COMSTECH Yearbook 2021

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COMSTECH
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Foreword

OIC’s standing committee on scientific and technological cooperation (COMSTECH) continues to serve member states in the sphere of science and technology as per its mandate and strategic vision, as well as in line with the Astana (2017), and Abu Dhabi (2021) declarations. During 2021, COMSTECH team working under the chairmanship of Excellency the President of Pakistan has conducted a large number of activities for science, technology and healthcare capacity building, and for fostering institutional linkages. Many new initiatives were launched, including one of the largest fellowship programs in the OIC system, health Africa initiative, S&T profiling of the member states, and research project support program.

Along with these several major initiatives were launched in partnership with national and international organizations. These include Africa ophthalmology program with Islamic Development Bank (IsDB), and Layton Rahmatulla Benevolent Trust (LRBT); food security program with Islamic Organization for Food Sciences (IOFS), program in biotechnology with International Center of Genetic Engineering and Biotechnology (ICGEB); science in exile program with The World Academy of Sciences (TWAS), and United Nations Educational Scientific and Cultural Organization (UNESCO), Palestinian fellowships program with COMSTECH Consortium of Excellence (CCoE) universities, and Palestinian International Cooperation Agency (PICA) neglected tropical disease program with NTD Network, Durham University, UK and others. Based on special needs of certain member states bilateral programs were also launched, such as with Yemen, Nigeria, and Lebanon programs.

This rather brief document only provides synopsis of some key COMSTECH activities, and full portfolio of programs is beyond the scope of this document. For past, present, and future activities, you are invited to visit the COMSTECH website (www.comstech.org), and help us to spread the words so young scientists and S&T institutions can benefit from these strategically important initiatives of one of the key institutions of the OIC system, the COMSTECH.
COMSTECH in Brief

COMSTECH the Ministerial Standing Committee on Scientific and Technological Cooperation of the OIC (Organization of Islamic Cooperation) was established by the Third Islamic Summit of OIC held at Makkah, Saudi Arabia in January 1981.

COMSTECH is composed of all the member states of OIC represented by their ministers of science and technology and chaired by the President of the Islamic Republic of Pakistan. The Prime Minister of the Islamic Republic of Pakistan is Co-Chairman of COMSTECH.

The structure of the COMSTECH consists upon General Assembly, Executive Committee, and COMSTECH Secretariat. The COMSTECH Secretariat functions under the supervision and control of the Coordinator General who is its Chief Executive.

The core mandate of COMSTECH is to strengthen cooperation among OIC member states in science and technology (S&T), and enhance their capabilities through training in emerging areas, undertake follow-up-actions and implementation of the resolutions of the OIC, and to draw up programs and submit proposals designed to increase the capability of the Muslim countries in science and technology.

The ultimate aim is to build and nourish a scientific culture in addition to using S&T as a major contributor to socio-economic development and rapid industrialization.
ORGANIZATIONAL STRUCTURE

Chairman COMSTECCH
President of Pakistan

GENERAL ASSEMBLY

Coordinator General

Executive Committee
COMSTECCH Secretariat

COMSTECCH General Assembly

COMSTECCH General Assembly is the main decision making body, composed of the ministers of science and technology/ higher education of OIC member states.
Coordinator General
COMSTECH

Prof. Dr. Muhammad Iqbal Choudhary is Coordinator General of COMSTECH. He is a world renowned medicinal chemist. He has published 1,175 research papers in the fields of organic and bioorganic chemistry in international journals, 76 books and 40 chapters in books published by major US and European press. He has secured 40 US patents so far.

Dr. Choudhary's work has been cited by the researchers from around the world by 27,407 times and his h-index is 70. By now 94 national and international scholars have completed their PhD degrees under his supervision.

Dr. Choudhary is D.Sc., Ph.D., and C. Chem. He has been awarded by different governments of Pakistan with Hilal-e-Imtiaz, Sitara-e-Imtiaz, and Tamgha-e-Imtiaz.

He is a fellow of world renowned science academies: Academy of Sciences for the Developing World, Islamic World academy of Sciences, Pakistan Academy of Sciences, Royal Society of Chemistry, and Chemical Society of Pakistan.

Prof. Choudhary started a number of programmes for the capacity building and socio-economic development of OIC member states.
COMSTECH
Scientific Advisory Council

COMSTECH aims to strengthen cooperation among the OIC Member States in science, technology and innovation (STI), and enhance their individual and collective capacities in STI, as well as cultivate a culture of science appreciation in all echelons of the OIC societies. In short, COMSTECH essentially works to harness the power of STI for socioeconomic progress, and economic well-being.

The COMSTECH Scientific Advisory Council (COMSTECH-SAC) 2020, was formed with the following guidelines.

Vision
COMSTECH-SAC’s aims to become a forum for STI policy advisors and STI practitioners to share experience, build capacities, and primarily develop approaches to the use of scientific evidence in informing policy at all levels of government, primarily in OIC countries.

Mission
The COMSTECH-SAC shall be an advisory group of leading experts, nominated and invited by the Coordinator General COMSTECH to:

1. Upon the request of OIC member states, and the directive of the Coordinator General COMSTECH, assist OIC member countries to build up their science advisory capacity and develop appropriate science advisory mechanisms to complement their own national needs.

2. Propose a model STI advisory mechanism that COMSTECH can develop and promote and can be adapted by the OIC member countries.

3. Upon the request of OIC member countries, and the directive of the Coordinator General COMSTECH, offer advice and evidence-based counsel to member states of the OIC and OIC organizations on STI policies and activities.

4. Undertake reviews and consultations on national STI policies and strategies in OIC member countries.

5. Organize outreach meetings to share experiences and best practices in the domain of science advice to governments, policy-makers and other stakeholders, in cooperation with similar networks from around the world.
COMSTECH Programs
COMSTECH-IFS Research Grants Programme

COMSTECH and International Foundation for Science (IFS), Stockholm, started joint programme in 1998. The purpose of the collaboration is to enhance research capability in the OIC region.

The joint program is valuable because of the similarity of the mandates and strong common interest in capacity building of the two organizations in the developing countries. The purpose of the collaboration is to enhance research capability within the OIC region, and to reap a rich harvest by obtaining matching grants from IFS (US$ 0.1 million/year) for OIC scientists and institutions.

This Program has so far financed 358 research projects amounting to US$ 3.898 million in 32 OIC member states: Afghanistan, Algeria, Bangladesh, Benin, Burkina Faso, Cameroon, Cote D’ivoire, Djibouti, Egypt, Gabon, Gambia, Indonesia, Iran, Jordan, Lebanon, Malaysia, Mali, Mauritania, Morocco, Mozambique, Niger, Nigeria, Pakistan, Palestine, Senegal, Sierra Leone, Somali, Sudan, Suriname, Togo, Tunisia and Uganda.

2021 Grantees

Saima Qadeer  
Pakistan

Michael AGBAJE  
Nigeria

M. Abu Bakr Shabbir  
Pakistan

Philip OKE  
Nigeria

Sylvanus MENSAH  
Benin

Gwladys Aazongnide  
Benin

Aires Mbanze  
Mozambique

Kangbéni Dimobe  
Burkina Faso

Krichen Khouloud  
Tunisia

Marcel Hounbedji  
Benin

Amir Hameed  
Pakistan

Titilope Olagunju  
Nigeria

Karlmax Rutaro  
Uganda

Armel ASSO  
Cote d’Ivoire

M. Majedul ISLAM  
Bangladesh

Eliezer BIAO  
Benin

Maximilien Azalou  
Benin

Noureen Zafeer  
Pakistan
COMSTECH-IFS
Research Grantees

Researcher: M Majedul ISLAM
Country: Bangladesh
Discipline: Environmental/ Biological Sciences
Grant: $12,500
Project: Monitoring and quantifying health risks of antibiotic resistant bacteria in urban surface water.

Researcher: Sylvanus MENSAH
Country: Benin
Discipline: Environmental/ Biological Sciences
Grant: $11,294
Project: Assessing the effects of abiotic and biotic factors on the relationship between tree diversity and aboveground tree carbon in West African forests and tree savannas

Researcher: Marcel Houngbedji
Country: Benin
Discipline: Food Sciences
Grant: $12,000
Project: Developing stabilized multifunctional backslop starter using cost-effective drying technic for sustainable fermentation of selected cereal-based foods in West-Africa

Researcher: AZONGNIDE Gbédotchitché Gwladys
Country: Benin
Discipline: Biological Sciences
Grant: $9,906
Project: Morphological characterization and early growth improvement of Vitellaria paradoxa C.F. Gaertn in Benin

Researcher: Eliezer BIAO
Country: Benin
Discipline: Environmental Sciences
Grant: $9,600
Project: Assessing the impacts of climate change on water resources and sustainable adaptation strategies in two climate regions in Benin (West Africa)

Researcher: Maximilien AZALOU
Country: Benin
Discipline: Agricultural Sciences
Grant: $15,000
Project: Perceptions of farmers and genetic parameters of endangered Pabli cattle breed: implication for community-based conservation of the species in Benin

Researcher: Kangbéni Dimobe
Country: Burkina Faso
Discipline: Natural Sciences
Grant: $10,750
Project: Multiple abiotic and biotic drivers of seedling survival and growth of the endangered Pterocarpus erinaceus Poir. (Fabaceae-Faboideae) in Burkina Faso: implications for sustainable management

Researcher: Asso Armel ASSO
Country: Cote d’Ivoire
Discipline: Biomedical Sciences
Grant: $10,100
Project: Poaching, trade and role of critically endangered vulture species in traditional medicine in Côte d’Ivoire (West Africa)

Researcher: Aires Mbanze
Country: Mozambique
Discipline: Environmental Sciences
Grant: $11,852
Project: Dambos Wetlands Over-exploitation and its Implications for Biodiversity Conservation and Local People Livelihoods in Niassa Province, Northern Mozambique

Researcher: Titilope Olagunju
Country: Nigeria
Discipline: Physical Sciences
Grant: $12,740
Project: Development of a smart low loss solar dryer for drying local varieties of ginger and black pepper cultivated in Osun State, Nigeria
COMSTECH-IFS Research Grantees

Researcher: Michael AGBAJE  
Country: Nigeria  
Discipline: Biological Sciences  
Grant: $14,977  
Project: Investigating the causes of variations in strains of Dermatophilus congolensis and their possible association with infectivity of specific animal host

Researcher: Philip OKE  
Country: Nigeria  
Discipline: Physical Sciences  
Grant: $14,810  
Project: Epidemiology, Species Identification and Pathogen Detection in Culicoides from Nigeria

Researcher: Amir Hameed  
Country: Pakistan  
Discipline: Physical Sciences  
Grant: $11,450  
Project: Investigations of the toxic glycoalkaloids in commercially grown potatoes across Pakistan and their dietary exposure among the urban adults (20-24 years old)

Researcher: Noureen ZAFEER  
Country: Pakistan  
Discipline: Biological Sciences  
Grant: $14,865  
Project: Feed-grade Nano-additives to Control and Prevent Dissemination of Zoonotic Diseases from Poultry

Researcher: Muhammad Abu Bakr SHABBIR  
Country: Pakistan  
Discipline: Physical Sciences  
Grant: $13,500  
Project: Molecular characterization and potential transmission of colistin resistant genes in Escherichia coli from commercial poultry to humans

Researcher: Saima QADEER  
Country: Pakistan  
Discipline: Genetic Engineering  
Grant: $15,000  
Project: Assessment of ram sperm DNA integrity in relation to cryopreservation and in vivo fertility rate

Researcher: Krichen Khouloud  
Country: Tunisia  
Discipline: Environmental Sciences  
Grant: $12,171  
Project: Impact of human activity on degradation of North African Stipa tenacissima L. ecosystems: Case of Tunisia

Researcher: Karlmax Rutaro  
Country: Uganda  
Discipline: Health Sciences  
Grant: $13,350  
Project: Value chain hygiene practices and microbial contamination of street and market vended ready-to-eat edible grasshopper, Ruspolia differences in Uganda
COMSTECH-ICGEB Cooperation Programme

COMSTECH signed a memorandum of understanding with ICGEB to establish a general framework for cooperation in science, education, and technology.

COMSTECH-ICGEB programme, launched in January 2022, is offering research grants, fellowships and visiting professorship scheme to organize workshops in emerging technologies for capacity building of OIC states in various aspects of biotechnology and genetic engineering.

International Centre for Genetic Engineering and Biotechnology (ICGEB) is based in Trieste, (Italy), Durban (South Africa), and New Delhi (India). COMSTECH is an OIC Ministerial Standing Committee on Scientific and Technological Cooperation based in Islamabad, Pakistan.

COMSTECH-CCoE Yemen Program

COMSTECH in collaboration with Embassy of the Republic of Yemen in Islamabad launches “COMSTECH-CCoE Yemen Programme” for the capacity building of Yemeni scientists. H. E. Mohammed Motahar Alashabi, the Ambassador of Yemen had a series of meetings with Coordinator General COMSTECH to start this programme.

Under this programme COMSTECH initially announces 50 fellowships for Yemeni nationals who are currently in Yemen. These fellowships are being offered by members of COMSTECH Consortium of Excellence (CCoE), International Center for Chemical and Biological Sciences (ICCBS) (University of Karachi), The University of Lahore, Lahore, and Health Services Academy (HSA), Islamabad.
COMSTECH-TWAS
Science In Exile Programme

UNESCO and TWAS have partnered with COMSTECH the Ministerial Standing Committee on Scientific and Technological Cooperation of the Organization of Islamic Cooperation (OIC) to launch the UNESCO–TWAS–COMSTECH Science in Exile Fellowship Programme for displaced and refugee scholars and scientists.

The fellowship programme aims to provide displaced and refugee scholars and scientists who have not yet found a safe and long-term host country to pursue doctoral studies in Pakistan, at institutions which are members of the COMSTECH Consortium of Excellence (CCoE).

Fellowships are full-time and tenable in Pakistan at one of the academic and science, technology and engineering research member institutions of the COMSTECH Consortium of Excellence (CCoE).

COMSTECH
Research Fellowships
For LDCs in OIC

COMSTECH and prestigious member Institutions of COMSTECH Consortium of Excellence jointly offer research fellowships to young researcher in OIC countries to enable them to spend 6-12 months at a relevant center of excellence in many listed institutions of OIC member states.

The purpose of these fellowships is to enhance the research and development capacity of promising researchers and engineers, and helping them to foster linkages for further collaboration in their fields, especially those who are from least developed OIC member states and are at the beginning of their research career.
COMSTECH Fellowships for Virology and Vaccine Technologies

COMSTECH, in collaboration with key centers of excellence in OIC countries, announced the training scholarship in the fields of virology and vaccine technology. This is indeed an attempt to prepare next generation of scientists of OIC nations to meet the challenge of current and future pandemics/epidemics.

COMSTECH jointly offered fellowships to young scientists from OIC countries to enable them to spend 3 months at a relevant center of excellence in another OIC country.

The purpose of these fellowships is to enhance the research and development capacity of promising scientists, especially those at the beginning of their research career, helping them to foster linkages for further collaboration in the fields of virology and vaccine technology.

COMSTECH Scholarships and Fellowships for Palestine Nationals

COMSTECH has launched a special program offering scholarships, research fellowships, technicians training & workshop participation grants for Palestinian students.

This program is a collaborative effort of the member institutions of COMSTECH Consortium of Excellence, Association of Private Sector Universities of Pakistan, and COMSTECH.

These scholarships and research fellowships are being provided to undergraduate, graduate students, and research fellows. Workshop participation is being facilitated for the students, Scientists, Engineers and technicians of the State of Palestine.
COMSTECH has launched “COMSTECH Consortium of Excellence (CCoE)” comprising upon key academic, science, technology and engineering research institutions of OIC member countries. The strategic intent of the CCoE is to:

Create S&T interdependence among OIC member countries.

Build capacity in key areas of S&T through exchange programs and Institutional linkages.

Provide enabling environment to increase investment, and trade through technology-based projects within OIC member countries.

Build an ecosystem of collaboration and enable knowledge-based economic growth in the OIC Region.

