

# DEPARTMENT OF BIOLOGICAL AND BIOMEDICAL SCIENCES

*Believe*

*Become*

*Succeed*

## *Message from the Chair*

It was Carl Sagan who said, "Science is a way of thinking much more than it is a body of knowledge". This is the time of year with the Nobel prizes being announced that I reflect on the advancements made in science, not just within BBS but AKU and the scientific community at large. Each year, breakthroughs are made in medicine, patient care, technology, and many other avenues. These serve as a reminder of how far we have come and how much there is yet to be discovered.

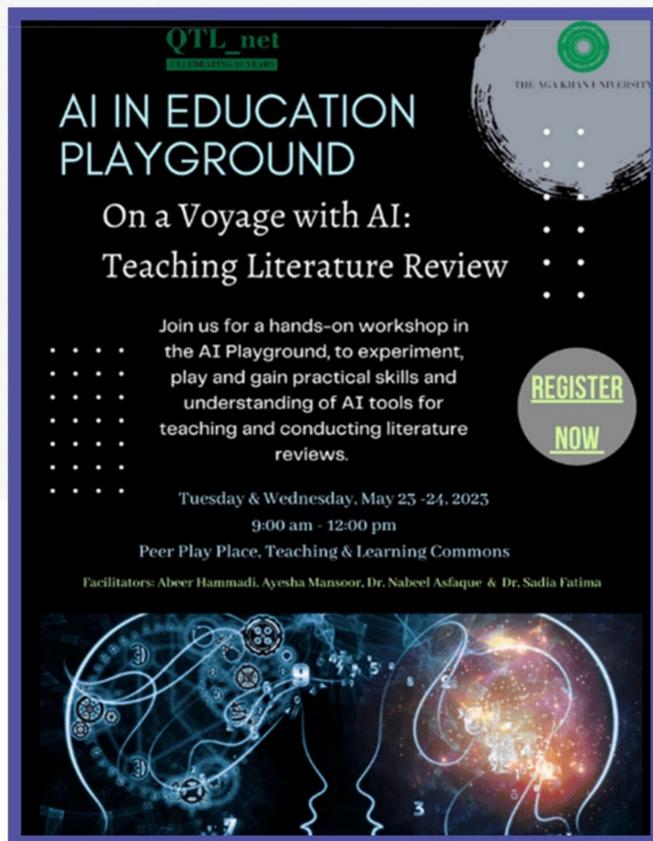
On November 15, 2023, the BBS Department will be holding its annual Biological Sciences conference. The theme for this year is, fittingly enough, From Basics to Breakthroughs. Along with our departmental research themes, the conference will explore the effects of climate change and artificial intelligence in healthcare and will consist of pre-and-post conference workshops. Our first conference was held in 2021, just as Covid restrictions were put back in place. Each of us in the department has vivid memories of conducting a purely virtual conference. This year, as with last year, we are pleased to invite everyone to attend in person. The last newsletter for 2023 showcases, as always, the accomplishments of our faculty and staff over the past few months. I invite you to read through the activities conducted by the department and look forward to another eventful year full of learning, growth, and opportunity. Please do share your feedback and suggestions.

Warm Regards,  
Kulsoom

OCT  
2023



# FROM THE HUB



Dr Sadia Fatima conducted a workshop, On a voyage with AI: teaching literature review, in collaboration with Dr Nabeel Ashfaque and the Network of Quality, Teaching and Learning (QTL\_Net) from May 23-24, 2023. The workshop enhanced participants' understanding of literature review skills and leveraged the use of AI in academic research and was a valuable learning experience.



Dr Rehana Rehman facilitated Education grand round faculty mentorship: avenues, challenges and prospects, organized by the Department of Educational Development on March 21, 2023.

