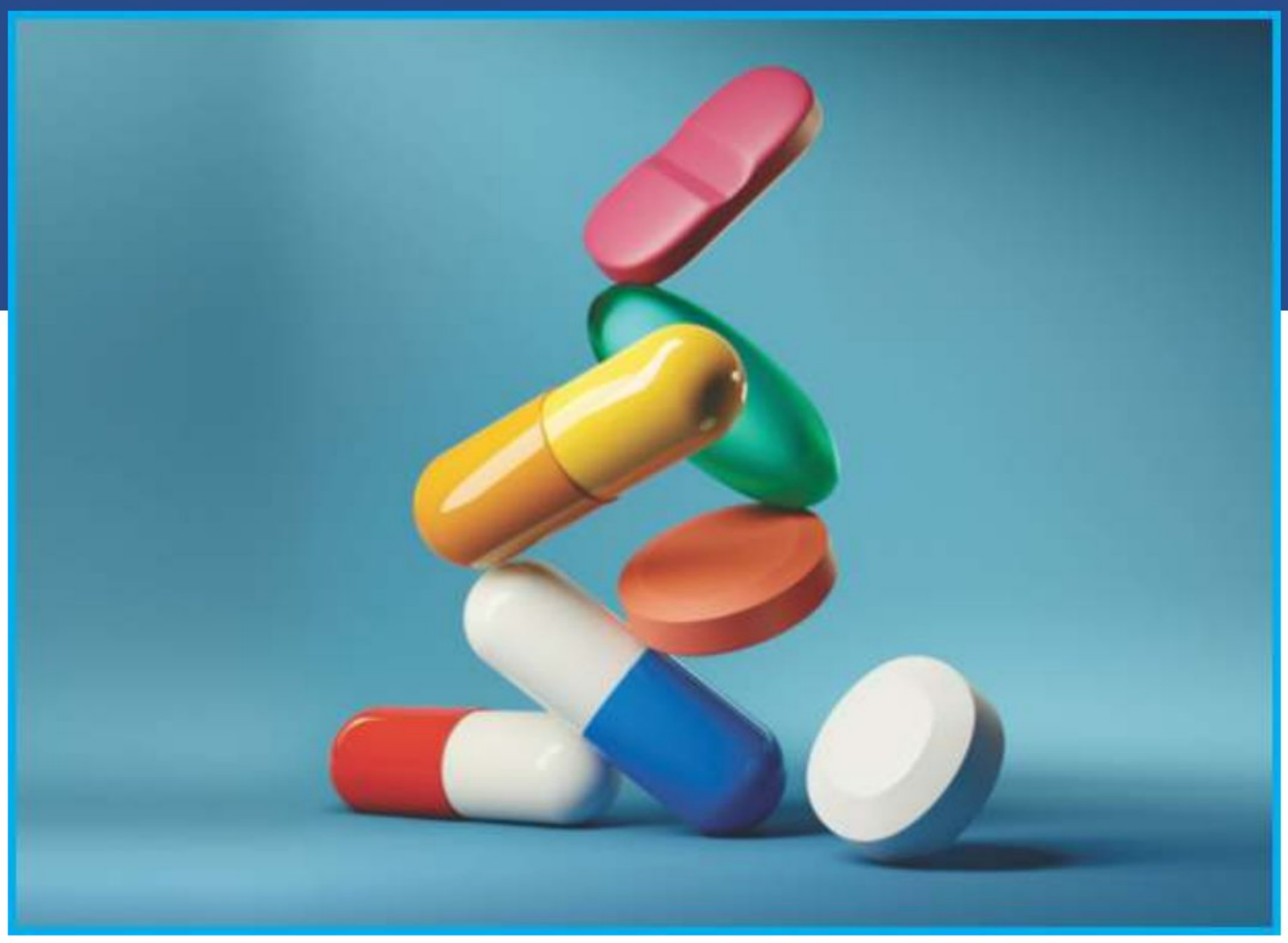
UMT

School of Pharmacy Newsletter

Volume I | Issue 3 | July-September 2022



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Message from

Editor in Chief:

We are pleased to share the 3rd issue (July – September) of The School of Pharmacy's quarterly newsletter. This newsletter would give an insight into recent activities at SPH including an overview of The International Pharmacy Conference successfully organized by SPH in collaboration with giving back to Pharmacy in Pakistan. It will also highlight the various training workshops held for SPH faculty under the Faculty Development Program. The student corner will represent the poster and documentary competitions held for SPH students. The health corner includes awareness about the continuous dengue fever threat. I hope u will enjoy this issue thoroughly.