1. International Centre for Chemical and Biological Sciences (ICCBS) University of Karachi, Karachi
2. National University of Science and Technology (NUST), Islamabad
3. Ghulam Ishaq Khan Institute of Engineering Sciences & Technology (GIKI), Swabi
4. Quaid-e-Azam University, Islamabad
5. Lahore University of Management Sciences (LUMS), Lahore
6. National Institute of Health (NIH), Islamabad
7. Pakistan Institute of Nuclear Science and Technology (PINSTECH), Islamabad
8. Government Collage University, Lahore
9. University of Karachi, Karachi
10. University of the Punjab, Lahore
11. COMSATS University, Islamabad
12. University of Peshawar
13. University of Lahore, Lahore
14. NED University of Engineering and Technology (NEDUET), University Road, Karachi
15. The Islamia University of Bahawalpur, Bahawalpur
16. Bahauddin Zakaria University (BZU), Multan
17. Baluchistan University of Engineering and Technology (BUET), Khuzdar, Baluchistan
18. Baluchistan University of Information Technology, Engineering and Management Sciences (BUITEMS), Quetta, Baluchistan
19. Al- Shifa Trust Eye Hospital Rawalpindi, Jhelum Road, Rawalpindi, Pakistan
20. Netkent Mediterranean Research and Science University, Lefkoşa, Turkish Republic of Northern Cyprus, Turkey
21. TÜBİTAK, Ankara, Turkey
22. Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Abu Dhabi Road, Rahim Yar Khan, Pakistan
23. PCSIR, Islamabad
24. PCRWR, Islamabad
25. Institute of Space Technology, Islamabad
26. Health Service Academy, Islamabad
27. Agha Khan University Medical College, Karachi
28. NRC, Cairo, Egypt
29. Superior University, Lahore
30. Middle East Technical University (METU), Ankara, Turkey
31. Islamic University in Uganda, Uganda
32. Shahid Beheshti University of Medical Sciences, Tehran, Iran
33. Islamic University of Technology, Gazipur, Bangladesh
34. Universiti Teknologi MARA, Malaysia
35. Universitas Airlangga, Surabaya, Indonesia
36. Bangladesh University of Health Sciences, Dhaka, Bangladesh
37. International Islamic University (IIUI), Islamabad
38. Kazan Federal University, Kazan, Russian Federation
39. Virtual University of Pakistan, Lahore
COMSTECH STI Profiles of OIC Member States

The member countries of the OIC are vigorously engaged with science, technology and innovation, both as a pursuit of knowledge and in harnessing the forces of nature for human betterment. Depending on their circumstances they have advanced to different levels, but much needs to be done, in general, to catch up with the attainments of the more advanced countries.

However, there exists a well-defined need to catalogue national efforts in this direction. In particular, to identify respective strengths, achievements and shortcomings, as well as the institutions and policies that are shaping the scientific research and development profiles of OIC member states.

To achieve the above mentioned goals COMSTECH has ventured on this ambitious task of preparing a summarized version of the science, technology and innovation landscape of each OIC member state. COMSTECH hopes that the scientific community as well as the planners and administrators of member states will find these profiles both useful and inspiring.
COMSTECH Technology and Innovation Portal

The COMSTECH Technology and Innovation Portal is a digital platform to showcase the prowess of scientists, innovators from the OIC world. The portal is in line with the Science, Technology and Innovation (STI) Agenda 2026 initiated by The Organization of Islamic Cooperation (OIC). It provides an ecosystem to key actors in OIC states to showcase innovative solutions and technologies that tackle the challenges within the OIC world and to build a culture of science and innovation amongst the Muslim nations.

The portal enables innovators, startups, SMEs, academics, governments and NGOs, to benefit from this tailor-made database. It will bring meaningful change to the lives of millions of people across the OIC member countries by giving every scientist, technologist and innovator an opportunity to make a difference to the Muslim world.

COMSTECH Africa Program in Health and STI

COMSTECH Africa programme include:

- Research Grants for Young Scientists
- Research Fellowships Program
- Technicians Training Program
- Technical Cooperation
- Eye Camps, Training in Ophthalmology and Repair of Medical Equipment

In November 2021, COMSTECH and LRBT in collaboration with the IsDB organized free eye camps in The Gambia and the Republic of Niger and carried out cataract surgeries, maintenance of eye medical equipment, and training workshop for cataract surgery.
COMSTECH Reverse Linkages Programme with IsDB

COMSTECH and IsDB are strategic partners working on several projects including Reverse Linkages Programme through South-South Cooperation (SSC) to connect developing countries to help solve common problems.

Reverse Linkage is a technical cooperation mechanism enabled by the IsDB where OIC countries exchange their knowledge, expertise, technology and resources to develop their capacities and devise solutions for their autonomous development.

16 Resource Centers in Pakistan are mapped by IsDB as Provider Institutions for Reverse Linkage Program with focus on Agriculture, Agro-based Industry, Pharmaceuticals Industry, Information Communication Technology.

More than 10 Reverse Linkage projects such as vaccine development, improvement of corn variety, SMART Agriculture, cancer therapy & food packaging have been submitted to IsDB by COMSTECH in collaboration with OIC countries including Saudi Arabia, Sudan, Malaysia & Turkey.

COMSTECH Technician Training Program

COMSTECH offers internships to technical personnel in developing OIC countries to enable them to spend 4-6 weeks at a centre of excellence/university in the OIC member state, and learn the operations, trouble shooting and related details of state-of-the-art instrumentations. The purpose of these fellowships is to strengthen the capacity of technical manpower in the effective and optimal use of expensive and sophisticated research equipment.

In the first cycle of this initiative, 24 candidates from Azerbaijan, Egypt, Gambia, Gabon, Indonesia, Kazakhstan, Nigeria, Pakistan, Sudan, Uzbekistan and Yemen have been selected and placed at the ICCBS, UoL, GIKI, GCU, NUST, NIH, CUI, and PU.
COMSTECH Distinguished Scholars Program

The Distinguished Scholars Program is focused on building the scientific capacity of the OIC member states in various scientific fields of science, technology, & innovation (STI), through benefiting from the best talent globally. In this program, top distinguished scientists/ engineers are engaged to serve as experts for inter-Islamic activities.

The nominated eminent scholars are requested by COMSTECH to conduct online webinars and physical workshops/ training courses in the OIC member countries along with reviewing academic structure for institutions that request it.

So far, 41 eminent scholars with expertise in Science, Technology, Engineering and Mathematics have been inducted into the distinguished scholars program. This initiative will allow scholars to showcase their prowess in the field internationally, and would allow other countries to learn from trained eminent scientists and engineers.

COMSTECH Basic Sciences Program

COMSTECH has initiated a new program to incorporate the most recent developments in the area of basic sciences. Under this program, COMSTECH aims to promote capacity building in the fields of mathematics, physics, chemistry, biology, and their interdisciplinary areas. Under the program online lectures are being arranged to address the fundamental concept of basic fields of science.
Capacity Building of R&D Organizations of MoST Pakistan

COMSTECH in collaboration with the Ministry of Science and Technology, Government of Pakistan has initiated a Program for Capacity Building of the R&D Organizations/ Institutions/ Universities affiliated with the Ministry of Science and Technology.

Two meetings have been held between COMSTECH and the R&D Organizations/ Institutions/ Universities at the COMSTECH Secretariat under the Chair of the Federal Secretary MoST and the Additional Secretary MoST. Areas of interest for potential collaboration with the partner institutions in the OIC member states have been discussed.

Facilitating MoST, Pakistan Towards Indigenous Human Vaccine Production

COMSTECH is leveraging its network of relevant institutions in the OIC member states including Pakistan to promote and facilitate initiative of indigenous human vaccine production by the Ministry of Science and Technology of Pakistan. COMSTECH has already organized 3 expert level meetings on human vaccine development in Pakistan. Two of these meetings were chaired by the Federal Minister for Science and Technology, H.E. Senator Syed Shibli Faraz. These meetings had a representation from leading pharmaceutical companies of Pakistan.

COMSTECH has drafted proposed actions for the human vaccine development in consultation with the stakeholders. These proposed actions have been shared with the Ministry of Science and Technology.

COMSTECH programmes are focused on nurturing scientific culture, enhancing mutual cooperation among OIC member states, building capacity for the development of science and technology ultimately leading to prosperity through socio-economic development of the Ummah.
COMSTECH Awards

COMSTECH in collaboration with the Ministry of Science and Technology, Government of Pakistan has initiated a Program for Capacity Building of the R&D Organizations/Institutions/Universities affiliated with the Ministry of Science and Technology.

Two meetings have been held between COMSTECH and the R&D Organizations/Institutions/Universities at the COMSTECH Secretariat under the Chair of the Federal Secretary MoST and the Additional Secretary MoST. Areas of interest for potential collaboration with the partner institutions in the OIC member states have been discussed.

COMSTECH decided in 1996 to give awards to recognize outstanding research work carried out by scientists who are citizens of, and working in, OIC member states. Each award carries a certificate, shield of honor and cash prize. COMSTECH gives awards in “Basic Sciences” and “Excellence in Science and Technology”.

BASIC SCIENCES

The basic sciences award is given in; Biology, Chemistry, Mathematics and Physics. Each award carries a cash prize of US$ 5000. The awards in Basic Sciences are conferred on the recipients by H.E. President of Pakistan (Chairman COMSTECH) in the COMSTECH General Assembly meeting.

EXCELLENCE IN SCIENCE & TECHNOLOGY

These biennial awards started in 2009, carry a certificate, shield of honor and cash prize of US$ 2000 and US$ 3000. This award category is further divided into four sub-categories:

1. Best Young Researcher Award
   This award is for scientists under the age of 40.

2. Best Scientific Book Award
   This award is for the author of an outstanding scientific book published by internationally renowned publisher during the last two years.

3. Award for Patent
   This award recognizes individuals for outstanding contribution that have had lasting impact in furthering the theory and or development of commercial systems. The patent must have been registered during the past five years.

4. Best Research Paper Award
   This award recognizes outstanding research paper published in an international journal in the last two years. The award is given in each of the four basic sciences (Biology, Chemistry, Mathematics and Physics).

COMSTECH Laureate 2021

MUHAMMAD ASHRAF
ALI A. MOSAVI-MOVAHADI
KHONDOKER NAZMOON NABI
ALI A. MOSAVI-MOVAHADI
MUSTAFA KEMAL BEYAZIT
ESMAEL GHAVANLOO
HALA EL SAKA
AZRUL AZLAN HAMZAH
KHONDOKER NAZMOON NABI
FAHAD ALSOHIME
MOHD IKMAR NIZAM
Training Programs and Conferences/Forums
Journalists’ Training Crucial for Science Communication

The COVID-19 pandemic has accelerated the ability of researchers to reach the audiences so much more quickly. There are receptive audience, always waiting for information, and there is a lot of hunger about scientific information and research-based knowledge. Science communication is relatively a new field of study. We should organize training for journalists on science communication to educate masses and fight infodemic, said Mr. Ehsan Masood while addressing COMSTECH webinar on “Pandemic lessons for science communication” held online, on Jan. 6, 2021.

He asked some basic questions; what is the criteria of lockdown, social distancing and when do we open and close borders, how do we test, trace and isolate and said that it does not relate to a sort of advance technology to answer these questions. There should have been some consensus amongst the world on it. But all of these things happening according to each country’s own standards, everyone is doing by self, may I call it pandemic of selfishness or what, he lamented.

Mr. Ehsan mentioned that in contrast, science is really fascinating. The pandemic has shown, that when researchers can set aside the desire to compete and when agree to work towards the greater shared goal, then look what can happen. He mentioned that I have not seen this level of cooperation in my 25 years long career in science journalism. The way researchers communicate with each other has been a much more collegial and cooperative endeavor.

Infodemic – a pandemic of misinformation, but also a pandemic of disinformation, which means deliberately intended to mislead or potentially to cause harm. The flow of scientific information has very heavily relied on social media. We have all benefitted massively from social media. But of course this ability to communicate so much more quickly and easily with very vast number of people has downside as well. It is fueling the infodemic. The concerning element of this is the scale and speed of it.

He concluded by saying that science is happening faster, it is being communicated faster, the regulatory process is happening quicker, many more people are now involved in the research process, we talk about citizen science, public involvement, public engagement, all these things are coming on the way on the scale that is different.
Medical Research is Obligation not Option

Current pandemic, COVID-19 has made it clear that knowledge in textbooks being taught is something of past and not sufficient to help tackle with the current pandemic. Research in medical is not an option, it is an obligation on us all to find new ways and means to tackle with current and future health crisis, said Prof. Dr. Khalid Saeed Khan, in his lecture delivered at COMSTECH. He emphasized general public to take part in the research process, it is beneficial for you and the generations to come.

Dr. Khalid talked about the difference between factual knowledge and the fake one. He delved deep in the research process to find fact based implementable beneficial knowledge for the humanity. He said that the health and economic development are related and both go side by side.

Dr. Khalid said that good decisions can only be made when they are research based. Decisions made on the basis of untested fake information cannot be beneficial.

He said that medical research is limited in Pakistan and the infrastructure is not available at ground level. He stressed the need of the engagement of citizens in the research process and the dissemination of research information to the masses through the internet and all other available means.

Answering to a question asked by Dr. NM Butt, a physicist and expert in nanomedicine, he stressed the need of the curriculum balance with regard to theory and practice. He totally agreed with Dr. Butt to add a research semester at MBBS level to engage the doctors in research at very early stage of their career.

More than 115 people attended this lecture in person as well as virtually on Zoom from Pakistan and other OIC member states.

The lecture was delivered by Prof. Dr. Khalid Saeed Khan, Distinguished Investigator - Beatriz Galindo programme - at University of Granada, Spain. He has published over 400 peer-reviewed research papers with current h-index >70. Dr. Khalid has so far supervised 25 higher-degree theses. He has contributed to many trials and meta-analyses by conducting 48 primary research trials, recruiting 979,242 participants, and has published 149 systematic reviews, collating data from 6415 studies with 68,798,079 participants. Dr. Khalid is lead author of 'Systematic Reviews to Support Evidence-Based Medicine', which won a BMA Medical Book award. He remained Editor of BJOG an international Journal of Obstetrics and Gynaecology. His “Core Outcomes in Women's and Newborn Health” (CROWN) initiative was awarded a BMA Strutt and Harper grant to help reduce research waste.
COMSTECH Webinar on Innovation Policy

Dr. Syeda Tanveer Kausar Naim, Former Chairperson, Pakistan Council for Science and Technology and member UNESCO International Advisory Board (IAB) delivered COMSTECH webinar on innovation policy for OIC states on January 15, 2021.

She talked about the relationship between science, technology and innovation, the national innovation systems, and the role of STI policies in the development of a country.

Dr. Naim highlighted the complexity of the innovation systems, its components, technologies involved and the relevance of STI capabilities and importance of public policy instruments required to create an efficient business climate for success. She suggested institutional architecture essential for promotion of innovation in developing countries.

Policy makers, bureaucrats, development and innovation experts, academicians, scientists, entrepreneurs, journalists, students, and interested general public attended the lecture.

Dr. Syeda Tanveer Kausar Naim obtained D. Phil from Sussex University, UK. She served as the Chairperson, Pakistan Council for Science and Technology. She served COMSTECH as Consultant and founded STI Policy Research and Training Centre of COMSTECH. She conducted training courses on STI policy and entrepreneurship for capacity building of OIC states and provided consultancy, compiled directories and policy documents. She also served as member of UNESCO International Advisory Board (IAB) on reform of the Science, Technology and Innovation System in Nigeria, and conducted Technology Audit for Turkey under EU 7th Framework Program. She served as member of Board of Trustees of International Network for Promotion of Scientific Publications (INASP) at Oxford and as member of the quality control board of MERID project which helped create awareness in the Middle East scientific community about Horizon 2020 and other programmes of EU. She also provided STI review and advisory services to Maldives, Gambia, and Pakistan.

In 2018 she served as senior consultant to UNESCO for preparation of STI profiles of 56 member states of Islamic Development Bank to propose policy instruments for the Bank to help member states build their STI capacity.
COVID19 is not a Last Virus, have Good Surveillance System

It is not a last virus, so we have to be constantly aware and have good surveillance system and exchange information with people all over the world. It is most important at this moment for all of us to go on and fight this pandemic not only by making vaccines but also making therapeutics available for the people who are diseased. Prof. Iftner said while addressing concluding session of COMSTECH international workshop on viral diseases diagnostics.

Prof. Dr. Thomas Iftner from Institute for Medical Virology and Epidemiology of Viral Diseases, University of Tuebingen, Germany delivered concluding lecture on “existing strategies for vaccine development and combating novel viruses with special focus on COVID-19 pandemic” in which he talked in detail about the history of vaccines, development process, and benefits to the world. He described current vaccines that have been developed and are in the process of development around the world for COVID-19 pandemic.

In concluding remarks, Prof. Dr. M. Iqbal Choudhary, Coordinator General COMSTECH said that for capacity building, organizing such events are extremely important. He mentioned that when economies, systems and even countries failed to cope with the COVID pandemic, this was the science that worked and provided solutions to this problem faced by the humanity. Dr. Choudhary emphasized that research on viral diseases is extremely important and now it is impossible to hide knowledge because viral diseases does not recognize borders and it has become a global problem. He said that COMSTECH and ICCBS would help virologists to travel to work in labs around the world. Dr. Choudhary said that it is our responsibility to link institutions around the world for research.

COMSTECH International Workshop on “Fundamental Techniques in Viral Diseases Diagnostics” concluded on January 27, 2021. More than 300 virologists, scientists and students from around the OIC member states participated in this workshop. Thirteen national and international experts from Germany, China, Sweden and Pakistan delivered lectures on different aspects of viral diseases during the event. All lectures are available on COMSTECH Youtube channel.
Two-day online certificate course on “Basic Plant Tissue Culture Techniques” organized by COMSTECH in collaboration with International Center for Chemical and Biological Sciences (ICCBS), University of Karachi, and Pakistan Biotechnology Information Center (PABIC Karachi - Chapter), was inaugurated by Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH.