## FROM THE HUB

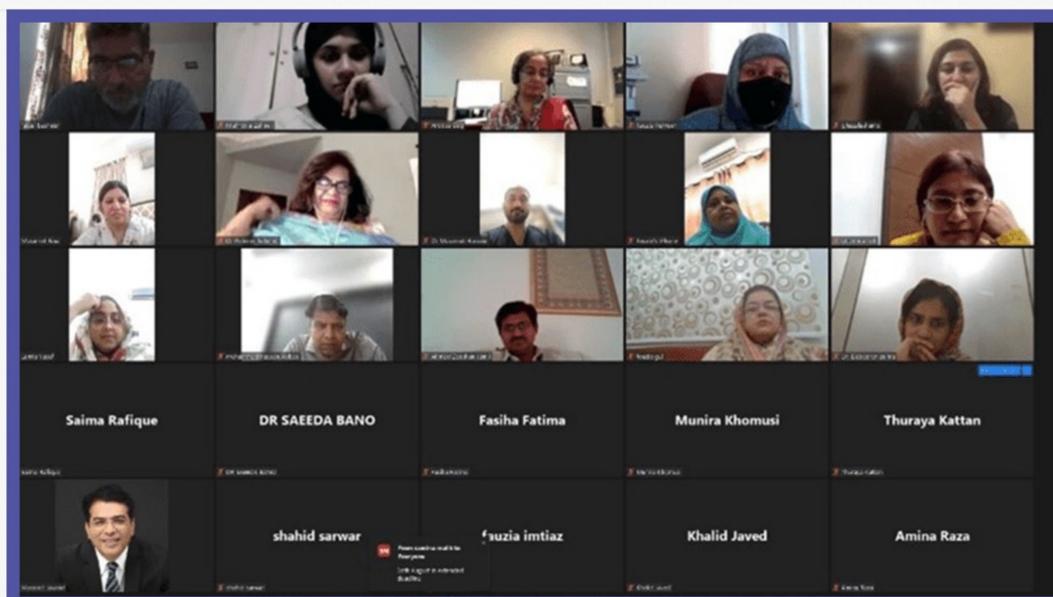


The Office of Faculty Development and Academic Affairs team led by Drs Fazal Hameed Khan, Shahid Shamim and Sadia Fatima, directed and offered a workshop on academic administration for faculty and staff on August 17, 2023. Maliha Murtaza, Aimen Sami, Dr Gulzar Lakhani and Nadeem Mustafa Khan facilitated the workshop.



Dr Kamran Afzal conducted a workshop, Emotional intelligence, at Hamdard university on May 5, 2023.

# FROM THE HUB



Dr Rehana Rehman participated in a 12-week course, AI in Research, which aimed to provide an understanding of the role of AI in designing and writing research papers.



A workshop on problem-based learning and team-based learning was conducted by Dr Kamran Afzal at Azra Naheed Medical College Superior University, Lahore, from August 5-8, 2023.

# FROM THE HUB



The poster is for an online session via Zoom titled "DIGITAL BOOTCAMP coggle". It is organized by QTL\_net, The Network of Quality, Teaching and Learning. The session is on Thursday, 24th August, 2023. The topic is "Creating Visual Mind Maps for Conceptual Understanding". The facilitators are Dr Sadia Fatima (Medical College) and Abeer Hammadi (QTL\_net). The session is held in three time zones: UK (10:30 AM - 12:30 PM), PAK (02:30 - 4:30 PM), and East Africa (12:30 - 2:30 PM). A registration link is provided: "Click here to Register". The poster is organized by the Blended and Digital Learning Team. For details, contact info@qtl.edu.

Online session via Zoom

THE QAADAN UNIVERSITY  
The Network of Quality, Teaching and Learning (QTL\_net)

## DIGITAL BOOTCAMP

### coggle

#### Creating Visual Mind Maps for Conceptual Understanding

- Identify the benefits of mind-mapping in enhancing meaningful learning.
- Explore the use of Coggle for mind-mapping web presentations.
- Develop and share a conceptualized diagram to enhance teaching and learning.

**Thursday, 24th August, 2023**

**Facilitators:** Dr Sadia Fatima (Medical College) | Abeer Hammadi (QTL\_net)

Region	Time
UK	10:30 AM - 12:30 PM
PAK	02:30 - 4:30 PM
East Africa	12:30 - 2:30 PM

[Click here to Register](#)

QTL\_net  
Organized by the Blended and Digital Learning Team  
For details, contact: [info@qtl.edu](mailto:info@qtl.edu)

Dr Sadia Fatima conducted an online CPD workshop on Coggle in collaboration with QTL\_Net at the Digital Bootcamp on August 24, 2023.

# FROM THE HUB

Elif - The Edtech Accelerator for Pakistan & PakGPT - A Platform of Scholars, Academics, AI Researchers, Innovators, & Entrepreneurs for AI in Higher Education

STEMx  
STEM SCHOOL FOR THE WORLD

In Collaboration with: Powered by:

## A VIRTUAL CRASH COURSE ON INTEGRATING GENERATIVE AI IN UNIVERSITY INSTRUCTION

**Dr. Fahad Javed**  
Head of Research, Motive AI

**Prof. Tariq Banuri**  
Research Professor, Univ. of Utah  
Fmr. Chairman, HEC

**Jazib Zahir**  
Chief Operating Officer, Tintash  
Adjunct Faculty, LUMS

**Hamza Farooq**  
Adjunct Professor, UCLA/Stanford  
ex-Google, x-Walmart Labs

**Wajahat Ali**  
Product Manager, Edy & Lead AI  
Arbsoft

**Dr. Sadia Fatima**  
Associate Professor & Chair  
Haile T Debas Teachers Academy  
The Aga Khan University

**Prof. Imran Zualkernan**  
Head of Computer Science,  
American University of Sharjah (AUS)

**Salman Abedin**, Adjunct Faculty, Conestoga  
College & Toronto School of Mgmt.  
**Irfan Kheiri**, Director, Interactive & Immersive Tech,  
Soultex Game Studio & Adjunct Faculty, IVSAA

**Dr. Athar Osama**  
Founder/CEO, Elif & STEMx  
Fmr. Member S&T & ICT, Planning Commission

**Manali A. Ahmed**  
Adjunct Faculty for Technology Ethics  
Princeton University, United States

**Prof. Adil Najam**  
President, WWF International  
Fmr. VC, LUMS, & Dean Emeritus, BU Pardee School

**Saeed Qadri**  
Head of Portfolio Commercial Management  
Nokia, United Kingdom

Limited Spots. Bulk Discounts Available  
Register Today to reserve.

