

Edition 04

RESEARCH INSIGHTS

• BRIDGING HEALTHCARE AND RESEARCH •

EDITORIAL

Research begins with a simple question: *How can we improve the lives of the patients entrusted to our care?* At IHHN, this question drives our commitment to generating evidence that addresses local health priorities while contributing to global knowledge. My own research has long centred on equity, ensuring that a child's postal code never determines their prognosis. This vision is reflected throughout IHHN's growing research portfolio. From clinical and translational research to public health, medical education and health systems strengthening, our investigators are generating evidence that informs practice, shapes policy and improves patient care. In alignment with IHHN's commitment to environmental sustainability, ICON 2026, the 8th Biennial Conference of our institution, will convene under the theme Resilient Care, Sustainable Future: Bridging Climate Action and Patient-Centred Healthcare. As you read Edition 4 of Research Insights, I encourage you to explore the breadth of scholarly activity being undertaken across our network.



Dr. Syed Ahmer Hamid
Consultant Pediatric Oncologist, IHHN

A TRIBUTE TO

DR. NASEEM SALAHUDDIN HONORING A LIFE OF SERVICE



The IHHN community bid farewell to Dr. Naseem Salahuddin, Professor Emeritus and former Head of the Department of Infectious Diseases (ID) on May 22, 2026. Her passing marks the loss of a visionary physician, educator and pioneer whose contributions transformed the landscape of infectious diseases in Pakistan and will continue to shape the field for generations.

She joined IHHN in 2007, at a time when Pakistan had only six formally trained ID specialists. She dedicated herself to addressing critical gaps in care by establishing dedicated HIV and tuberculosis (TB) clinics, a WHO compliant Rabies Prevention and Training Centre and the country's first formal Infectious Disease fellowship program. She also co-founded the Infectious Diseases Society of Pakistan and served on the WHO Strategic and Technical Advisory Group for Neglected Tropical Diseases, leaving behind an enduring legacy of clinical excellence, education, and public health leadership.

At her memorial service held at IHHN's Korangi Campus, Chairman Abdul Karim Pracha announced the establishment of the Dr. Naseem Salahuddin Center of Excellence for Infectious Diseases to carry her vision forward.

HIGHLIGHTED STORY

GOLD AND SILVER WON AT ASIA-PACIFIC STEVIE AWARDS



IHHN received Gold and Silver Honors at the 2026 Asia-Pacific Stevie Awards (APSA), one of the region's most prestigious awards programs recognizing innovation. Competing against more than 1,000 nominations from 29 markets, IHHN's Cystic Fibrosis (CF) Program received Gold for excellence in patient-centred care while its broader scalable healthcare model earned Silver for social impact. The APSA recognizes organizations

across the for-profit, non-profit and public sectors and is widely regarded as a global benchmark for innovation and organizational excellence. These accolades underscore IHHN's position as a healthcare innovator delivering measurable, equitable impact for underserved populations, not only within Pakistan but across the Asia-Pacific region.

INTERNATIONAL REPRESENTATION

INDUS HOSPITAL HOSTS HEALTH WISE SESSION ON CYSTIC FIBROSIS WITH INTERNATIONAL EXPERTS

IHHN organized a media awareness session on Cystic Fibrosis (CF), bringing together experts from Pakistan and Türkiye to emphasize the importance of early diagnosis, greater awareness and equitable access to specialized care for this rare genetic disorder. The session was led by Dr. Muhammad Fareeduddin, Head of Pediatrics at IHHN in collaboration with specialists from the Marmara CF Team, Türkiye including Professor Dr. Bülent Karadağ, Professor Dr. Yasemin Gökdemir, Professor Dr. Özge Kenis Coşkun, Ms. Damla Kocaman, and Ms. Gamze Taştan. Discussions highlighted that CF remains significantly underdiagnosed in Pakistan owing to limited awareness and restricted access to diagnostic facilities. Experts also reviewed advances in CFTR modulator therapies and emphasized the need for a national CF registry, expanded access to genetic testing, and the implementation of nationwide newborn screening. The session reaffirmed IHHN's commitment to advancing rare disease care through clinical excellence, research, international collaboration and medical education.



