

Newsletter

PAKISTAN ACADEMY OF SCIENCES

Promoting Science, Technology and Innovation for Socio-economic Development

October 2024

Volume 19; No. 4

Visit of PAS Officials to the National Academy of Sciences (NAS) of Belarus from August 18-22, 2024 and signing of Protocol with NAS of Belarus for Cooperation in Science and Technology



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The contact between the Pakistan Academy of Sciences (PAS) and the National Academy of Sciences of Belarus (NASB) in the field of Scientific Cooperation is very much thriving during the year 2024. On Feb. 08, 2024, Academician Vladimir G. Gusakov (Chairman of the Presidium of NASB & Member of the Govt. of the Republic of Belarus) invited PAS reps. to NASB to familiarize with new innovation projects of NASB; to review the state of Belarus-Pakistan innovative Cooperation; to negotiate new areas and mechanisms of joint scientific-technical activities; as well as to update PAS-Belarus Agreement on S&T Cooperation for 2025-2026. In response, Prof. Dr. Kauser Abdullah Malik, President PAS and Prof. Dr. M. Aslam Baig, Sec. General PAS visited NASB from 19-21 August, 2024. The visit was coordinated by the Ministry of Foreign Affairs and PAREP- Minsk. During the visit to NASB/Minsk, the PAS delegation visited various S&T/Industry related institutions affiliated with NASB. On invitation of President PAS, the Chairman of the Presidium of NASB agreed to collaborate with PAS in the organization of a joint Conference in Islamabad (Pakistan) tentatively in October, 2024 or so, on the topic "Prospects of Regional Cooperation in Innovative Applied Research for Socioeconomic Development". A protocol on S&T Cooperation between PAS and NASB was also signed at Minsk on August 21, 2024.

2-Day PAS-CERP-IGHD-AKU International Symposium on Climate Change and Health and Development Consequences in Pakistan: Challenges and Opportunities (September 1-2, 2024)



The joint Symposium on Climate Change and Health and Development Consequences in Pakistan, hosted by the Pakistan Academy of Sciences (PAS), the Institute for Global Health & Development at Aga Khan University (IGHD-AKU), and the Centre for Economic Research in Pakistan (CERP), was held in Dr. A.Q Khan Auditorium at Pakistan Academy of Sciences (PAS) on September 1-2, 2024. The conference aimed to address the crucial challenges and opportunities arising from climate change in Pakistan. The main objective behind the organisation of this symposium was to unite leading international and national experts, academicians, researchers, policymakers, and industrial professionals to exchange knowledge, research findings, and practical solutions regarding the pressing challenges and opportunities related to the climate change and its consequences on health and development in Pakistan.

Prof. Dr. Kauser Abdulla Malik (President, PAS), chaired the inaugural session and welcomed the conference delegates and participants. During the opening remarks, Dr. Zulfiqar A. Bhutta, Founding Director, IGHD-AKU and Maroof A. Syed, President and CEO, CERP emphasized the significant consequences of climate change on health. Moreover, there was a keynote address on “Climate Change and Consequences for Women and Children Globally” by Dr. Ana Bonnell. Invited speakers and around 132 participants from QAU Islamabad, GCU-Lahore, Peshawar University, NUST University Islamabad, PIDE, COMSATS University Islamabad, Rawalpindi Women University, Higher Education

Commission of Pakistan, University of Swabi, International Islamic University Islamabad, and others participated the symposium physically as well as virtually. The foreign speakers were mainly from the London School of Hygiene & Tropical Medicine, University College London and the London School of Economics. The foreign and local eminent speakers presented Twenty-Four lectures in seven (7) Technical sessions at this event. The first technical session was devoted to four key-note lectures subjected to (a) Climate Change and Agriculture and Food Security in Pakistan; (b) Climate Change and Disasters; Impacts on Pakistan's Economy; (c) Where is the Civic Society Voice in the Climate Change Debate in Pakistan? (d) Climate Change and Human Health & Nutrition: The Evidence from Pakistan.

