



FHCC2025

IGNITING IDEAS – RESHAPING HEALTHCARE

International Conference on

FUTURE OF HEALTHCARE

Igniting Ideas – Reshaping Healthcare

30–31 October 2025, Islamabad



FHCC2025

Igniting Ideas – Reshaping Healthcare

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Dear Delegates, Colleagues, and Partners,

It is my distinct privilege to welcome you to the International Conference on the Future of Healthcare 2025 (FHCC2025) — a landmark gathering of global minds committed to reimagining the health systems of tomorrow. FHCC2025 provides a unique platform to share a common vision for the future of healthcare. From digital health and AI-driven diagnostics to climate-responsive health systems and inclusive policy frameworks, our discussions will span the full spectrum of challenges and opportunities shaping the future of care.

The inaugural conference theme, “Igniting Ideas, Reshaping Healthcare,” reflects our commitment to bold thinking and collaborative action. We

are proud to host a diverse community of experts, leaders, and changemakers from across disciplines and geographies — each bringing unique insights to the table.

I extend heartfelt thanks to our speakers, sponsors, and organizing team for their dedication and vision. Most importantly, I thank you — our participants — for your engagement, curiosity, and commitment to advancing health for all.

Let us use this moment not only to exchange ideas but to forge lasting partnerships and inspire solutions that will shape the future of healthcare for generations to come.

Warm regards, Chairman, FHCC2025

THEMATIC AREAS

The International Conference on the Future of Healthcare 2025 brings together cutting-edge innovation and transformative ideas shaping the future of healthcare. Our carefully selected thematic areas reflect the evolving landscape of medicine, technology, and public health, offering a multidisciplinary view of tomorrow’s healthcare.



Nano Medicine

Molecular-level treatment for precision care



Regenerative Medicine

Organ and tissue regeneration



AI in Healthcare

Diagnostics, treatment, and patient care



Genomics

Personalized genetic interventions



Telemedicine

Improved access with virtual healthcare



Precision Public Health

Interventions via data analytics



Robotic Surgery

Enhancing surgical precision



Augmented & Virtual Reality

Revolutionizing medical training and patient engagement



Cellular Medicine

Cell-based therapies for complex diseases

DR. JASIM ANWAR

CHAIRMAN FHCC2025

Message

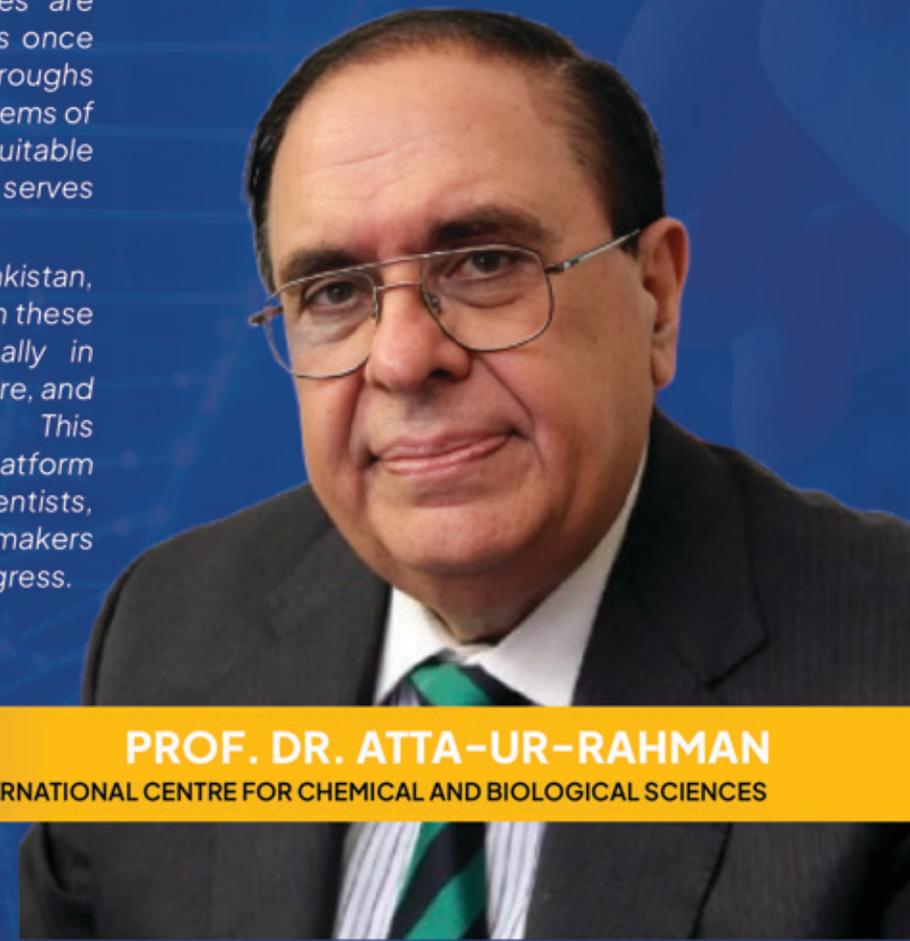
It is my great pleasure to welcome you to the International Conference on Future of Healthcare jointly organised by jointly organized by the Ministry of National Health Services, Khyber Medical University Peshawar, Pak-Austria Fachhochschule Institute of Applied Sciences and Technology, National University of Medical Sciences and the International Center for Regenerative and Cellular Medicine.

We meet at an extraordinary moment in human history when advances in biology, technology, and data are redefining the very foundations of medicine and healthcare. We are witnessing the rise of personalized medicine—where treatment is guided by each individual's genes, environment, and microbiome. Stem cell therapies are offering unprecedented potential to regenerate damaged tissues and organs, bringing new hope to patients with neurodegenerative, cardiac, and musculoskeletal diseases. Meanwhile, lipid nanoparticles—originally developed for mRNA vaccines—are now revolutionizing drug delivery, allowing precise transport of nucleic acids and therapeutic molecules directly into target cells. Artificial intelligence stands at the centre of this

transformation. AI is accelerating drug discovery, interpreting medical images with accuracy comparable to expert clinicians, and predicting disease risks long before symptoms appear. Combined with wearable sensors, telemedicine, and big-data analytics, it is helping to democratize healthcare by extending quality care to remote and underserved populations. At the same time, gene and cell therapies, nanomedicine, and immunotherapies are pushing the boundaries of what was once thought possible. Yet, these breakthroughs must be accompanied by strong systems of governance, ethical oversight, and equitable access to ensure that science truly serves humanity.

Developing countries, including Pakistan, are poised to benefit immensely from these revolutions if we invest strategically in research capacity, digital infrastructure, and academia-industry collaboration. This conference provides an invaluable platform for such partnerships — uniting scientists, clinicians, entrepreneurs, and policymakers in a shared vision of global health progress.

I would like to congratulate Prof. Jasim Anwer Chairman FHCC2025, and his team for holding this important event and I hope that it will ignite important collaborations in some of the emerging frontiers of health sciences.



PROF. DR. ATTA-UR-RAHMAN

PROFESSOR EMERITUS, INTERNATIONAL CENTRE FOR CHEMICAL AND BIOLOGICAL SCIENCES

Message

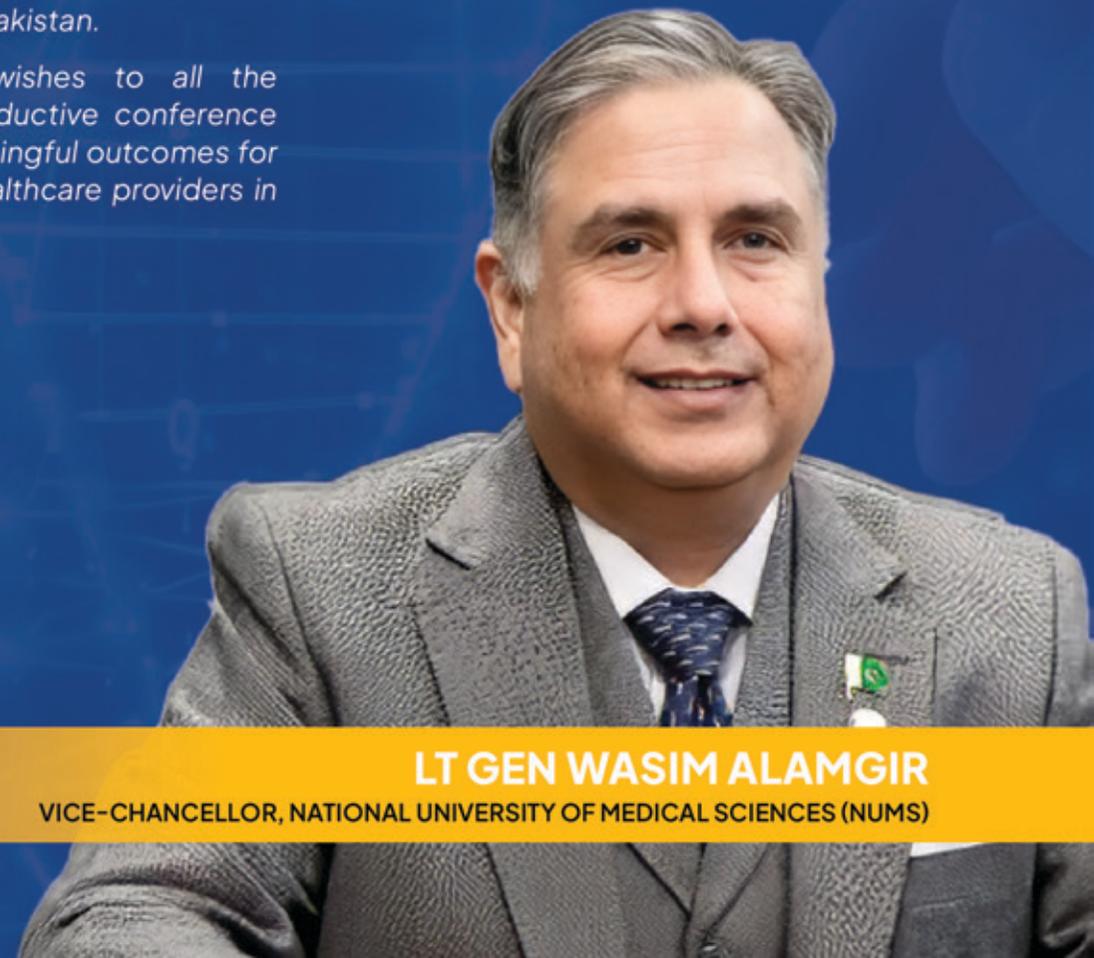
It gives me immense pleasure to convey my appreciation to the distinguished guests, participants and organizers of the International Conference on Future of Healthcare (FHCC 2025) to be held at COMSTECH Secretariat, Islamabad.

Pakistan, while producing some of the leading physicians and researchers in biomedical sciences, has unfortunately been unable to harness their potential for advancement of the healthcare system in the country. We bear a disproportionate burden of infectious and non-communicable diseases (NCDs). Multiple reasons exist for this, including lack of proper healthcare guidelines; absence of patient safety measures; inadequate diagnostics; limited public health research; lack of enforcement of policies; and limited resources.

NUMS firmly believes that research and development (R&D) is vital for economic growth, social development, and technological progress in the country. Given the unique health challenges faced by Pakistan, investing in R&D is critical for the development of affordable and accessible

healthcare solutions leading not only to better health outcomes in the population but also sustainable development and economic growth. NUMS is in the process of establishing research and academic institutes geared towards addressing local and global health challenges, driving healthcare innovation, attracting investment and talent, thereby contributing to the development of sustainable and resilient healthcare systems in Pakistan.

I extend my best wishes to all the participants, for a productive conference that translate into meaningful outcomes for all segments of the healthcare providers in the country.