DR. JAVERIA AIJAZ HONORED WITH THE INTERNATIONAL SOCIETY FOR BIOLOGICAL AND ENVIRONMENTAL REPOSITORIES (ISBER) 2026 SPECIAL SERVICE AWARD



Dr. Javeria Aijaz, Head of the Biorepository Unit at IHHN, received the 2026 Special Service Award from the International Society for Biological and Environmental Repositories (ISBER), recognizing her outstanding leadership and contributions to the global biobanking community. As an ISBER Regional Ambassador and certified Qualification in Repository Science (QBRs) professional, she has advanced biobanking education and indigenous research through international collaborations and educational initiatives. Working within a resource-constrained setting, she established Pakistan's first pediatric acute leukemia biobank. Under her leadership, IHHN's Biorepository Unit is progressing toward Biorepository Accreditation Program (BAP) accreditation while expanding into a state-of-the-art facility with advanced liquid nitrogen storage, automation technologies, and a customized biobanking information platform.

INTERNATIONAL REPRESENTATION

REPRESENTING IHHN ON THE GLOBAL HEALTH STAGE



Dr. Saima Ali, Head of Emergency Medicine at IHHN's Korangi campus, delivered the keynote address at the University of Pennsylvania's Emergency Medicine Global Health Case Competition, held virtually on May 28, 2026. Organized by UPenn's Department of Emergency Medicine in collaboration with its Center for Global Health, the competition brings together medical trainees from low- and middle-income countries to present clinical cases relevant to their local emergency care settings. Drawing on her expertise in health professions education and interprofessional communication, Dr. Ali highlighted the importance of evidence-informed, context-sensitive approaches to emergency care. Her invitation as keynote speaker at this international academic forum reflects IHHN's growing recognition in global health and medical education.

REPRESENTING PAKISTAN AT THE EMEA SURGICAL OUTCOMES SUMMIT 2026

Dr. Ghina Shamsi, Head of the Department of General Surgery at IHHN, represented Pakistan at the Europe, Middle East and Africa (EMEA) Surgical Outcomes Summit 2026. She contributed to international discussions on evidence-based wound healing, surgical innovation and strategies to improve patient outcomes through global collaboration. Her participation reflects IHHN's growing role in international surgical research and its commitment to advancing evidence-based practice and benchmarking clinical care against global standards in resource-constrained settings.



INTERNATIONAL NETWORK FOR HEALTH WORKFORCE EDUCATION (INHWE) CONFERENCE



Dr. Madiha Ata and Dr. Junaid Sheikh, medical educationists from Indus University of Health Sciences (IUHS), presented at the 4th International Online Conference of the International Network for Health Workforce Education (INHWE), held January 7–9, 2026. Dr. Ata's presentation, Teaching to Think: The Reality of Teaching Diagnostic Reasoning and Critical Thinking in an LMIC, examined the challenges of fostering advanced clinical reasoning in low- and middle-income country (LMIC) settings. Dr. Sheikh's presentation, Digital Health and AI in Health

Professions Education, explored the integration of digital health and artificial intelligence in preparing future-ready healthcare professionals. Together, their contributions highlighted the role of IHHN and IUHS in advancing global dialogue on health workforce education and innovation.

RESEARCHER SPOTLIGHT



"We really need to find solutions to our own problems, because when we import research from other countries, it does not always address what our patients are actually facing."

PERSONAL JOURNEY & JOINING IHHN

Dr. Javeria Aijaz is known at IHHN as a molecular pathologist, but her path to that role was anything but direct. She completed her FCPS in Hematology soon after graduating, working as a consultant and Assistant Professor for several years before recognizing a decisive shift in her field: pathology was moving toward molecular diagnostics, increasingly the basis for disease diagnosis, yet in Pakistan no formal training in molecular pathology existed. She applied for a Fulbright Scholarship and completed a PhD in Human and Molecular Genetics in the United States. When Dr. Saba Jamal, Senior Director of Pathology Labs at IHHN, reached out with a vision to build the institution's molecular capacity, Dr. Aijaz returned and joined IHHN, a decision she has never second-guessed.