Workshop Dates:  
Aug 25-27, 3-7pm PKST

APPLY BY AUG 23RD

Bit.ly/GenAI4UnivFaculty

COURSE FACULTY

Dr Sadia Fatima was invited to conduct a session, Re-designing assessments for the post-ChatGPT world, in a 3-day 12+ hours crash course on generative AI for university faculty organized by The STEM School for the World in collaboration with Elif and PakGPT, from August 25-27, 2023.

Topics:

- ✓ Lab Reports Interpretation
- ✓ Markers & Blood Tests
- ✓ Case Discussions
- ✓ Monitoring Parameters
- ✓ Dose Calculations
- ✓ Case based group activity

**HURRY UP!**  
Limited Seats Available

**Dr Amber Palla**  
• B-Pharm,  
• M-Pharm,  
• PhD  
• Assistant Professor,  
Pharmacology, The Aga  
Khan University (AKU)

Activity Director

**Dr. Essa Laboratory & Diagnostic Centre**  
ABUL HASAN ISPHANI RD BRANCH

13 May, 2023 (Saturday)  
11:00am - 2:00pm

Dr Amber Palla conducted a workshop, Iron deficiency anemia, arranged by Pakistan pharmacy mentors for undergraduate medical and pharmacy students on May 13, 2023, at Essa Laboratory, Karachi. Research Associate Mahwish Fatima accompanied Dr Palla and facilitated the workshop. The students appreciated the interactive element and case-solving strategies used in the workshop.

## FROM THE HUB

Drs Kulsoom Ghias and Sadia Fatima were invited to conduct a workshop, 'Active learning strategies for effective learning and student engagement'. It was held in collaboration with Drs Kausar Jabeen and Lena Jafri from the Department of Pathology and Laboratory Medicine, along with Kiran Qasim Ali and Aly Jafferani from QTL-Net for the faculty and staff of the Department of Pathology and Laboratory Medicine on September 7 and September 12, 2023.



Dr Najeeha Iqbal was a co-organizer at the Sanger Institute retreat 'Accelerating microbiome research to improve child health in low and middle-income countries' held at the Hinxton Hall Conference at the Wellcome Genome Campus in the UK from April 17 - 19, 2023. The focus of this retreat was to discuss how to accelerate microbiome research to improve the health of children in Asian, Latin American and African countries.

# FROM THE HUB



Dr Sadia Fatima was invited to conduct a pre-conference workshop, Leveraging AI in healthcare research, along with Dr Syed Faisal Mehmood, Dr Nabeel Ashfaque and Ms Ayesha Mansoor at the Annual Research Day held by the Department of Medicine on September 20, 2023.



Dr Amber Palla facilitated a workshop, ECG interpretation, as part of a clinical skills workshop organized by the Women Squad in collaboration with the Kashif Iqbal Thalassaemia Care Centre Trust on July 5, 2023.

# FROM THE HUB

The poster features the Aga Khan University logo and name in Urdu and English. It is organized by the Working Group for Women (WGW) in collaboration with the Department of Biological and Biomedical Sciences and DCPE. The event is titled 'UNLEASHING CREATIVITY WITH PECHA KUCHA: PRESENT WITH IMPACT' and is scheduled for Wednesday, September 13, 2023, at the University Center 13 floor, classroom 1-2 from 9:00 am to 12:00 pm. Learning objectives include understanding Pecha Kucha presentations, exploring scenarios for effective use, and creating/presenting one. A registration link is provided. The poster also lists Dr. Syeda Sadia Fatima (Associate Professor, Biological and Biomedical Sciences) and Dr. Anita Allana (Sr. Coordinator / Sr. Instructor, Working Group for Women/ UGME) as organizers. Contact information for Anita Allana and Sagar Pirwani is provided at the bottom.

Dr Sadia Fatima, in collaboration with the Working Group for Women, designed and conducted a workshop, Unleashing creativity with Pecha Kucha: present with impact, on September 13, 2023.

An innovative teaching pedagogy, Theatre in pharmacology, was introduced by Dr Amber Palla on May 18, 2023, for teaching pharmacology core concepts in the UGME foundation module to the class of 2027. This was a creative way to consolidate the concepts of adrenergic agonist.



# FROM THE HUB



Dr Kulsoom Ghias was invited to present and moderate a plenary at the AMEE 2023 annual meeting, Voices of AMEE, which provided a platform for speakers from diverse personal and professional backgrounds to share under-represented and varied points of view within health professions education to initiate important and much-needed conversations in communities of practice.

Dr Sadia Fatima was invited to give a talk, AI-assisted writing: how to use ChatGPT to boost your writing abilities, at the coffee talk series at the Department of Medicine on May 4, 2023. Over 100 attendees were present and found the presentation both informative and practical.