LT GEN WASIM ALAMGIR

VICE-CHANCELLOR, NATIONAL UNIVERSITY OF MEDICAL SCIENCES (NUMS)

Message

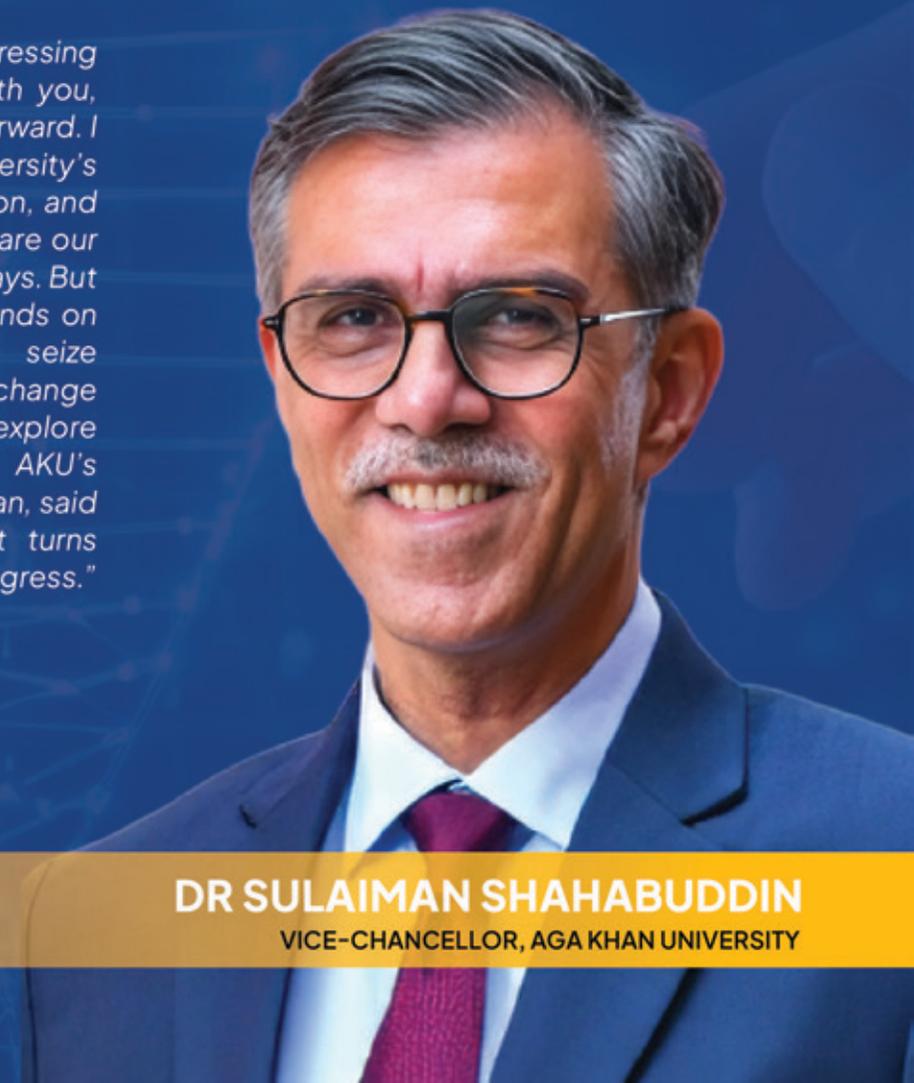
As we enter the second quarter of the 21st century, the pace of healthcare innovation has never been greater. Advances in artificial intelligence, genomics, precision medicine, simulation, and many other fields are delivering powerful new tools for clinical care, research, and education.

At the same time, the challenges facing healthcare professionals, institutions, and systems are immense. Maternal, newborn, and child mortality are still high. Infectious diseases are widespread, and we cannot allow our collective success in addressing COVID-19 to lull us into complacency regarding the possibility of future pandemics. As their populations age, Pakistan and other low- and middle-income countries face a growing burden of chronic diseases that they remain under-equipped to combat. Further complicating matters is the vast challenge of climate change, which threatens to undo much of the progress we have made in addressing health inequities.

In these circumstances, it is urgent that we seek to bridge the gap between innovation and impact. Translating new discoveries into improved health outcomes for our population

must be a high priority for clinicians, academics, and health care leaders in both the public and private sectors. New technologies are tools. The question is: how can we use them to achieve our shared goal of improving the lives of the people we serve?

I am greatly looking forward to addressing this important subject together with you, both at this conference and going forward. I take great pride in the Aga Khan University's contributions to healthcare innovation, and my colleagues and I are eager to share our work with you over the next several days. But it is clear to me that success depends on partnership, and that we must seize opportunities such as this to exchange insights, strengthen ties, and explore opportunities for collaboration. As AKU's Chancellor, His Highness the Aga Khan, said last month: "It is partnership that turns ripples of change into waves of progress."



DR SULAIMAN SHAHABUDDIN
VICE-CHANCELLOR, AGA KHAN UNIVERSITY

Message

The future was once thought to be unknown... a vast, incomprehensible mystery that only time could reveal. But today, with the rapid advancement of technology and artificial intelligence, that future is no longer just awaited- it is predicted, calculated, and shaped by human innovation.

This transformation extends far beyond the world of machines and data. It has revolutionized the very essence of healthcare. The kind of diagnostic precision and patient management facilities we have today, across every field of medicine, surgery, obstetrics, and beyond, were previously beyond our imagination.

Now it is no longer about possibilities- it is about the realities of nanomedicine, regenerative medicine, robotic surgeries, and 3D bone grafting. These once sounded like fiction, yet they are now a part of modern medical practice. Each advancement brings us closer to redefining the boundaries of what healthcare can achieve- turning the unimaginable into our reality.

Who would have imagined that just a few years back, DNA-associated pathologies might one day be preventable, and that future generations could possibly be born

free of inheritable metabolic disorders? Here we are, standing at the threshold of that possibility.

Keeping in mind the significance of this advancement, ICRC is continuously coming up with innovative ideas to make full use of artificial intelligence and emerging medical technologies.

This centre will act as a hub of collaboration by bringing together clinicians, researchers, and students to work side by side, to learn from international institutions around the globe, and to utilize and contribute to the future advancements in healthcare.

The centre also plans to develop a stem cell bank that will support both therapeutic treatments and preventive healthcare, marking a major step forward in modern medicine in Pakistan.

Ladies and gentlemen, we are entering a new era, where technology empowers healing, where research creates progress, and where the dream of a healthier, more resilient generation is no longer a distant vision, but a future within our reach.



DR. MUHAMMAD AYAZ

CEO INTERNATIONAL CENTER FOR REGENERATIVE & CELLULAR MEDICINE

Message

It is both a privilege and a heartfelt pleasure to extend my warmest welcome to all participants, speakers, organizers, and distinguished guests joining us for the inaugural International Conference on the Future of Healthcare (FHCC 2025). On behalf of PAF-IAST, I am proud to represent an institution that stands at the crossroads of science, technology, and human aspiration, one dedicated to reimagining the role of interdisciplinary research in shaping the world of tomorrow.

The world today is experiencing a profound convergence of discovery and innovation. From artificial intelligence to precision medicine, from regenerative technologies to digital health ecosystems, we are witnessing the dawn of a new healthcare paradigm. The theme of FHCC 2025, "Igniting Ideas - Reshaping Healthcare," resonates deeply with our mission at PAF-IAST: to transform ideas into impact, and curiosity into creation.

As universities evolve from centres of learning into engines of innovation, our collective challenge is not merely to generate knowledge, but to translate it into meaningful,

real-world outcomes. This conference embodies that spirit: a space where thought meets application, and where collaboration sparks transformation.

At PAF-IAST, we are proud to pioneer a model that bridges the worlds of academia, industry, and society. Rooted in applied learning and inspired by global collaboration, our institute fosters a vibrant ecosystem where invention thrives and ideas come alive. With specialized focus areas such as biomedical engineering, biotechnology, and health technologies, we are uniquely positioned to contribute solutions that are both locally relevant and globally significant.

We envision a future where universities serve as living laboratories — places where science meets empathy, where technology uplifts communities, and where innovation carries a distinctly human touch. At PAF-IAST, this belief drives everything we do.



PROF. DR. MUHAMMAD MUJAHID

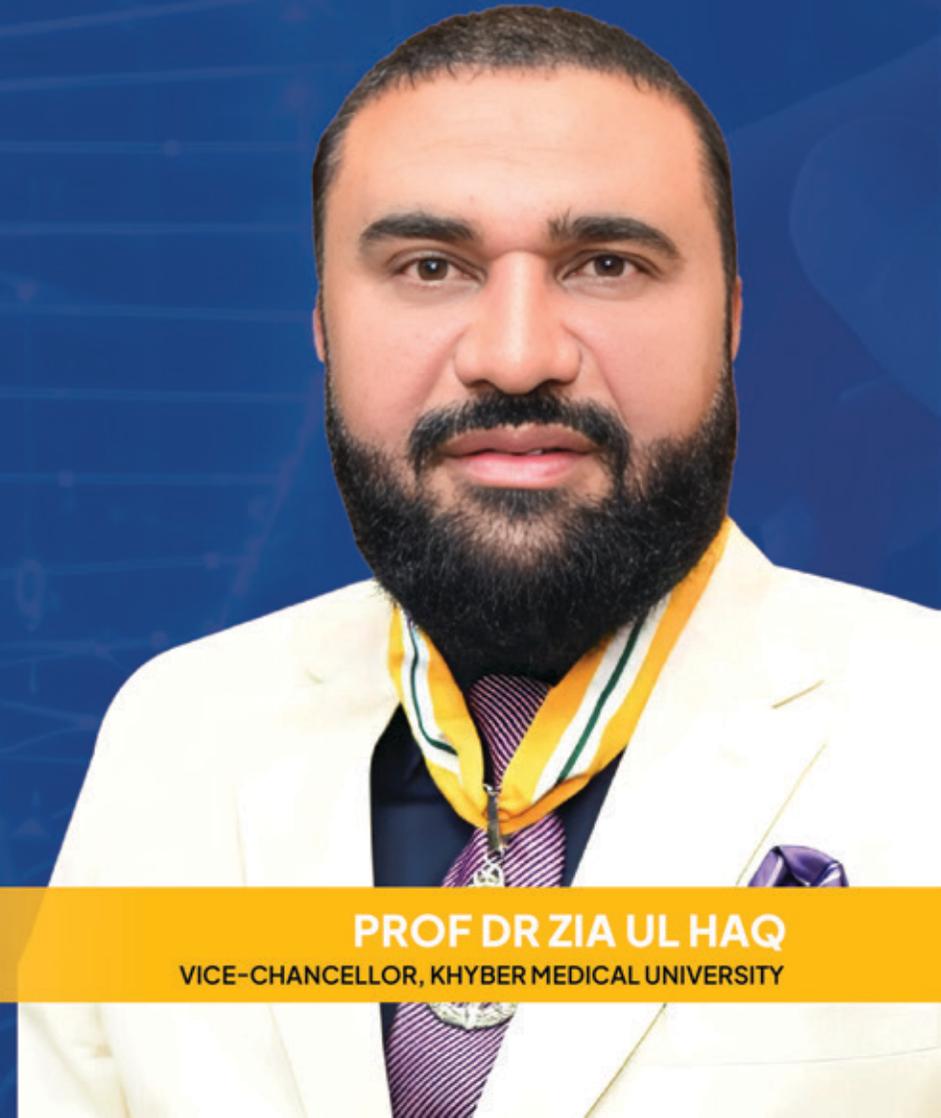
RECTOR, PAK-AUSTRIA FACHHOCHSCHULE INSTITUTE OF APPLIED SCIENCES AND TECHNOLOGY

Message

It is a great honor to welcome you to FHCC2025 – Future of Healthcare Conference, a global platform where ideas converge to shape the next era of health and well-being. This event reflects our shared commitment to innovation, collaboration, and excellence in healthcare.