CONFRONTING THE PROBLEM

The challenge Dr. Aijaz confronted was structural. Pakistan carried an enormous infectious and genetic disease burden with almost no domestic diagnostic infrastructure to match it. Clinical genomics existed in research settings but had not been translated to routine diagnostic testing. Competency was scarce, the regulatory landscape was nascent, and economic analyses rarely factored the full cost of diagnostic inaccuracy, including reduced hospitalizations, improved treatment targeting, and downstream outcomes, against the upfront cost of molecular testing. Dr. Aijaz saw this gap not as an obstacle but as a mandate: if no one was going to build this capacity, IHHN would have to build it from within.

LANDMARK WORK

Her most significant contribution has been the translation of molecular research techniques into functional diagnostic assays for Pakistan's specific disease population. When IHHN's cystic fibrosis testing by polymerase chain reaction (PCR) consistently returned negative results despite strong clinical suspicion, Dr. Aijaz suspected that the Delta-F508 mutation common in Western populations might not reflect Pakistani genetic variants. She launched a research project sequencing all specimens that returned PCR-negative, and the results confirmed her hypothesis: the local mutation profile was entirely different. This discovery enabled the introduction of complete CFTR gene sequencing at IHHN, the only institution in Pakistan offering this test, provided entirely free of cost. The sequencing data directly enabled Trikafta access for patients who would otherwise never have qualified, transforming outcomes for a population that had been, in effect, diagnostically invisible. Her laboratory has since expanded into acute leukemia diagnostics in collaboration with St. Jude Children's Research Hospital and the University of North Carolina, who funded initial assay validation. A novel leukemia diagnostic test is approaching clinical readiness. Her team also developed the Rabies Immunity by Fluorescent Focus Inhibition Test (RIFFIT), not available as a diagnostic assay anywhere else in Pakistan. All capacity was built indigenously: when the first molecular sequencing machine arrived at IHHN, no external training was available. The team trained itself through online resources and iteration, over three years developing sufficient expertise to introduce these tests into clinical use.

LEGACY & CURRENT FOCUS

As Co-Principal Investigator on IHHN's inaugural Indus Seed Fund Grant (ISFG), studying artemisinin resistance in malaria through next-generation sequencing, Dr. Aijaz continues expanding IHHN's diagnostic and surveillance role. Her current focus is on growing the genomics program toward whole genome and whole exome sequencing, which would address cases where existing tests cannot identify causative variants despite strong clinical suspicion. Beyond rare disease, she sees population genomics as a critical frontier: understanding why certain conditions such as diabetes, hypertension, and specific cancers present at higher frequencies in the Pakistani population, and using that data to inform public health prevention. Her aspiration is not only to diagnose but to anticipate, building a genomics infrastructure that will shape healthcare decisions for generations.

HONORING EXCELLENCE

HIGHLIGHTED GRANTS

IHHN AWARDS INAUGURAL INDUS SEED FUND GRANT (ISFG): ARTEMISININ RESISTANCE SURVEILLANCE

IHHN awarded its inaugural Indus Seed Fund Grant (ISFG) to a study titled Artemisinin Resistance Surveillance of Plasmodium falciparum by Next Generation Sequencing of the Kelch 13 Gene: A Single Center Experience from Karachi, Pakistan. The project is led by Dr. Aamir Sikander Kazi, Consultant Infectious Diseases, as Principal Investigator, with Dr. Javeria Aijaz, Section Head of Molecular Biology and Molecular Pathologist at IHHN, as Co-Principal Investigator. Selected through a multi-stage evaluation by 16 independent experts from institutions including Aga Khan University (AKU), NUST, Ziauddin University, Khyber Medical University, and Rawalpindi Medical University, the study addresses artemisinin resistance in malaria, a growing global threat, with Karachi's status as a major metropolitan and port city making it a critical site for early resistance surveillance in the region.