**Clinical Research Training Sessions**  
Organized By: Departmental Research Committee (DRC-DOM)

**Coffee Talk Series**

Thursday, May 04<sup>th</sup>, 2023 | 4:00 – 5:00 PM  
AI-Assisted Writing: How to Use ChatGPT to Boost Your Writing Abilities

**Speaker:**  
**Dr. Syeda Sadia Fatima**  
MBBS, M.Phil, PhD, FHEA (UK), Fellow International FAIMER Institute (USA)  
Associate Professor, Department of Biological and Biomedical Sciences  
Chair Membership Subcommittee Haile T. Deba Teachers' Academy

**Zoom link:** <https://aku-edu.zoom.us/j/95767782640>  
**Meeting Passcode:** 872717

**Session moderator:** Unzela Ghulam

Activity Code: CD-MED-00103-2022  
Clinical Research Training Sessions  
The ACCME designates this live educational activity for a maximum of 1.00 credit hours of CME in category 1 credit.  
The ACCME designates this live educational activity for a maximum of 1.00 credit hours of CME in category 1 credit.  
The ACCME designates this live educational activity for a maximum of 1.00 credit hours of CME in category 1 credit.

# FROM THE HUB



Drs Amber Palla, Kamran Afzal, Kanza Muzaffar, Saara Muddasir, Zuhair Yusuf, Salman Siddiqi and Arooj Shafiq served as members at the 17<sup>th</sup> Annual and 4<sup>th</sup> Virtual Mega Question Review, Enhancing the reliability and validity of assessments, for undergraduate and postgraduate academic programs at FHS-AKU on August 12, 2023. Drs Sadia Fatima and Rehana Rehman were invited to serve as Chairs for groups, and Drs Satwat Hashmi, Sadia Fatima and Zehra Jamil were invited to serve as educational resource person(s).

# FROM THE HUB

## Conference presentations:

Wasim M, Musani M, Arfa S, Siddiqi HS, Muddassir S, Arain FM. Unleashing nature's potential: herbal extracts as a promising therapy for drug-resistant epilepsy. Research talk presented at the 9<sup>th</sup> Annual Neuroscience Conference, Pakistan Society of Basic & Applied Neuroscience (PASBAN), Karachi, August 12 - 13, 2023

Khan RI, Ghias K. Developing contextually relevant Master-level bioethics program for Pakistan. Virtual oral presentation. APBEN 2023, Manila, Philippines, May 2023

Ghias K, Wangsaturaka D, Puranitee P, Boker A, Riklefs V. Symposium: Aspiring to excellence – best practices in health professions education. APMEC 2023, Singapore, May 2023

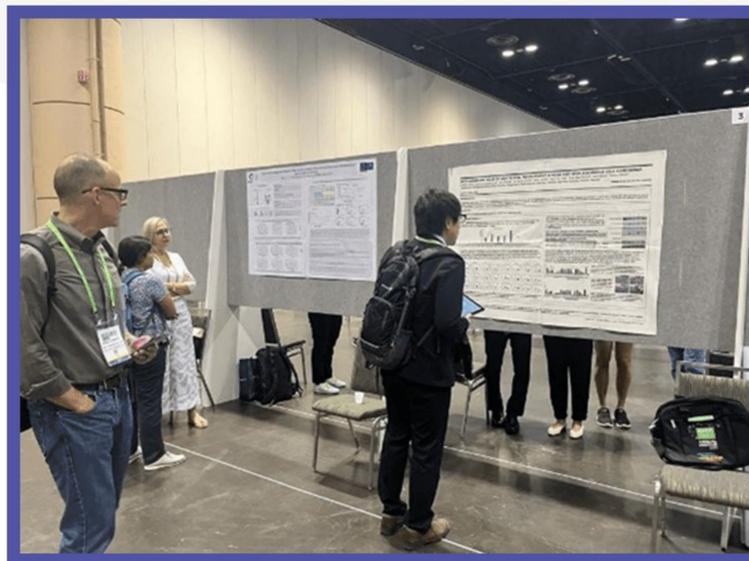
Rehman R, Tazeen A, Saira K, Rahila A. Perception of faculty: Mentorship Programs @ AKU; a qualitative study. 1<sup>st</sup> International Health Professions Education Conference, IQRA in HPE: Celebrating the past and navigating the future, Karachi, May 20, 2023. Awarded 3<sup>rd</sup> best oral presentation



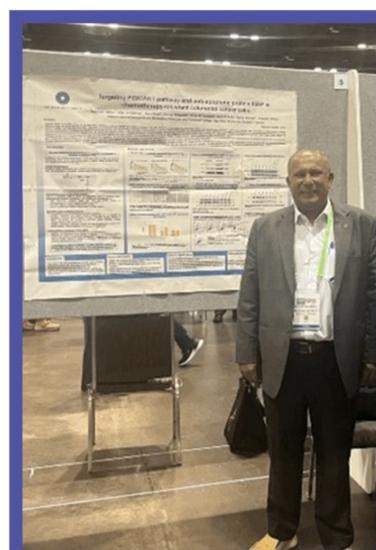
## FROM THE HUB

Jabeen K, Ahmed I, Fatima SS, Ghias K. Does medical students' perception of Team Based Learning sessions have an impact on achieving the learning outcomes? E-poster AMEE 2023, Glasgow, UK, August 2023

Ghias K, Shakeel H, Sheikh A, Abidi SH, Masood KI, Fatima S, Bilwani F. Mechanism and role of neutrophil recruitment in head and neck squamous cell carcinoma. Poster AACR Annual Meeting 2023, Orlando, FL, USA, April 2023

