



DEPARTMENT OF BIOLOGICAL AND BIOMEDICAL SCIENCES

Believe

Become

Succeed

Message from the Chair

As the COVID-19 challenge continues, I take this opportunity on behalf of all members of BBS to wholeheartedly thank our colleagues on the frontlines of care and to pledge our support as needed. During this time, the work of the institution continues. I am proud of the collaborative efforts that involved the BBS faculty and staff and enabled a move to online teaching in the undergraduate medical program within days. As a leading health research institution, this is also an opportunity to undertake and disseminate research that can impact real-time practices. Again, I am proud to say that BBS is stepping up to this challenge. This edition of the BBS newsletter highlights work from “simpler” times. May we soon see better days and carry forward the spirit of collaboration, support and innovation that has emerged. I pray that you and your families stay safe, healthy and blessed.

Kulsoom Ghias



COVID-19 RESPONSE



Hands on Deck



Drs Ahmed Zafar Cheema, Fatima Mustansir, Azhar Hussain, Kulsoom Ghias, Mr Ghulam Haider, Ms Sabah Farhat volunteered to perform N95 fit testing



Online Teaching

The Undergraduate Medical Education Years 1 and 2 successfully launched online teaching modules via Microsoft Teams. Faculty, administrative staff and students were provided online training for the teaching platform. This was a collaborative effort by the Office of UGME, BBS, P&LM, CHS and IT departments



Scholarly Activity

Dr Abdul Mannan Baig reported on the loss of smell and taste sensation as an early warning sign of SARS-CoV-2 infection

Dr Naseer Ahmed coauthored a paper on novel coronavirus 2019-nCoV

M P H I L I N A U G R A T I O N

A new MPhil in Biological and Biomedical Sciences program was launched in January 2020. The program is designed to produce competent, confident and productive scientists who can continue their passion for research and learning onto PhD training or develop a successful career in academia and industry straightaway. Our mission is to educate graduate students using research based education and enable them to ask innovative questions and during the process, contribute to their fields by unfolding their creative energy.



The Inaugural Batch

The academic plan is focused on the development of breadth and depth of knowledge in the form of multidisciplinary integrated concepts, self-directed learning, inquiry, critical thinking and expression of thought to strengthen the model of research based education in a horizontal enabling environment. Our inaugural batch is in the middle of completing their first semester. We are now preparing to conduct admission test and interviews to select the second batch of students.

FROM THE FACULTY HUB

Reframe Rare in Pakistan Conference



Dr Rehana Rehman coordinated a session on Complex Clinical Cases: Challenges faced by experts dealing with Rare Diseases



Dr Fazal Arain presented a case report poster on a 2 ½ year old child suffering from Hypermangnesemia with Dystonia, Polycythemia and Cirrhosis

Seminar on Challenges of Management of Polycystic Ovarian Syndrome



Dr Rehana Rehman gave a talk on Vitamin D Deficiency, Oxidative Stress Markers and ABCA1 genetic variants in PCOS



Dr Sadia Fatima gave a talk on Nutritional therapies in PCOS

FROM THE FACULTY HUB



Dr HR Ahmad gave an invited talk on the Institution-Faculty Relationship @ Prof Dr MH Qazi Memorial Lecture Series; University of Karachi



Dr Naseer Ahmed gave an invited talk on Role of Translational Research in Integrative Medicine @ the University of Haripur



Dr Sadia Fatima gave an invited lecture at the 2nd PROBE conference titled Chemerin Gene Methylation status on Gestational Diabetes @ University of Karachi

Fellowship Award

Dr Sadia also received a two year fellowship training program offered by the Foundation for Advancement of International Medical Education and Research (FAIMER) institute, Philadelphia, USA

A K U O P E N D A Y 2 0 2 0

BBS Faculty and Laboratory Staff organized sessions as part of the Intellectual Marathon arranged for visits of different schools of Karachi on Open days at Aga Khan University



Orientation session



Activity for testing the nerve conduction velocity



Briefing on the use of common laboratory equipment



Drs Rehana Rehman and Salman Siddiqi facilitated concept mapping exercise in collaboration with DED

STAFF NARRATIVES

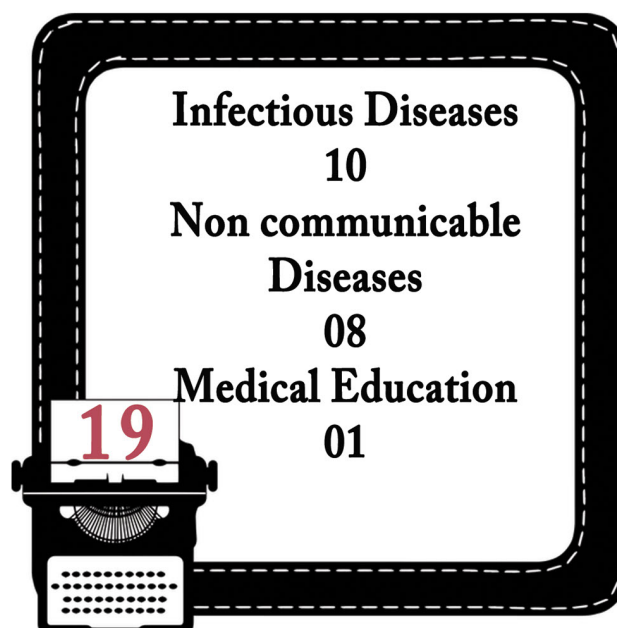


Mr Ali Moosa attended Advanced Module of the Grants and Research Administration Course offered by Centre of Excellence in Women and Child Health & Department of Pediatrics and Child Health