MEGA RANDOMIZED REGISTRY TRIAL: CONSERVATIVE VS. LIBERAL OXYGENATION TARGETS

In collaboration with the Medical Research Institute of New Zealand, Dr. Komal Baloch, Consultant and Head of Critical Care Medicine at IHHN, served as Site Principal Investigator for a multicentre, randomized, registry-embedded clinical trial comparing conservative and liberal oxygen therapy in mechanically ventilated adults in the intensive care unit. The study was successfully completed and closed out in June 2026.



MEDICAL STONE EXPULSION STUDY

In collaboration with Getz Pharma Pvt. Ltd., Dr. Abdul Hafeez Qureshi, Consultant and Head of Urology at IHHN, served as Site Principal Investigator for a multicenter, open-label, randomized comparative study evaluating silodosin versus tamsulosin as medical expulsive therapy for patients with acutely obstructing ureteral calculi.



ADVANCING INTEGRATED DIABETES AND MENTAL HEALTH CARE THROUGH DIADEM

The DiaDeM Implementation Project, funded by the UK National Institute for Health Research (NIHR) Global Health Research Program, is led by Professor Abdul Basit, Director of the Indus Diabetes and Endocrinology Center (IDEC). Building on the original DiaDeM Programme, the project integrates a culturally adapted behavioral activation intervention for people living with diabetes and depression into primary care clinics at IHHN through the Community Health Department (CHD).



DISTINGUISHED PUBLICATIONS

JANUARY 1ST, 2026 – JUNE 31ST, 2026.

1.

Embregts, C. W., Salahuddin, N., Gohar, M. A., Naseer, F., Hussain, S., Alblas, K., ... & GeurtsvanKessel, C. H. (2026). Detection of rabies virus RNA in dog-bite wounds in a rabies-endemic area: evidence from an observational cohort study. *EBioMedicine*, 127.

2.

Castellucci, L. A., Chen, V. M., Kovacs, M. J., Lazo-Langner, A., Greenstreet, P., Kahn, S., ... & Rodger, M. (2026). Bleeding risk with apixaban vs. rivaroxaban in acute venous thromboembolism. *New England Journal of Medicine*, 394(11), 1051-1060.

3.

Fahad, M., & Majid, S. (2026). P125 Are third-generation cephalosporins still considered first choice for ascitic fluid infection in decompensated cirrhotic patients? Study from a large tertiary care health network, Pakistan.

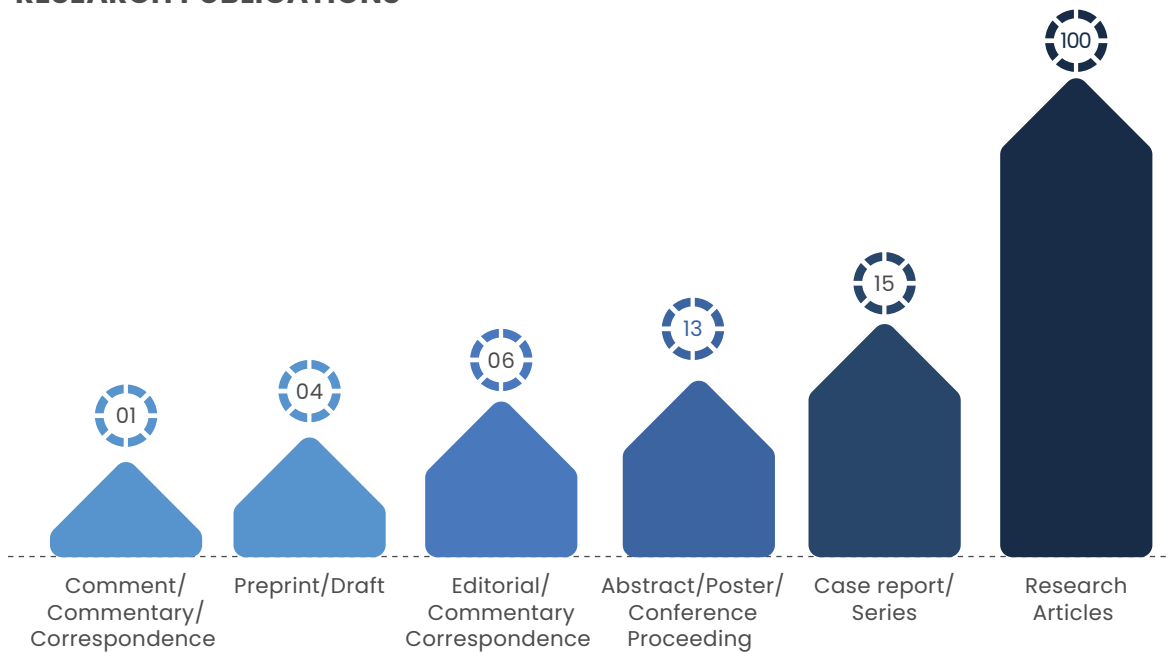
4.