At Khyber Medical University, our vision is to lead in health sciences education and research, creating solutions that make healthcare efficient, equitable, and compassionate. We believe the future of healthcare will be defined by the integration of advanced technologies with human-centered care – embracing breakthroughs in genomics, artificial intelligence, telemedicine, and precision public health while ensuring accessibility for all.

FHCC2025 is more than a conference; it is a movement toward a healthier, more resilient world. Together, let us ignite ideas, embrace innovation, and transform healthcare for generations to come.



PROF DR ZIA UL HAQ

VICE-CHANCELLOR, KHYBER MEDICAL UNIVERSITY

PROGRAMME OVERVIEW



Day 1,
Thursday, 30 October 2025



0800 - 0900 HRS.
Registration of Participants

INAUGURAL SESSION

TIME	SESSION
0900 – 0915	Recitation & Conference Welcome

SPEAKERS / MODERATORS

Dr. Jasim Anwar Chairman FHCC 2025
MBBS, MAppSc (USYD), PhD (UNSW Sydney)

Prof. Dr. Zia ul Haq Vice-Chancellor KMU
MBBS, PhD (UK), DPH, FFPH (UK), FCPS, Dip Med Ed, MPH

DISTINGUISHED KEY NOTE SPEAKERS

0915 – 0945



Chief Guest Address
Prof. Dr. Atta-Ur-Rahman
FRS,N.I., H.I., S.I., T.I.
The Fascinating World of Discovery

0945 – 1000



Prof. Dr. Muhammad Mujahid
Rector, Pak Austria Fachhochschule:
Institute of Applied Sciences and
Technology

1000 – 1015



Prof. Dr. Kausar Abdullah Malik
(HI, SI, TI)
Overview of Bio-Medical Research
in Pakistan

1015 – 1030



Dr Sulaiman Shahabuddin
President The Aga Khan
University

1030 – 1045



Ronald Lavater
MPA, FACHE
Chief Executive Officer,
International Hospital
Federation (IHF), Geneva
Leadership for Low Carbon and
Resilient Hospitals Worldwide

1045 – 1100



Sonia Roschnik
Executive Director
Geneva Sustainability
Centre, Geneva

POSTER EXHIBITION, NETWORKING AND TEA BREAK

1100 – 1130 HRS
Main Lobby Ground Floor

THEME: ARTIFICIAL INTELLIGENCE IN HEALTH

1100 – 1130

AUTHOR

Aiman Naeem

MS in Computer Science, Bahria University, Islamabad;
Federal Urdu University of Arts, Science & Technology,
Islamabad

CO-AUTHORS

Muhammad Farhan Khan

PHD, University of Engineering and Technology, Taxila, Pakistan; School of Computer Science and IT, University College Cork,
Cork, Ireland

TITLE

Fusion of RF and LSTM for Robust Human Activity Recognition
in Healthcare Monitoring Systems

AUTHOR

Azhar Ziaur Rehman

MS, Rehmaniyah Governance Consultants

TITLE

Adopting AI in a hospital using Existing Resources

AUTHOR

Dr. Maryam

BDS, CRCP, MD oral Pathology, Liaquat College of
medicine and dentistry

CO-AUTHORS

Dr. Rabail Khero; Dr. Iqra Ali; Prof. Dr. Uzma Zareef; Dr. Arifa Haque; Dr. Afshan Qamar

TITLE

A Systematic Review on the Early Detection of Oral Cancer
Using Artificial Intelligence and Electronic Tongue Technology

AUTHOR

Shafaq Taseen

MBBS, MSPH, The Aga Khan University

TITLE

Augmenting Artificial Intelligence in WHO's Mental Health Gap
Action Programme (mhGAP) to Transform Child and Adolescent
Mental Health in LMICs

POSTER EXHIBITION, NETWORKING AND TEA BREAK

1100 – 1130 HRS
Main Lobby Ground Floor

THEME: ARTIFICIAL INTELLIGENCE IN HEALTH

1100 – 1130

AUTHOR

Dr. Noman Khalique

Ph.D., RANI Omico-Informatics Feeds and
Pharmaceuticals (PVT) Limited, Lahore, Pakistan

CO-AUTHORS

Dr. Asma Ahmed

Ph.D., Institute of Molecular Biology and Biotechnology (IMBB), The University of Lahore, Lahore, Pakistan

TITLE

Silico assessment of plant derived fatty acids effects on poultry
meat and its validation via in vivo approach

AUTHOR

Shafaq Taseen

MBBS, MSPH, The Aga Khan University

TITLE

Harnessing Artificial Intelligence and Digital Technology for
Enhancing Routine Immunization among Zero-Dose Children

AUTHOR

Sundas Irshad

MBBS, Punjab Institute of Neurosciences, Lahore,
Pakistan

TITLE

Comparison of Various Predictive Tools in Predicting Risk of
Cerebrospinal Fluid Diversion Post-Resection of Posterior Fossa
Tumors: A Systematic Review

CO-AUTHORS

Amna Sohail, MBBS; Chengde Medical University, China; **Raahim Bashir**, MBBS; CMH Medical and Dental College, Lahore, Pakistan; **Fiza Ismail**, MBBS; Continental Medical College, Lahore, Pakistan; **Sabeel Mahmood**; MBBS, Allama Iqbal Medical College, Lahore, Pakistan; **Syeda Aleena Hassan**; MBBS, Fatima Jinnah Medical University, Lahore, Pakistan; **Sameed Safdar**, MBBS; Allama Iqbal Medical College, Lahore, Pakistan; **Hania Fatima**, MBBS; Agha Khan University, Karachi, Pakistan; **Haseeb Mehmood Qadri**; MBBS, Punjab Institute of Neurosciences, Lahore, Pakistan; **Sabino Luzzi**, MBBS, MD, FACS, PhD; University of Sassari, Sardinia, Italy; **Asif Bashir**, MBBS, MD, FACS, FANS, Diplomate American Board of Neurosurgery; Punjab Institute of Neurosciences, Lahore, Pakistan

POSTER EXHIBITION, NETWORKING AND TEA BREAK

1100 – 1130 HRS
Main Lobby Ground Floor

THEME: ARTIFICIAL INTELLIGENCE IN HEALTH

1100 – 1130

AUTHOR

Syeda Ariba Hashmi

MBBS, Dow university of health sciences

TITLE

Contraception Chronicles: The Gamified Approach to Post-graduate Education in Family Medicine

CO-AUTHORS

Marzia Muhammad Hanif, MBBS, FCPS; Aga Khan University Hospital; **Ayesha Khan**, MBBS, FCPS; Dow university of health sciences

AUTHOR

Zainab Rafeeqt

MS, The Aga Khan University, Mohammad Ali Jinnah University

TITLE

Structural Analysis of Artemisinin Resistance Marker Pfk13 of Plasmodium falciparum

CO-AUTHORS

Dr. Najia Ganchi, PhD, The Aga Khan University; **Dr. Kamran Azim**, PhD, Mohammad Ali Jinnah University

Panel 1:

Creating Enabling Environment for Moving into the Future of Healthcare

1130-1300

Venue: Main Conference Hall

PANELISTS

Dr. Saeed Akhtar
(MD, MPH, FACS)
Chairman of the Board
of Governors at Pakistan
Kidney and Liver Institute
& Research Center
(PKLI&RC), Prime Minister's
Focal Person for Hepatitis C
Elimination in Pakistan



**Ms. Vasoontara S.
Yiengprugsawan**
Senior Universal
Health Coverage
Specialist, Asian
Development Bank



**Mr. Hamed Yaqoob
Sheikh**
Secretary, Ministry of
National Health Services
Regulation & Coordination,
Government of Pakistan



Dr Luo Dapeng
WHO Representative
in Pakistan



Mr. Khurram Khalid Ilyas
Country Manager
Roche Diagnostics
Pakistan & Afghanistan

MODERATOR

Dr. Jasim Anwar, MBBS
MApSc (USDY), PhD (UNSW)

DISCUSSION TOPICS

- Role of Bilateral and Multilateral Organization for a shared vision of future of health
- Moving together into the future (Equality)
- Aligning with PM's URAAN Pakistan
- Institutional Reforms and Curriculum Development

POSTER EXHIBITION AND LUNCH BREAK

1300 – 1400 HRS
Main Lobby Ground Floor

THEME: CELLULAR MEDICINE

1300 – 1304

AUTHOR

Parsa Gul

PhD Scholar, Quaid-i-Azam University, Islamabad

CO-AUTHOR

Naveed Ahmed, PhD, Professor; Department of Pharmacy, Qau, Islamabad; **Asim-ur-Rehman**, PhD, Professor, Department of Pharmacy, Qau, Islamabad.

TITLE

Designing Bioresponsive Smart Nanocarriers for Targeted Antifungal Therapy

THEME: GENOMICS & PRECISION MEDICINE

1304 – 1320

AUTHOR

Amber Khan

PhD Biotechnology, Dr. A. Q. Khan Institute of Biotechnology and Genetic Engineering (KIBGE), University of Karachi

TITLE

Association Of Non-Synonymous +326 A>T And Synonymous +258 G>A Polymorphisms in Omentin-1 Gene and Their Implication in Osteoarthritis Susceptibility

AUTHOR

Dr. Ayesha Ishtiaq

PhD, National University of Medical Sciences, Quaid-i-Azam University Islamabad

TITLE

A cohort study investigating the role of Bisphenol A in the molecular pathogenesis of breast cancer

CO-AUTHOR

Maryam Anyat Nasrullah, Department of Biochemistry, Quaid-i-Azam University, Islamabad; **Jahangir Sarwar Khan**, Rawalpindi Medical University; **Sara Malik**, Rawalpindi Medical University; **Usman Tareen**, Department of Biochemistry, Quaid-i-Azam University, Islamabad; **Mariam Anees**, Department of Biochemistry, Quaid-i-Azam University, Islamabad; **Aneesa Sultan**, Department of Biochemistry, Quaid-i-Azam University, Islamabad; **Iram Murtaza**, Department of Biochemistry, Quaid-i-Azam University, Islamabad

AUTHOR**Dr. Zaineb Akram**

Assistant Professor, Section of Genetics,
National University of Medical Sciences, NUMS.

CO-AUTHOR

Dr. Nimrah Siddique, THQ Hospital, Kahuta, Rawalpindi; **Muhammad Attique**, The Diabetes Center, Islamabad;
Qamar un Nisa Chaudhary; Bone Marrow Transplant Center, Rawalpindi.