On the second day of the symposium Dr. Mukhtar Ahmad (Chairman HEC), chaired the fifth technical session of the event. It included lectures on various topics including community-based approaches to promote resilience and adaptation in rural Sindh, innovations addressing climate change and biodiversity in the northern areas of Pakistan, agricultural innovations targeting climate change and food security in Pakistan, coping strategies and scalable interventions for farmers facing weather shocks, and lessons learned from CERP's agriculture portfolio. The remaining five lectures covered a range of topics including challenges and opportunities in population movement, the economic outlook, achieving SDGs, weather shocks in relation to climate change, and their impact on health and development in Pakistan.

Prof. Sergey Lysenko (Director) and Assistant Professor Irina Danilovic were joined virtually as the Special Guest Speakers from the Institute of Nature Management of the National Academy of Sciences of Belarus. They talked about the regional consequences of global climate change in Eastern Europe with a focus on Belarus.

During the concluding session, Chief Guest Mr. Ahsan Iqbal, Federal Minister of Planning, Development and Special Initiatives and Inter Provincial Coordination, Government of Pakistan addressed the Symposium. He emphasized on the consequences of climate change and the importance of inter-disciplinary approach to tackle it. Furthermore, the chief guest urged the Pakistan Academy of Sciences to provide strategies based on science and technology to Government of Pakistan

to cope with the ongoing issues especially climate change and environmental crisis. Later on, Sec. General Prof. Dr. M. Aslam Baig thanked the Foreign Delegates, PAS Fellows, Invited Speakers, Organizers of the Symposium and the Participants.

This event brought together a diverse group of experts, policymakers, and stakeholders to address the complex and multifaceted impacts of climate change on Pakistan's health, agriculture, food security, development and economic sectors, and explored possible indigenous and innovative strategies as a way forward. The symposium fostered meaningful dialogues and developed actionable strategies to mitigate the adverse effects of climate change while exploring opportunities for sustainable development.

2-Day International Conference on Breaking Boundaries: Digital Transformation and Innovative Science Management Practices (8-9 October 2024)



Pakistan Academy of Sciences (PAS) in collaboration with the Network of Academies of Sciences in Countries of Organization of Islamic Conference (NASIC), PMAS Arid Agriculture University, Rawalpindi (AAUR), and University Institute of Information Technology (UIIT) organized a 2-day conference on “Breaking Boundaries: Digital Transformation and Innovative Management Science Practices”, from October 8-9, 2024 at the Auditorium of AAUR. Prof. Dr. Muhammad Naeem, Vice Chancellor PMAS-AAUR; Prof. Dr. Khalid Mahmood Khan, Sec. General, NASIC and Former President PAS; Prof. Dr. Tasawar Hayat, Former Secretary General, PAS; Dr. Ikram Ali Malik, Director Univ. Institute of Management Sciences (AAUR) addressed in inaugural session and welcomed the conference delegates and participants. Prof. Dr. Khalid Mahmood Khan was invited as the Chief Guest at the occasion.

The main objective behind the organization of this conference was to unite leading international and national experts, academicians, researchers,

policymakers, and industrial professionals for a mutual exchange of ideas among national and international participants for innovation and collaboration in the domain of “Digital Transformation and Innovative Management Science Practices”. Additionally, the event aimed to understand the latest digital transformation trends and their implications for businesses, emphasizing the importance of breaking traditional boundaries for organizational success; and bridging the gap between theory and practical applications by providing participants with opportunities to explore various fields, to learn the latest research and discoveries and to discuss ideas for implementation. The conference included panel discussions, interactive sessions; and keynote addresses by 18 speakers (including six from abroad who participated online). Over 200 participants including scientists, academicians, scholars, industrialists, and policymakers from various institutes of Pakistan attended the event physically and or virtually.

Prof. Dr. Mukhtar Ahmad, Chairman-HEC, was invited as the Chief Guest at the concluding session. He highlighted how digital innovation is essential for driving efficiency, growth, and competitive advantage in today's dynamic business environment. He said no business can survive without digital transformation. He asked universities to focus on the transformation of technology and said the Pakistani youth is on top of achieving foreign scholarships. Prof. Dr. Khalid Mahmood Khan, Secretary General NASIC, said that research is necessary for innovations and we have to work hard according to the digital era and international standards. Prof. Dr. Mohammad

Naeem, vice chancellor of AAUR, expressed the hope that the conference may help in finding opportunities and future directions. He said there is a huge potential in the youth to take the country forward through digitization. He also said everybody should acquire the latest technological skills for capacity building. Prof. Dr. Ikram Ali Malik, Director UIMS, said breaking traditional boundaries is the need of the era to bridge the gap between academic research and industry. He said we have to find new opportunities in different disciplines and also need to train people for digital transformation.