In his inaugural address Dr. Choudhary said that the field of plant tissue culture is extremely important with a broad range of applications. He said that this technology is although over 100 years old but in the last 30 years plant tissue culture has played an extremely important role in various fields of agriculture. He said that this technology helps in improving crop varieties, and to produce disease free plants. In fact, fundamental techniques/technologies used in plant tissue culture form the basis of many other disciplines including molecular biology, and regenerative medicine, he highlighted.

The founder of the modern agricultural biotechnology in Iran, Prof. Dr. Behzad Ghareyazie will train the participants of this course along with the Egyptian geneticist, Prof. Dr. Naagla Abdalla, head department of genetics, Cairo University, Cairo, and Pakistani agriculturist, Prof. Dr. Saifullah Khan, department of agriculture and agribusiness management, University of Karachi, Pakistan.

Over 200 researchers in the field of plant sciences are attending this training course from 20 countries online. The course will conclude on Feb. 27.

COMSTECH organized international webinar on “Thermodynamic systems in biology and physics” delivered by Prof. Dr. Utkir A. Rozikov, of V. I. Romanovskii Institute of Mathematics, Tashkent, Uzbekistan online.

Prof. Rozikov discussed thermodynamic system of biology and physics and defined the thermodynamic systems by discussing available mathematical models and giving examples of real world problems.

He talked about sex determination systems of species, and said that in some species of reptiles, including alligators, some turtles, and a few birds sex is determined by the temperature provided to the egg. He described that if you give same egg hot temperature it would produce male and the same egg will produce female against cooler temperature. This is achieved by hotter temperature being one sex and cooler temperature being the other.

Prof. Rozikov said temperature and time are two dynamical systems that bring changes in the system. He discussed some mathematical problems in describing the dynamical system and described mathematical models of population evolution operators.

This webinar was open to academicians, scientists, and general public. More than 100 people attended it online.

Rozikov is an internationally renowned expert in probability, mathematical physics and analysis, specializing in dynamical systems and statistical mechanics on graphs. He has published over 150 research papers in top journals. He has received many national and international prizes for his work.
COMSTECH & NTD Network Collaborate to Build Capacity Against Leishmaniasis

Neglected Tropical Diseases (NTDs) are a major health and economic burden on member states of Organisation of Islamic Cooperation (OIC). The control and elimination of NTDs require a scaled-up integration of global mass treatment programmes, along with new tools and technologies to tackle these diseases. COMSTECH, in collaboration with A Global Network for Neglected Tropical Diseases known as the NTD Network, has launched a virtual lecture series for researchers across the Muslim world and beyond.

The NTD Network, funded by Global Challenges Research Fund (GCRF) of UK Research and Innovation (UKRI), is a consortium of academic researchers from South America, Asia, and the UK, seeking new therapeutic solutions to Leishmaniasis and Chagas disease.

Both COMSTECH and the NTD Network aim to promote global scientific cooperation and build research capacity to find new and better therapeutic solutions for NTDs.

The first lecture of this series was delivered by Professor Jeremy Mottram, the NTD Network institutional lead for York University. He is a Professor of Pathogen Biology, York Biomedical Research Institute, University of York, United Kingdom.

Dr. Mottram said that, I am pleased to have this opportunity to share the work we are doing within our NTD network - a global network for neglected tropical diseases, and to have this opportunity to tell some of the COMSTECH members about the work that we do and hopefully to promote further interactions in future.

He said NTD Network is based in university of Durham, UK, and links researchers interested in neglected tropical diseases with four hubs one in the UK, Pakistan, India and a hub in South America. These four regional hubs allow a number of research institutes and research groups to come together to address some of the fundamental questions around early phase drug discovery. He said that we have a mixture of parasitologists, chemical biologists, structural biologists and some immunologists that are taking an interdisciplinary and a collaborative approach to seek new solutions.

Dr. Mottram informed that in the first phase of this project we are trying to identify molecular targets within the parasite that can be used in identifying new chemical entities that can be first phase of a drug discovery programme.

He mentioned that this disease identified in 1903, and no new registered drugs developed in last 20 years and the impact of discovery science is limited, however the prospects are promising. He informed that Leishmaniasis drugs is an issue, and there is a need for the development of new drugs.

He informed that one of the major ways in which understanding of parasite and its interaction with the hosts is going to change through the ability of CRISPR to edit genomes of the parasites. Either for example to understand the basic biology or to make attenuated live vaccines and conduct those types of experiments.

Prof. Dr. M. Iqbal Choudhary, Coordinator General COMSTECH welcomed the speaker and introduced him to the participants. More than 200 participants from OIC member states attended this lecture online.
Webinar on South Asia's Health Care Challenges

South Asia only spends 2 percent of GDP on healthcare, lagging behind any other region in the world. Current health expenditure is inappropriate to meet the current and future challenges of health in the region. To become more viable country in health sector, we must have state-of-the-art health education, healthcare professionals, and proper research with adequate infrastructure, said Dr. Mobashir Ahmed Bhatti, while addressing COMSTECH webinar on “South Asia’s Health Care Challenges” held online.

Dr. Bhatti said A combination of genetic, physiological, lifestyle, and environmental factors can cause non-communicable diseases. He said, cardiovascular disease, diabetes, cancer and chronic obstructive pulmonary disease causing disease burden in south Asia.

He said, shifts in leading risk factors like dietary habits, tobacco use and high blood pressure are causing these diseases. He mentioned that industrialization, westernization of lifestyles and aging are health influencing factors.

Dr. Bhatti emphasized regional specific research and individualized healthcare. He said, personalized medicine is an emerging practice of medicine that uses an individual's genetic profile to guide decisions made in regard to the prevention, diagnosis, and treatment of disease.

He said, that poorly controlled diabetes puts us at higher risk of certain infections, including some fungal ones.

He said that in Pakistan after 50 years of age, people start facing blood pressure issues. He suggested to improve the lifestyle and remove the causes of blood pressure which are not right food, oil and specifically the way we cook our foods. He recommended a committee of experts formed by the government with the mandate to ensure healthy food provision to the masses.

Dr. Mobashir Ahmed Bhatti is a medical doctor. He is founding president of Pakistan Association of Integrative Medicine and executive coaching lead for South Asian Academy of Physicians and Surgeons. He has worked in over a dozen countries setting up leadership, product, research and alliance teams. As a leadership and team development expert, now he is focused specially on health care sector and devoted his efforts to the need of forming an international team of professionals to work as a research and development group in compiling evidence-based empirical data that irrefutably establishes and documents global health issues.

This webinar was open to academicians, scientists, and general public from all the member OIC states. More than one hundred people attended this webinar online.
**Webinar on Ovarian Cancer**

COMSTECH webinar on “In search of improving outcomes across the continuum of ovarian cancer” delivered online by Dr. Ikram Burney, Senior Consultant in Medical Oncology at the Sultan Qaboos University Hospital, Muscat, Oman, and a Visiting Faculty at the Panjwani Center for Molecular Medicine and Drug Research, International Center for Chemical and Biological Sciences, Karachi University, Pakistan on Friday evening.

Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH welcomed and introduced the speaker. He said, one thing you really find is two different streams of health care, one in which basic scientists working on understanding diseases at a molecular level with no understanding of clinical outcome and on the other side you will find lots of clinicians with so much of rich experience of treating people with little understanding of ideology at molecular level. This is exactly what is important and where Dr. Ikram Burney impress me a lot. He is a clinician par excellence and a researcher of a very high quality and caliber.

In his presentation, Dr. Burney discussed different areas across the continuum of ovarian cancer management, from early detection to overcoming resistance to cisplatin treatment. He presented data on markers of early diagnosis, such as transcription factor E2F5, FAT tumor suppressing homolog 4 (FAT4) gene, SOC2 gene. Dr. Burney also discussed the role of naturally occurring compounds, such as Frankincense extract, Acetyl-keto-beta boswellic acid (AKBA), and natural marine products such as Hymenialdisine, Gallic acid and Malformin A1.

Dr. Ikram Burney graduated from Liaquat Medical College, University of Sindh, Pakistan and received his training in medicine and medical oncology at the Hammersmith Hospital London, the Aga Khan University Hospital, Karachi, and Southampton University Hospitals Trust in the UK. His areas of clinical and research interest include lymphoproliferative disorders, gynecological malignancies, sarcoma, supportive care in oncology, and medical education.
Webinar on Polypill and Life Style of Primary Prevention of Cardiovascular Disease

Prof. Reza proposed a fixed-dose combination therapy - polypill strategy - as an approach to reduce the burden of cardiovascular disease, especially in low-income and middle-income countries. It is a low cost early and sustainable intervention needed to prevent cardiovascular disease burden, he said while addressing COMSTECH webinar on “Polypill and life style of primary prevention of cardiovascular disease” online. Prof. Dr. Reza Malekzadeh is a Professor of medicine, Director digestive disease research institute, Tehran university of medical sciences, Iran.

He said cardiovascular diseases are major causes of mortality worldwide. Over 60% of the global burden of coronary heart diseases is in low and middle income countries. He said that people from disadvantaged background are at greater risk of heart attack and stroke than people with more affluent backgrounds.

Prof. Reza suggested to change your lifestyle by stopping smoking, increasing physical activity, decreasing weight and eating healthier foods to prevent cardiovascular disease.

He said that high blood pressure, dietary habits, high LDL cholesterol, high body mass index, tobacco, high fasting glucose, kidney dysfunction, alcohol, low physical activity, air pollution, non-optimal temperature and other environmental risks are the risk factors for cardiovascular disease.

To give the remedy he suggested to the governments of low and middle income countries, to screen everyone at age 35-40 for risk factors at fixed intervals, treat risk factors when incidentally found and check everyone for risk factors at regular intervals. He said that stratify the population by age, clinical cardiovascular disease risk score, heart calcium risk score and provide intervention accordingly.

He said a fixed-dose combination therapy—the so-called polypill—was proposed more than 15 years ago as an acceptable and cost-saving approach to reduce cardiovascular disease risk. Since then, different formulations of polypill have been used in several studies worldwide, he mentioned.
Webinar on Big Data Analytics

COMSTECH organized international webinar on Big Data Analytics: A Lucrative Tool for OIC. Prof. Dr. S. Ejaz Ahmed from faculty of Math and Science, Brock University, Canada delivered this webinar.

He said, the field of big data is at top in emerging technologies for many years. He talked about descriptive, predictive and prescriptive analytics. Dr. Ejaz said, if you want to become a data scientist you have to learn descriptive, diagnostic, predictive and prescriptive data skills. Extracting data from big data called data science, he described.

Dr. Ejaz said, as data science jargon has begun to flood into government, businesses, and social circles, navigating statistical information and tools can be an arduous and daunting task for policy makers. The rapid growth in the size and scope of data sets in a variety of disciplines have naturally led to the usage of the term, Big Data.

He said that the analysis of data is important in multiple research fields such as engineering, social media networks, bioinformatics, personalized medicine, environment, neuroscience, astronomy, nanoscience, and financial studies among others.

He pointed out that there are many challenging questions. For example, how to acquire, manage, process, analyze, and make sense of big data? Clearly, big data is the future of research in a host of disciplines, and trans-disciplinary programs are required to develop the skills of data science.

His presentation guided the participants from the basics of big data analytics into a deeper discussion of how to handle unconventionally large data matrices in a multitude of applications.

Dr. Ejaz said that the bias in the data collection and modelling process yields misleading results. He said, statistical bias affects analytical modeling. Dr. Ejaz suggested that it is important for policymakers and business professionals to understand the analytics done behind the scenes; which allows them to communicate results to key stakeholders with confidence.

Dr. S. Ejaz Ahmed is professor and Dean of the Faculty of Mathematics and Science, Brock University, Canada. He is an internationally known scholar, educator, and an accomplished researcher.
Lecture on Drug Discovery for Leishmaniasis

Lecture on protozoan drug discovery: Old drugs, new targets and mining for novelty -delivered online by Professor Paul W. Denny, Professor in Biosciences Department, University of Durham, United Kingdom. This was a second lecture of COMSTECH-NTD Network joint lecture series.

Prof. Paul said that it is very important initiative to engage with COMSTECH, it is very important to reach out beyond the consortium to other countries and individuals who are interested in and suffering burden of neglected tropical diseases, which we are trying to mitigate.

He said, our primary aim is to identify new molecular targets which are essential for the parasite and can be exploited for drug therapy by March 2022.

He mentioned that the neglected tropical diseases (NTDs) are a major health and economic burden in member states of Organisation of Islamic Cooperation. He informed that the control and elimination of NTDs requires both a scaled-up and integrated global mass treatment programmes, along with new tools and technologies to tackle these diseases.

COMSTECH, in collaboration with NTD Network - Global Network for Neglected Tropical Diseases, has launched a virtual lecture series for researchers across the Muslim world. This programme offers opportunities to enhance knowledge, skills and connections of researchers, to help grow our shared global capacity to tackle these rapidly growing NTDs.

The NTD Network, funded by UKRI’s Global Challenges Research Fund (GCRF), is a consortium of academic researchers from South America, Asia, and the UK, seeking new therapeutic solutions to Leishmaniasis and Chagas diseases.

Both COMSTECH and NTD Network aim to promote global scientific cooperation and build research capacity to find new and better therapeutic solutions for NTDs.

This webinar was open to academics, scientists and the general public from all OIC member states. More than 190 people joint this lecture online.
International Webinar on Academic Collaboration, Science Diplomacy and OIC

International webinar on 'Academic Collaboration, Science Diplomacy and OIC: Challenges and Opportunities' organized jointly by COMSTECH and Department of International Relations, Islamia University Bahawalpur on March 22, 2021.

The objective of the event was to bring stakeholders from academic management and diplomatic circles together to address bottlenecks and create opportunities for international academic collaboration through science diplomacy.

COMSTECH set up Consortium of Excellence (CCoE) comprising of leading science, technology, and engineering academic and research institutions of Pakistan, under the “Science Diplomacy Initiative” of the Ministry of Foreign Affairs (MoFA). The Islamia University of Bahawalpur being the founding member of the CCoE, through its department of international relations offered to jointly organize this international webinar.

In his message, the chief guest, Dr. Arshad Mahmood, Federal Secretary, MoST appreciated the establishment of COMSTECH Consortium of Excellence (CCoE) and the Islamia University Bahaualpur, being the leading higher education institution of Southern Punjab, the founding member of the CCoE.

Dr. Arshad said that it is our collective responsibility to collaborate and join hands for addressing challenges effectively, particularly in the current COVID-19 situation.

He said that academic institutions have a vital role to play in addressing various problems being faced by the Muslim Ummah. There is dire need to create collaborations and partnerships among the higher education institutions of the Islamic countries so that they may benefit from one another's experience, expertise and knowledge. He assured utmost cooperation of Ministry of Science and Technology for CCoE and other collaborative initiatives of COMSTECH.

The Vice Chancellor IUB, Engr. Prof. Dr. Athar Mahboob, in his introductory remarks highlighted the challenges faced by the Muslim world. He stressed the need of mutual cooperation and joint research projects. He reminded the glorious past of Ummah and stressed to capture that again by establishing diplomatic ties through science diplomacy.

Coordinator General COMSTECH Prof. Dr. M. Iqbal Choudhary, stressed the need of developing linkages in his welcome address. Dr. Choudhary mentioned that there are some good research institutions in the OIC member states. He pointed out that there is a deep south and deep north in the OIC member states. He emphasized the development of academic collaboration and funding mechanism for joint science projects.

Chairman Pakistan Science Foundation Prof. Dr. Shahid Mahmood Baig said in his keynote address that everything can't be made available under one roof for science research. There are many good institutions, research groups and labs working in OIC countries. We just need to identify and collaborate with them. Dr. Baig offered full support from his institution both technically and financially to joint activities.

Dr. Muhammad Ijaz Latif, Chairman, Dept. of Int'l Relations concluded the session by vote of thanks.

Dr. Iqbal  Dr. Arshad  Dr. Shahid  Dr. Athar
Webinar on Drug Discovery

COMSTECH organized a webinar on “Advanced methods for structure determination of proteins and their complexes: drug discovery for motor neuron disease to COVID-19”, online.

Dr. Samar Hasnain, Molecular Biophysicist, delivered this webinar. He talked about advanced methods for determining structures of proteins and their complexes. He gave a comprehensive overview of protein structure determination, steps of producing recombinant protein and protein purification. Dr. Hasnain discussed crystallization of protein and its role in the drug discovery and development. He informed that one drug to treat COVID patients is under trial, and it will complete by summer 2022. He gave a comprehensive account of the history of crystallography, current developments and future prospects.

Dr. Christian Betzel, University of Hamburg, introduced the speaker to the audience, whereas Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH gave the background and talked on the importance of the webinar.

Samar Hasnain, PhD in experimental Physics, from University of Manchester is a structural biologist with over 45 years of synchrotron radiation experience. Dr. Hasnain has pioneered an approach to define the structures of metalloproteins: now widely used by the structural biology community.
COMSTECH Yearbook 2021

Webinar on Turbulent Flows in Classical and Quantum Fluids

COMSTECH organized a webinar on “A Perspective of Turbulent Flows in Classical and Quantum Fluids” delivered by Prof. Dr. Joseph Niemela, Research Scientist Emeritus and Consultant, at The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy online.

