhammad Ali discussed symptoms, patterns, and consequences of COVID-19 and proposed recommendations to mitigate this epidemic. Dr. Ali Talha Khalil shared current updates on COVID-19 and discussed other breakthrough infections.

Prof. Mushtaq Ahmad discussed various herbs and alternative therapies for pandemic diseases by consuming Herbal Drinks to boost the immune system. Dr. Farhan Khan elaborated the collection and analysis of various samples to overall estimate the risk of this epidemic on the lives of people. Dr. Saima Sharif gave a presentation to determine the impact of atmosphere and climate change to further increase the growth of epidemics and elaborated on various models that can be utilized to determine the impact. All the speakers stressed “Building the Global Vaccine Manufacturing Capacity” to respond to Pandemics”. Prof. Zabta Khan Shinwari spoke about the way forward to combat COVID-19. He remarked that what emerges next will partly depend on the ongoing evolution of SARS-CoV-2, on the behavior of citizens, on the government's decisions about how to respond to the pandemic, on progress in vaccine development and treatments, and also in a broader range of disciplines in the sciences and humanities that focus both on bringing this pandemic to an end and learning how to reduce the impacts of future zoonosis, and on the extent to which the international community can stand together in its efforts to control COVID-19.

AASSA-PAS Webinar I Glimpses



Prof. Dr. Anwar ul Hassan Gillani, FPAS & VC, The University of Haripur Received Presidential Award “Hilal-e-Imtiaz” March 23, 2021

Prof. Dr. Anwar ul Hassan Gillani, FPAS & VC, The University Of Haripur Received Presidential Award “Hilal-i-Imtiaz” for his outstanding contributions in the field of Science (Pharmaceutical Sciences). The award (HI) was conferred in a ceremony held at the President's house on March 23, 2021, which is the highest civil award given to any scientist during the last decade. While working at the Aga Khan University Prof. Gilani made breakthrough discoveries including translational research (from lab to patients) on Natural medicine/Functional foods for their effectiveness in cardiometabolic diseases such as high blood pressure and cholesterol, diabetes, and Alzheimer's disease).



Pakistan Academy of Sciences congratulates Prof. Dr. Anwar ul Hassan Gillani on receiving this prestigious civil award.

Obituary

Prof. Dr. Syed Irtifaq Ali (1930-2021)

Prof. Dr. Syed Irtifaq Ali, a renowned botanist, Fellow-PAS, former Vice Chancellor of Karachi University (KU) Prof Emeritus, and Ali passed away on February 18, 2021, after a brief illness. He was a renowned top-ranking (plant) taxonomist in the region and considered an authority on the plants of Southeast Asia in general and Pakistan in particular. One of Prof Ali's greatest contributions as a researcher was The Flora of Pakistan — the most comprehensive and authentic scientific work ever on Pakistan's flora. Initiated over four decades ago and completed in 2020, the book has 224 volumes containing details of over 6,000 indigenous and commonly cultivated plants.

He has contributed to the field of plant sciences at the national and international level and provided basic information on the plant wealth of Pakistan, which is widely used by phyto-chemists, pharmacists, ecologists, agriculturists, and foresters.



For his contribution and distinguished career, he was conferred with Sitara-e-Imtiaz in 1988 and honored with the Emeritus status in 2011. He was also awarded the title of the Higher Education Commission Distinguished National Professor in 2004. He will be missed by the PAS Fellows.

May the departed soul rest in eternal peace, Ameen!

Prof Dr. Habib Ahmad (1959-2021)

The remarkable Prof. Dr. Habib Ahmad left this mortal world on April 7, 2021 for his journey to the hereafter. He was an Eminent Scientist, Distinct Teacher, great Cyto-geneticist, eminent Plant Taxonomist, Fellow of the Pakistan Academy of Sciences, and above all a best Human Being. He was serving as Professor Emeritus of Genetics in the Department of Genetics, Hazara University Mansehra Pakistan. He was born on 13th July 1959 in Matta Swat in the home of his father Muhammad Saeed (known as Serae Mulvi Seb)—the first teacher of the Swat State and a pronounced philanthropist and educationist in the era of Swat State. He remained Dean of Sciences Hazara University (2006 – 2010), Vice Chancellor, Hazara University (2015 - 2016) & Vice Chancellor, Islamia College Peshawar (2016 to 2020).

He introduced a Rapeseed Variety 'Hasnain-2013'. This variety is being sown widely in Pakistan. He completed 28 research projects, supervised 47 Ph.D., 148 MPhil & 84 MSc/BS students, published 325 journal research articles, 51 Book chapters/monographs & more than 100 abstracts, and explored 35 New Genes/Nucleotide Sequences in his career. He visited more than 15 different countries. For his splendid research career, he was awarded the Presidential award Tamgha-e-Imtiaz (2010), KP R&D efforts award (2015), PAS Gold Medal (2019), HEC Best Teacher Award (2015), Productive Scientist of Pakistan Award (2011, 2012, 2013, 2014, 2015 & 2016), IBC Cambridge Leading Scientist Award 2011, UNESCO Teacher of the Year Award 2007, and Best Researcher of Hazara University Award 2006. He remained a Fellow of the Pakistan Academy of Sciences, President Pakistan Botanical Society, President Society Conservation Biology of Pakistan, Honorary Fellow Zoological Society of Pakistan, member of many other scientific societies.



People like him born once in centuries and it's not an exaggeration if he is claimed as a perfect human being. He was a candle for many in the field of education and research, especially, the deprived masses of society. We are sure that all his students and followers will take his noble cause ahead in society to educate people and work for the welfare of people. We pray to the almighty ALLAH that best blessings may shower upon his gallant soul and may he is in the eternal Peace of the best of paradises. Ameen summa aamin!

Khan Bahadar Marwat (PhD)
Fellow
Pakistan Academy of Sciences

Shujaul Mulk Khan (PhD)
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Member Pakistan Academy of Sciences