Invited Talk: “Common Misconceptions about Science in our Culture” by Mr. Qadeer Qureshi (October 10, 2024)

Pakistan Academy of Sciences (PAS) in collaboration with the Pakistan Institute of Engineering & Applied Sciences (PIEAS) organized a popular talk on “Common Misconceptions about Science in our Culture” by Mr. Qadeer Qureshi, an Electrical Engineer, holding a Master's Degree from Texas A&M University, College Station, Texas, USA. The event was held in the Auditorium of the Academy on October 10, 2024, in Islamabad. Prof. Dr. Aslam Baig (HI, SI, TI), Secretary General PAS welcomed the honorable speaker and the participants. Fellows and Members of PAS as well as over 100 participants from the National Center for Physics (NCP), COMSATS Institute of Information Technology (CIIT), and Quaid-i-Azam University (QAU) Islamabad attended the event physically and or virtually. Prof. Dr. Aslam Baig (HI, SI, TI), Secretary General PAS; and Prof. Dr. Shahid Qamar, from PIEAS, were the focal persons of the event. The talk aimed to provide crucial insights into the understanding of some of the misconceptions about scientific phenomena that are common in our

culture and the correct way to describe such phenomena. Some of the misconceptions discussed during the talk were: Scientific theories, if proven, become laws; Scientific theories are not reliable because they change every few years; If a body travels at the speed of light, it is converted into energy; Quantum entanglement allows faster than light communications; Earth's gravity is due to its spin; Eclipses can cause deformation in fetuses; Moon landing was a hoax; We use only ten percent of our brains; and Scientists have rejected the theory of evolution. The event concluded with a brainstorming Q/A session among the participated scientists and research students from various institutions about some common misconceptions of scientific phenomena to understand the correct way to describe those phenomena and how they evolved in our culture. Prof. Dr. M. Aslam Baig, Secretary General, PAS, presented the Academy Shield to the honorable invited speaker.



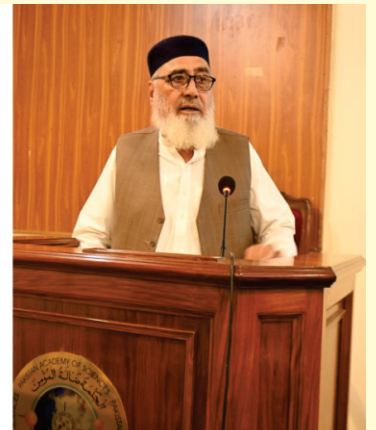
Workshop on Review/Upgradation of National Science, Technology and Innovation Policy (NSTIP) (October 22, 2024)

A workshop on “Review/Upgradation of National Science, Technology and Innovation Policy” was held at the Pakistan Academy of Sciences (PAS) on October 22, 2024. Prof. Dr. Aslam Baig, Secretary General of PAS, and Dr. Sara Qaisar, Director, PAS Policy Unit, welcomed the participants and highlighted the objectives of the workshop. A total of 24 Academicians and Scientists from Strategic

Commissions, including Brig. Dr. Irfan, Dean SCEE, NUST, Dr. Amir Azam from KFU-EIT, Dr. Mujahid from PAF-IAST, and Dr. Mirza Habib, Member Finance, PSF, attended the event. The workshop aimed to review and update the National Science, Technology, and Innovation Policy (NSTIP) to address emerging challenges, foster innovation, and align with national development goals.



Reference/Memorial in Honour of (Late) Prof. Dr. Anwar Nasim, S.I. (Fellow Pakistan Academy of Sciences) (September 13, 2024)



Pakistan Academy of Science (PAS) held a Reference Meeting for (Late) Prof. Dr. Anwar Nasim, S.I. (Fellow Pakistan Academy of Sciences) who breathed his last on September 1, 2024 and was buried in Canada. The Reference Session was well attended by the Fellows and Members of the Academy both physically in the PAS Auditorium as well as virtually (online). The main objective of the meeting was to pay homage and

tributes to this great Molecular Biologist and Geneticist of Pakistan who made valuable scientific contributions and achievements.