Prof. Niemela said that science is a universal language. Basic sciences are very important. There is an international year announced for basic sciences for sustainable development. He said we really need basic sciences these are really global for all nations and people.

Prof. Dr. Joseph Niemela outlined some of the challenges associated with the study of turbulent flows, an enduring unsolved problem in classical physics. He said, turbulence exists from microscopic to astrophysical scales, and also in quantum fluids albeit subject to severe restrictions imposed by the quantization of circulation, as first postulated by Onsager and Feynman. The talk was intended to be accessible to a non-specialized audience as well.

Coordinator General COMSTECH said in his introductory remarks that we are in search of ways to promote basic sciences in OIC states. He said one impediment is to develop real science is that students have very weak foundation to do so. Prof. Choudhary mentioned that International Centre for Theoretical Physics is a one example which have played a very important role in the development of physics in the world. He said we want to make science and technology part of the culture.

The webinar was attended by students, researchers, young scientists, and academicians from the OIC member states online as well as in-person at COMSTECH secretariat.

Prof. Niemela is a Research Scientist Emeritus and Consultant at the Abdus Salam International Centre for Theoretical Physics, a UNESCO Category 1 Institute, where he headed its Office of External Activities, Training and Research in Italian Laboratories (TRIL) program, and Applied Physics group.

He is presently Chair-elect of the Forum on International Physics of the American Physical Society (APS), Secretary of Commission 13 (Physics for Development), of the International Union of Pure and Applied Physics (IUPAP), and Chair of the Physics for Development Group of the European Physical Society (EPS). He is a Fellow of the American Physical Society (APS) and is a Foreign Fellow of the Pakistan Academy of Sciences (PAS). He is a recipient of the Dwight Nicholson Medal from the APS, the Galileo Galilei medal of the Italian Physical Society, and the SPIE Educator of the Year award.
Webinar on Escherichia Coli as a Model Organism

COMSTECH organized webinar on “Escherichia coli as a Model Organism” conducted by Prof. Dr. Ute Römling, Dept. of Microbiology, Tumor and Cell Biology, Karolinska Institutet, Stockholm, Sweden.

Dr. Römling said that I feel very honored to give this COMSTECH lecture. She said that Escherichia coli has been studied for long time and still we know very little about this bacterial specie. Dr. Römling informed that antimicrobial resistance among bacteria is increasing with globally disseminated clones. She said hospital-acquired infections in the clinics in susceptible patients is also on the rise.

She said that older population require more medical care, and diabetic individuals are prone to infections. She said that high blood glucose levels lead to more severe infections. Dr. Römling said that Escherichia coli is a major cause of human intestinal and extra-intestinal infections.

Coordinator General COMSTECH, Prof. Dr. M. Iqbal Choudhary welcomed the audience and introduced the speaker. He said that Prof. Dr. Römling is a scientist of high caliber. She is connected with many young scientists in the developing world and helping them in their career. Prof. Choudhary said that she is truly an ambassador of science, development and peace.

Prof. Dr. Ute Römling is Professor of Medical Microbial Physiology at the world famous Karolinska Institutet in Stockholm, Sweden. Her research focuses on the molecular mechanisms of biofilm formation mainly in Enterobacteria such as Salmonella typhimurium and persistence mechanisms of Pseudomonas aeruginosa world-wide spread clone C.

Webinar on Use of Nanomaterials in Medicine

COMSTECH has started a lecture series program on “Emerging Technologies”. This program is an effort to help upcoming scientists in identifying key areas of scientific research which are contributing immensely in the well-being of the humankind.

The first lecture of this series was given by Dr. Abdolreza Simchi of Sharif University of Technology, Iran, online on the application of nanomaterials in medicine. Dr. Simchi said that there are many applications of nanomaterials along with the application in the field of medicine.

Dr. Simchi talked about the basics of nanomaterials and their use. He said that today nanomaterials are used for drug delivery, therapy, bio-imaging, regenerative medicine, bio-sensing and bioinformatics. He elaborated each topic in detail and mentioned experiments conducted by his team.

Dr. Simchi concluded his talk by saying that there is a plenty of room for development of nanomaterials for biomedical applications.

Dr. Abdolreza Simchi is a distinguished Professor of Engineering Science and Materials Engineering and a fellow of the Alexander von Humboldt Foundation Bonn, Germany. He is among the top 1% highly-cited materials scientists on Web of Science, and ranked among the top 150 scientists worldwide in “Emerging and Strategic Technologies Materials” identified by Sandford University in 2021.
Visceral Leishmaniasis (VL) is a neglected tropical disease accounting for second highest mortality worldwide, with an estimated 50,000 to 90,000 new cases annually. India alone accounts for 50% of the global VL cases. Considering the growing drug-related toxicities, parasite resistance, HIV-co-infection, the development of an effective vaccine for Leishmaniasis remains a global priority, said Dr. Nahid Ali addressing COMSTECH webinar.

She said, a clear understanding of host immunology and role of T cells in long-lasting memory generation is extremely essential to control hard-to-treat infections like VL. Although human VL is characterized by high Leishmania-specific antibodies, inadequate, depressed CMI response and lack of protective cytokines are hallmarks of disease progression, she informed.

Dr. Nahid said that her clinical studies showed that successful cure to this disease is possible. The life-long immunity against re-infection and relatively simple lifecycle of Leishmania parasites show feasibility of vaccine development against this disease, she mentioned. She suggested continuous efforts to develop DNA and protein-based vaccine candidates to confer desired T cells response in preclinical models.

Prof. Dr. M. Iqbal Choudhary introduced the speaker and said that it is really a very challenging work when we try to solve the problem of disease of interdisciplinary nature.

Prof. Dr. Syed Khurshid Hasanain, Advisor COMSTECH, introduced the speaker and said that the research paper publication has key role in the career development of academics.
Lecture on The Role of Amino Acids in the Bioenergetics of Trypanosoma Cruzi

COMSTECH organized a lecture on “The Role of Amino Acids in the Bioenergetics of Trypanosoma Cruzi” delivered by Prof. Dr. Ariel M. Silber, Department of Parasitology, University of São Paulo, online.

Prof. Silber talked about Trypanosoma cruzi, and its life cycle and metabolism. He unfolded the very basic fundamentals of mitochondria and its properties as battery. He discussed the contribution of three amino acids: Proline, Histidine, and Alanine. Prof. Silber concluded his talk on answering the question of how we can obtain some numbers of mitochondrial bioenergetics.

Coordinator General COMSTECH, Prof. Dr. M. Iqbal Choudhary introduced the speaker to the audience. He said OIC member states are spread over four continents from north America to Africa, Middle East and Central and South Asia. Prof. Choudhary said that many of these countries are least developed, these are tropical countries and are facing host of problems like illiteracy, lack of medical supplies, healthcare research and huge disease burden. He said, this is the reason that we started this program in collaboration with NTD Network to develop capacity of scientists in this region through the lectures of top scientists of the world.

COMSTECH, in collaboration with A Global Network for Neglected Tropical Diseases (NTD Network), has launched a virtual lecture series for researchers across the Muslim world. This programme draws upon expertise from both networks, and offers opportunities to gain or enhance researcher’s knowledge, skills and connections, to help grow shared global capacity to tackle these rapidly growing NTDs.

The NTD Network, funded by UKRI’s Global Challenges Research Fund (GCRF), is a consortium of academic researchers from South America, Asia, and the UK, seeking new therapeutic solutions to Leishmaniasis and Chagas disease. Both COMSTECH and the NTD Network aim to promote global scientific cooperation and build research capacity to find new and better therapeutic solutions for NTDs. This webinar was attended by the academics, scientists and the general public from all OIC member states.
International Webinar on “A Way Forward to Food Quality and Food Safety”

Insufficient intake of balanced diet rich in proteins, vitamins and micronutrients (Fe, Zn), folates, and unaffordability/inaccessibility to food rich in nutrition, along with adulteration, lack of education about healthy food and imbalanced food habits are main reasons for stunted growth in children and due to Iron deficiency anemia in women, which is increasing at alarming rate, said National and International experts while speaking at International Webinar on “A Way Forward to Food Quality and Food Safety”, held on online.

More than 1000 participants attended the event virtually. The event was organized by University of Agriculture, Faisalabad and Pakistan Agricultural Scientists Forum (PAS Forum) in collaboration with, Federation of Pakistan Chambers of Commerce & Industries (FPCCI), National Alliance for Safe Food (NAFS), UK-Pakistan Science and Innovation Global Network (UPSIGN), COMSTECH and Young Professionals for Agricultural Development (YPARD).

Mian Abdul Rasheed from FPCCI inaugurated the event by offering full support from the industry to work with academia to address the food quality crisis in Pakistan through innovations. Prof. Khurshid Hasanain, Advisor COMSTECH emphasized the need for collaboration among Muslim world to tackle the food quality crises and learn from each other. Dr. Omer Mukhtar from PCSIR Labs highlighted the nutritional status of Pakistan population indicating severe issue of micronutrient malnutrition in Pakistan. Food fortification, supplementation and biofortification are some of solutions to address the challenges, highlighted by International speakers, Professor Nicola Lowe from UCLAN University, Dr. Jalil Miyan from University of Manchester and Dr. Khalid Mahmood, UPSIN/Rothamsted Research.

Access to safe food free from pathogens, chemicals, pesticide residues is another challenge which need to be addressed through transformation in food systems especially food value chain, and promoting the use of fair & clearly written food labels. Pakistan faces the challenge of access to cold chain that add another layer affecting the shelf life of perishable food products that includes milk, meat and fresh vegetables, noted the experts.

An important highlight of the webinar panel discussion was how farmers and consumers could take advantage of the low-cost technologies to enhance the shelf life and quality of the food products. There is need to create a culture of responsibility on maintaining the minimum food standards from farm to fork. The consumer awareness could play important role to implement such change in the food system, discussed the panelists.

The panel discussion was facilitated by Dr. Shinawar Ali, from Punjab University and chaired by Dr. Khalid Mahmood along with panelist Prof. Tahir Zahoor, Dr. Muhammad Riaz and Muhammad Awais Khan from National Alliance for Food Safe also emphasized the need for combining research, industry and policy making to deliver safe food to consumers.

There is need to work together including private sector under the guideline provided by national and international scientists on innovative technologies and provide awareness to farmers as well as consumers, said, Dr. Abdul Wakeel, President Pakistan Agricultural Scientists Forum.

Professor Anas Sarwar Qureshi, Vice Chancellor Agri-Varsity who was also the chief guest of the event, stressed that biofortification seems to be very sustainable strategy to address the micronutrient malnutrition in developing countries with predominant cereal based diet. Participants applauded the webinar that such kind of forum should be arranged with maximum interaction of researchers, stakeholders and policy people to discuss the challenges and solutions.
International Seminar on Challenges for Healthcare in Pandemics

Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH mentioned in his welcome address that our partnership with IEEE being the largest professional organization in the world has been extremely fruitful and we have organized a lot of joint events in the past. COMSTECH is Pakistan's strongest intergovernmental organization with the aim to enhance science and technology cooperation in OIC member states. Int'l Seminar on “Challenges for the Healthcare in Pandemics” held on March 31, 2021, and organized by COMSTECH and IEEE Educational Activities Karachi Section.

The year 2020 is remarkable in every definition of the world. I have seen over 3 million deaths, over 300 million infections and over $15 trillion loss to economies all over the world caused by this pandemic. He quoted Malinda Gates that any calamity of this magnitude can magnify the calamities that already exist. The difference between haves and have nots have increased. Systemic crisis increased, mentioned Dr. Choudhary.

He appreciated by saying that what science has done in last one year is truly remarkable. Science and technology exceeded the global expectations. Dr. Choudhary mentioned that when everything has failed such that global economic cooperation, science and technology delivered. We have seen the biological understanding, development of diagnostics and vaccines have happened. Technology has fulfilled all the promises which it has made to humanity at large, he said. This is not last pandemic, we need to prepare and be resilient for the next health challenges, he informed.

The pandemic opens new dimensions of thinking in every walk of life, specially our health care industry which now requires new ways of working, new methods of communication finding new solutions to problems and try to innovate solutions. Digital health in the current era is more than just online virtual visits and distant patent monitoring. COVID19 pandemic primarily redesigned the health care system and highlighted the important of gap that can be problematic in the future, Dr. Muhammad Sadiq Ali Khan said in opening remarks.
International Workshop on AI & Machine Learning in Life Sciences

COMSTECH in collaboration with International Center for Chemical and Biological Sciences, Karachi organized an International Workshop on “Artificial Intelligence & Machine Learning in Life Sciences” on March 25, 2021.

COMSTECH as host institution represents 57 member states, it is a second largest block of countries after United Nations. Countries situated in Africa, Asia and some part of Europe and South America are part of COMSTECH, said Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH in his welcome address.

Dr. Choudhary said that Artificial Intelligence (AI) is extremely important, it has been used in COVID19 treatment, patient care, tracking and tracing of positive patients, and most importantly it was used in analysis of big data. He mentioned that science was able to perform because of enabling technologies and AI is certainly one of the most important technologies.

Dr. Choudhary informed that we are in process of establishing a research center particularly focused on the application of AI in health.

Dr. Saurabh Sinha, of University of Illinois at Urbana-Champaign addressed the workshop and talked about cyberinfrastructure foundations and challenges, big data and use of AI and Machine Learning (ML) and shared his own experiences. He concluded that ML and AI will play a key role in analysis, given the high dimensionality of data, large volumes of training data, and inter-relationships among different components of the data.

Dr. Ghazna Khalid, Advisor to Prime Minister on health, was the guest of honor of the event. She said that AI/ML can help doctors make better clinical decisions, replace human judgment in some areas of healthcare. It can help in diagnostic processes by analyzing data generated from patients.

Dr. Ghazna informed that we use big data set to individualize patient care, we can know the susceptibility to not only the cancer but also the other non-communicable diseases. We will be able to know and predict from our genetic structure the susceptibility of genes. This is why AI and ML is so important to patient care.

She mentioned that genome on chip will make possible the tailor-made patient care possible in future and then be the next revolution in life sciences. The future of doctors is in AI and ML. We need to intertwine it into patient care, to provide better quality and make informed decisions, and understand disease processes.

Dr. Shahid Mehmood, Chairman and CEO of Interactive Group, the chief guest of the workshop, informed that world population is moving to 8.8 to 10.4 billion by 2100, connectivity and geographical shift is taking place as well.

Dr. Shahid said that AI and ML are tools that are fast moving, because the processes, storages, connectivity is now doubling every 12 to 18 months. When we have technology moving at that pace and we have population shift, the analyses specially for future disease monitoring and future control mechanisms become complex.

Dr. Shahid said that population shift is happening, connectivity, and geographical footprint are changing. When geographical footprint changes it also have impact on various communal diseases and whole stuff that we are trying to study with AI and ML as a tool because manually it will become impossible, he pointed out.

He suggested that first thing we need to do in Pakistan is to plan, how and where to store all of these data? How to generate this data in a digital format? How to manage the big data? How to learn all the tools available around the world and how to apply them?

He emphasized to think about, how will we mange data. What will be the cyber sovereignty, authenticity, management and rules that apply to the data that would be generated by all the studies. This becomes the new challenge, he indicated. How do we streamline the data in a manner that can translate into something that can ethically be managed as the future course of action? This is the real challenge not only for Pakistan but also for all OIC states.

Dr. Waseem Haider of COMSATS gave opening remarks, and four lectures were delivered by distinguished speakers in the technical sessions of the workshop.
International Workshop on Nanomedicine

COMSTECH organized international workshop on “nanomedicine – development and challenges”. The three-day long workshop was inaugurated on March 15, 2021 at COMSTECH Auditorium, Islamabad.

The workshop was delivered by 15 leading scientists from UK, USA, Germany, France, Switzerland, Saudi Arabia, Malaysia and Pakistan.

More than 100 academic and research institutions from Pakistan, other OIC member states and from across the world participated both physically and virtually in this international event.

Apart from more than 100 young scholars who participated in-person, more than 200 international participants joined this event virtually from Egypt, UAE, Mauritius, Turkey, Azerbaijan, Cameroon, Niger, Iraq, Bangladesh, UK, China, Kyrgyzstan, Hong Kong and Saudi Arabia.

The workshop consisted upon four technical thematic sessions. The themes of the sessions were functional materials for disease sensing and treatment, functional nanoparticles for biomedical applications, nanotechnology for diagnostics and clinical applications, and nano-antimicrobials. This three-day event was scheduled with lectures by experts, each lecture was of one-hour duration with question answer session.