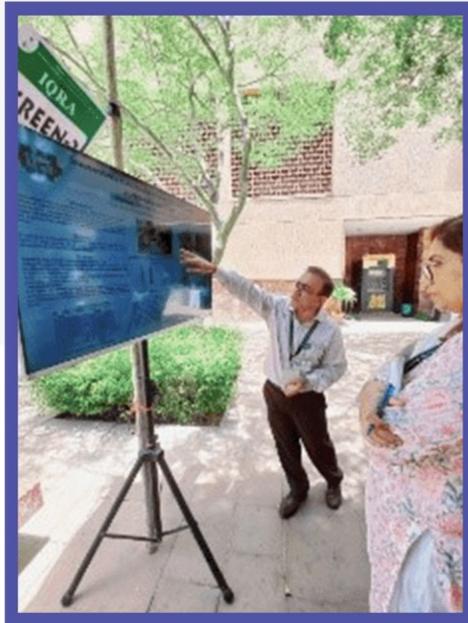


Akbar R, Rehman MU, Khan A, Belgaumi N, Farooqui I, Arain AS, Hussain A, Ghias K. Targeting PI3Kinase AKT pathway and anti-apoptotic protein XIAP in chemotherapy-resistant colorectal cancer cells. Poster AACR Annual Meeting 2023, Orlando, FL, USA, April 2023



## FROM THE HUB

Siddiqi HS, Palla AH, Fatima M. Group-based learning for identifying drug preparations in first year MBBS students at Aga Khan University Medical College. E poster, 1<sup>st</sup> International Health Professions Education Conference, IQRA in HPE: Celebrating the past and navigating the future, May 20, 2023



Dr Amber Palla conducted an Urdu poetry recitation at the Women Faculty Forum event, Baat Barsat Aur Hum, on August 30, 2023. A memorable comment made to Dr Amber summed up the experience: “I could hardly stop my tears when you were reading “Self-made logon ka almiya - I could relate”.

# FROM THE HUB



The BBS department spurred into action when invited to join the women's tape-ball cricket tournament, thanks to Dr Amber Palla, who created an impressive team, and Dr Zehra Jamil, who served as the team captain for the BBS Swinger Maidens. After winning one match (by default..), BBS reached the semi-finals, an impressive move for a cricket team at their first-ever tournament. #BBSCRICKETROCKS!

# ACHIEVEMENTS



**Sadia Fatima, MBBS,  
MPhil, PhD**  
*Project Advisor*

Dr Sadia Fatima was selected to serve as a Faculty Project Advisor at the International FAIMER Institute for the 2023 Fellows on May 13, 2023. This selection highlights her expertise and recognition in medical education, showcasing her role in mentorship and guidance in shaping future healthcare professionals.

Dr Sadia Fatima was selected to serve as Deputy Chair for the Professional Development Sub-committee at the international DOHaD society on July 12, 2023. This leadership position within a scientific society is poised to play a crucial role in fostering the exchange of knowledge and promoting professional development not only within the department but also on a broader scale, contributing to the advancement of the field and the growth of its members.

# ACHIEVEMENTS



BBS faculty, staff and students were given the opportunity to present at the Research Expo 2023, held on October 7, 2023, at Liaquat National Hospital and Medical College.

Postdoctoral Fellow Dr Muhammad Wasim was awarded 1<sup>st</sup> prize for the oral research talk presentation for his topic, Exploring the power of nature: herbal extracts as a potential treatment for drug-resistant epilepsy - a neurological disorder. Authors: Muhammad Wasim, Mehr Mussani, Syeda Arfa, Hasan Salman, Sara Ahmad, and Fazal Manzoor Arain.

MPhil student Sabeen Fatima was awarded 1<sup>st</sup> prize for her poster presentation, Molecular insights into infertile Polycystic Ovary Syndrome by using mass spectrometry based proteomics.

Presenting author: Sabeen Fatima.

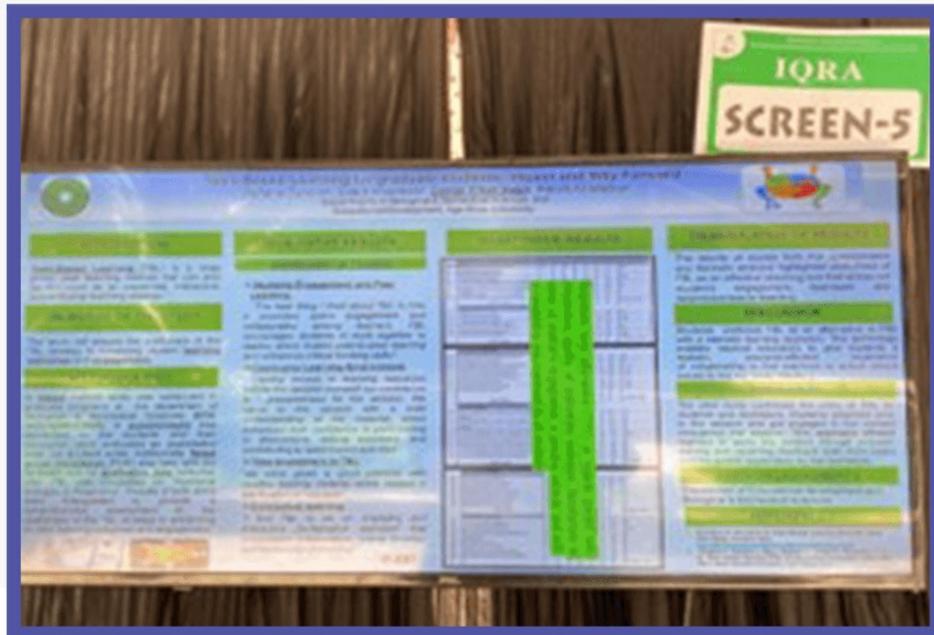
Co-authors: Dr Rehana Rehman, Munazza Raza Mirza, Haq Nawaz Khan, Soma Vankwani, and Muneeza Zafar.