Adnan, N., Amini, L., & Patel, M. J. (2026). Revisiting the EMPATICC trial in low- and middle-income countries. *European Heart Journal*, ehag006.

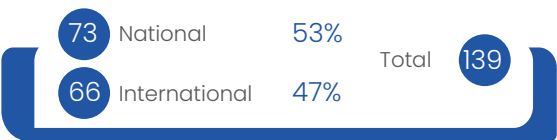
5.

Ahsan, M., Adnan, F., Khan, M. A., & Khursheed, N. (2026). Antimicrobial susceptibility of carbapenem-resistant *Acinetobacter baumannii* against tetracycline, doxycycline, tigecycline, minocycline and colistin: experience from a tertiary care hospital in Karachi. *BMC Microbiology*.

TYPE OF RESEARCH PUBLICATIONS



PUBLICATION PLATFORM



SPOTLIGHT ON RESEARCH SUCCESS

ORIC LAUNCHES ICON 2026 SPECIAL SUPPLEMENT OF THE PAKISTAN JOURNAL OF MEDICAL SCIENCES

IHHN's Office of Research, Innovation and Commercialization (ORIC) facilitated publication of the **ICON 2026 Special Supplement** of the Pakistan Journal of Medical Sciences (PJMS), featuring 27 original research papers authored by IHHN faculty and residents. Managed by the ORIC team as the ICON Publication Committee under the leadership of Dr. Ammad Fahim, Director ORIC, with Ms. Sayyeda Reza, Manager ORIC and Ms. Simra Naz, Research Associate, the initiative received 80 submissions from across the IHHN network, including Karachi (54), Muzaffargarh (17), Lahore (5), and Multan (4). All manuscripts underwent a rigorous peer-review process resulting in the publication of 27 papers. The launch was attended by PJMS leadership, IHHN faculty, residents and research stakeholders. Dr. Ashar Alam, Medical Director, Indus University Hospital, highlighted the growth of IHHN's research portfolio, while Mr. Shaukat Ali Jawaid, Chief Editor of PJMS, acknowledged the collaborative effort behind the supplement. The publication represents a significant milestone in strengthening IHHN's scholarly output and advancing research dissemination in Pakistan.



PROFESSOR DR. FARIDAH AMIR ALI JOINS AKU EXTERNAL ADVISORY BOARD



Professor Dr. Faridah Amir Ali, Principal of the Indus College of Family Medicine and Public Health (ICFMPH) at IHHN has been appointed to the External Advisory Board of the Aga Khan University (AKU) Center for Clinical Best Practices. In this role, she will provide strategic oversight for the dissemination of evidence-based, locally relevant Best Clinical Practice Guidelines to general practitioners across Pakistan through Continuing Medical Education (CME) initiatives and digital platforms. The

collaboration reflects a shared commitment to strengthening primary care by advancing context-appropriate, locally generated evidence.

IHHN RESEARCH RECOGNIZED AT HAEMCON 2026

IHHN's Clinical Laboratories and Blood Transfusion Services demonstrated a strong research presence at the Pakistan Society of Hematology (PSH) Annual Conference, HAEMCON 2026, held in Peshawar from May 1–3, 2026. Dr. Saba Jamal, Senior Director of Blood Transfusion Services, served as co-chair and delivered a keynote address on risk register implementation and mitigation in transfusion safety. IHHN researchers presented six oral presentations and three posters across the scientific program. Of the conference's five competitive scientific sessions, IHHN secured three Best Presentation Awards, with Dr. Shabneez Hussain, Dr. Zeenat Amna Azhar and Ms. Nida Jawaid each recognized as Best Presenter in their respective sessions.