It was concluded by the speakers that the nanotechnology offers new prospects of developing affordable, quick and scalable solutions in diagnoses and treatment of COVID-19 and other diseases and manufacturing of personal protective equipment.
IAS-COMSTECH International Conference on Biodiversity to Prepare for CBD Meeting

Under the patronage of His Royal Highness Prince El Hassan bin Talal, founding patron of the Islamic World Academy of Science (IAS), IAS and COMSTECH organized biodiversity conference on 1st April 2021. The purpose of the conference was to share information in preparation for the fifteenth meeting of the parties to the Convention on Biological Diversity (CBD) which will be held in 2021, in Kunming, China.

Prof. Dr. M. Iqbal Choudhary, Coordinator General COMSTECH delivered welcome address in which he said that this event is focused on bringing various stakeholders on board in the OIC region for a unified view at the int'l biodiversity conference, scheduled to be held in 2021 in Kunming, China. He appreciated IAS for its achievements and wished success for this premier organization of top scientists of the Muslim world, founded by COMSTECH.

Dr. Choudhary said that the lives of our evolutionary siblings depends on conserving biodiversity. He emphasized the need to respect all creations of Allah SWT, to live and prosper. He highlighted that every living being is interdependent on each other, loss of life is a loss of diversity. He lamented that biodiversity is dropping everywhere at an alarming pace and the impact of biodiversity loss has already crossed nature's limits of resilience.

He informed that within the OIC region, biodiversity is threatened from fast expanding limits of northern deserts in sub-Saharan and tropical Africa and Middle East as well as West Africa. Whereas in the East, sea level rise is impeding the limits of terrestrial biosphere of Island and deltaic countries. Glaciers are melting in central Asia, and in northern Afghanistan and Pakistan. All these factors are causing tremendous loss of biodiversity and thus loss of ecosystem services.

Dr. Choudhary said that the human animal interactions due to deforestation, urbanization, increasing footprint human activities, exotic eating habits are the key causes of zoonotic diseases, including the current COVID19 pandemic.

The Coordinator General COMSTECH invited His Royal Highness to spare time for the launching of COMSTECH-IAS joint programs in near future.
Advanced Training on Establishment of Halal Products Testing Lab

COMSTECH organized a 3-day advanced training course on “how to establish halal products testing laboratory”, in collaboration with International Center for Chemical and Biological Sciences (ICCBS) Karachi, and Pakistan National Accreditation Council (PNAC) during June 8 – 10, 2021, at COMSTECH Secretariat, Islamabad.

Federal Minister for Science & Technology, Mr. Shibli Faraz, graced the occasion as the chief guest and Mr. İlhan ÖVÜT, Secretary General, The Standards and Metrology Institute for Islamic Countries (SMIIC), Turkey, addressed the inaugural session.

According to the global Islamic finance report, the global halal industry is estimated to be worth around USD 2.3 trillion growing at an estimated annual rate of 20%, the industry is valued at about USD 560 billion a year.

In view of the diversity of several products, including processed food and other items of daily use in the present day, authentication and confirmation of their Halal nature is a growing challenge globally. Beside the environmental contaminants, both biological and chemical, addition of non-halal ingredients, which is prohibited for Muslims, is a matter of concern. In recent years, awareness about Halal food and other products has increased due to the cross contamination of several industrial products in our daily life. However, with increasing globalization, many Islamic countries import these products or ingredients from places where Islamic injunctions are not observed. It is therefore, imperative for the Muslim countries to establish Halal testing laboratories which will ensure the Halal status of the consumer products.

The objectives of the training are to impart knowledge on how to establish a research and development laboratory for the investigation / analysis of non-halal ingredients in food, cosmetics and pharmaceuticals by providing hands-on training on instruments involved in non-halal ingredients testing. To explain the procedure for the testing of most common non-halal ingredients such as detection of alcohol, pork meet, and pork fat (lard) and genetically modified organisms (GMOs), along with learning the procedure for the laboratory accreditation for ISO 17025 and OIC/SMIIC 35:2020, and to have understanding of how to successfully participate in international proficiency testing.

The course is designed for scientists and research scholars and technicians from OIC member states, involved in food testing and research to participate and acquire state-of-the-art knowledge to establish halal products testing laboratories in their countries.

International Workshop on Tropical Medicine and Natural Product

Indonesian Institute of Science (LIPI) in collaboration with COMSTECH is organizing an online international workshop on “Tropical medicine and natural products” on Wednesday, 2nd June 2021.

This workshop is divided into 2 sessions to discuss biodiversity exploration for traditional medicine and natural products, and natural products and industrial applications. Furthermore, it will provide potential opportunity of collaboration between OIC member states to conduct research related to tropical medicines and natural products for the treatment of communicable and non-communicable diseases.

Natural products from plants, marine organisms, and microorganisms, are the richest source of drug candidates. Currently over 40% of clinically used drugs have natural origin. Nature is the sustainable source of biologically active molecules, and recent developments in chromatography and spectroscopic techniques made it possible to fully utilize their potential.

The aim of this workshop is to identify and explore the biodiversity potential of traditional medicine and natural product in health and disease management as well as to discuss most recent developments in this field, and to foster productive collaboration between the researchers in OIC member states.

This workshop is open for public, along with researchers, academia, related ministries/Institutions, universities, and media from OIC member state.
Training on Clinical Trials for Vaccine Development

COMSTECH in collaboration with Drug Regulatory Authority of Pakistan (DRAP) and International Center for Chemical and Biological Sciences (ICCBS), Karachi organized one-day hybrid training on “collaboration among OIC member states for promotion of research culture in medicines and vaccines through strengthening and upgrading the clinical trials”.

The inaugural session was chaired by Maj. Gen. Aamer Ikram, Executive Director, National Institute of Health, Islamabad. Dr. Abdur Rashid, Director, Division of Pharmacy Services, DRAP delivered the welcome address.

Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH said that COMSTECH promotes soft image of Pakistan through its programmes in OIC member states. While discussing COMSTECH’s latest initiatives he mentioned health and agriculture programmes started by COMSTECH for African member states in collaboration with Islamic Development Bank and Al-Shifa Eye Trust. He said that COMSTECH has established consortium of excellence comprising best universities from OIC member states. He informed that COMSTECH has started scholarship scheme in collaboration with the member institutions of COMSTECH consortium of excellence. He said that capacity building for clinical trials is most important, because without clinical trials no vaccine or medicine can be developed.

In his inaugural address, the Executive Director, NIH, said all challenges bring opportunities along with them as well. There is a need to identify them and get benefit. He said it is all about joining hands and exerting collective effort to meet the challenges, and appreciated the contribution of all national institutions and individual scientists against the challenges raised by the COVID pandemic. He informed that we conducted first time phase III clinical trials in which 80,000 people participated, and the output was very successful. He said that we need to enhance capacity for vaccine development, and we are going to establish a specialized center for vaccine development. He appreciated the contribution and role of DRAP.

Director, DRAP, highlighted the role and contribution of the Authority and appreciated the organization of this event and recommended to have such capacity building joint events in future.

3-day Training Course on How to Establish Halal Testing Laboratory

By our conviction, Islam is a way of life. Islam sets food standards for humanity. Corruption is not Halal, Halal means doing things in lawful manner, said Mr. Shibli Faraz, Minister for Science and Technology while addressing 3-day COMSTECH training course on “How to establish Halal testing laboratory”.

He said rather focusing on going international, focus on ensuring healthy food quality. Labs should have capacity to determine Halal and Haram with the focus on complete food value chain. The Minister encouraged all Halal industry related institutions to develop mechanism for increasing capacities and advised that universities should be part of this as well.

Mr. Faraz highlighted the way forward for research by mentioning that there is a huge gap between research done in the past in Pakistan and its application. He emphasized that research should bring benefit to the people of Pakistan and the entire humanity. He said that research should yield to patent and then be commercialized.

Prof. Dr. Iqbal Choudhary, Coordinator General COMSTECH said that Halal accreditation and certification is a niche in which we can achieve excellence. He said that Halal business is growing over 20% and there are no major Halal certification bodies in Muslim countries. Dr. Choudhary said that we at COMSTECH are focused on science based commercialization and developing capacity in OIC member states focusing on the application of science research output.

Secretary General, The Standards and Metrology Institute for Islamic Countries (SMIIC), Turkey, Mr. İhsan ÖVÜT, said that we need to develop common standards with the commitment to practice them to compete internationally.

The inaugural session was addressed by Ms. Ismat Gul Khattak, Director General, Pakistan National Accreditation Council, Mr. Akhtar A. Bughio, Director General, Pakistan Halal Authority, and Prof. Dr. Syed Ghulam Musharraf, Professor, Dr. Panjwani Center for Molecular Medicine and Drug Research, ICCBS, Karachi.
Recent Developments in Drug Discovery and Medicinal Chemistry

A 2-day online meeting on Recent Developments in Drug Discovery and Medicinal Chemistry organized by COMSTECH in collaboration with H.E.J. Research Institute of Chemistry, and International Center for Chemical and Biological Sciences, University of Karachi, Karachi.

The event consisted upon eleven hour long lectures that were given by experts from USA, China, Turkey and Pakistan on recent development of drug discovery and medicinal chemistry.

Prof. Dr. M. Iqbal Choudhary, Coordinator General COMSTECH said in his inaugural address that this event is a continuation of various activities of COMSTECH that has been conducted for last one and half year. Prof. Choudhary said that capacity building is a very important aspect and we need to develop it to absorb technologies to use them.

He said medicinal chemistry has been the very important subject throughout the history, it started from development of drugs from natural products. It was initially developed as a tool for generating tremendous quantities of chemical space, expanding it for high throughput screening, and combinatorial chemistry to use with new space that medicinal chemistry has generated.

Prof. Choudhary mentioned that medicinal chemistry has actually moved forward and acquired a new shape and magnitude. It has emerged as multidisciplinary science, and now we understand many diseases at molecular level and the molecular target has become the main emphasis of medicine. Medicinal chemists now look into the drug targets for different diseases and start designing molecules for them.

He said today medicinal chemistry is based on target, and designing structures which fits well with molecular drug target and it has given medicinal chemistry a new phase and rationale.

Prof. Choudhary informed that according to World Health Organization there are 650 drugs in the pipeline of development, within a year or two medicinal chemists will be able to architect new entities that could treat COVID19, which I feel would be a major solution to COVID19, he hoped.

Training for OIC States to Achieve Self-reliance in Vaccine and Medicine

COMSTECH organized a day long training to promote “Collaboration among OIC member countries for Promotion of Research Culture in Medicine and Vaccine Development through Strengthening and Upgrading the Clinical Trials” on 3rd June 2021 at COMSTECH Secretariat, Islamabad. This was a hybrid event with limited in-person participation of local experts and large scale virtual participation from OIC member states i.e. Iran, Azerbaijan, Bangladesh, Nigeria, Cameroon, Egypt, Saudi Arabia, Iraq, Pakistan and Jordan.

The objective of this training was to provide a valuable platform to deliberate upon, and develop a joint mechanism for research and development, specifically clinical trials, as a step towards self-reliance of OIC member states in medicine and vaccine development.

This training was organized in continuation of COMSTECH efforts to bolster self-reliance of OIC member states in medicine and vaccine development as adopted in Jakarta Declaration and OIC Action Plan 2019-2021.

Speakers of training illuminated mechanism of conducting clinical trials by the member countries besides developing a framework for capacity building, knowledge sharing, and technology transfer mechanism. This training provided an opportunity to technically advanced OIC member states to help upgrade the capacity of the other member countries to conduct multi-center and multi-country clinical trials.

This event was held in close association of Drug Regulatory Authority of Pakistan (DRAP) and International Centre of Chemical and Biological Sciences (ICCBS). Prof. Dr. M. Iqbal Choudhary, Coordinator General COMSTECH, Islamabad, Asim Rauf, CEO of the DRAP, Pakistan, Dr Abdur Rashid, Director, Division of Pharmacy Services, Prof. Dr. Abdelbary Elhissi, College of Pharmacy, Qatar University, Qatar, Prof. Dr. M. Raza Shah, ICCBS University of Karachi, Prof. Dr. Khalid Saeed Khan, University of Granada, Spain, Prof. Dr. Ismail Ibrahim Mohammed Al-Thaqafi, Umm Al-Qura University, Mecca, Saudi Arabia and Prof. Dr. Naveed M. Khan, University of Sharjah, UAE were the speakers of this training.
Workshop on Genebank Management for African Countries

COMSTECH organized training workshop on “Acquisition, Conservation, Exchange, and Safety Duplication of Plant Genetic Resources” in OIC Member Countries – Africa Chapter”. It was organized online by COMSTECH in partnership with the Islamic Organization for Food Security (IOFS), Kazakhstan, and the Bio-resources Conservation Institute (BCI) of Pakistan Agricultural Research Centre (PARC), Islamabad.

The Coordinator General of COMSTECH, Prof. Dr. M. Iqbal Choudhary and the Director General of IOFS, Mr. Yerlan A. Baidaulet addressed the opening session of the workshop and described the commitment of their respective organizations to ensure the capacity of African member states of OIC to manage and develop their plant genetic material using genebanks. Both the heads stressed the importance of developing and maintaining cooperation and sharing technical expertise and genetic material among member states.

Addressing the crucial issue of providing food security in the face of booming populations and looming climate change scenarios, COMSTECH is organizing a series of international regional training webinars on the preservation and expansion of national plant genetic resources.

The objectives of this series of webinars are to build the capacity of OIC member countries in maintenance and operations of genebanks - collection of genetic materials, conservation, germplasm exchange policies - and familiarize the participants with international and national laws and policies on the subject. The webinars also seek to enhance networking among genebanks from different countries, as effective international collaboration will help preserve biodiversity and ensure long-term agricultural sustainability and food security worldwide.

Resource persons represent the extensive experience and knowledge of the genebanks and research institutions of Azerbaijan, Kazakhstan, Malaysia, Nigeria, Oman, Pakistan, Tunisia, Turkey, and UAE.

The participating institutions included the National Agricultural Research Centre (NARC) and the National Genebank of Pakistan, the International Centre for Biosaline Agriculture, UAE, the Kazakh Research Institute of Agriculture and Plant Growing, the Natural and Medical Sciences Research Center at the University of Nizwa, Oman, the Biodiversity and Genetic Resources Department at the Ministry of Agriculture and Forestry, Turkey, the Malaysian Agricultural Research and Development Institute (MARDI), the Azerbaijan National Academy of Sciences (ANAS), the National Genebank of Tunisia, and National Genetic Resources Centre of Nigeria.

Over 70 participants attended this two-day conference from Burkina Faso, Chad, Cote d'Ivoire, Ethiopia, Mali, Mozambique, Niger, Nigeria, Togo, Tunisia, and Uganda.

The event followed by similar training webinar for the Middle East-North Africa (MENA) region of the OIC in Sept. 2021. After the training webinars have been completed, the two organizations (COMSTECH and IOFS) plan to organize a conference for genebank specialists from all three regions (Asia, Africa, and MENA) to consolidate the outcomes and cement the newly formed partnerships between the genebanks.
2-day International Workshop on Chemical Safety & Security in Academic and Industrial Laboratories

COMSTECH and ICCBS inaugurated 2-day international workshop on “Chemical Safety & Security in Academic and Industrial Laboratories”, at COMSTECH Auditorium in Islamabad.

Addressing the inaugural session, Prof. Dr. M. Iqbal Choudhary, a renowned chemical scientist, Coordinator General COMSTECH and Director, International Center for Chemical and Biological Sciences (ICCBS), a world renowned institute in the field of chemical and biological sciences, said, chemicals have immense effects on human health and even impact on health of coming generations. He asked, when we buy chemicals from abroad, we are given safety instruction to handle them, but when we synthesize new chemicals, do we know the safety concerns? He stressed the need of knowing the kinds of hazards of chemicals we are exposed to in our labs and environment. He informed that there are many chemicals that have immense risk even if we are exposed to a very small quantity of them, Dr. Choudhary recommended that we must have proper training mechanism for people who work in labs and handle chemicals, develop capacity and infrastructure, spend more money to secure people exposed to chemicals, introduce regulatory framework, and develop a good system of chemical disposal.

Dr. Shahid Baig, Chairman, Pakistan Science Foundation (PSF), said that many chemicals have short and long term serious effects that can even take our life. He suggested we must have proper chemical handling training for lab workers, students, and chemical handlers. He informed that we do not have any chemical safety and security training course. He said academic and industrial labs would benefit from this workshop. Dr. Baig said that PSF and Ministry of Science and Technology (MoST) commends the role of COMSTECH under the leadership of Prof. Dr. M. Iqbal Choudhary for the capacity building of Pakistan and the entire Muslim world in the field of science and technology. He informed that PSF, MoST and COMSTECH are working together on number of projects, and have many in pipeline. Dr. Baig said that MoST is looking forward to cooperate with COMSTECH to achieve its objectives of socio-economic development and capacity building of OIC member states.

Mr. Khalid Latif, corporate sector consultant with 33-year experience in multinational chemical industry, said we use chemical in large quantity in our daily life without following any safety measures. He informed that health and environment are somewhat neglected areas, academic labs are also lacking in practicing safety measures. He informed, safety and security is most important in chemical handling, and emphasized the need of proper safety training in chemical handling.