# THE GRADUATE STATION



The Program Office arranged a workshop, Navigating the research journey: from synopsis to thesis writing, for MPhil and PhD students, directed by Dr Rehana Rehman and facilitated by BBS faculty members including Drs HR Ahmad, Kulsoom Ghias, Fareena Bilwani, Najeeha Talat Iqbal, Amber Palla Arooj Shafiq, Khalid Hameed and Rozmeen Akbar. Mussarat Ashraf and Asra Khan supervised an EndNote hands-on activity.

# THE GRADUATE STATION



MPhil student Syeda Pinar Nasir presented an abstract for a poster presentation, Team- based learning for graduate students: impact and way forward, in the 1<sup>st</sup> International Health Professions Education Conference, IQRA in HPE: Celebrating the past and navigating the future on May 20, 2023. The poster was rated as the 4<sup>th</sup> best poster presentation.

The Office of Graduate Studies is pleased to announce that a new elective course for Anatomy, The Brain-Body Axis: Development, Structure and Function, has been developed, approved, and launched for MPhil-BBS students. The MPhil program is immensely grateful to Dr Fazal Arain, who spearheaded the project and incorporated feedback from all Anatomy faculty members. Drs HR Ahmad, Khalid Khan, Kulsoom Ghias, Zehra Jamil, and Sadia Fatima provided notable contributions as well.

# GRANTS

1. Dr Kulsoom Ghias (PI), Dr Muhammad Murtaza, Dr Nabeel Zafar (University of Wisconsin, Madison, USA). Low-cost liquid biopsies to monitor treatment response in patients with metastatic colorectal cancer from the Carbone Cancer Center 2023; Global Oncology Grant, University of Wisconsin, Madison.
2. Dr Sadia Fatima (PI), Dr Ambrin Fatima. Mobile health (m-Health) intervention to reduce the epigenetic signature of Advanced Glycation end Products (AGE) as a risk biomarker in metabolically healthy and unhealthy obese adults; PKR 1,133,202, Pakistan Science Foundation.
3. Dr Rehana Rehman (PI). Efficacy of Vitamin D supplementation in females with Polycystic Ovary Syndrome: a randomized open label delayed start design; PKR 3,968,125, Pakistan Science Foundation.
4. Dr Ambrin Fatima (PI), Dr Salman Kirmani, Dr Ghulam Zainab, Dr Aeysha Malik, Dr Waqas Uddin Khan, Dr Fizza Akbar, Dr Muhammad Sajid Hussain. Molecular investigations of idiopathic Recurrent Pregnancy Loss (RPL) in Pakistani population; PKR 3,971,600, University Research Council, AKU.

# GRANTS

5. Dr Amber Palla (PI), Dr Ambrin Fatima, Dr Satwat Hashmi. Pharmacological evaluation of edible herbs and their active constituents in gut motility disorders; PKR 1,500,000, Seed Money Grant, AKU.

6. Sabeen Fatima (PI, supervisor: Dr Rehana Rehman), Dr Ayesha Habib, Dr Shaista Afzal, Dr Haq Nawaz Khan. Identification and characterization of infertile Polycystic Ovary Syndrome: using proteomic approach; PKR 674,626, University Research Council, AKU.

7. Hijab Zehra (PI, supervisor: Dr Ambrin Fatima), Dr Afsar Ali Mian. Generation and characterization of a human ZNF142 knock out induced pluripotent stem cell line using CRISPR/Cas9 genome editing; PKR 675,600, University Research Council, AKU.

# PUBLICATIONS

1. Sultan AS, Ali R, Zahid N, Akbar R, Ali M, Fatima SS, Ghias K, Martins R, Tariq M, Ajani K. Experiences of undergraduate medical, nursing students and faculty regarding flipped classroom: a mixed method study at private medical university in Pakistan (2023). *BMJ Open* 13(4):e070276.  
<https://doi.org/10.1136/bmjopen-2022-070276>
2. Fatima SS, Zakaria M, Zakaria A, Tekian A. Exploring knowledge, attitudes and perceived myths towards foetal programming and factors affecting it among the public and health professionals in Pakistan: a needs assessment study (2023). *J Pak Med Assoc* 73:1054-1060.  
<https://doi.org/10.47391/JPMA.7393>
3. Azhar A, SM Alam, Ashraf M, Malick A, Riffat S, Rehman R. Vitamin D status and its relationship with oxidative stress markers in infertile women with polycystic ovary syndrome (2023). *Pak. J Pharm Sci* 36(1):331-335.  
<https://doi.org/10.36721/PJPS.2023.36.1.SP.331-335.1>
4. Azhar A, Asad F, Rizvi F, Abid F, Farooqui MU. Diabetic rats: hyperlipidemia and role of mango seed (2023). *J Clin Exp Invest* 14(3):em00817.  
<https://doi.org/10.29333/jcei/13213>
5. Rehman R, Naz S, Khan HN, Sheikh A, Azhar A, Ashraf M, Afzal S, Khan AH. Efficacy of Vitamin D supplementation and metformin compared to metformin alone in infertile females with Polycystic Ovary Syndrome: a randomized open-label trial (2023). *Protoc Exch*.  
<https://doi.org/10.21203/rs.3.pex-2199/v1>