SPOTLIGHT ON RESEARCH SUCCESS

IHHN SHOWCASES RESEARCH AT PSPOCON 2026

Dr. Naeem Jabbar, Consultant Pediatric Hematology Oncology represented IHHN at the 8th International Pakistan Society of Pediatric Oncology Conference (PSPOCon 2026), held in Lahore on February 6–7, 2026. He presented findings from the Pakistan Society of Pediatric Oncology (PSPO) National Protocol on Acute Lymphoblastic Leukemia (ALL), in which 62% of enrolled patients were treated at IHHN, underscoring the institution's leading role in national pediatric oncology research. Protocol updates were also presented by Dr. Shamvil Ashraf, principal investigator for the Wilms' Tumor protocol and Dr. Muhammad Raza Rafie, principal investigator for the Hodgkin Lymphoma protocol. In addition, seven IHHN abstracts were accepted for oral and poster presentations, with all presenters receiving PSPO travel grants.



ICONM STUDENTS HOST NURSING THEORY SYMPOSIUM



On January 22, 2026, senior students from the Indus College of Nursing and Midwifery (ICONM) organized a Nursing Theory Symposium at IUHS under the guidance of Assistant Professor Mr. Yousuf Bhatti. Through research-based presentations, students demonstrated the application of core nursing theories to clinical practice, highlighting the connection between theoretical knowledge and patient care. The symposium strengthened critical thinking, research and professional communication skills while reflecting IUHS's commitment to preparing nursing professionals grounded in evidence-based practice from the earliest stages of their training.

ORIC AND IQVIA STRENGTHEN RESEARCH COLLABORATION

The Office of Research, Innovation and Commercialization (ORIC) at IHHN hosted a collaborative meeting with IQVIA on May 19, 2026, celebrating the longstanding partnership between the two organizations while exploring future research opportunities. The session highlighted their successful collaboration on COVID-19 clinical trials and the ongoing Hepatitis C research project. Senior representatives from IQVIA, including Ms. Sadiya Altaf, Manager of Research and Development, joined Dr. Shahid Majid and the ORIC team for discussions on strengthening collaboration, identifying new clinical trial opportunities, and expanding research partnerships. The meeting reaffirmed the shared commitment of both organizations to advancing high-quality clinical research and laid the groundwork for future collaborative initiatives.



TRAILBLAZING INITIATIVES

ICON 2026

8th Biennial Conference

RESILIENT CARE SUSTAINABLE FUTURE

Bridging Climate Action and Patient-centered Healthcare

Karachi: October 08, 09 & 10 2026
Muzaffargarh: October 14 2026
Lahore: October 16 & 17 2026

The poster features a green background with a grid of solar panels and a network of green hexagons containing icons for healthcare, sustainability, and technology. Logos for Indus University of Health Sciences (IUHS) and Indus Hospital & Health Network are in the top right corner.

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DISEASE REGISTRIES

IHHN continues to strengthen its role in disease registries through active participation in national and international registry initiatives, providing research, coordination, and administrative support. These include the Pediatric Surgery Registry, Pediatric Oncology Registry, Hip Fracture Registry of Pakistan, e-Yukon Global Registry, Pakistan Society of Nephrology (PSN) Renal Registry, Diabetes Registry of Pakistan (DROP), and the European Cystic Fibrosis Society Patient Registry. These registries support systematic clinical data collection, generate opportunities for collaborative research, and contribute to improving patient care and healthcare outcomes.

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Newsletter Team Front row (L-R): Prof. Faridah Amir Ali, Dr. Sama Mukhtar, Dr. Muhammad Fareeduddin.
Back row (L-R): Mr. Haisum Raza, Ms. Afifa Batool, Dr. Zehra Kazmi, Ms. Sayyeda Reza, Dr. Madiha Ata.