Dr. Abdul Rashid, Director Pharmacy Services, Drug Regulatory Authority of Pakistan, said that safety and security is an area of negligence. He suggested that researchers and students should equip themselves with the multidisciplinary knowledge to produce innovative results. He said chemicals are used for commercial purposes, they are useful but dangerous to health and environment. He suggested that government and industry should develop chemical safety standards and provide proper training to students, chemical handlers and lab workers.

In his introductory remarks, Dr. Zaheer of ICCBS informed that we have 200 local and 300 foreign online participants attending this workshop. He said we need to develop and introduce safety culture in our academic and industrial labs to mitigate the hazards posed by the chemicals.
COMSTECH Course on Basic Plant Tissue Culture Techniques

COMSTECH in collaboration with International Center for Chemical and Biological Sciences and Pakistan Biotechnology Information Center Karachi organized online certificate course on “Basic plant tissue culture techniques”.

The course was designed to address the interest of scientists and research scholars working in various fields of plant biotechnology, genetics, and molecular biology.

The course comprised on lectures and hands on training sessions covering overview of plant tissue culture and its applications, equipment and media used, explant selection, sterilization, initiation, multiplication, shooting and rooting.

Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH welcomed the participants of the course and highlighted the importance of plant tissue culture techniques and its contribution to economic development of Muslim world.

Dr. Pejman Azadi, Deputy Director General for Technology, Agricultural Biotechnology Research Institute of Iran, Dr. Muhammad Yusuf Zafar, Former Chairman, Pakistan Agricultural Research Council, and Dr. Muhammad Usman, University of Agriculture, Faisalabad, conducted this course online.

The course was attended by 120 scientists and students online from OIC member states.

Training Course on Technology Commercialization, Innovation and Entrepreneurship

COMSTECH and NETKENT Mediterranean Research and Science University, Turkey jointly organized advanced training course on “Technology commercialization, innovation and entrepreneurship” online.

Rector, NETKENT University, H.E Professor Tayfun Turgay, and H.E Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH, addressed the inaugural session. Both the dignitaries emphasized the need of rapid technology development, and stressed the technology commercialization, innovation and entrepreneurship development in OIC member states.

They encouraged the youth of OIC member states to become technology entrepreneur, bring new innovations and enhance technology commercialization and cooperation in the Muslim world. Both the dignitaries urged the bilateral and multilateral cooperation among the OIC member states for the technology development, commercialization and entrepreneurship. They said that the technology development and commercialization is key to achieve the sustainable development goals.

COMSTECH and NETKENT planned this course by realizing the importance of technology commercialization and Innovation for entrepreneurs, and the important role technology commercialization plays in the integrated national approach for innovation and research.

During the course, eminent experts delivered lectures in the area of technology commercialization, aimed at building concepts, enhancing critical thinking, and developing understanding of the subjects of startups, technology developers, researchers, and entrepreneurs.

Technology experts and business enthusiasts along with university students and faculty from Azerbaijan, Bangladesh, Cameroon, Indonesia, Kazakhstan, Nigeria, Turkey and UAE attended the course.
COMSTECH-IOFS
International Training on PGR Conservation and Safety

COMSTECH & Maroof International Hospital jointly inaugurated 2-day international training in randomized controlled trials, at COMSTECH Secretariat.

Prof. K. H. Mujtaba Quadri, Chair Research and Head of Nephrology, Maroof Clinical Investigation Center, Maroof International Hospital, Islamabad, stressed the need of training in conducting controlled trials and called for joint strategy. He has delivered keynote speech at the occasion. Prof. Quadri, talked about history, and legacy of clinical trials initiation and gave a comprehensive guidelines of the current course, including etiquettes to be followed during the course, in his speech.

Dr. Abdur Rasheed, Director, Drug Regulatory Authority of Pakistan, informed about the current clinical trials being conducted in Pakistan and stressed the need of capacity building through training of researchers in conducting clinical trials. Dr. Ghazna Khalid, Member Prime Minister’s Task Force for COVID19, said that we have potential of conducting clinical trials, and we should train our researchers to perform quality trials.

Dr. Shahzad Ali Khan, Vice-Chancellor, Health Services Academy (HSA), chaired the inaugural session. He said that HSA and COMSTECH has joined hands to carry out joint projects for capacity building in public health sector as well as health care research. He appreciated the idea of Prof. Choudhary, Coordinator General COMSTECH, that we should out-reach to the OIC countries that are in urgent need of strengthening of their public health system.

Coordinator General, COMSTECH, Prof. Dr. M. Iqbal Choudhary welcomed the participants and appreciated the contribution of key institutions involved in clinical trials. Prof. Choudhary, stressed the need of training in conducting world-class clinical trials and termed it immensely important as first step towards drug security.

Prof. Choudhary guided the researchers to prove our immense treasure of traditional medicine through clinical trials and develop modern drugs from them for not only indigenous use but also for export to the other nations and earn foreign exchange. He also stressed the need of developing drugs for diabetes and neglected diseases like Leishmaniasis, and Leprosy.
COMSTECH and UK-based Organizations SAWiE & UPSIGN Organized World Food Day 2021

COMSTECH and UK-based organizations SAWiE & UPSIGN organized World Food Day 2021 at COMSTECH Secretariat. The President of Pakistan graced the occasion as chief guest. He stressed COMSTECH and OIC states to strive for nurturing hybrid cooperation among OIC states to achieve excellence in socio-economic development. Dr. Alvi emphasized the need of taking right decision at the right time in agriculture.

He urged the world politicians to stop fighting and divert trillions of dollars being spent on the wars to ensuring provision of healthy food to the growing population of the world and bringing the hunger to an end.

Dr. Alvi advised OIC states to ensure intensive use of technology to increase yield. He said we must have to reduce the gap between the farmer and the technologist. He informed that it is a right time to take decision to grab the opportunities being offered by the emerging silicon revolution. He said that OIC states must enhance cooperation on sharing their learned skills, and acquired knowledge to benefit each other. We must timely use new technique like speedy gene editing CRISPR-CASS tech to develop new seeds.

Prof. Dr. M. Iqbal Choudhary, the Coordinator General COMSTECH welcomed the participants and said the inability to feed growing population in OIC states is a failure of many nations. He said food insecurity often puts nation's internal and external security at risk.

Dr. Yerlan Baidaulet, Director General, Islamic Organization for Food Security (IOFS), Kazakhstan addressed the session and appreciated the efforts of the President of Pakistan for the development of S&T in OIC region. He said that food security is critical, and we should initiate programs and projects to achieve zero hunger in our nations. He invited COMSTECH to cooperate with IOFS in implementing its strategy to achieve food security goals in OIC states.

Dr. Khalid Mahmood, co-founder of SAWiE, said Pakistan is facing huge issue with food security due to climate change. He said the country has 8 million small holder farmer who own less than 5 Acre, and have low crop yield due to lack of access to quality inputs, access to finance, real time knowledge of crop health, climate change and changing weather patterns have created uncertainty in the growing conditions.

Dr. Mahmood — with President of Pakistan's permission — launched the SAWIE app and said that this app would help farmers to achieve optimum yield. He said that SAWIE app is a satellite based ecosystem solution to guide farmers to better manage their crops through training videos and real time satellite linked knowledge on the health status of the crop. This app also guides farmers in choosing quality inputs, seed & fertilizer, irrigation, crop protection solutions, and their timely application.

The inaugural session was attended by nine ambassadors of OIC member states along with agriculture scientists and farmers. In the technical session, speakers from UAE, UK, USA and Pakistan participated.
Certificate Course on Micropropagation of Quality Banana Plant for Commercial Purpose

COMSTECH, in collaboration with International Center for Chemical and Biological Sciences (ICCBS) and Pakistan Biotechnology Information Center (Karachi Chapter) organized online certificate course on “Micropropagation of Quality Banana Plant for Commercial Purpose”.

Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH said in this welcome address that this capacity building event is focused on Banana, which is considered as cash crop. Banana is a staple crop in many countries in west Africa and central Africa as well as south America. It is a very important crop which brings lots of revenue to many countries. Banana is prone to diseases, he mentioned. Prof. Choudhary said that we have seen in many countries that Banana has been wiped out because of various viruses and different kinds of diseases. He said, tissue culture technique is very easy to perform by even farmers with little training. He said that tissue culture technology provides virus free germplasm which helps protecting plants from diseases and enhancing their quality.

Prof. Choudhary also informed that COMSTECH has a major agriculture programme and working jointly with Islamic Organization of Food Security on different aspects of food security and agriculture.

The course comprised upon a lecture and an online training session covering, overview of plant tissue culture and its applications, equipment and media used, explant selection, sterilization, initiation, multiplication, shoots and rooting.

The course was attended by more than 350 interested scientists and research scholars working in various fields of plant biotechnology.

Dr. Paul Chege of Afri-Center, International Service for the Acquisition of Agri-biotech Applications ISAAA delivered the lecture.

2-day Online Training Course on Inclusive Science Technology and Innovation policy for OIC Member States

COMSTECH organized a 2-day online training course on “Inclusive Science Technology and Innovation policy for OIC Member States”. Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH delivered inaugural address and introduced the plenary speaker of the event, Prof. Dr. STK Naim.

He said Dr. Naim is a great source of inspiration. She is the best expert to talk about science and technology innovation policy. She has profound understanding of STI policy. She has a long experience of working in this field, and has been contributing in STI policy making of different countries.

Prof. Choudhary said, every country should have its own STI policy based on its ground realities, strengths and weaknesses. A policy that has been tailored according to their own needs. One policy proven successful in one country cannot yield same results in the other country because of many other indigenous factors.

Dr. Naim gave talk on essential elements of innovation systems. She said, when the whole system works together, then innovation starts happening. Each country need to develop understanding of innovation and train their people to innovate.

She said we can provide guidelines and take international instances for learning, that is all a policy adviser can do for a country. Policy making have to be indigenous, encompassing all stakeholders – policy makers, scientists, politicians, and private sector.

She said, private sector is a major player in innovation sector. We all know that innovation works in a cohesive and coherent system, and all STI policies are intertwined. All the players in innovation system work like an orchestra. The innovation system only works when all elements work together.

This two-day training delivered by national and international experts and more than 50 experts/policy makers from different institutions of OIC member states participated in this training course online.
COMSTECH - OIC Essay Competition on AI

Ambassador Askar Massinov, the Assistant Secretary General (S&T) of the OIC complimented COMSTECH, the OIC Ministerial Standing Committee on Scientific and Technological Cooperation and ICYF, the Islamic Cooperation Youth Forum, for organizing an essay competition on Artificial Intelligence (AI) for the youth of OIC countries. Speaking at the online Prize Distribution ceremony of the event he emphasized the need for member countries to invest in forefront technologies, and in particular for the youth to become familiar with AI as it would profoundly affect the employment landscape of the near future. The Coordinator General of COMSTECH, Prof. M. Iqbal Choudhary highlighted COMSTECH efforts to promote scientific cooperation between member states for coordinating efforts in fighting COVID-19 as well as keeping abreast of frontiers in science and technology. He identified several recent initiatives of COMSTECH for enabling capacity building of member states in the field of AI. The President of ICYF, Mr. Taha Ayhan highlighted ICYF efforts to motivate OIC youth towards emerging technologies and the opportunities that they present for future careers. Dr. S. K. Hasanain, Advisor COMSTECH, described the event as open to participants from all OIC countries and consisting of two categories viz. students (18-25 years) and young professionals (25-35 years). The essays could be in any of the three official OIC languages (English, Arabic or French) and were required to be original and unpublished.

An international Jury of four experts from different OIC countries assessed the entries on the basis of the structure and organization, technical mastery of the selected topic, novelty of the idea being proposed, and finally, realistic potential of the proposed theme for application. Possible themes for the essays were identified as AI in Health/Education, AI for Technology Frontiers, AI in E–Governance, Ethical & Regulatory Issues in Applications of AI and AI for Social Development.

A total of 110 participants from 22 different OIC countries applied for the competition. On the basis of their 300-500 word abstracts, 43 participants were shortlisted for the two categories. Each essay was evaluated independently by several Jury members.

The Assistant Secretary General OIC announced award winners in the two categories, the 1st Prize is in professional category won by Mr. Beltus Nkwawir Wiysobunri of Cameroon for his essay on “A Deep Learning Automatic Tactile Pavement Detection System for the Visually-Impaired”. The 2nd Prize is awarded to Mr. Ousman Touray of Gambia for his essay on “Monitoring Health: Monitoring Diabetes and Hypertension Using AI” and the 3rd Prize is won by Mr. Selahattin Bingol of Turkey for his essay on “Do Judges and Prosecutors Need to Be Worried”?

In the students category the 1st Prize is awarded to Ms. Sara Marhoon Al-Ghafri from the College of Engineering, National University of Science and Technology, Oman for her essay titled, “SANAD: A learning tool for the visually impaired” and the 2nd Prize is awarded to Ms. Joanna Gomez of the School of Arts and Sciences, Division of Humanities and Social Sciences, University of the Gambia (UTG), Gambia for her essay titled, “Certification and Auditing as Tools for Effective Data Regulation and Oversight in Artificial Intelligence” and the 3rd Prize is awarded to Ms. Samawia Rizwan of the National University of Science and Technology (NUST) (RCMS), Islamabad, Pakistan for her essay titled, “Integrated machine learning and bioinformatics approaches for the Development of potential therapeutics against pandemic diseases”.

First prize winners in both categories would be entitled to a prize money of US$500, second prize winners US$300 and third prize winners would receive US$200 as a token of appreciation for their efforts. The ten best essays would be published. COMSTECH also plan to support development of new applications presented in some of the award winning essays.
COMSTECH organized a panel discussion session on women’s day. The session was addressed by Dr. Khadija Yusoff, Prof. Dr. Tim Unwin, Dr. Rana Dajani, Dr. Sumbla Sheikh, and Prof. Dr. M. Iqbal Choudhary from Malaysia, UK, Jordan, Germany and Pakistan respectively.

During this COVID19 period science emerged as savior of the humanity. Over last 11 months we have seen over 170 vaccines in different phases of development. This was only science that responded with speed and fulfilled the purpose, said Dr. M. Iqbal Choudhary, in his introductory remarks to the panel discussion session.

He said that women had played dual role to save the world by serving in the field and to save the humanity by serving their families. But at the end of the day they suffered. Women are the one who lost jobs, and also suffered in their professional career and growth. Dr. Choudhary said that we have to remain in COVID world for long. He lamented that in the developing world, when parents have choice to educate child, it would always be the male child, if they have choice to feed child properly, the girl child would be malnourished. He stressed the need to know the impact of COVID era on women, on their contribution to the scientific world, on their education, and on their future.

Dr. Khadija Yusoff, Universiti Putra, Malaysia, said in her lecture that COVID caused loss of lives and livelihood, disrupted all spheres of life including research teaching and learning. She suggested to have strategies for career development, good leadership, investment in advanced online teaching technologies by universities, time management and rethinking of promotion key performance indicators.

Prof. Dr. Tim Unwin, University of London, UK said that across the Muslim world there are a large number of women scientists, eager to contribute. He said that digital tech has a key role to play but will increase gender inequalities unless mitigating actions are taken. He said that cultural context remains critically important.

Prof. Dr. Tim Unwin suggested that we should have women champions. We need to change the men’s attitude and behavior to help women excel in Tech and STEM, if they are going to benefit the maximum they can.

Dr. Rana Dajani, Hashemite University, Jordan informed that we survived COVID because of curiosity – seeking beyond the frontier. All brains are equal, there is just lack of opportunities that are out there. She said that the reasons of less women at workplace are not just lack of opportunities it is also the framework of the workplace which was designed by men for men when the industrial revolution happened. When women try to enter the framework they have to mold them to fit this frame without acknowledging the differences between men and women.

Prof. Dajani said that what I suggest is not that we can get more women into the workplace or get them in STEM. It should be a choice to work or stay at home and nurse the children for the women. Those who are privileged have a choice.

Dr. Sumbla Sheikh of Tubingen University, Germany suggested to minimize the negative impact of COVID19, there should be training sessions to develop mindfulness exercises, and meditational techniques to relieve the stress caused by COVID19.

She said that gender disparity is deep rooted and stressed that policy should be focused to root out gender disparity and governments should enact the policies. We really need to strive hard to get rid of it.
Visits & Meetings
**Indonesian Envoy Louds COMSTECH Services to OIC States**

H.E. Mr. Adam M. Tugio, Ambassador of the Republic of Indonesia, visited COMSTECH Headquarters. Prof. Dr. M. Iqbal Choudhary, Coordinator General COMSTECH warmly received him and gave him a tour to the COMSTECH facility. Dr. Iqbal briefed him on the state-of-the-art facilities available at COMSTECH headquarters.

The Coordinator General took His Excellency to the poster exhibition site and highlighted the current economic status of Indonesia by describing him the poster of Indonesia displayed there. COMSTECH has prepared one poster of each OIC member state highlighting key socio-economic, and scientific development indicators.