Prof. Dr. M. Aslam Baig, Secretary General, Pakistan Academy of Sciences presented Introductory Welcome to the audience. He informed the audience that Dr. Anwar Nasim was elected as Fellow of the Academy in the year 2007.

Throughout his association with the Academy and specially during his tenure as President of the Pakistan Academy of Sciences from 2015-2017 and as Secretary General of the Pakistan Academy of Sciences from 2013-2014, Dr. Nasim made all out efforts and support for the upgradation and sustainability of scientific and academic activities of the Academy.

Ten (10) Fellows of the Academy who happened to be close associates of Dr. Anwar Nasim spoke at the occasion and shared their memories and views on the scientific and social life of this highly celebrated Molecular Biologist of Pakistan. It was reflected that throughout his scientific career, Dr. Nasim remained a strong source of encouragement and support for his colleagues, associated scientific community including scientists, engineers and researchers at the Academy and within the strategic scientific

institutions, as well as students within universities, colleges and schools and above all the common masses.

In his closing address, Dr. Kauser Abdullah Malik, President Pakistan Academy of Sciences lauded Dr. Anwar Nasim for his high-grade technical and management skills. His intellectual contributions to Pakistan were enumerable and his determination remained unmatched throughout his scientific & professional career. He praised Dr. Nasim for his significant contributions for the uplift of the Academy. The meeting concluded that as one of the most highly decorated scientists of Pakistan, (Late) Dr. Anwar Nasim has left behind a rich harvest of sweet memories and marvellous achievements as inspiration for all those who know him and for the generations to come.

One-day Conference on “Environmental and Health Issues” in collaboration with the University of Swat (16 August 2024)

Pakistan Academy of Sciences (PAS) in collaboration with the University of Sawat (UoS) organized a Conference on “Environmental and Health Issues” on August 16, 2024, at the University of Swat, Khyber Pakhtunkhwa. Prof. Dr. Hassan Sher, Vice Chancellor of the University of Swat was the chief guest at the occasion. The conference aimed to provide an active interaction between distinguished scholars and experts to discuss critical environmental challenges

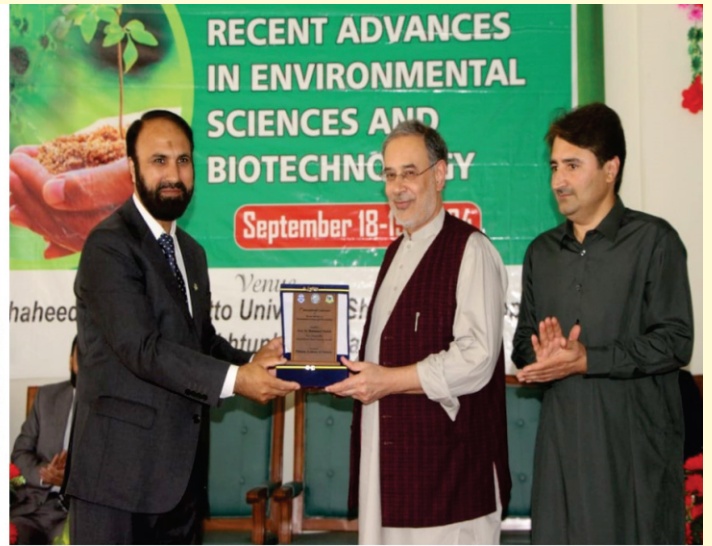
and their effects on public health. The conference also facilitated meaningful discussions and proposed sustainable solutions to address these contemporary issues. Around 150 participants including faculty members and research students from Kohat University of Science and Technology (KUST), the University of Sawat (UoS), Abdul Wali Khan University Mardan (AWKUM), and The University of Peshawar (UoP) participated in the event.