TITLE

Measurement of Telomere Length: A Prospective Biomarker for
Disease Diagnosis and Prognosis

AUTHOR**Eiman Meer**

MS Biomedical Sciences, Department of Biological &
Health Sciences, Pak-Austria Fachhochschule: Institute
of Applied Sciences & Technology, Haripur,
Khyber Pakhtunkhwa, Pakistan

CO-AUTHOR

Yousaf Jamal Mahsood, Department of Ophthalmology, Khyber Girls Medical College, Hayatabad Medical Complex, Peshawar, Khyber Pakhtunkhwa, Pakistan; **Fazli Wahid**, Department of Biological & Health Sciences, Pak-Austria Fachhochschule: Institute of Applied Sciences & Technology, Haripur, Khyber Pakhtunkhwa, Pakistan; Terasaki Institute for Biomedical Innovation, Los Angeles, United States of America; **Muhammad Ilyas**, Center for Omic Sciences, Islamia College Peshawar, Khyber Pakhtunkhwa, Pakistan; **Jibril Hirbo**, Department of Medicine, Vanderbilt University Medical Center, Tennessee, United States of America; **Bakht Daniyal Khan**, Department of Ophthalmology, Khyber Girls Medical College, Hayatabad Medical Complex, Peshawar, Khyber Pakhtunkhwa, Pakistan; **Hussain**, Department of Ophthalmology, Khyber Girls Medical College, Hayatabad Medical Complex, Peshawar, Khyber Pakhtunkhwa, Pakistan; **Humaira Ayub**, Department of Biological & Health Sciences, Pak-Austria Fachhochschule: Institute of Applied Sciences & Technology, Haripur, Khyber Pakhtunkhwa, Pakistan

TITLE

Circulating microRNAs as Biomarkers for Primary Open-Angle
Glaucoma: A Case-Control Study

PARALLEL WORKSHOPS

1400 – 1640 HRS

ROOM A – AL-KHWARIZMI (3RD FLOOR)

Workshop on
Artificial Intelligence
in Instrument Development

Facilitators

Dr. Sadia Fatima
Director KMU HIS Hazara

Dr. Naveed Afzal Khan
MBBS, MHPE, PgDip. Family
Medicine, HQ&PS, CHR

Dr. Naheed Mahsood
MBBS, MPH, MHPE, CHR,
PhD Scholar
(Med Edu)

ROOM B – AL-RAZI (3RD FLOOR)

Hands-on Workshop on
Next-Generation Sequencing (NGS)
Data Analysis and Bioinformatics
Skills Development

Facilitators

Dr. Muhammad Ilyas
Centre for OMIC Sciences,
Islamia College Peshawar

Dr. Waseem Haider
Department of Biosciences,
COMSATS University Islamabad

Dr. Valeed Khan
Rahman Medical Institute Peshawar

Dr. Zafar Ali
MBBS, MHPE, FCPS, FRCPath (UK)
Associate Professor, Associate Chief
of Pathology & Section Head of
Histopathology, Shifa International
Hospital, Islamabad

ROOM C – BOARD ROOM (3RD FLOOR)

Hands-on Workshop on
Regenerative Medicine and
3D Bioprinting:
From Concept to Tissue Fabrication

Facilitators

Dr. Fazli Wahid
PhD, Fulbright Fellow, Assoc.
Professor PAF-IAST

Dieg N.R Sanchez
PhD

Akshat Joshi
PhD, Japan

PARALLEL WORKSHOPS

1400 – 1640 HRS

ROOM D – AL-BIRUNI (3RD FLOOR)

Hands-on Workshop on
Nanomedicine Preparation &
Characterization Techniques

Facilitators

Dr. Muhammad Naeem

PhD, Associate Professor,
Dept. of Biological Sciences, NUMS

Dr. Adnan Haider

PhD, Associate Professor,
Dept. of Biological Sciences, NUMS

Dr. Uzma Azeem Awan

PhD, Assistant Professor,
Dept. of Biological Sciences, NUMS

ROOM E – JABAR BIN HAYAN (3RD FLOOR)

Workshop on Precision in Practice:
Advanced Imaging, Physiology &
Interventions in the Modern Cath
Lab – EG

Facilitators

Dr. Yasir Parviz

MBBS, MRCP (UK), MRCP (Lon),
CCT (medicine, cardiology),
FACC, FRCP, MSc, PhD

Ziad F. Attieh

MBA, BBA, Certified Cardiovascular
Technologist Dubai Health Authority
& Lebanese Syndicate of
Electro-Radiology

PARALLEL WORKSHOPS

1400 – 1640 HRS

ROOM F – HALL 1 (1ST FLOOR)

Symposium cum Workshop on Emerging Trends in Clinical Genetics and Genomics

Facilitators

Prof Aisha Mohyuddin
Dean, Faculty of multidisciplinary
Studies, NUMS

Dr Humayoon Shafique Satti
Head, Section of Genetics,
Department of Biological Sciences,
NUMS

Dr Zaineb Akram
Assistant Professor, Department of
Biological Sciences, NUMS

Dr. Zaira Rehman
ASenior Computational Biologist
Indus Hospital & Health Network
(IHHN)

Dr. Samih Alqawlaq, PhD
Executive Clinical Sales Specialist,
Illumina

Prof. Muhammad Jawad Hassan
Consultant Medical Geneticist
Shifa International Hospital (SIH)

Prof. Muhammad Ansar
Professor of Biochemistry
Quaid-i-Azam University (QAU)

Dr. Massab Umair
Principal Scientific Officer & Head,
Virology National Institute of Health
(NIH)

Mr. Hamid Ali
General Manager
ELC Biogen

Prof. Dr. M. Israr Nasir
Professor of Pathology
Jinnah Sindh Medical University
(JSMU)

Dr. Natasha Anwar
Consultant Molecular Pathologist
Aga Khan University Hospital
(AKUH)

Miss Fizza Akbar
Senior Instructor, Paediatric Genetics
Aga Khan University Hospital
(AKUH)

PARALLEL WORKSHOPS

1400 – 1640 HRS

ROOM F – HALL 1
(1ST FLOOR)

Abstract Presentations

- 01** Preventive Genomic Medicine in Reproductive Health: The Role of PGT-A and PGT-M in Transforming Care and Preventing Rare Genetic Diseases
Muhammad Umair PhD
King Abdullah International Medical Research Center, Ministry of National Guard & Health Affairs (MNGHA), Riyadh Kingdom of Saudi Arabia (KSA)
- 02** Genomic Analysis of Salmonella Typhi strains Before and After Typhoid Vaccine Introduction in Pakistan
Junaid Iqbal PhD
Paediatrics and Child Health, The Aga Khan University, Karachi

POSTER EXHIBITION, NETWORKING AND TEA BREAK

1640 – 1700 HRS
Main Lobby Ground Floor

THEME: GENOMICS & PRECISION MEDICINE

1100 – 1130

AUTHOR

Muhammad Fozan

BS Bio-Medical Sciences, Pak Austria Fachhochschule
Institute of Applied Sciences and Technology, Mang

CO-AUTHORS

Amina Mishkat, Muhammad Abideen, Dr. Fazal Wahab

TITLE

Establishment of Mouse Embryo Assay (MEA) Protocols for
Quality Control in IVF Laboratories in Pakistan

AUTHOR

Hamza Khan

PhD, Pak-Austria Fachhochschule: Institute of Applied
Sciences and Technology, Haripur

TITLE

Uncovering novel genetic determinants of primary congenital
glaucoma in Pakistani families

AUTHOR

Rozeena Baig

M.Phil. Genetics, American Society of Human Genetics
& AMP

TITLE

Uncovering Population-Specific TLR4 Variants and Cytokine
Profiles: A Regional Genetic Insight into Osteoporosis Risk in
Pakistani Women

AUTHOR

Tooba Raheem

M.phil, epartment of Pathology and Laboratory
Medicine, Aga Khan University Hospital

TITLE

Antifungal Susceptibility Pattern and Molecular Identification
of Cryptococcus species through ITS and IGS regions, from
Pakistan

AUTHOR

Ume Kulsoom

Ph.D., Hamdard University

TITLE

Association of Hypertensive Coronary Artery Disease with
Insufficient Vitamin D levels and Vitamin D Receptor Gene
Polymorphism at stage I, Stage II and Stage III Hypertension

PANEL DISCUSSION AND ABSTRACT PRESENTATIONS

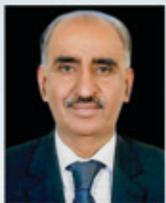
Panel 2:

Reshaping Precision Medicine through
Technological Evolution

1700–1830 HRS

Venue: Main Conference Hall

PANELISTS



Maj Gen (R) Tassawar Hussain
MBBS, MCPS, FCPS (Pak),
MRCP (UK), FRCP (London),
Professor/Head of Medicine &
Asso Dean, Foundation
University Medical College.
Ex-Principal, Army Medical
College



Dr. Naveed Afzal
MBBS, FRCS, FRCS (Urol),
Dip Urol. Consultant
Urologist, da Vinci Robotic
Surgeon & MDT Chair UK



Dr. Yasir Parviz
MBBS, MRCP (UK), MRCP (Lon),
CCT (medicine, cardiology),
FACC, FRCP, MSc, PhD,
UK Board-Certified
Interventional Cardiologist



Dr. Zahra Hoodbhoy
AKU, MBBS, MPH, PhD
(Population & Public
Health), Associate
Professor (Research)

MODERATOR



Prof. Dr. Farah Naz Qamar
MBBS, DCH, FCPS (Paeds),
Masters (Clinical Res), FRCP
(Edin), PhD Prof, Dept. Paeds
and Child Health, AKU

Discussion Topics

- Artificial Intelligence
- Telemedicine
- Robotic Surgeries
- Advancement in Interventional Cardiology
- Virtual Reality in Medical Education

Abstract Presentations

AUTHOR

Faiqa Ijaz Khan MBBS, MRCS
Punjab Institute of Neurosciences (PINS)

TITLE

Non-invasive Brain-Computer Interface for Motor Rehabilitation: Evidence and Pragmatic Implications for Lower Middle-Income Countries (LMICs)

CO-AUTHORS

Dr Sundas Irshad, MBBS; Dr Haseeb Mehmood Qadri; MBBS; Prof Asif Bashir; MBBS, MD, FAANS, FACS,
Punjab Institute of Neurosciences (PINS)

AUTHOR

Aly Hamza Khowaja MBBS
Aga Khan University

CO-AUTHORS

Ali Hyder, MBBS, Aga Khan University; **Maryam Aftab**, MBBS, Aga Khan University; **Nashia Ali Rizvi**, MBBS; MPH, Aga Khan University; **Mohsin Ali Mustafa**, MBBS; MBA, Aga Khan University; **Adil Haider**, MD; MPH; FACS, Aga Khan University

TITLE

Chatting with the Guidelines: Developing a RAG Chatbot to Enhance Evidence-Based Medicine in Pakistan

AUTHOR

Rehama Iqba MBBS, MSPH, CHPE
Medical College, The Aga Khan University

CO-AUTHORS

Rozina Nuruddin; MBBS, MSc, PhD, Associate Professor; Department of Community Health Sciences, Medical College, The Aga Khan University; **Nuruddin Mohammed**; MBBS, FCPS, PhD, Associate Professor; Department of Obstetrics and Gynecology, Medical College, The Aga Khan University; **Saleem Sayani**; PhD; Director Digital Health Resource Centre, The Aga Khan Development Network, Pakistan; **Sidrah Nausheen**; MBBS, FCPS, Associate Professor; Department of Obstetrics and Gynecology, Medical College, The Aga Khan University

TITLE

Towards innovative digital health solutions: An informed development of mHealth application for promotion of breast feeding and young child feeding practices among mothers in Karachi

AUTHOR

Maryam Aftab MBBS
The Aga Khan University

CO-AUTHORS

Aly Hamza Khowaja, MBBS; Aga Khan University; **Ali Hyder**, MBBS; Aga Khan University; **Sarim Ali Jafri**, Pharm.D; Aga Khan University; **Mohsin Ali Mustafa**, MBBS, MBA; Aga Khan University; **Nashia Ali Rizvi**, MBBS, MPH; Aga Khan University; **Samar Fatima**, MBBS, FCPS, MHPE; Aga Khan University; **Adil Haider**, MD, MPH; Aga Khan University

TITLE

Building a Patient-Centered Care App and Safety-First AI-Powered Chatbot for Pakistan

PROGRAMME OVERVIEW



Day 2,
Friday, 31 October 2025

TIME

SESSION

VENUE

PANEL DISCUSSION

Panel 3:

Decoding the AT&CG of Life: Genomics, Personalized Medicine and Precision Public Health

0900 – 1100 HRS
Main Conference Hall

PANELISTS



Prof. Dr. Shahid Mahmood Baig, PhD Hilal-i-Imtiaz, Sitara-i-Imtiaz Fellow Pakistan Academy of Sciences



Dr. Salik Javed Kakar MBBS, M.Sc. (UK), PhD (UK), Vice Principal, PAF-IAST



Dr. Ambrin Fatima, PhD Human Genetics, Assistant Professor Department of Biological and Biomedical Sciences, and Centre for Regenerative Medicine and Stem Cell Research, AKU



Dr. Humayoon Shafique Satti, PhD Biochemistry/ Molecular Biology Section Head Human Genetics, NUMS