## PUBLICATIONS

6. Azhar A, Javaid M, Ashraf M, Nasir M, Rehman R. Vitamin D screening before fertility treatment plans: pilot study in PCOS and non-PCOS infertile women (2023). *Pak J Physiol* 19(2):15-9.

7. Wasim M, Khan HN, Tawab A, Habib F e, Iqbal M, Awan FR. High performance liquid chromatography based assay optimization for the detection of plasma amino acids for applications in metabolic disorders in developing countries (2023). *Sep Sci Plus*.  
<https://doi.org/10.1002/sscp.202300119>

8. Musani M, Wasim M, Siddiqi HS, Muddasir Khan SA, Arain FM. Herbal extracts: the future treatment option for drug-resistant epilepsy (2023). *J Pak Med Assoc* 73(6):1266-1271.  
<https://doi.org/10.47391/JPMA.7081>

9. Wasim M, Khan HN, Ayesha H, Awan FR. Need and challenges in establishing newborn screening programs for inherited metabolic disorders in developing countries (2023). *Adv Biol (Weinh)* 7(7):e2200318.  
<https://doi.org/10.1002/adbi.202200318>

10. Hasan Z, Masood K, Qaiser S, Khan E, Hussain A, Ghous Z, Khan U, Yameen M, Hassan I, Nasir MI, Qazi MF, Memom HA, Ali S, Baloch S, Bhutta Z, Veldhoen M, Simas JP, Mahmood SF, Ghias K, Hussain R. Investigating the impact of prior COVID-19 on IgG antibody and Interferon gamma responses after BBIBP-CorV vaccination in a disease endemic population: a prospective observational study (2023). *Health Sci Rep* 6(9):e1521.  
<https://doi.org/10.1002/hsr2.1521>

# PUBLICATIONS

11. Rehman R, Ali R, Khalid S, Ali TS. Seeds of trust ripe as luscious fruits: faculty mentorship forum at Aga Khan University Medical College (2023). *Pak J Med Sci* 39(5):1268-1274. <https://doi.org/10.12669/pjms.39.5.7175>
12. Ali R, Khan TA, Gul H, Rehman R. An interplay of Progesterone, Leukemia Inhibitor Factor and Interleukin-6 in the window of implantation; Impact on fertility (2023). *Cytokine* 170:156332. <https://doi.org/10.1016/j.cyto.2023>
13. Ashraf M, Khan HN, Ibrahim R, Shahid M, Khan S, Fatima A, Ullah S, Rehman R. Genetic association of Vitamin D receptor gene with female infertility (2023). *Nucleos Nucleot Nucl.* <https://doi.org/10.1016/j.cyto.2023.156332>
14. Zehra T, Tariq M, Rehman R, Zuberi RW. Basics of faculty-to-faculty mentoring: a process to identify support and challenges (2023). *PLOS One.* <https://doi.org/10.1371/journal.pone.0287127>
15. Alam F, Shahid M, Riffat S, Zulkipli IN, Syed F, Ashraf M, et al. SIRT1 and antioxidants in infertile females: exploration of the role of Vitamin D (2023). *PLoS One* 18(7): e0287727. <https://doi.org/10.1371/journal.pone.0287727>
16. Sultan AS, Ali R, Zahid N, Akbar R, Ali M, Fatima S, Ghias K, Martins R, Tariq M, Ajani K. Experiences of undergraduate medical, nursing students and faculty regarding flipped classroom: a mixed method study at private medical university in Pakistan (2023). *BMJ Open* 13(4):e070276. <https://doi.org/10.1136/bmjopen-2022-070276>