News in Brief

Annual Medication Management Conference Hosted by the Shifa International Hospital, Islamabad

Dr Ejaz Ullah Cheema, Dean SPH and Dr Ayaz Ali Khan, Associate Professor SPH represented UMT as guest speakers at the Annual Medication Management Conference Hosted by the Shifa International Hospital Islamabad. Dr Ejaz Cheema spoke about preparing the pharmacy workforce in the era of constant change and priorities for the next decade.

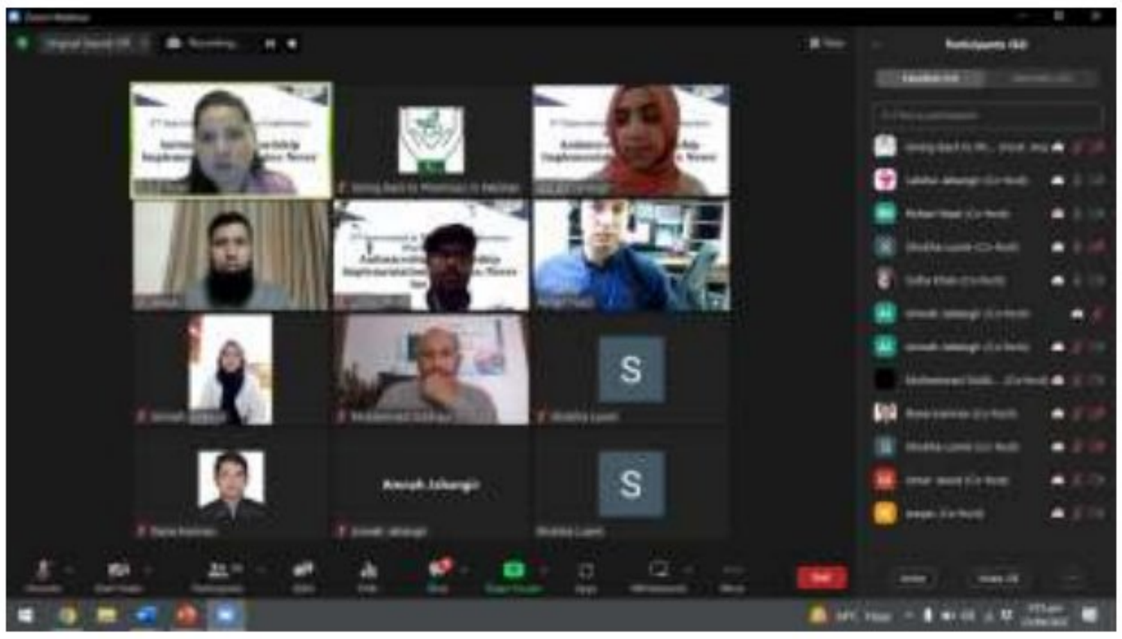
World Pharmacist Day at Indus Hospital

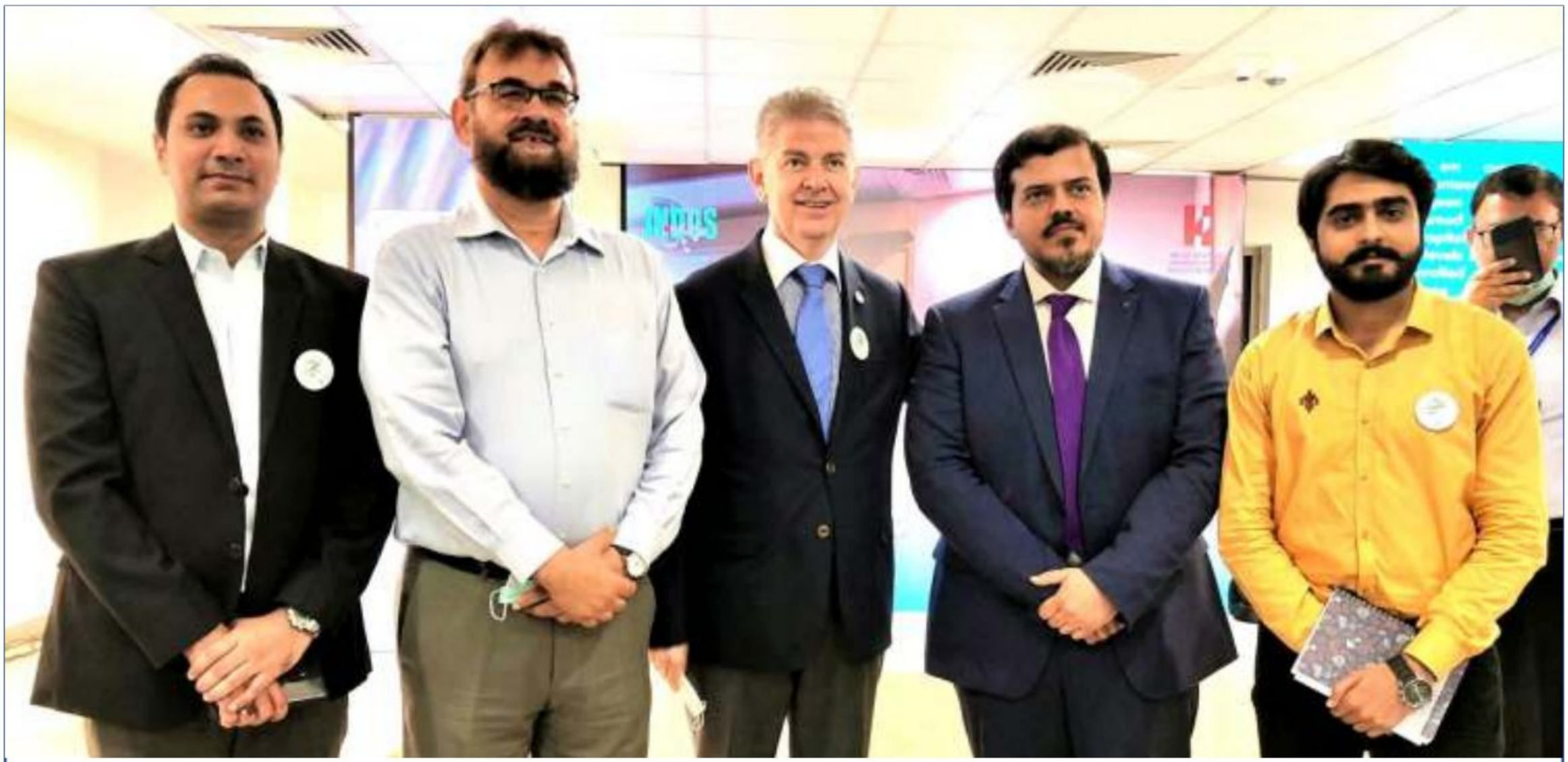
Indus Hospital Jubilee town organized World Pharmacist Day on Monday, October 25. Dean SPH Dr Ejaz Ullah Cheema was invited as the chief guest of the event. Dr Rabia Altaf (Associate Professor SPH) and Dr Abdul Qayyum Khan (Assistant Professor SPH) represented UMT at the event. In his talk to the attendees, Dr Ejaz highlighted the importance of the Pharmacy profession and the role of pharmacists in clinical and healthcare setups.

SPH ACTIVITIES

Pharmacy Conference

The third international hybrid conference titled "Innovation in Pharmacy" was conducted by UMT School of Pharmacy in collaboration with Giving back to Pharmacy in Pakistan. The two-day conference started on September 23, 2022, with pre-conference workshops including a workshop on OSCE conducted by Dean SPH Dr Ejaz Ullah Cheema. The second day of the conference comprised multiple online sessions as well as a KAHOOT Quiz competition and in-house poster presentation competition among SPH students. The top three winners of both competitions were awarded cash prizes and shields. The conference concluded with a panel discussion. The panel team included Dean SPH, Dr Ayaz Ali Khan, Associate Professor SPH and Mr Mehboob Ahmed, CEO Clinix Pharmacy. The role and scope of Pharmacists in academia, industry and community setups were highlighted in the panel discussion. It was a great learning experience for students as well as faculty members.