Prof. Choudhary briefed the Ambassador on the current COMSTECH activities and future programmes and vision for the socio-economic uplift of the OIC member states by the application of modern technologies. Prof. Choudhary requested the Excellency to arrange visits of OIC scholars to OIC center of excellence in vaccine technology in Bandung, Indonesia. The Ambassador proposed to organize exhibitions of technologies developed in leading OIC countries to fight against COVID-19 pandemic. He also proposed to collaborate in the applications of IT-based technologies for the effective vaccination process.

H.E. Mr. Adam, appreciated the current programmes of COMSTECH and the vision for the future. Prof. Choudhary presented a shield of memento to the Ambassador.

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**COMSTECH and Cuban Embassy Agree to Work for Capacity Building of OIC States**

Coordinator General, COMSTECH, H. E. Prof. Dr. M. Iqbal Choudhary along with Dr. Syeda Tanveer Kausar Naim, Former Chairperson, Pakistan Council for Science and Technology, UNESCO International Advisory Board (IAB), had a meeting with H.E. Mr. Zéner Javier Caro González, the Ambassador of Republic of Cuba on Feb. 18, 2021 at the Embassy of Cuba in Islamabad to discuss avenues of cooperation for capacity building of OIC member states.

During the meeting it was agreed upon that COMSTECH would work closely with the esteemed Embassy of the Republic of Cuba and collaborate with the Ministry of Foreign Affairs of the Cuba for capacity building of OIC member states in the fields of virology, vaccines, nutrition, agriculture, and training of paramedical staff.

H. E. Prof. Dr. Choudhary appreciated the vision of the Ambassador and his support to Pakistan at the critical moments. He also invited His Excellency to visit COMSTECH headquarters in Islamabad.

Left to Right: H.E. Mr. Zéner Javier Caro González, Dr. Syeda Tanveer Kausar Naim, H. E. Prof. Dr. M. Iqbal Choudhary.
Palestinian Envoy Commends COMSTECH Scholarships for Palestine

The Ambassador of Palestine, Mr. Ahmed Jawad A. Rabaei visited COMSTECH on the invitation of the Coordinator General COMSTECH, Prof. Dr. M. Iqbal Choudhary to discuss the mechanism for execution of 500 scholarships for Palestinian students recently and explore avenues of mutual cooperation in the area of science and technology.

Prof. Choudhary informed that the programme management unit has been established at COMSTECH to execute this programme. He said, that Palestinian students would be fully facilitated for enrollment in Pakistani universities. Prof. Choudhary also mentioned that online education facilities would also be provided to Palestinian students by Pakistani universities.

Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH said that Palestinian people are under aggression and siege by occupant forces. They have limited access to higher education and research facilities. Over seven decades of occupation has systematically destroyed educational and socio-economic infra-structures of Palestinian state. In order to support them, COMSTECH launched a special program offering research fellowships, technicians training & workshop participation grants for Palestinian students.

Mr. Rabaei appreciated COMSTECH announcement of scholarships and fellowships for Palestinian students and assured full participation of Government of Palestine and Embassy of Palestine in scholarship program and its further facilitation for implementation of this programme. The Ambassador, on the behalf of government and Palestinian people, thanked COMSTECH, APSUP and member institutions of COMSTECH-MOFA Consortium of Excellence for offering 500 scholarships for Palestinian students.

He appreciated the efforts and support extended by the Prime Minister and Foreign Minister of Pakistan to Palestinian people. The Ambassador offered one million Olive trees to COMSTECH for plantation in universities and institutions that have offered these scholarships. COMSTECH and the embassy of Palestine agreed to work together expeditionary to chalk out the modalities of the work program. Both the dignitaries exchanged souvenirs of memorandum.
Prof. M. Iqbal Choudhary Calls on Chinese Envoy

Professor Dr. Muhammad Iqbal Choudhary, Coordinator General, COMSTECH met with H. E. Nong Rong the Ambassador of Peoples Republic of China today.

Both the dignitaries discussed the avenues of bilateral cooperation in the fields of science and technology between the two nations as well as in the OIC region.

The Ambassador showed keen interest in the development and promotion of Chinese traditional medicine in Pakistan. Prof. Choudhary appreciated the idea and agreed on joint venture for the promotion and development of Chinese traditional medicine in collaboration with the Pakistani institutions.

H. E. Nong Rong congratulated Prof. Choudhary for winning Mustafa Prize, conferred upon him by Mustafa Foundation, Iran earlier this year. The Ambassador presented Prof. Choudhary the Guangxi Golden Silkball Friendship Award which was announced last year for him.

On the recommendation of Guangxi Normal University, the People's Government of Guangxi Zhuang, province of China decided to honor Prof. Dr. M. Iqbal Choudhary with the 2020 Guangxi Golden Silkball Friendship Award for his outstanding contribution to the economic and social development of Guangxi.

Prof. Dr. Muhammad Iqbal Choudhary is world renowned medicinal chemist. He has published 1,175 research papers in the fields of organic and bioorganic chemistry in international journals, 76 books and 40 chapters in books published by major US and European press. He has secured 40 US patents so far. Dr. Iqbal is D.Sc., Ph.D., and C. Chem. He has been awarded by different governments of Pakistan with Hilal-e-Imtiaz, Sitara-e-Imtiaz, and Tamgha-e-Imtiaz.

Prof. Dr. M. Iqbal Choudhary is currently serving as Coordinator General, COMSTECH and Director, International Center for Chemical and Biological Sciences, University of Karachi.
Kazakhstan Envoy Calls on Coordinator General, COMSTECH

H.E. Mr. Yerzhan Kistafin, the Ambassador of the Republic of Kazakhstan, visited COMSTECH Secretariat to discuss joint initiatives for science and technology, capacity building and higher education linkage.

Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH extended him very warm welcome. Both the dignitaries discussed the establishment of linkages between universities, reactivate OIC15 programme, and to launch proceedings of Al-Farabi Forum organized by COMSTECH last year on the occasion of 1150th anniversary of Al-Farabi — renowned Muslim philosopher.

They discussed to establish the Al-Farabi chair in the universities of Pakistan and Iqbal chair in the universities of Kazakhstan. The Ambassador agreed to the suggestion of holding Iqbal Forum in Kazakhstan next year.

The Ambassador informed that the embassy of Kazakhstan will hold a live conference on the occasion of 30th anniversary of Pak-Kazakh relationship.

Mr. Kistafin appreciated COMSTECH initiatives and assured full support for capacity building initiatives of COMSTECH for OIC member states, as well bilateral cooperation between Pakistan and Kazakhstan.

Ambassador of Kazakhstan Lauds COMSTECH Initiatives

H.E. Mr. Yerzhan Kistafin, Ambassador of the Republic of Kazakhstan visited COMSTECH secretariat. Prof. Dr. M. Iqbal Choudhary, Coordinator General COMSTECH extended him a very warm welcome.

Both the dignitaries discussed avenues of mutual cooperation in the field of science and technology. They discussed joint new initiatives between universities of the OIC member states to share expertise, extend scholarships, and exchange faculty to enhance cooperation for capacity building in science and technology in OIC member states.

Prof. Dr. M. Iqbal Choudhary briefed the Ambassador on current programmes and past achievements of COMSTECH, along with future plans.

The Ambassador appreciated COMSTECH programmes and activities conducted for capacity building of OIC member states. He appreciated the organization of Al-Farabi forum to celebrate his 1150th birthday by COMSTECH and MoU signed between COMSTECH and Turkic Academy to start joint programmes of mutual interest. Joint initiatives in connection with 30-year anniversary of Pak-Kazakh diplomatic relations. He assured full cooperation of his office for initiatives taken by COMSTECH for enhancing mutual cooperation with his country.
Minister for Science and Technology visits COMSTECH

Minister for science and technology, Mr. Shibli Faraz visited COMSTECH secretariat on May 26. Coordinator General COMSTECH, Prof. Dr. M. Iqbal Choudhary extended him a warm reception, along with his team.

The Coordinator General gave him a detailed presentation on COMSTECH establishment, aims and objectives, past achievements, present programmes and future initiatives, including preparation of science profiles of OIC member states, COMSTECH research publication program, research fellowships, technician training program, COMSTECH initiative for health and innovation in Africa, and OIC technology innovation portal.

The Minister appreciated the current achievements of COMSTECH and future plans devised for the socio-economic development of Ummah through the application of science and technology.

COMSTECH was established in 1981, in Makkah during 3rd OIC Summit. It is chaired by the President of Pakistan and co-chaired by the Prime Minister. It was established with the commitment of OIC leadership to achieve an inter-Islamic cooperation for science and technology based development of the Ummah.

COMSTECH takes follow up action for implementation of relevant resolutions of Islamic Summit Conference, collaborate with International, Regional and national organizations, and develop linkages. It reviews the work of expert groups and the tasks assigned to subsidiary organs and affiliated institutions of OIC working in different fields of S&T and submits progress report of COMSTECH and new proposals for consideration of the Summit through chairman COMSTECH. COMSTECH Apprise Council of Foreign Ministers (CFM) of COMSTECH activities through Secretary General OIC.

Secretary MoST Visits COMSTECH Headquarters

Dr. Arshad Mahmood, Secretary, Ministry of Science and Technology, visited COMSTECH Headquarters. Prof. Dr. M. Iqbal Choudhary, Coordinator General COMSTECH welcomed the Secretary at COMSTECH Headquarters and gave him a detailed presentation on COMSTECH establishment, objectives its past programmes, current initiatives and future plans. Dr. Choudhary informed the Secretary about the achievements of COMSTECH by mentioning many accomplished programmes and projects of COMSTECH.

Prof. Choudhary mentioned that COMSTECH is only OIC organization hosted by Pakistan which functions under the chairmanship of the President of Pakistan while the Prime Minister is the co-chair of COMSTECH. COMSTECH works for socio-economic development of 57 OIC member states through the application of science and technology.

He mentioned the benefits of COMSTECH programmes to Pakistani scientists and institutions and said that COMSTECH provides a leadership opportunity to Pakistan in the Muslim World in the field of science and technology.

Prof. S. Khurshid Hasanain, Adviser, COMSTECH, Dr. Mohammad Ali Mahesar, Consultant, COMSTECH and Mr. Syed Aftab Hussain Zaidi, Senior Director, HR & Admin COMSTECH were also present in the meeting.
Nigerian Delegation Visits COMSTECH

A delegation of 30 Nigerian officials who are participants of a senior executive course at the National Institute of Policy and Strategic Studies, Nigeria, visited COMSTECH on Monday. The delegation is on a study tour to Pakistan with the purpose to benefit from Pakistan's best practices in the context of policy implementation. Coordinator General, COMSTECH, Prof. Dr. M. Iqbal Choudhary extended warm welcome to the delegation at COMSTECH Headquarters.

Prof. Choudhary gave a detailed briefing on COMSTECH establishment, objectives, past activities, progress and future plans to the delegation. He briefed the delegation on the benefits of COMSTECH programmes to OIC member states including Nigeria in detail.

Prof. Choudhary highlighted the facilities available at COMSTECH for capacity building activities and subsequently arranged a tour of the delegation to the entire COMSTECH facility.

The tour was part of training programme of the senior executive course of National Institute for Policy and Strategic Studies, Nigeria.
1st Meeting of CCoE Focal Persons

OIC Ministerial Standing Committee on Scientific and Technological Cooperation (COMSTECH) organized meeting of Focal Persons of COMSTECH Consortium of Excellence (CCoE) to discuss progress and review various initiatives of CCoE.

Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH said in his opening remarks that the most important asset is the human resources and what we can do to furnish it by giving quality education. Talking about African region he suggested that Pakistan should expand diplomatic presence in the region to help make outreach and interaction with African nations easy. He asked the participants to find out how we can use CCoE platform to benefit Pakistan. Prof. Choudhary informed that the role of COMSTECH in CCoE is to facilitate the interaction of member universities with the OIC member states, but the key role to run this initiative is of the member institutions. COMSTECH would fund and facilitate travel arrangements, whereas local hospitality will be arranged by the host institution.

The major agenda items of the meeting included for discussions were, frequent interaction among the institutions, information sharing, active participation in COMSTECH events, update on CCoE activities, introduction to COMSTECH technology and innovation portal, and COMSTECH-ICCBS international exhibition among others.

The participants of the meeting assured their utmost cooperation in effective implementation of various initiatives of the consortium. It was also agreed that consortium member institutions would work closely together through experience, expertise and knowledge sharing. The meeting of the consortium would be held on quarterly basis, and the next meeting would be hosted by Government College University, Lahore. A joint MoU signing ceremony among CCoE member institutions and COMSTECH would also be held soon.

Currently 26 leading universities and research institutions of Pakistan and from other OIC member states are members of CCoE. Scholarships, fellowships, technician training and technology commercialization are the major programmes of CCoE.

The OIC Ministerial Standing Committee on Scientific and Technological Cooperation (COMSTECH) and Ministry of Foreign Affairs, Government of Pakistan launched “COMSTECH Consortium of Excellence (CCoE)” comprising of leading academic and research institutions of Pakistan and OIC member states in the fields of science, technology, engineering and mathematics, in November last year.
COMSTECH Coordination Meeting with R&D institutions of MoST

COMSTECH organized coordination meeting with R&D institutions affiliated with Ministry of Science and Technology at COMSTECH secretariat.

Secretary for Ministry of Science and Technology, Dr. Akhtar Nazir, chaired the meeting. He assured full support of the Ministry to the R&D institutions. Dr. Akhtar said, we need to develop a clear vision for all R&D and S&T organizations, review it and assess its feasibility and then go for capacity building and competitive growth initiatives. He suggested that we need to review and update statutes and rules of our organizations which need to align with the current needs. He appreciated the organization of the meeting and termed it a very useful initiative. Dr. Akhtar said, we believe that there is not superman or super organization, we need to build teams, and encourage teamwork to advance. He proposed to institutions the mechanism of collaboration between S&T and regulatory organizations including regular meetings.

Coordinator General, COMSTECH, Prof. Dr. M. Iqbal Choudhary said the objective of this meeting is to find ways to make COMSTECH a strongest organization in Pakistan, which is the only organization of OIC hosted by Pakistan. He said we have to find ways that how can COMSTECH play role for establishing linkages and joint collaborative projects among Pakistani R&D institutions and the institutions of OIC system and member states. Dr. Choudhary suggested that the COMSTECH strength needs to be utilized for promotion of Pakistan’s science diplomacy initiative as well as achieve competitive growth of S&T institutions of Pakistan.

Capacity building of R&D institutions, fostering collaboration, and developing international linkages of R&D institutions affiliated with the Ministry of Science & Technology. Identification of relevant partner institutions in the OIC region for R&D collaboration and capacity building initiatives and discussion on COMSTECH technology portal along with preparation of a brief roadmap and implementation strategy for review and approval of the Federal Minister for Science & Technology, were the thrust areas of the discussions.

Heads of 14 top R&D organizations and universities of Pakistan participated in the meeting and shared their views, suggestions and insights.
Memoranda of Understanding
COMSTECH and ICGEB Enter into MoU to Advance S&T in Member States

COMSTECH signed memorandum of understanding with the International Centre for Genetic Engineering and Biotechnology (ICGEB), desiring to enhance mutual collaboration as well as cultural, scientific and operational interaction that may lead to significant improvements of the activities of both institutions.

Both institutions have agreed to establish a general framework for cooperation in science, education and technology, to facilitate and strengthen collaboration in the fields of common interest such as emerging technologies, advanced genomics, biotechnology and life sciences.

COMSTECH and ICGEB will cooperate to develop joint fellowship schemes, grants schemes, and encourage the exchange of scientific and technical information, visits, and participation by students and scientists of their member states in scientific conferences and seminars organized in the fields of common interest.

Any project, programme and activity developed by both parties shall be of high scientific standard and beneficial to the advancement of science and technology and be relevant for establishment of contacts and networks between scientific organizations, institutions, scientists, researchers, and experts from the respective member states.

ICGEB is an intergovernmental organization to provide the international community with a centre of excellence for research, training and technology transfer in the field of genetic engineering and biotechnology, supporting its member states in the progress towards the achievement of the 2030 sustainable development agenda.

COMSTECH is the ministerial standing committee on scientific and technological cooperation of OIC. The president of Pakistan is the Chairman of COMSTECH. The Core mandate of COMSTECH is to strengthen cooperation among OIC member states in science and technology, and enhance their capabilities, implement OIC resolutions and draw up programmes to increase the capability of the OIC member states in science and technology.
COMSTECCH Enters into MoU with NETKENT Mediterranean Research and Science University

The NETKENT Mediterranean Research and Science University, TRNC/ Turkey and OIC Ministerial Standing Committee on Scientific & Technological Cooperation COMSTECCH, entered into a Memorandum of Understanding (MoU). The MoU was signed by Coordinator General, COMSTECCH, Prof. Dr. M. Iqbal Choudhary and Rector, NETKENT Mediterranean Research and Science University, Prof. Tayfun Turgay, in an online ceremony.