Dr. Sadia Fatima KMU IHS Hazara, MBBS, PGD, PhD (Glasgow) Director, KMU, Institute of Health Sciences Hazara



Muhammad Ansar PhD Department of Biochemistry, Quaid-I-Azam University, Islamabad

MODERATOR



Dr. Aisha Mohyuddin Dean Multidisciplinary Sciences, NUMS

Discussion Topics

- Role of Gene-Editing in disease prevention
- Genomic Surveillance and bioterrorism
- Personalized Medicine and Finding Cancer Cure
- Combating Microbial Resistance
- Precision Public Health

ABSTRACT PRESENTATIONS

AUTHOR

Abdul Wadood Khan MS Human Genetics
Department of Biological Sciences, NUMS

TITLE

Genomic Profiling and In-silico Characterization of Candidate Variants in Families of Inherited Bone Marrow Failure Syndrome Patients

AUTHOR

Zeeshan Ansar MBBS, FCPS
Aga Khan University, karachi

TITLE

Genomic landscape of pathogenic mutations in Pakistani population with late-stage colorectal cancer

AUTHOR

Hammad Yousaf PhD
Aga Khan University, karachi

TITLE

Biallelic variants in RELCH, encoding a Rab11-binding protein, cause a complex neurodevelopmental disorder

AUTHOR

Sadia Farrukh PhD
Aga Khan University, karachi

TITLE

Parental clinical manifestation association with Newborn Immune Senescence and telomere biology in Pakistan

CO-AUTHOR

Saeeda Baig

POSTER EXHIBITION, NETWORKING AND TEA BREAK

1100 – 1300 HRS
Main Lobby Ground Floor

THEME: NANO MEDICINE

1100 – 1115

AUTHOR

Ali Raza MS
National University of Medical Science, Rawalpindi, Pakistan

TITLE

Development and Characterization of Anti-cancerous Drugs Conjugated Gold Nanospheres as a Potential Drug Delivery System for Hepatocellular Carcinoma Therapy

CO-AUTHOR

Uzma Azeem Awan, PhD, Aqsa Mehreen, MS, Abdul Basit, MS, National University of Medical Science, Rawalpindi, Pakistan.

AUTHOR

Madiha Ghazanfar PhD Scholar
National University of Medical Sciences, Rawalpindi

TITLE

Surface Functionalized Nano-Cyclosporine Enema for the Treatment of Ulcerative Colitis

CO-AUTHOR

Aqsa Mehreen, MS Biotechnology, Shahzaib, MS Biotechnology, Muhammad Naeem, PhD Pharmacy, National University of Medical Sciences, Rawalpindi

AUTHOR

Sara Munir Pharm-D
University of the Punjab, Lahore

TITLE

Innovative Nanoscaffolds for Precision Tissue Regeneration

AUTHOR

Umaima Khan Masters in Nanomedicine
Department of biological Sciences, National University of Medical Sciences, Islamabad

TITLE

Silver based Antibiotic Polymer Dressings: Fabrication and Characterization for Advanced Wound Healing

CO-AUTHOR

Adnan Haider, Phd Polymer science, National University of Medical Sciences, islamabad; **Ambreen Umar,** MS Biotechnology, National University of Medical Sciences, Islamabad

THEME: PRECISION PUBLIC HEALTH**1115 - 1130****AUTHOR**

Dr Adeel Khoja MBBS, PhD
The Aga Khan University;
The University of Adelaide

TITLE - 1

Influence of Socioeconomic Status on the Association Between Pregnancy Complications and Premature Coronary Artery Disease: Linking Three Cohorts

TITLE - 2

Pregnancy Complications Are Associated with Premature Coronary Artery Disease: Linking Three Cohorts

CO-AUTHOR

Dr Prabha H. Andraweera, PhD,
Dr Rosanna Tavella, PhD,
Dr Tiffany K. Gill, PhD,
Dr Gustaaf A. Dekker, PhD
Ms Suzanne Edwards, MSc Statistics,
Dr Margaret A. Arstall, PhD,
The University of Adelaide, Australia;

Dr Claire T. Roberts, PhD,
Flinders University, Australia

AUTHOR

Rida Jawaid M.Phil
The Aga Khan University Hospital

TITLE

Precision Public Health through Maternal Nutrition: Neurodevelopmental Outcomes from the Benazir Nashonuma Program in Pakistan

AUTHOR

Tehniyat Khadijat MBBS
Acute Medicine and Rheumatology, Epsom General Hospital, Surrey, GBR

TITLE

The Effect of Statin Therapy on Liver Enzymes and Fibrosis Progression in Patients With Coexisting Cardiovascular Disease and Non-alcoholic Fatty Liver Disease (NAFLD)

CO-AUTHOR

Zunaira Rizwan, Priya Joel, Hafiz Muhammad, Faizan Mughal, Asma Abdul Razzak, Muhammad Tayyab, Mavish Arif

PANEL DISCUSSION AND ABSTRACT PRESENTATIONS**Panel 4:**

From Cells to Systems: Regenerating Organs, Reversing Disease, and Reimagining Life

1130–1300 HRS

Venue: Main Conference Hall

PANELISTS

Dr. Afsar Mian
PhD (Hematology),
MPhil (Molecular Biology),
BSc (Hons) Natural Sciences
Associate Professor, AKU



Dr. Fazal Wahab
Ph.D., Humboldt Fellow
Associate Professor,
PAF-IAST



Dr. Akshat Joshi
South Korea (online)
PhD (Materials Engineering),
MTech (Biomed Eng),
Terasaki Institute for
Biomedical Innovation, USA
Adjunct Prof, DY Patil
Vidyapeeth (Deemed Uni),
Pune, India



Dr. Adnan Haider
Ph.D, Associate Professor
Nanomedicine Div.
NUMS

MODERATOR

Dr. Fazli Wahid
Ph.D., Fulbright Fellow
Terasaki Institute for Biomedical
Innovations, Los Angeles,
California, USA, Associate
Professor, Department of
Biomedical Science, PAF-IAST

Discussion Topics

- Cellular Medicine
- Tissue Re-Engineering
- 3D bio-printing
- Stem Cells
- Invitro Fertilization

ABSTRACT PRESENTATIONS**AUTHOR**

Dr Paras Jawaid PhD
Assistant Professor

CO-AUTHOR

Paras Jawaid, Mati Ur Rehman, Mahwish Fatima, Al-Muayyad Gajani, Azhar Hussain, Ather Enam

TITLE

DPP inhibition: A Promising Target for Inducing Cell Death in Cancer

AUTHOR

Dr. Asma Ahmed PhD
Institute of Molecular Biology and Biotechnology (IMBB),
The University of Lahore, Lahore, Pakistan

CO-AUTHOR

Khadija Kiran, Ph.D., Institute of Molecular Biology and Biotechnology (IMBB), The University of Lahore, Lahore, Pakistan

TITLE

Unveiling the Frostbite Healing Properties of Phytocompound loaded zinc nanoconstructs from Chir Pine (*P. Roxburgii* Sarg.) Leaves

AUTHOR

Atiya Rabbani PhD
Iqra university Chak Shahzad Campus Islamabad;
Comsats university Islamabad Abbottabad Campus;
Alikhademhosseini laboratory, California Nanosystem
Institute, USA

CO-AUTHOR

Fazli Wahid, Associate Professor, The Pak-Austria Fachhochschule: Institute of Applied Sciences and Technology (PAF-IAST);
Reihaneh Haghniaz, PhD, Ali Khademhosseini's Laboratory, Center for Minimally Invasive Therapeutics (CMIT) California Nano-Systems Institute, University of California Los Angeles, USA

TITLE

Biocompatible Chitosan-Spinel Ferrite Nanocomposites with Dual Antimicrobial and Wound Regeneration Properties

AUTHOR

Afeefa Zainab PhD
Institute for Life and Information Science LiMe,
Kyoto University

CO-AUTHOR

Vladyslav Honcharuk, Alexis Vandenberg

TITLE

oCELLoc: Optimizing Reference Cell Types for Single-Cell and Spatial Transcriptomics

POSTER EXHIBITION, AND LUNCH BREAK

1300 – 1400 HRS
Main Lobby Ground Floor

THEME: PRECISION PUBLIC HEALTH

1300 – 1310

AUTHOR

Urooj Amjad M. Phil Microbiology
Caring and curing centre, Peshawar

CO-AUTHOR

Dr. Muhammad Junaid Qadri, MBBS, Atlas Medical centre, Peshawar; **Dr. QuratulAin Qazi**, MBBS, MCPS Derma, Caring and curing centre, Peshawar; **Dr. Nayab Amjad**, BDS, FCPS, Lady ready hospital, Peshawar; **Dr. Muhammad Habib-e-Ajmi**, MBBS, M. Phil Physiology, Yashfeen college of pharmacy, Lahore

TITLE

Screened out before takeoff: The first study from Pakistan on dermatological disqualification of Gulf-bound workers

AUTHOR

Uzma Shamsi MBBS, MSc Epidemiology & Biostatistics, PhD
Aga Khan University Karachi Pakistan

CO-AUTHOR

Sarah Saleem, MBBS, FCPS; Aga Khan University Karachi Pakistan; **Namra Usman**, MBBS; Aga Khan University Karachi Pakistan; **Iqbal Azam**, MSc Statistics; Aga Khan University Karachi Pakistan; **Aliya Aziz**, MBBS, FCPS; Aga Khan University Karachi Pakistan

TITLE

Late-stage diagnosis and its impact on survival in Pakistani women with cervical cancer: Findings from an institutional cancer registry

THEME: REGENERATIVE MEDICINE

1310 – 1320

AUTHOR

Dr. Aisha Ishaque PhD
College of Molecular Medicine, Ziauddin University, Karachi

CO-AUTHOR

Asmat Salim, PhD, Rida-e-Maria Qazi, PhD, Irfan Khan, PhD, Panjwani Center for Molecular Medicine and Drug Research, International Center for Chemical and Biological Sciences, University of Karachi; **Durriyyah Sharifah Hasan Adli**, PhD; University of Malaya, 50603 Kuala Lumpur, Malaysia

TITLE

Bone Marrow Derived Mesenchymal Stem Cell Preconditioning Reverses Ischemia Induced Neuronal Degeneration in Rats

AUTHOR

Nida Khalid Ansari PhD Scholar
National University of Medical Sciences.

CO-AUTHOR

Syeda Maheen Kazmi, MS Human Genetics, National University of Medical Sciences

TITLE

Unlocking Regenerative Power: Optimized Exosome Harvesting from Bone Marrow MSCs

AUTHOR

Saleha Nisar PhD, MPhil, BDS
AM College, NUMS

CO-AUTHOR

Hass Viviane, Yong Wang

TITLE

Expedited Remineralization and Biostability of Sound and Caries Affected Dentin Collagen via Crosslinking Strategy

CONTINUED PARALLEL WORKSHOPS (MOVING FROM DAY 1 TO DAY 2)

1400 – 1640 HRS

POSTER EXHIBITION, NETWORKING AND TEA BREAK

1640 – 1700 HRS
Main Lobby Ground Floor

THEME: REGENERATIVE MEDICINE

1640 – 1445

AUTHOR

Sara Munir Pharm-D
Punjab University College of Pharmacy,
University of the Punjab lahore

TITLE

Invitro and Invivo studies of PLGA-PEG Nanocarriers Co-delivering Paclitaxel and Anti-PD-1 For Enhanced Chemo-Immuno-therapy

THEME: TELEMEDICINE AND DIGITAL HEALTH

1640 – 1445

AUTHOR

Ammarah Ghayas MBBS
Aga Khan University

CO-AUTHOR

Ebadullah Shadood Ahmed, MBBS, **Omer Shafiq**, MBBS; **Huba Atiq**, MBBS; FCPS; **Muhammad Faisal Khan**, MBBS; FCPS; **Haroon Khan**, MBBS, MD; **Asad Latif**, MBBS; MD; MPH, Aga Khan University.