First International Conference on “Recent Advances in Environmental Sciences and Biotechnology” in collaboration with SBBU Shringal, Dir (18-19 September 2024)

Pakistan Academy of Sciences (PAS) in collaboration with the Shaheed Benazir Bhutto University (SBBU), Sheringal, Dir, organized a First International Conference on “Recent Advances in Environmental Sciences and Biotechnology” on September, 18-19, 2024, at SBBU, Sheringal, Dir, Khyber Pakhtunkhwa. Prof. Dr. Muhammad Shahab, Vice Chancellor of the SBBU-Dir, welcomed the honourable speakers and all participants. The main aim of the conference was to provide an active interaction between the experts to

share the knowledge, latest innovations and achievements in the field of environmental sciences and biotechnology. Around 200 participants including faculty members and research students from Govt. College University (GCU) Lahore, Kohat University of Science and Technology (KUST), University of Sawat (UoS), Abdul Wali Khan University Mardan (AWKUM), and The University of Haripur (UoH) participated in the event.



One-day Symposium on "Randomized Controlled Clinical Trials (RCCT) in Pakistan - 2024" at Prof. Salimuzzaman Siddiqui Auditorium, ICCBS-University of Karachi (29 August 2024)

International Center for Chemical and Biological Sciences (ICCBS) in collaboration with the Pakistan Academy of Sciences (PAS), organised a one-day symposium on "Randomized Controlled Clinical Trials (RCCT) in Pakistan 2024" at Prof. Salimuzzaman Siddiqui Auditorium, ICCBS-University of Karachi, on August 29, 2024. Prof. Dr. M. Raza Shah, the Chief Organizer, Chair Holder of UNESCO Chair, and GM CBSCR (ICCBS), delivered the welcome address. He provided an overview of the event's objectives and the significance of RCCT in Pakistan, setting the tone for the rest of the day. Dr. Saif-ur-Rehman Khattak, Director of Central Drug Laboratory, DRAP, shared his insights on the regulatory landscape of clinical trials in Pakistan, highlighting the role of DRAP in ensuring the integrity and quality of clinical research. The Chief

Guest, Dr. Zeeshan Nazir, Director of Pharmacy Services, DRAP, delivered a keynote address, emphasizing the importance of randomized controlled trials in advancing healthcare in Pakistan and the challenges faced in the field. Dr. Naghma Hashmi, Chief Coordinator CBSCR (ICCBS), concluded the inauguration ceremony with a vote of thanks, expressing gratitude to all participants, speakers, and organizers for their contributions to the event's success. The event brought together over 300 onsite participants and 40 online attendees, including experts, researchers, and practitioners from across the country. The event featured insightful lectures, discussions, and interactive sessions, all focused on promoting the integrity, ethics, and progress of clinical trials in Pakistan.

The program consisted of 5 key speakers including Dr. Raza Shah, Dr. Obaidullah Malik, Dr. Khalid Saeed Khan, Dr. Saif-ur-Rehman Khattak, and Dr. Nagma Hashmi. Prof. Dr. M. Raza Shah provided an in-depth introduction to the Center for Bioequivalence Studies and Clinical Research (CBSCR). He outlined the center's mission, vision, and its pivotal role in promoting clinical research in Pakistan. He also discussed the achievements and future plans of CBSCR, emphasizing the importance of collaborative research in achieving scientific excellence. Dr. Obaidullah Malik delivered an insightful presentation on the "Pakistan Clinical Research Landscape." He provided a comprehensive overview of the current state of clinical research in Pakistan, highlighting the alignment with sustainable development goals and the existing regulatory framework. Dr. Malik emphasized the roles of various stakeholders, including government bodies, research institutions, and industry players, in shaping the clinical research environment. He also discussed the challenges and opportunities within the field, offering a clear perspective on how Pakistan can continue to advance its clinical research capabilities to meet international standards. The session was highly informative, offering valuable insights for researchers and professionals involved in clinical trials. Prof. Dr. Khalid Saeed Khan discussed the critical aspects of clinical trial integrity and ethics. He emphasized the ethical considerations that must be adhered to during clinical trials, including informed consent, patient safety, and data integrity. His lecture provided a global perspective, with examples from international clinical trials, underscoring the importance of maintaining high ethical standards in research. Dr. Saif-ur-Rehman Khattak explored the challenges and solutions associated with conducting multi-center clinical trials. He discussed the complexities involved in coordinating trials across multiple locations, managing data consistency, and ensuring compliance with diverse regulatory requirements. He also shared strategies to overcome these challenges, drawing from his extensive experience in the field. Dr. Nagma Hashmi delivered a comprehensive lecture on the importance of bioequivalence studies, particularly in

the context of generic drug development. She explained the scientific and regulatory aspects of bioequivalence, the methodology used in such studies, and the critical role they play in ensuring the safety and efficacy of generic medicines. Her lecture highlighted the urgent need for more bioequivalence studies in Pakistan to support the local pharmaceutical industry.