With this MoU, the NETKENT Mediterranean Research and Science University will be inducted as a member of COMSTECCH Consortium of Excellence (CCoE). CCoE comprises upon leading science technology and engineering academic and research institutions from OIC member states. By now 20 top institutions/universities have become member of CCoE. The aim of CCoE is to create S&T interdependence among OIC member states and build capacity in key areas of STEM through exchange programmes. CCoE was established last year by COMSTECCH and Ministry of Foreign Affairs (MoFA) under the “Science Diplomacy” initiative of MoFA, Pakistan.

Being a member of CCoE, the NETKENT Mediterranean Research and Science University will be able to exchange faculty, researchers, graduate and postgraduate students, scientific publications, study programmes, academic projects or any data or information on mutual understanding basis with any other member university of CCoE.

The CCoE membership provides opportunity, to establish joint supervision, research projects, publications and patents, to the member institutions. NETKENT Mediterranean Research and Science University will be able to organize joint courses, workshops, seminars and skill development trainings along with participation in CCoE’s annual meetings and other activities. COMSTECCH may provide travel support to the visiting scholars or postdoctoral fellows.
COMSTECH and LRBT Agree to Conduct Eye Camps in Niger and Gambia

OIC Ministerial Standing Committee on Scientific and Technological Cooperation (COMSTECH) and Layton Rahmatulla Benevolent Trust (LRBT) entered into an agreement to carry out wide-spread outreach programs for the prevention of blindness in the African region of OIC member states.

Both organizations agreed to organize eye camps to conduct about 200 surgeries in Banjul, Gambia and 400 surgeries in Niamey, Niger.

LRBT will select a team of highly qualified and experienced eye surgeons to conduct the eye camps, whereas COMSTECH will help in coordination between LRBT and local Health authorities of Gambia and Niger, and would reimburse the cost of medicines and consumables along with their transportation to Banjul, Gambia. Visa arrangements, visa fees, vaccination and the cost of lab tests and token of appreciation to the team members will also be provided by COMSTECH.

Islamic Development Bank, under its Alliance to fight avoidable blindness program, will support air travel along with medicines and consumables for eye camps in Niamey, Niger. The local travel and hospitality for the entire visiting team will be the responsibility of local hosts.

COMSTECH was established by the Third Islamic Summit of OIC held at Makkah, Saudi Arabia in January 1981. The core mandate of COMSTECH is to strengthen cooperation among OIC member states in science and technology, and enhance their capabilities through training in emerging areas, undertake follow-up-actions and implementation of the resolutions of the OIC, and to draw up programs and submit proposals designed to increase the capability of the Muslim countries in science and technology.

LRBT is an organization committed to prevent the suffering caused by blindness and other eye ailment in Pakistan.

Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH and Mr. Najmus Saquib Hameed, Chairman, LRBT signed this agreement in Karachi.
COMSTECH and IUIU Uganda Sign MoU

The Rector of the Islamic University in Uganda (IUIU), Prof. Dr. Ismail Simbwa Gyagenda and the Coordinator General COMSTECH, Prof. Dr. M. Iqbal Choudhary signed a Memorandum of Understanding (MoU) at COMSTECH Secretariat.

The intent of this MoU is to promote and strengthen the cooperation between COMSTECH and IUIU by providing a platform for collaborative activities such as sharing experiences and best practices, development of methodologies and mobility of experts in the relevant fields of mutual interest.

Under the MoU, COMSTECH will help IUIU in developing linkages with the institutions in OIC region, and will develop a programme in association with IUIU through which young researchers/students from IUIU and different least developed OIC member countries from Africa may visit Pakistan and conduct research for 6 to 12-month duration. COMSTECH will also arrange the visit of distinguished scholars to IUIU to deliver lectures, conduct workshops and training courses.

The MoU enables IUIU to get consultancy from COMSTECH Advisory Council. IUIU will be able to collaborate in organizing national and international events such as workshops, conferences, symposia, and exhibitions in different fields. IUIU will become the member of COMSTECH Consortium of Excellence along with registration on COMSTECH technology portal.

IUIU will support COMSTECH in organizing medical training in the fields of ophthalmology and telemedicine in least developed OIC member countries in Africa along with conducting eye surgery camps.

The Islamic University in Uganda was established in 1988 by the Organization of Islamic Cooperation under a bilateral agreement with the Government of Uganda. COMSTECH is Pakistan based ministerial standing committee on scientific and technological cooperation of the Organization of Islamic Cooperation established in 1981.
COMSTECH and MSTF Sign MoU to Enhance Cooperation

The Memorandum of Understanding (MoU) is signed by COMSTECH the Ministerial Standing Committee on Scientific and Technological Cooperation of the OIC, Islamabad, Pakistan, represented by its Coordinator General, Prof. Dr. M. Iqbal Choudhary and Mustafa (PBUH) Science and Technology Foundation, Tehran, Iran represented by its CEO, Mahdi Safarinia, on Friday.

The MoU will encourage discussions and cooperation between the both organizations and individual scientists and employees within each organization in relation to opportunities for collaborative research activities and increasing the capacity of actual and potential role-players who avidly seek the advancement of science, technology, and innovation in the Islamic World.

The MoU is devised to support the development of collaboration between the both organizations in areas of mutual interest with the focus on the value that can be achieved through working in collaboration to achieve the shared aims and objectives.

Both organizations will jointly promote cooperation, consult with each other on identifying best practices in the use of technical cooperation methodologies in the areas of science and technology, socio-economic development, rapid industrialization, and related areas of common interest.

Both organizations will exchange documentation and information in their respective fields of competence, implement programs and projects to develop the technological and scientific capacity of OIC member states, and jointly apply for funding opportunities available from domestic and international sources to develop the technological and scientific capacity of OIC member states.

Mustafa Science and Technology Foundation and COMSTECH also signed a joint young scientists’ fellowship program agreement to support the young scientists with the cooperation of prestigious scientific and research institutes of reputable companies in Islamic countries. The program will support young scholars and technologists by providing them 6 to 12 month long fellowships.
COMSTECH and HSA Ink LoU to Build Public Health Capacity in OIC States

COMSTECH and Health Services Academy (HSA) signed a Letter of Understanding (LoU) to collaborate in the areas of: teaching, research, knowledge transfer, and exchange of information with the focus to achieve shared aims and objectives, here at COMSTECH Secretariat on Thursday.

It was agreed upon to conduct online, and in-person trainings in African regions in basic health sciences, and policy making by sending prominent experts in a particular field to the region to train people not only from the host country but also from the neighbouring countries as well. Both the institutions resolved to carry out extensive capacity building programs public health in African regions.

It was agreed to develop joint research programmes; invite scholars for lectures, talks and participation in conferences, colloquia and symposia; organize workshops, exchange information and publications; and facilitate faculty and staff visits to the partner institutions of OIC member states.

COMSTECH would invite the Health Services Academy (HSA), Pakistan, as a member of COMSTECH Consortium of excellence for the development and promotion of public health activities in OIC member states. Distinguished teachers, professors, researchers of HSA would work as resource persons for capacity building in public health of OIC member states.

HSA in collaboration with COMSTECH would submit a project proposal of the establishment of Infectious Diseases Center in Gambia under Resource Linkage Programme of Islamic Development Bank.

The Health Services Academy, is a degree awarding institute, under the umbrella of Ministry of National Health Services Regulations & Coordination, Government of Pakistan. HSA offers long term, short term teaching training and research programs in public health.

The COMSTECH is the Ministerial Standing Committee on Scientific and Technological Cooperation of the OIC. The President of Pakistan is the Chairman of COMSTECH. COMSTECH works for the socio-economic development of OIC member states through capacity building in frontier fields of science and technology, and strengthening cooperation.
COMSTECH, SAWiE Join Hands to Combat Climate Change Affecting Farmers in OIC States

COMSTECH has joined hand with SAWiE, to address the climate change crisis affecting livelihood of millions of smallholder farmers in OIC member states. To achieve this milestone, a Memorandum of Understanding (MoU) between COMSTECH and SAWiE was signed online.

Addressing to the MoU signing ceremony, Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH, said, it is a matter of urgency to tackle climate change crisis. The entire OIC world including Pakistan are facing the dire water shortage. Pakistan is an agriculture economy with over 40% population employed in the agriculture sector. The agrarian sector contributes more than 20% in the GDP, and it is dominated by smallholder farmers — 90% farmers with less than 12.5 acres.

Dr. Choudhary said that the collaboration with SAWiE will help develop sustainable agriculture solutions to achieve improved food quality by supporting smallholder farmers through knowledge-based farm advisory. He said, this collaboration will develop capacity in agriculture supply chains, addressing food security, and improving income of OIC member states.

Ms. Nosheen Ramzan, Chairperson SAWiE said “linking research with the agriculture industry not only benefits the economy but also addresses societal grand challenges of climate change, food security, nutrition, healthy environment, and healthy planet”.

She said, new innovation contributes towards achieving sustainable agriculture solutions through net zero emissions. This collaboration will address food security & help smallholder farmers. She mentioned that this has a direct link with the achievement of United Nations sustainable development goals (SDGs).

SAWiE uses open source earth observation data sets from European Space Agency and its community platform of farmer’s network to help smallholder farmers to choose suitable time of sowing, irrigation application, pests and disease control measures and harvest planning to fetch better prices. COMSTECH plans to work with SAWiE to popularize these applications in OIC region in different languages. The partnership entails sharing knowledge, developing collaborative projects, and organizing capacity building events of stakeholders in OIC member states.
COMSTECH Signs MoU with IOFS

OIC Ministerial Standing Committee on Scientific and Technological Cooperation (COMSTECH) and Islamic Organization for Food Security (IOFS) signed Memorandum of Understanding (MoU). The MoU was signed at COMSTECH Secretariat by Coordinator General COMSTECH and Director General, IOFS.

Astana based IOFS fosters the socio-economic development of its member countries with ultimate goal of promoting food security, sustainable agriculture and rural development, whereas Islamabad based COMSTECH builds indigenous capabilities of OIC member states in the fields of science and technology through cooperation and mutual assistance.

In pursuit of common objectives both organizations intend to establish a general framework to facilitate and implement the collaboration and cooperation in areas of common interest. IOFS-COMSTECH partnership will focus on scaling-up ongoing initiatives and exploring new opportunities to collaborate on global, regional and country-level priorities.

The areas of cooperation include: joint projects, identifying S&T needs of OIC states, capacity-building activities in agriculture and food security, exchange of information, and joint research.
COMSTECH Celebrations
World Food Day Celebration

COMSTECH and UK-based organizations SAWiE & UPSIGN are celebrating World Food Day 2021 in Pakistan on 14th October.

World Food Day is an international day celebrated every year worldwide on 16 October. This day is celebrated widely by organizations concerned with hunger and food security.

The aim to celebrate World Food Day in Pakistan is to promote knowledge and support good practices for enhancing agriculture and food production through climate-smart agriculture, conserve water, soil resources and protect biodiversity.

COMSTECH celebrated the event under the theme of “World Food Day — Our Actions Are Our Future”. The event consists upon two sessions — inaugural and technical.

The technical session includes six talks from top national and international agriculture scientists and corporate leaders, which was followed by discussion session on the theme of “Achieving food self-sufficiency in Pakistan”.

Developing resilient food systems, role of saline agriculture, microfinance model for uplift, hidden, new approaches to address food security, threats from invasive species of pests, disease and use of bio-pesticide to protect biodiversity are the themes of expert talks. The session would conclude with the closing remarks by the Federal Minister for Food Security of Pakistan and vote of thanks by Coordinator General, COMSTECH.
COMSTECH Celebrates World Science Day

COMSTECH celebrated “World Science Day”. Prof. Dr. Atta-ur-Rahman FRS, Chairman, Prime Minister Task Force for Science and Technology graced the occasion as chief guest.

Prof. Dr. Atta-ur-Rahman said that it is alarming that we are unable to see the light at the end of the tunnel in case of implementing guidelines addressing climate change. He said at the moment we are not succeeding. The past actions of nations show the clear intent that how much they are serious towards climate change mitigation.

Prof. Rahman talked about a number of technologies available to use to address climate change effects. He suggested that to use new technologies, OIC states need to invest in S&T, innovation and entrepreneurship. He stressed the need of awareness of issues at hand and the technologies available to deal with them.

Mr. Ali Tauqeer Sheikh informed that the temperature increase by 1.5 Celsius is considered bad but by 2 degrees it would be disastrous. He said we are way behind Paris agreement. Mr. Sheikh said that it is good to share that the global discourse on climate change is now driven by science. Mr. Sheikh also mentioned that OIC states will be affected by climate change events as well. He suggested to prepare in advance and plan to mitigate climate change challenges.

Dr. Muhammad Ali Shah, Vice-Chancellor, QAU said that we in collaboration with COMSTECH working on developing consortium of universities to share knowledge and expertise and climate change could be a part of it. Dr. Shah suggested that information technology and sustainable development must be included in curriculum of all fields of studies so that we can equip young generation with high impact modern knowledge to compete in the world.

Director General IOFS, Mr. Yerlan Baidaulet, shared the vision, mission and activities of IOFS. He said climate change have deep impact on all spheres of life and we have to collectively prepare for it.

Coordinator General COMSTECH, Prof. Dr. M. Iqbal Chaudhary welcomed the participants and highlighted the importance of science and science communication to the masses for active engagement with new technologies and innovations available. He stressed the need to science and technology linkages with the society for development. Prof. Chaudhary said that S&T has played key role in global transformation and help the humanity to act beyond the limitations.
The second OIC Summit on Science and Technology held virtually on Wednesday which was hosted by the United Arab Emirates. H.E. Dr. Arif Alvi, the President of Pakistan and Chair of OIC Ministerial Standing Committee on Scientific and Technological Cooperation (COMSTECH) delivered his recorded statement in the inaugural session. He said, COMSTECH, is moving forward on STI Agenda 2026, in spite of severe financial crunch. As Chairman COMSTECH, he proposed to place focus on African member states for health and agriculture development with particular emphasis on biosaline agriculture, COVID-19 related technology and capacity building, initiation of research fellowships and technical training programs for African science community, and addressing challenge of environmental degradation and rehabilitation.

Dr. Alvi appreciated COMSTECH efforts and urged member states to mobilize resources and come forward with their contributions to COMSTECH programmes.

OIC Summit appreciated the leadership of H.E. Dr. Arif Alvi for promoting intra–OIC scientific and technological cooperation for the implementation of OIC STI Agenda 2026 and advancement of science, technology and innovation in the member states, especially the Least Developed Countries (LDCs).

The Summit resolved to further intensify efforts to fulfil the goals and targets of the OIC STI Agenda 2026 through a series of focused initiatives and programs to be proposed by COMSTECH in coordination with General Secretariat and other relevant OIC institutions and called upon the member states, who have the resources, to consider providing necessary financial and technical support to COMSTECH and General Secretariat to carry out initiatives.

The Summit called on COMSTECH to develop a comprehensive roadmap for establishing technology transfer mechanisms amongst the OIC member states in collaboration with General Secretariat and other international partners.

The Summit commended the efforts of COMSTECH for forging multinational cooperation on varietal development, preservation and integration into the seed system, and appreciated the efforts of the General Secretariat and COMSTECH for identifying leading institutions and scientists of the member states and mapping their science publication profiles and called upon COMSTECH to establish links with the goal of promoting exchange of knowledge and expertise among these institutions.
The Mustafa Prize — International symbol of scientific excellence — for the year of 2021 has been awarded to Prof. Dr. Muhammad Iqbal Choudhary of Pakistan in the field of bio-organic chemistry.

The Mustafa Prize, a top science and technology award, is granted biennially to the top researchers and scientists of the Islamic world in four categories: “Life and Medical Science and Technology”, “Nanoscience and Nanotechnology”, “Information and Communication Science and Technology”, and “All areas of science and technology”. The Mustafa Prize was established in 2012 as a symbol of scientific excellence at the international level, and it is regarded as Nobel prize of the Muslim world.

Five scientists each from Pakistan, Iran, Bangladesh, Lebanon and Morocco have been awarded The Mustafa Prize in their respective fields of study.

Prof. Dr. Muhammad Iqbal Choudhary is world renowned medicinal chemist. He has published 1,175 research papers in the fields of organic and bioorganic chemistry in international journals, 76 books and 40 chapters in books published by major US and European press. He has secured 40 US patents so far.

Dr. Iqbal's work has been cited by the researchers from around the world by 27,407 times and his h-index is 70. By now 94 national and international scholars have completed their PhD degrees under his supervision.

Dr. Iqbal is D.Sc., Ph.D., and C. Chem. He has been awarded by different governments of Pakistan with Hilal-e-Imtiaz, Sitara-e-Imtiaz, and Tamgha-e-Imtiaz.

He has been elected fellow by world renowned science academies named Academy of Sciences for the Developing World, Islamic World academy of Sciences, Pakistan Academy of Sciences, Royal Society of Chemistry, and Chemical Society of Pakistan.

Prof. Iqbal has been honored by the President of Iran with Khwarizmi International Award, President of Azerbaijan, with ECO Award in Education and the Prime Minister of Pakistan with COMSTECH Award in Chemistry.

He has been given the prestigious title of “Distinguished National Professor” by the Higher Education Commission in 2004 and Meritorious Professor by the University of Karachi in 2013.