TITLE

Leveraging the Critical Care Capacity of Remote Intensive Care Unit Through Online Education and Tele-ICU: Evidence from Multi-Tiered Training Program

AUTHOR

Anam Shahil Feroz PhD
Aga Khan University

TITLE

Remote Moderated Usability Testing of a Mobile Phone App for Remote Monitoring of Pregnant Women at High Risk of Preeclampsia in Karachi, Pakistan

AUTHOR

Anam Shahil Feroz PhD
Aga Khan University

TITLE

Perceived Barriers and Facilitators of Implementing a Sustained Smartphone-Based Telemonitoring Program for Pregnant Women at High Risk for Preeclampsia in the Public and Private Health Sectors of Pakistan

AUTHOR

Zeerak Jarrar BDS, MPH
Department of Medicine, The Aga Khan University
Hospital, Karachi, Sindh

TITLE

Acceptability and Scalability of an IT-Based App for Risk Assessment of Non-Communicable Diseases by Lady Health Workers in Pakistan - A Mixed-Method Pilot Study

CO-AUTHOR

Zeerak Jarrar, Saadia Sattar, Shaharyar Usman, Ghulam Kubra Rind, Hassan Z. Naqvi, Lijing L. Yan, Zainab Samad, Ayeesha Kamal

**CLOSING REMARKS BY
CHIEF GUEST**

1700 – 1800 HRS

VOTE OF THANKS
DR. JASIM ANWAR
CHAIRMAN FHCC 2025



PANEL
DISCUSSIONS

Panel 1

Creating Enabling Environment for Moving into the Future of Healthcare

MODERATOR



DR. JASIM ANWAR
MBBS, MAPSC (USYD),
PhD (UNSW)
CHAIRMAN FHCC2025

PANELISTS



DR. SAEED AKHTAR
(MD, MPH, FACS)
CHAIRMAN OF THE BOARD OF GOVERNORS
AT PAKISTAN KIDNEY AND LIVER INSTITUTE &
RESEARCH CENTER (PKLI&RC), PM'S FOCAL PERSON
FOR HEPATITIS C ELIMINATION IN PAKISTAN



MR. HAMED YAQOOB SHEIKH
FEDERAL SECRETARY
MINISTRY OF NATIONAL HEALTH
SERVICES REGULATIONS &
COORDINATION, GOVERNMENT
OF PAKISTAN

This high-level panel explores institutional reforms, curriculum innovation, and global collaboration, aligning with vision of URAAN Pakistan to create an enabling, equitable environment for advancing the future of healthcare.

1130 - 1300 HRS

Venue: Main Conference Hall

PANELISTS

**MS. VASOONTARA S.
YIENGPRUGSAWAN**
HEALTH SPECIALIST,
ASIAN DEVELOPMENT
BANK



DR LUO DAPENG
WHO
REPRESENTATIVE
IN PAKISTAN



**MR. KHURRAM KHALID
ILYAS**
COUNTRY MANAGER
ROCHE DIAGNOSTICS
PAKISTAN &
AFGHANISTAN

Discussion Topics

- Institutional Reforms and Curriculum Development
- Aligning with PM's URAAN Pakistan
- Role of Bilateral and Multilateral Organization for a shared vision of future of health
- Moving together into the future (Equality)

Panel 2 Reshaping Precision Medicine through Technological Evolution

MODERATOR



PROF. DR. FARAH NAZ QAMAR
MBBS, DCH, FCPS (PAEDS),
MASTERS (CLINICAL RES),
FRCP (EDIN), PhD

PANELISTS



MAJ GEN (R) TASSAWAR HUSSAIN
MBBS, MCPS, FCPS (PAK),
MRCP (UK), FRCP (LONDON)



DR. NAVEED AFZAL
MBBS, FRCS, FRCS (UROL),
DIP UROL.

This panel brings together leading experts to explore how AI, telemedicine, robotics, interventional cardiology, and virtual reality are revolutionizing precision medicine, reshaping healthcare delivery, and redefining patient outcomes

1130 - 1300 HRS

Venue: Main Conference Hall

PANELISTS



DR. YASIR PARVIZ
UK BOARD-CERTIFIED
INTERVENTIONAL CARDIOLOGIST



DR. ZAHRA HOODBHOJ
ASSOCIATE PROFESSOR
(RESEARCH)

Discussion Topics

- Artificial Intelligence
- Telemedicine
- Robotic Surgeries
- Virtual Reality in Medical Education
- Advancement in Interventional Cardiology

Panel 3

Decoding the AT&CG of Life: Genomics, Personalized Medicine and Precision Public Health

MODERATOR



DR. AISHA MOHYUDDIN
DEAN MULTIDISCIPLINARY
SCIENCES NUMS

PANELISTS



DR. SHAHID MEHMOOD BAIG
HILAL-I-IMTIAZ, SITARA-I-IMTIAZ
FELLOW PAKISTAN ACADEMY
OF SCIENCES



DR AMBRIN FATIMA
ASSISTANT PROFESSOR



DR HUMAYOON SHAFIQUE SATTI
PhD BIOCHEMISTRY/
MOLECULAR BIOLOGY, QAU

This panel delves into genomics and precision public health, exploring gene-editing, personalized medicine, microbial resistance, and genomic surveillance to unlock innovative solutions for disease prevention and future healthcare challenges

1130 - 1300 HRS

Venue: Main Conference Hall

PANELISTS

DR. SALIK JAVED KAKAR
VICE PRINCIPAL
AT PAF-IAST



DR. SADIA FATIMA
MBBS, PGD, PhD
(GLASGOW)



DR. MUHAMMAD ANSAR
PhD PROFESSOR
DEPARTMENT OF BIOCHEMISTRY
QAU

Discussion Topics

- Role of Gene-Editing in disease prevention
- Genomic Surveillance and bioterrorism
- Precision Public Health
- Combating Microbial Resistance
- Personalized Medicine and Finding Cancer Cure

Panel 4 From Cells to Systems: Regenerating Organs, Reversing Disease, and Reimagining Life

MODERATOR



DR. FAZLI WAHID
ASSOCIATE PROFESSOR
PAF-IAST

PANELISTS



DR. AFSAR MIAN
ASSOCIATE PROFESSOR,
AKU



DR. AKSHAT JOSHI
PHD (MATERIALS ENGINEERING),
SOUTH KOREA

This panel explores breakthroughs in regenerative medicine, from stem cells and tissue engineering to 3D bioprinting and cellular therapies, highlighting transformative innovations that promise to regenerate organs, reverse disease, and reimagine life.

1130 - 1300 HRS

Venue: Main Conference Hall

PANELISTS

DR. FAZAL WAHAB
ASSOCIATE PROFESSOR
PAF-IASST



DR. ADNAN HAIDER
ASSOCIATE PROFESSOR
NANOMEDICINE DIV.
NUMS

Discussion Topics

- Cellular Medicine
- Tissue Re-Engineering
- 3D bio-printing
- Invitro Fertilization
- Stem Cells



WORKSHOPS

WORKSHOP 1

Next-Generation Sequencing (NGS) Data Analysis and Bioinformatics Skills Development

3rd Floor, Room B – Al-Razi, COMSTECH Secretariate, Oct 30-31, 2025, 02.00 PM



SCAN THE QR CODE FOR MORE DETAILS
or visit on
fhcc2025.com/workshop-1



OBJECTIVES

- Introduce the foundational principles of next-generation sequencing and its application in biological research.
- Develop hands-on skills in navigating and utilizing command-line interfaces for data handling and analysis.
- Build competency in quality assessment, read alignment, variant detection, RNA sequencing analysis, and genome assembly.
- Guide participants through workflows in genomic data analysis.



TARGET AUDIENCE

The workshop is designed for graduate students, early-career researchers, laboratory professionals, and educators from life sciences, particularly those working in genomics, biotechnology, microbiology, molecular biology, and related fields. Prior knowledge of programming is not required, although basic familiarity with biology and data handling is recommended.

FACILITATORS



Dr. Muhammad Ilyas
Centre for Omic Sciences,
Islamia College
Peshawar



Dr. Valeed Khan
Rahman Medical
Institute Peshawar



Dr. Waseem Haider
Department of Biosciences,
COMSATS University
Islamabad



Dr. Zafar Ali
MBBS, MHPE, FCPS, FRCPath (UK)
Shifa International Hospital, Islamabad

WORKSHOP 2

Precision in Practice: Advanced Imaging, Physiology & Interventions in the Modern Cath Lab

3rd Floor, Room E – Jabar Bin Hayan, COMSTECH Secretariate, Oct 30-31, 2025, 02.00 PM



SCAN THE QR CODE FOR MORE DETAILS or visit on fhcc2025.com/workshop-2



OBJECTIVES

- Master principles and clinical applications of invasive physiology (FFR, iFR, RFR, Pd/Pa).
-
- Integrate imaging/physiology data to guide precision interventions (e.g., PCI, CTOs, bifurcations).
- Implement radiation and contrast reduction strategies using advanced tools.
- Explore emerging technologies (AI, robotics, hybrid imaging).



TARGET AUDIENCE

- Interventional Cardiologists
- Fellows
- Technologists
- Cath Lab Nurses

FACILITATORS



Ziad F. Attieh

MBA, BBA,
Certified Cardiovascular
Technologist
Dubai Health Authority &
Lebanese Syndicate of
Electro-Radiology



Dr. Yasir Parviz

MBBS, MRCP (UK),
MRCP (Lon),
CCT (medicine, cardiology),
FACC, FRCP, MSc, PhD



WORKSHOP 3

Artificial Intelligence in Instrument Development

3rd Floor, Room A – Al-Khwarizmi, COMSTECH Secretariate, Oct 30-31, 2025, 02.00 PM



SCAN THE QR CODE FOR
MORE DETAILS
or visit on
fhcc2025.com/workshop-3



OBJECTIVES

- Describe the AMEE Guide No. 87 framework for instrument development and its relevance in healthcare research.
- Identify AI applications that can strengthen each stage of instrument design, testing, and implementation.
- Apply AI-based tools to improve efficiency, accuracy, and scalability in developing healthcare instruments.
- Recognise and address ethical considerations, bias, and data privacy in AI-assisted research



TARGET AUDIENCE

- Healthcare researchers
- Faculty members and medical educationists.
- Undergraduate medical students interested in research methodology.
- Postgraduate students and early-career researchers in healthcare disciplines.

FACILITATORS



Dr. Sadia Fatima
Director KMU Institute
of Health Sciences, Hazara



Dr. Naveed Afzal Khan
MBBS, MHPE, PgDip.
Family Medicine, HQ&PS,
CHR



Dr. Naheed Mahsood
MBBS, MPH, MHPE,
CHR, PhD Scholar
(Medical Education)

WORKSHOP 4

Nanomedicine Preparation & Characterization Techniques

3rd Floor, Room D – Al-Biruni, COMSTECH Secretariate, Oct 30-31, 2025, 02.00 PM



SCAN THE QR CODE FOR MORE DETAILS or visit on fhcc2025.com/workshop-4



OBJECTIVES

- Understand core principles of nanomedicine and its clinical & commercial potential.
- Gain hands-on training in multiple nanoparticle preparation techniques.
- Learn sample preparation for nanoparticle characterization using a Zeta Sizer, UV-Spectroscopy and Optical microscope.



TARGET AUDIENCE

- Graduate and postgraduate students in biotechnology, nanotechnology, pharmacy, materials science, and biomedical engineering.
- Researchers & faculty interested in nanotechnology-based projects.
- Industry professionals in formulation development, R&D, or QC.
- Clinicians & translational scientists exploring therapeutic nanomedicine applications.