Dr. Zeeshan Nazir delivered the closing remarks for the lecture series, summarizing the key takeaways from the day's discussions. He reiterated the importance of randomized controlled clinical trials in advancing medical knowledge and improving patient care in Pakistan. He also acknowledged the efforts of all speakers and participants in making the event a success. Participants were given a guided tour of the Clinical Trial Unit (CTU) and the Bioavailability and Bioequivalence (BA/BE) unit. This visit provided an opportunity to observe the state-of-the-art facilities and learn about the research activities being conducted at these units. The tour was highly appreciated by the participants, as it gave them a firsthand look at the infrastructure supporting clinical trials in Pakistan.

The event concluded with a formal closing ceremony, where certificates were distributed to all participants. The organizers expressed their gratitude to the attendees, speakers, and collaborators for their contributions to the success of the RCCT 2024 event. The ceremony marked the end of a fruitful day, with participants leaving with new insights and connections to advance their work in clinical trials. The "Randomized Controlled Clinical Trials (RCCT) in Pakistan 2024" event was a significant milestone in the field of clinical research in Pakistan. The event brought together experts from various sectors, providing a platform for knowledge sharing and collaboration. The discussions and lectures were highly informative, offering valuable insights into the challenges and opportunities in clinical trials. The success of the event was a testament to the hard work and dedication of the organizers, speakers, and participants.

Obituary

Prof. Dr. Sheikh Riazuddin 1944 - 2024

Prof. Dr. Sheikh Riazuddin (*H.I., S.I., T.I.*), a versatile scientist and one of the most highly rewarded academicians and researchers in Pakistan, breathed his last on August 12, 2024, in Lahore, Pakistan. He joined the Pakistan Academy of Sciences (PAS) as a Fellow in 1997.

Prof. Riazuddin enjoyed a distinguished career in the field of life sciences and molecular biology. During his service, he held prestigious positions such as: Executive Director A-IMB & Visiting Professor, Seoul National University, Seoul, South Korea, 2009-2013; Distinguished National Professor, Higher Education Commission, 2004 to date; Meritorious Professor, 2002; Professor (Rtd), National Center of Excellence in Molecular Biology, University of the Punjab, Lahore, 1985; Visiting Professor, Department of Biochemistry, University of Washington, Seattle, USA, 1988-2004; Principal Scientific Officer, Nuclear Institute for Agriculture and Biology (NIAB), Faisalabad, 1977-1985; Senior Scientific Officer, NIAB, Faisalabad, 1970-1977; Scientific Officer, PAEC, Lahore, 1966-1970.

Prof. Riazuddin was also the Fellow/Member of various scientific societies/organizations such as: Fellow, Pakistan Academy of Medical Sciences, 1997; The Academy of Sciences for the Developing World (TWAS), 1993; National Academy of Medical Sciences, 1995; The Chemical Society of Pakistan, 2003; American Academy of Microbiology, 2004; Member, American Phyto-pathological Society, 2001; American Society for Biochemistry and Molecular Biology, 2001-2003; New York Academy

of Sciences; 1991-1998; HUGO 1997; Asia Pacific IMBN, 2000.

In recognition of his academic and scientific achievements, Prof. Dr. Sheikh Riazuddin received prestigious awards, including Hilal-i-Imtiaz, 2004; Sitara-i-Imtiaz, 1994; Tamgha-i-Imtiaz, 1984; IARC Senior Postdoctoral Award, 1977; Swiss Prize (Isabelle De Caze De Nue), IARC, Lyon, France, 1978; Gold Medal, Pakistan Academy of Sciences, 1982; Gold Medal, Johns Hopkins Society of Scholars and Member, since 1989; Rockefeller Foundation's Biotechnology Career Fellow, 1989-2004; Khwarizmi International Prize by Iranian Govt., 1997; Carlos J. Finally Prize for Microbiology, UNESCO, 1997; Izaz-i-Kamal, 1998; Distinguished Scientist of the Year 2004 by Pakistan Academy of Sciences.

May Allah Almighty bless the departed soul with eternal peace. Amin.