Ms Areeba Khaleeq presented a paper at the 2nd PROBE conference titled Formation of thyroid hormone cascade in *Acanthamoeba* spp @University of Karachi

Lab staff attended Western blotting Technique training workshop

PUBLICATIONS



PUBLICATIONS

1. Alam F, Khan TA, Ali R, Tariq F, Rehman R. SIRT1 and cortisol in unexplained infertile females; a cross sectional study, in Karachi Pakistan. *Taiwan J Obstet Gynecol*
2. Rehman R, Amjad S, Tariq H, Zahid N, Akhter M, Ashraf M. Oxidative stress and male infertility: a cross sectional study. *Pak J Med Assoc*
3. Rogawski McQuade ET, Liu J, Kang G, Kosek MN, Lima AAM, Bessong PO, Samie A, Haque R, Mduma ER, Shrestha S, Leite JP, Bodhidatta L, Iqbal N et al. Protection from natural immunity against enteric infections and etiology-specific diarrhea in a longitudinal birth cohort. *J Infect Dis*
4. Yousuf FA, Kazmi K, Iqbal J, Ahmed N, Iqbal MP. Higher DNA methylation of ABO gene promoter is associated with acute myocardial infarction in a hospital-based population in Karachi. *Pak J Med Sci*
5. Liu TC, VanBuskirk K, Ali SA, Kelly MP, Holtz LR, Yilmaz OH, Sadiq K, Iqbal N et al. A novel histological index for evaluation of environmental enteric dysfunction identifies geographic-specific features of enteropathy among children with suboptimal growth. *PLoS Negl Trop Dis*
6. Iqbal NT, Ahmed K, Qamar FN, Shaheen F, Mehnaz A, Arif F, Saeed AA, Yousuf AM et al. Antibody-secreting cells to diagnose Mycobacterium Tuberculosis infection in children in Pakistan. *mSphere*
7. Baig AM, Khaleeq A, Ali U, Syeda H. Evidence of the COVID-19 Virus Targeting the CNS: Tissue Distribution, Host-Virus Interaction, and Proposed Neurotropic Mechanisms. *ACS Chem Neurosci*

PUBLICATIONS

8. Farhat S, Zafar MU, Sheikh MA, Qasim CM, Urooj F, Fatima SS. Association of resolvin level in pregnant women with preeclampsia and metabolic syndrome. *Taiwan J Obstet Gynecol*
9. Rehman R, Hashmi S, Akbar R, Fatima SS. Teaching "Shock Pathophysiology" by Flipped Classroom: Views and Perspectives. *J Med Educ Curric Dev*
10. GBD Chronic Kidney Disease Collaboration [Fatima SS]. Global, regional, and national burden of chronic kidney disease, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet*
11. Ahmed S, Ahmed N, Rungatscher A, Linardi D, Kulsoom B, Innamorati G, Meo SA, Gebrie MA et al. Cocoa Flavonoids Reduce Inflammation and Oxidative Stress in a Myocardial Ischemia-Reperfusion Experimental Model. *Antioxidants (Basel)*.
12. Ahmed N, Naseem M, Farooq J. Protective role of peroxiredoxin-4 in heart failure. *Clin Sci (Lond)*
13. Meo SA, Alhowikan AM, Al-Khlaiwi T, Meo IM, Halepoto DM, Iqbal M, Usmani AM, Hajjar W, Ahmed N. Novel coronavirus 2019-nCoV: prevalence, biological and clinical characteristics comparison with SARS-CoV and MERS-CoV. *Eur Rev Med Pharmacol Sci*
14. Siddiqui AR, Ali Nathwani A, Abidi SH, Mahmood SF, Azam I, Sawani S, Kazi AM, Hotwani AI et al. Investigation of an extensive outbreak of HIV infection among children in Sindh, Pakistan: protocol for a matched case-control study. *BMJ Open*

PUBLICATIONS

15. Ahmed K, Ahmed H, Ahmed FA, Ali AA, Akbar J, Rana J, Tariq U, Abidi SH. Analysis of anti-microbial and anti-biofilm activity of hand washes and sanitizers against *S. aureus* and *P. aeruginosa*. *J Pak Med Assoc*

16. Anwar MF, Khalid R, Hasanain A, Naeem S, Zarina S, Abidi SH, Ali S. Application of an integrated cheminformatics-molecular docking approach for discovery for physicochemically similar analogs of fluoroquinolones as putative HCV inhibitors. *Comput Biol Chem*

17. Tariq U, Iftikhar A, Zahid D, Sultan F, Mahmood SF, Naeem S, Ali S, Abidi SH. Emergence of HIV-1 Unique DG Recombinant Form in Pakistan. *AIDS Res Hum Retroviruses*

18. Martinez L, Cords O, Horsburgh CR, Andrews JR; Pediatric TB Contact Studies Consortium. The risk of tuberculosis in children after close exposure: a systematic review and individual-participant meta-analysis. *Lancet*

19. Al-Salam S, Hashmi S, Jagadeesh GS, Tariq S. Galectin-3: A Cardiomyocyte Antiapoptotic Mediator at 24-Hour Post Myocardial Infarction. *Cell Physiol Biochem*.

All events highlighted in this edition of the newsletter took place before social distancing measures were in place

For feedback and submissions please contact
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