FACILITATORS



Dr. Muhammad Naeem
Associate Professor,
Dept. of Biological Sciences,
NUMS



Dr. Adnan Haider
Associate Professor,
Dept. of Biological Sciences,
NUMS



Dr. Uzma Azeem Awan
Assistant Professor,
Dept. of Biological Sciences,
NUMS

WORKSHOP 5

Emerging Trends in Clinical Genetics and Genomics

3rd Floor, Room F – Hall 1, COMSTECH Secretariate, Oct 30-31, 2025, 02.00 PM



SCAN THE QR CODE FOR MORE DETAILS
or visit on fhcc2025.com/workshop-5



OBJECTIVES

- Introduce participants to fundamental concepts and emerging trends in clinical genetics and genomics.
- Provide practical skills for genomic data analysis and interpretation.
- Familiarize participants with the principles of genetic counseling.



TARGET AUDIENCE

- Undergraduate and graduate students in life sciences, biotechnology, microbiology, molecular biology, and related disciplines.
- Medical technologists and laboratory scientists working in molecular diagnostics.
- Researchers and faculty members seeking to update their genomics knowledge.
- Residents and trainees in pathology, hematology, oncology, pediatrics, and infectious diseases with interest in genomics.

FACILITATORS



Prof Aisha Mohyuddin Dr Humayoon Shafique

Dean, Faculty of
multidisciplinary Studies,
NUMS



Head, Section of Genetics,
Department of Biological
Sciences, NUMS



Dr Zaineb Akram

Assistant Professor,
Dept. of Biological
Sciences, NUMS

WORKSHOP 6

Regenerative Medicine and 3D Bioprinting: from Concept to Tissue Fabrication

3rd Floor, Room C – Board RoomOnline, COMSTECH Secretariate,
Oct 30-31, 2025, 02.00 PM



SCAN THE QR CODE FOR
MORE DETAILS
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OBJECTIVES

- To learn the basics of tissue bioprinting techniques and understand how 3D bioprinters are used in research and medicine.
- To learn the methodology for 3D Bioprinting of tissues/organs of interest.
- To know the ethical considerations and regulations related to 3D Bioprinting.



TARGET AUDIENCE

- Healthcare professionals, medical experts, professors, researchers and students, and young scientists seeking to gain 3D bioprinting skills for academic or commercial roles.
- Engineers, surgeons, and scientists interested in applying 3D bioprinting to their work.
- Anyone looking to quickly build an understanding of 3D bioprinting principles and applications.
- Laboratory Technicians: Technicians working in research or clinical laboratories and interested in getting a job abroad.

FACILITATORS



Dr. Fazli Wahid
PhD, Fulbright Fellow
Assoc. Professor PAF-IAST



Dieg N.R Sanchez
PhD



Akshat Joshi
PhD



Shazma Yousaf
PhD Scholar
PAF-IAST



Saba Iftikhar
PhDPhD Scholar
PAF-IAST



Ehtisham ul Haq
Masters of Science,
PAF-IAST

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01



FAIQA IJAZ KHAN
MBBS
Punjab Institute of
Neurosciences (PINS)

Abstract Title:

Non-invasive Brain-Computer Interface for Motor Rehabilitation: Evidence and Pragmatic Implications for Lower Middle-Income Countries (LMICs),
Artificial Intelligence in Health

02



ALY HAMZA KHOWAJA
MBBS
Aga Khan University

Abstract Title:

Chatting with the Guidelines: Developing a RAG Chatbot to Enhance Evidence-Based Medicine in Pakistan
Artificial Intelligence in Health

03



PARAS JAWAID
PhD
Aga Khan University

Abstract Title:

DPP inhibition: A Promising Target for Inducing Cell Death in Cancer
Cellular Medicine

04



ABDUL WADOOD KHAN
MS
Department of Biological
Sciences, NUMS

Abstract Title:

Genomic Profiling and In-silico Characterization of Candidate Variants in Families of Inherited Bone Marrow Failure Syndrome Patients
Genomics & Precision Medicine

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05



SADIA FARRUKH
PhD
Aga Khan University

Abstract Title:

Parental clinical manifestation association with Newborn Immune Senescence and telomere biology in Pakistan

Genomics & Precision Medicine

06



HAMMAD YOUSAF
PhD
Aga Khan University

Abstract Title:

Biallelic variants in RELCH, encoding a Rab11-binding protein, cause a complex neurodevelopmental disorder

Genomics & Precision Medicine

07



MUHAMMAD UMAIR
PhD
King Abdullah International
Medical Research Center
(KSA)

Abstract Title:

Preventive Genomic Medicine in Reproductive Health: The Role of PGT-A and PGT-M in Transforming Care and Preventing Rare Genetic Diseases

Genomics & Precision Medicine

08



ZEESHAN ANSAR
MBBS, FCPS
Aga Khan University

Abstract Title:

Genomic landscape of pathogenic mutations in Pakistani population with late-stage colorectal cancer

Genomics & Precision Medicine

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09



JUNAID IQBAL
PhD
Aga Khan University

Abstract Title:

Genomic Analysis of Salmonella Typhi strains Before and After Typhoid Vaccine Introduction in Pakistan

Genomics & Precision Medicine

10



ASMA AHMED
PhD
The University of Lahore

Abstract Title:

Unveiling the Frostbite Healing Properties of Phytocompound loaded zinc nanoconstructs from Chir Pine (*P. Roxburgii* Sarg.) Leaves

Nano Medicine

11



ATIYA RABBANI
PhD
Iqra University
Chak Shahzad Campus

Abstract Title:

Biocompatible Chitosan-Spinel Ferrite Nanocomposites with Dual Antimicrobial and Wound Regeneration Properties

Nano Medicine

12



DR REHAMA IQBAL
MBBS, MSPH, CHPE,
PhD SCHOLAR
Aga Khan University

Abstract Title:

Towards innovative digital health solutions: An informed development of mHealth application for promotion of breastfeeding and young child feeding practices among mothers in Karachi

Telemedicine and Digital Health

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13



MARYAM AFTAB
MBBS
Aga Khan University

Abstract Title:

Building a Patient-Centered
Care App and Safety-First
AI-Powered Chatbot for
Pakistan

Telemedicine and Digital Health

14



AFFEEFA ZAINAB
PHD
Aga KKyoto University,
Japanhan University

Abstract Title:

oCELLoc: Optimizing Reference
Cell Types for Single-Cell and
Spatial Transcriptomics

Cellular Medicine



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01



PARSA GUL
MBBS

Quaid e Azam University

Abstract Title:

Designing Bioresponsive
Smart Nanocarriers for
Targeted Antifungal
Therapy

Cellular Medicine

02



SUNDAS IRSHAD
MBBS

Punjab Institute Of
Neurosciences

Abstract Title:

Comparison of Various Predictive
Tools in Predicting Risk of
Cerebrospinal Fluid Diversion
Post-Resection of Posterior Fossa
Tumors: A Systematic Review

Artificial Intelligence in Health

03



AIMAN NAEEM
MSCS

Aga Khan University

Abstract Title:

Fusion of RF and LSTM for
Robust Human Activity
Recognition in Healthcare
Monitoring Systems

Artificial Intelligence in Health

04



SHAFAQ TASEEN
MBBS, MSPH

The Aga Khan University

Abstract Title:

Augmenting Artificial Intelligence
in WHO's Mental Health Gap
Action Programme (mhGAP) to
Transform Child and Adolescent
Mental Health in LMICs

Artificial Intelligence in Health

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05



SHAFAQ TASEEN
MBBS, MSPH
The Aga Khan University

Abstract Title:

Harnessing Artificial Intelligence and Digital Technology for Enhancing Routine Immunization among Zero-Dose Children

Artificial Intelligence in Health

06



EIMAN MEER
MS
Pak-Austria Fachhochschule:
Institute of Applied Sciences
and Technology

Abstract Title:

Circulating microRNAs as Biomarkers for Primary Open-Angle Glaucoma: A Case-Control Study

Genomics & Precision Medicine

07



UROOJ AMJAD
M. PHIL
Caring and curing center,
Peshawar, Pakistan

Abstract Title:

Screened Out Before Takeoff: The First Study from Pakistan on Dermatological Disqualification of Gulf-Bound Workers

Precision Public Health

08



TEHNIYAT KHADIJA
MBBS
Acute Medicine and
Rheumatology,
Epsom General Hospital,
Surrey, GBR

Abstract Title:

The Effect of Statin Therapy on Liver Enzymes and Fibrosis Progression in Patients With Coexisting Cardiovascular Disease and Non- alcoholic Fatty Liver Disease

Precision Public Health

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09



YUMNA HAMID ALI
MPHIL
Mohammad Ali Jinnah
University, MAJU

Abstract Title:

Higher expression of
anti-apoptotic genes in Long
COVID and its association with
inflammatory markers

Precision Public Health

10



DR. MANAN ASLAM
PhD
School of Management,
Jiangsu University, Zhenjiang,
Jiangsu, P.R. China,

Abstract Title:

Determinants of Organic Agriculture
Adoption: The Role of ICTs and
Socioeconomic Factors in Advancing
Food Security and Precision Public
Health

Precision Public Health

11



ADEEL KHOJA
MBBS, MSC EPIDEMIOLOGY
AND BIOSTATISTICS, PhD
The Aga Khan University
(Pakistan) & The University of
Adelaide (Australia)

Abstract Title:

Pregnancy Complications Are
Associated with Premature
Coronary Artery Disease:
Linking Three Cohorts

Precision Public Health

12



ADEEL KHOJA
MBBS, MSC EPIDEMIOLOGY
AND BIOSTATISTICS, PhD
The Aga Khan University
(Pakistan) & The University of
Adelaide (Australia)

Abstract Title:

Influence of Socioeconomic Status
on the Association Between
Pregnancy Complications and
Premature Coronary Artery Disease:
Linking Three Cohorts

Precision Public Health

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UZMA SHAMSI
MBBS, MSC, PhD
The Aga Khan University

Abstract Title:

Late-stage diagnosis and its impact on survival in Pakistani women with cervical cancer: Findings from an institutional cancer registry

Precision Public Health

14



RIDA JAWAID
MPHIL
The Aga Khan University
Hospital

Abstract Title:

Precision Public Health through Maternal Nutrition: Neurodevelopmental Outcomes from the Benazir Nashonuma Program in Pakistan

Precision Public Health

15



AMMARAH GHAYAS
MBBS
Aga Khan University
Hospital

Abstract Title:

Leveraging the Critical Care Capacity of Remote Intensive Care Unit Through Online Education and Tele-ICU: Evidence from Multi-Tiered Training Program

Telemedicine and Digital Health

16



ANAM SHAHIL FERAZ
PhD

Abstract Title:

Remote Moderated Usability Testing of a Mobile Phone App for Remote Monitoring of Pregnant Women at High Risk of Preeclampsia in Karachi, Pakistan

Telemedicine and Digital Health

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ANAM SHAHIL FEROUZ
PhD

Abstract Title:

Perceived Barriers and Facilitators of Implementing a Sustained Smartphone-Based Telemonitoring Program for Pregnant Women at High Risk for Preeclampsia in the Public and Private Health Sectors of Pakistan
Telemedicine and Digital Health

18



ZEERAK JARRAR
BDS,MPH
The Aga Khan University

Abstract Title:

Acceptability and Scalability of an IT-Based App for Risk Assessment of Non-Communicable Diseases by Lady Health Workers in Pakistan - A Mixed Method Pilot Study
Telemedicine and Digital Health

19



AZHAR ZIA UR REHMAN
MS COMPUTER ENGINEERING
OrientMCT

Abstract Title:

Adopting AI In a hospital using Existing Resources

Artificial Intelligence in Health

20



SYEDA ARIBA HASHMI
MBBS
Dow University of Health Sciences

Abstract Title:

Contraception Chronicles: The Gamified Approach to Postgraduate Education in Family Medicine

Artificial Intelligence in Health

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NUMAN KHALIQUE

PhD

RANI Omico-informatics feeds
and pharmaceuticals (PVT)
Limited, Lahore

Abstract Title:

In silico assessment of plant
derived fatty acids effects on
poultry meat and its validation
via in vivo approach

Artificial Intelligence in Health

22



DR. MARYAM ABID

BDS, CRCP

Liaquat college of medicine
and Dentistry (LCMD)

Abstract Title:

A Systematic Review on The Early
Detection of Oral Cancer Using
Artificial Intelligence and Electronic
Tongue Technologytt

Artificial Intelligence in Health

23



ZAINAB RAFEEQ

MS

The Aga Khan University,
Mohammad Ali Jinnah University.