# PUBLICATIONS

17. Kikuchi S, Wada A, Kamihara Y, Okazaki K, Jawaid P, Rehman MU, Kobayashi E, Susukida T, Minemura T, Nabe Y, Iwao N, Ozawa T, Hatano R, Yamada M, Kishi H, Matsuya Y, Mizuguchi M, Hayakawa Y, Dang NH, Sakamoto Y, Morimoto C, Sato T. DPP8 selective inhibitor tominostat as a novel and broad-spectrum anticancer agent against hematological malignancies (2023). *Cells*. 12(7):1100. <https://doi.org/10.3390/cells12071100>
18. Shaukat SN, Nasir F, Raza A, Khanani R, Uddin S, Kazmi SU. Expression profile of KIR3DS1/KIR3DL1 receptors in association with immunological responses in TB, HIV and HIV/TB infected patients (2023). *Microb Pathog* 180:106145. <https://doi.org/10.1016/j.micpath.2023.106145>
19. Yousaf H, Rehmat S, Jameel M, Ibrahim R, Hashmi SN, Makhdoom EUH, Iwaszkiewicz J, Saadi SM, Tariq M, Baig SM, Toft M, Fatima A, Iqbal Z. A homozygous founder variant in PDE2A causes paroxysmal dyskinesia with intellectual disability (2023). *Clin Genet* 104(3):324-333. <https://doi.org/10.1111/cge.14386>
20. Shaukat SN, Eugenin E, Nasir F, Khanani R, Kazmi SU. Identification of immune biomarkers in recent active pulmonary tuberculosis (2023). *Sci Rep* 13(1):11481. <https://doi.org/10.1038/s41598-023-38372-7>
21. Saadi SM, Cali E, Khalid LB, Yousaf H, Zafar G, Khan HN, Sher M, Vona B, Abdullah U, Malik NA, Klar J, Efthymiou S, Dahl N, Houlden H, Toft M, Baig SM, Fatima A, Iqbal Z. Genetic investigation of consanguineous Pakistani families segregating rare spinocerebellar disorders (2023). *Genes (Basel)* 14(7):1404. <https://doi.org/10.3390/genes14071404>

# PUBLICATIONS

22. Baig R, Zahid N, Kausar F, Qazi HIA, Moiz B, Hussain S, Khan AH, Arain F, Ahmad K. Burden of ocular abnormalities in patients with beta thalassaemia: a cross-sectional study (2023). *BMJ Open Ophthalmol* 8(1):e001293.

<https://doi.org/10.1136/bmjophth-2023-001293>

23. Zafar M, Malik IR, Mirza MR, Awan FR, Nawrocki A, Hussain M, Khan HN, Abbas S, Choudhary MI, Larsen MR.

Mass-spectrometric analysis of APOB polymorphism rs1042031 (G/T) and its influence on serum proteome of coronary artery disease patients: genetic-derived proteomics consequences (2023). *Mol Cell Biochem*.

<https://doi.org/10.1007/s11010-023-04797-x>

24. Ahmad I, Lokau J, Kespohl B, Malik NA, Baig SM, Hartig R, Behme D, Schwab R, Altmüller J, Jameel M, Mucha S, Thiele H, Tariq M, Nürnberg P, Erdmann J, Garbers C. The interleukin-11 receptor variant p.W307R results in craniosynostosis in humans (2023). *Sci Rep*. 13(1):13479.

<https://doi.org/10.1038/s41598-023-39466-y>

25. Sarfraz A, Jamil Z, Ahmed S, Umrani F, Qureshi AK, Jakhro S, Sajid M, Rahman N, Rizvi A, Ma JZ, Mallawaarachchi I, Iqbal NT, Syed S, Iqbal J, Sadiq K, Moore SR, Ali SA. Impact of diarrhoea and acute respiratory infection on environmental enteric dysfunction and growth of malnourished children in Pakistan: a longitudinal cohort study (2023). *Lancet Reg Health Southeast Asia* 15:100212.

<https://doi.org/10.1016/j.lansea.2023.100212>

# PUBLICATIONS

26. Baloch M, Baig AM, Ochani RK. Is dengue the new rising global health problem? The outbreak of 2019 in Pakistan (2023). *Minerva Med* 114(4):534-535.

<https://doi.org/10.23736/S0026-4806.20.06636-7>

27. Ahmad HR, Hashmi S. It can be reversed by an emergency doctor team reaching the spot during the golden period of trauma? (2023). *Pulse Int*.

28. Ahmad HR, Ghias K. Is freedom is lifeblood of creativity? Albert Einstein (2023). *SAAP Bull* 2023;6.

29. Ahmad HR. Lessons for human medicine from animals (2023). *Pulse Int*.

30. Siddiqui D, Badar U, Javaid M, Farooqui N, Shah SA, Iftikhar A, Sultan F, Mir F, Furqan S, Mahmood SF, Abidi SH. Genetic and antiretroviral drug resistance mutations analysis of reverse transcriptase and protease gene from Pakistani people living with HIV-1 (2023). *PLoS One* 18(8):e0290425. <https://doi.org/10.1371/journal.pone.0290425>

31. Ahmad HR. Science through summation of human creative energies (2023). *Pulse Int*.

32 Alam F, Khan AH, Baig M, Rehman R. Editorial: Recent advances in Vitamin D supplementation for improved reproductive endocrine and metabolic parameters (2023). *Front Endocrinol (Lausanne)* 14:1251388.

<https://doi.org/10.3389/fendo.2023.1251388>

# STAY TUNED



آغا خان یونیورسٹی  
THE AGA KHAN UNIVERSITY



## 3rd Annual Biological Sciences Conference

From Basics to Breakthroughs  
#trailblazingonwards  
#BBS

**Wednesday,  
November 15,  
2023**

9:00am to 5:00pm  
Auditorium,  
Aga Khan University,  
Stadium road campus

# SAVE THE DATE

**40** AKU  
onward.

For feedback, contact Bilal Effendi

[bilal.effendi@aku.edu](mailto:bilal.effendi@aku.edu)

Editorial Team: Dr Rozmeen Akbar, Dr Sadia Fatima, Ms Noorulain Salim  
and Mr Bilal Effendi