Abstract Title:

Structural Analysis of Artemisinin
Resistance Marker Pfk13 of
Plasmodium falciparum

Artificial Intelligence in Health

24



KINZA SHERAZ

MS HUMAN GENETICS
Department of Biological
sciences, NUMS

Abstract Title:

Measurement of Telomere Length:
A Prospective Biomarker for Disease
Diagnosis and Prognosis

Genomics & Precision Medicine

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SADIA FARRUKH
PhD
Aga Khan University

Abstract Title:

Parental clinical manifestation association with Newborn Immune Senescence and telomere biology in Pakistan

Genomics & Precision Medicine

26



AMINA MISHKAT
BS BIOMEDICAL SCIENCES
Pak Austria Fachhochschule
Institute of Applied Sciences
and Technology, Mang

Abstract Title:

Development and Optimization of Mouse Embryo Assay

Genomics & Precision Medicine

27



TOOBA RAHEEM
MPHIL
Department of Pathology and
Laboratory Medicine, Aga Khan
University Hospital

Abstract Title:

Antifungal Susceptibility Pattern and Molecular Identification of Cryptococcus species through ITS and IGS regions, from Pakistan

Genomics & Precision Medicine

28



HAMZA KHAN
PhD
Pak-Austria Fachhochschule:
Institute of Applied Sciences
and Technology, Haripur

Abstract Title:

Uncovering novel genetic determinants of primary congenital glaucoma in Pakistani families

Genomics & Precision Medicine

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FATIMA AKHTAR
MS BIOINFORMATICS
Department of Biological Sciences,
Faculty of Multidisciplinary Studies,
National University of Medical Sciences,
Rawalpindi,

Abstract Title:

Deciphering the Evolutionary Interplay between Dry Eye Disease-Associated Genes and Molecular Selection

Genomics & Precision Medicine

30



UME KULSOOM
PhD
Hamdard University

Abstract Title:

Association of Hypertensive Coronary Artery Disease with Insufficient Vitamin D levels and Vitamin D Receptor Gene Polymorphism at stage I, Stage II and Stage III Hypertension

Genomics & Precision Medicine

31



ROZEENA BAIG
M.PHIL. GENETICS
American Society of
Human Genetics & AMP

Abstract Title:

Uncovering Population-Specific TLR4 Variants and Cytokine Profiles: A Regional Genetic Insight into Osteoporosis Risk in Pakistani Women.

Genomics & Precision Medicine

32



AYESHA ISHTIAQ
PhD
National University of
Medical Sciences (NUMS)

Abstract Title:

A cohort study investigating the role of Bisphenol A in the molecular pathogenesis of breast cancer

Genomics & Precision Medicine

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AMBER KHAN
PHD BIOTECHNOLOGY
Dr. A. Q. Khan Institute of
Biotechnology and Genetic
Engineering (KIBGE),
University of Karachi

Abstract Title:

ASSOCIATION OF NON-SYNONYMOUS
+326 A>T AND SYNONYMOUS +258 G>A
POLYMORPHISMS IN OMENTIN-1 GENE
AND THEIR IMPLICATION IN
OSTEOARTHRITIS SUSCEPTIBILITY

Genomics & Precision Medicine

34



MADIHA GHAZANFAR
PhD
National University of
Medical Sciences (NUMS)

Abstract Title:

Surface Functionalized Nano-
Cyclosporine Enema for the
Treatment of Ulcerative Colitis

Nano Medicine

35



ALI RAZA
MS
National University of
Medical Sciences (NUMS)

Abstract Title:

Development and Characterization of
Anti-cancerous Drugs Conjugated
Gold Nanospheres as a Potential
Drug Delivery System for
Hepatocellular Carcinoma Therapy

Nano Medicine

36



UMAIMA KHAN
MASTERS
Department of Biological
Sciences, National University
of Medical Sciences
(NUMS)

Abstract Title:

Silver based Antibiotic Polymer
Dressings: Fabrication and
Characterization for Advanced
Wound Healing

Nano Medicine

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SARA MUNIR
PHARM-D
Punjab University
College of Pharmacy,
Punjab university lahore

Abstract Title:

In Vitro and In Vivo Studies of
PLGA-PEG Nanocarriers
Co-Delivering Paclitaxel and
Anti-PD-1 for Enhanced
Chemo-Immunotherapy
Nano Medicine

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SALEHA NISAR
PhD
AM College, NUMS

Abstract Title:

Expedited Remineralization and
Biostability of Sound and Caries
Affected Dentin Collagen via
Crosslinking Strategy
Regenerative Medicine

39



SARA MUNIR
PHARM-D
Punjab University
College of Pharmacy,
Punjab university lahore

Abstract Title:

Innovative Nanoscaffolds for
Precision Tissue Regeneration
Regenerative Medicine

40



NIDA KHALID ANSARI
PhD SCHOLAR
NUMS, AFBMTC

Abstract Title:

Unlocking Regenerative Power:
Optimized Exosome Harvesting
from Bone Marrow MSCs
Regenerative Medicine

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41



AISHA ISHAQUE

PhD

College of Molecular Medicine,
Ziauddin University, Clifton,
Karachi, Pakistan

Abstract Title:

Bone Marrow Derived Mesenchymal
Stem Cell Preconditioning Reverses
Ischemia Induced Neuronal
Degeneration in Rats

Regenerative Medicine



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HEALTH SCIENCES
ISLAMABAD



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DIRECTOR
KMU IHS HAZARA
MBBS, PGD, PhD
(GLASGOW)



MEHREEN KHALID
PRINCIPAL AHS
KMU IHS
ISLAMABAD



DR. AISHA MOHYUDDIN
DEAN
MULTIDISCIPLINARY STUDIES
NUMS
PhD (HUMAN GENETICS),
PRIDE OF PERFORMANCE
(PAKISTAN),
AFFILIATE TWAS (2007)



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SHAFIQUE SATTI**
SECTION HEAD
HUMAN GENETICS
NUMS
PhD
BIOCHEMISTRY /
MOLECULAR BIOLOGY



DR. AMAN KARIM
HEAD OF
BIOLOGICAL SCIENCES
DEPARTMENT, NUMS
PhD
CHEMISTRY
(NATURAL PRODUCTS)

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PAF-IAST
(BIOLOGICAL AND
HEALTH SCIENCES)



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PAF-IAST
(BIOLOGICAL AND
HEALTH SCIENCES)



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MASTERS
PAF-IAST
(BIOLOGICAL AND
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(BIOLOGICAL AND
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PAF-IAST
(BIOLOGICAL AND
HEALTH SCIENCES)



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PhD
PAF-IAST
(BIOLOGICAL AND
HEALTH SCIENCES)



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MASTERS
PAF-IAST
(BIOLOGICAL AND
HEALTH SCIENCES)



AMINA MISHKAT
MASTERS
PAF-IAST
(BIOLOGICAL AND
HEALTH SCIENCES)



HABAB ALI AHMAD
MASTERS
PAF-IAST
(BIOLOGICAL AND
HEALTH SCIENCES)



JUNAID AHMED TARIQ
PhD
PAF-IAST
(BIOLOGICAL AND
HEALTH SCIENCES)

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AMINA KHALID

PAF-IAST
(BIOLOGICAL AND
HEALTH SCIENCES)



MARIJ NOOR

PAF-IAST
(BIOLOGICAL AND
HEALTH SCIENCES)



ZARGHOONA JAWAD KHAN

MASTERS
PAF-IAST
(BIOLOGICAL AND
HEALTH SCIENCES)



MUHAMMAD MAUZ

MASTERS
PAF-IAST
(BIOLOGICAL AND
HEALTH SCIENCES)



HAJRA SHABIR

PAF-IAST
(BIOLOGICAL AND
HEALTH SCIENCES)



ISHTIAQ ALI
PHD SCHOLAR

PAF-IAST
(BIOLOGICAL AND
HEALTH SCIENCES)

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MUHAMMAD DANYAL



YAROOJ REHMAN



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ZULKIFAL



TALHA FAIZ

AND

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AIMEN RANA, ASIA KHAN, IBTISAM KARIM, MARIYA GHAFOORI, MOUALAL

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National University Of Medical Sciences Students Organizers



AQSA MEHREEN
MS BIOTECHNOLOGY
DEPARTMENT OF
BIOLOGICAL SCIENCES



ABDUL BASIT
PHD BIOLOGICAL SCIENCES
DEPARTMENT OF
BIOLOGICAL SCIENCES



FASIH ULLAH AFRIDI
MS NANOMEDICINE
DEPARTMENT OF
BIOLOGICAL SCIENCES



MESSAGE FROM OUR STRATEGIC PARTNER

Disease burden is rising, healthcare costs are increasing, and still half of the world's population lacks even the most basic care. The challenges are immense, and healthcare systems are calling for transformational—not incremental—improvement in patient care. With our unique position of having Diagnostics and Pharma under one roof, we can lead the way.

Keeping patients at the heart of everything we do, our ambition is clear: to prevent, stop, and cure diseases, and, with that, improve outcomes and reduce costs for patients and healthcare systems worldwide.

We will PREVENT diseases by identifying high-risk patients early to enable timely use of medicines.

We will STOP diseases by accurately diagnosing and stratifying patients to halt disease progression through targeted medicines.

We will CURE diseases by identifying the cause of disease in order to restore health through curative medicines.

And we will meet patients where they are - not only in the hospital but also in their home - to enable easier access and a better quality of life.

Our shared priority areas across Diagnostics and Pharma are oncology, neurology, and cardiovascular-metabolic diseases. Addressing these areas is crucial as they place a huge strain on societies and families worldwide. By 2035, they will account for half of the global disease burden.

With our deep understanding of diseases, we will address the most complex challenges in healthcare. We will

accelerate our research and development and deliver truly transformational diagnostic solutions, digital products, and medicines to better serve patient needs along their entire journey - from prevention and screening to diagnosis, treatment, and monitoring.

We will be at the forefront of innovation, adapting to shifting societal needs, and turning scientific and technological advancements into transformational solutions for patients.

We do this with a deep commitment to our people, culture, and values. We embrace sustainability and foster an inclusive environment that inspires people to perform at their best. In everything we do, we strive to make a positive impact on patients, society and the environment - now, and for generations to come.

We are creating a healthier future, together.

We are doing now what patients need next.



MR. KHURRAM KHALID ILYAS

COUNTRY MANAGER ROCHE, DIAGNOSTICS PAKISTAN & AFGHANISTAN

STRATEGIC PARTNERS



Ministry of National Health
Services Regulations & Coordination
GOVERNMENT OF PAKISTAN



THE AGA KHAN UNIVERSITY



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Mr. Shoaib Rana
CEO, Chemical House

For over 60 years, Chemical House has focused on transforming scientific innovation into real-world impact across healthcare, research, and industry. With NGS and molecular diagnostics now essential to understanding disease at the molecular level, our mission is to make genomic testing accessible, reliable, and seamlessly integrated into Pakistan's clinical, academic, and research systems.

We are committed to building a sustainable ecosystem supported by bioinformatics, data interpretation, and molecular expertise, enabling laboratories, clinicians, and educators to generate actionable insights. At Chemical House, we are not just technology providers, we are driving a shift toward data-driven diagnostics, early disease detection, and long-term scientific independence, with the vision of creating a lasting molecular legacy for Pakistan.

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