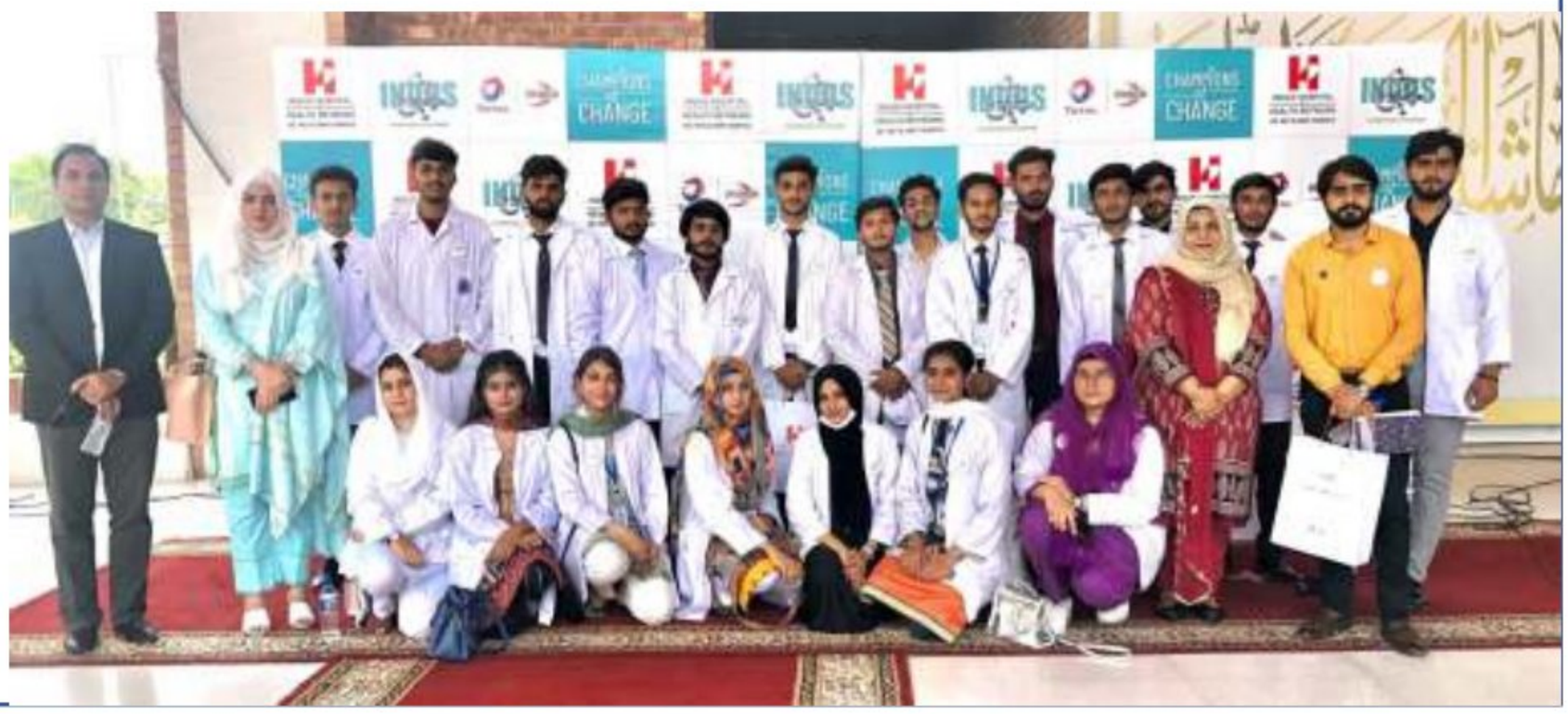
Visit to Indus Hospital

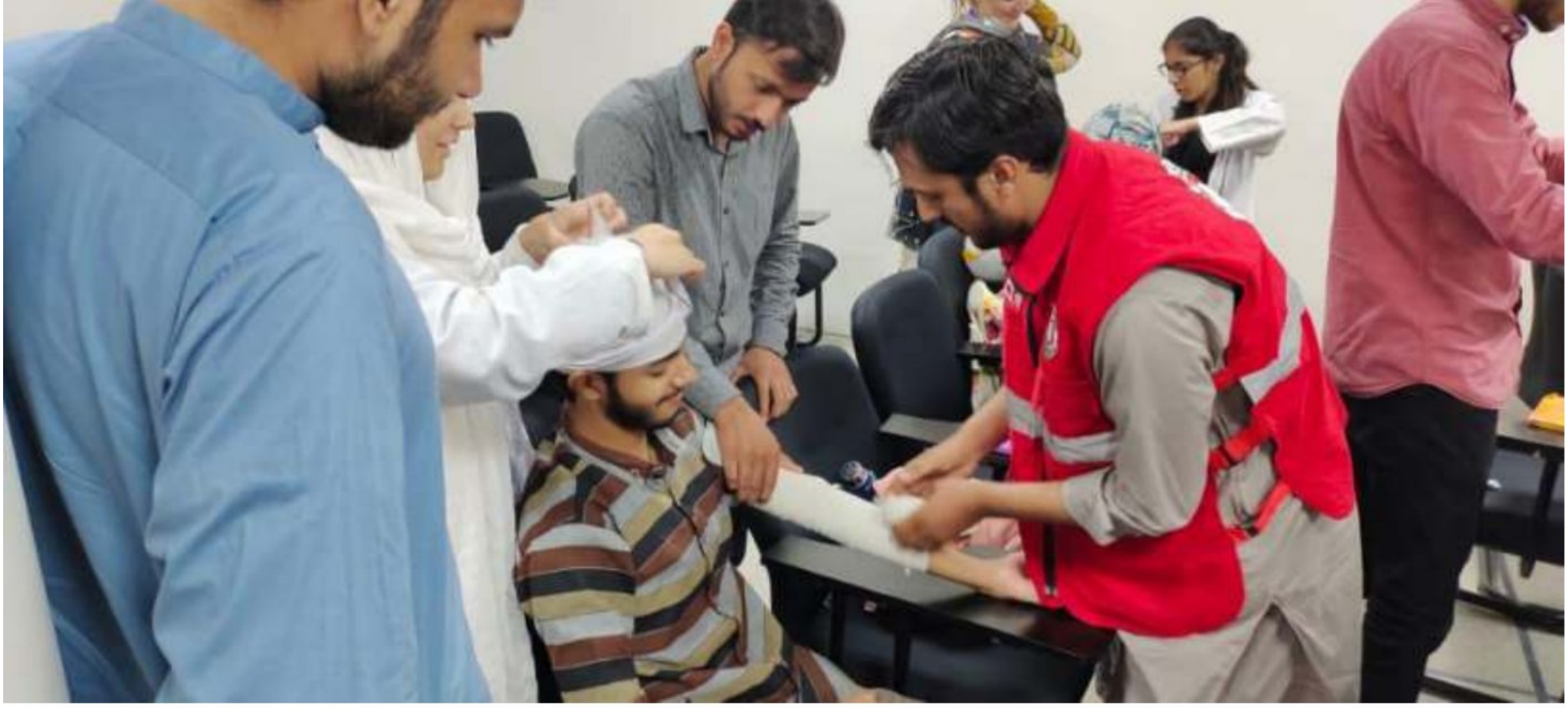
Office of Corporate Linkages and Placements (OCLP) along with the faculty and students of SPH attended the launch event of the Indus Yaqeen Program on July 19, 2022. The Indus Hospital with the collaboration of Lube House - Total Parco Pakistan launched the Yaqeen Program for the students.

The purpose of this program was

- Exposure to medical procedures and operations
- Motivation for humanitarian work
- Acclimatizing the students to high-pressure work environment
- Awareness campaigns
- Career counseling by mentors

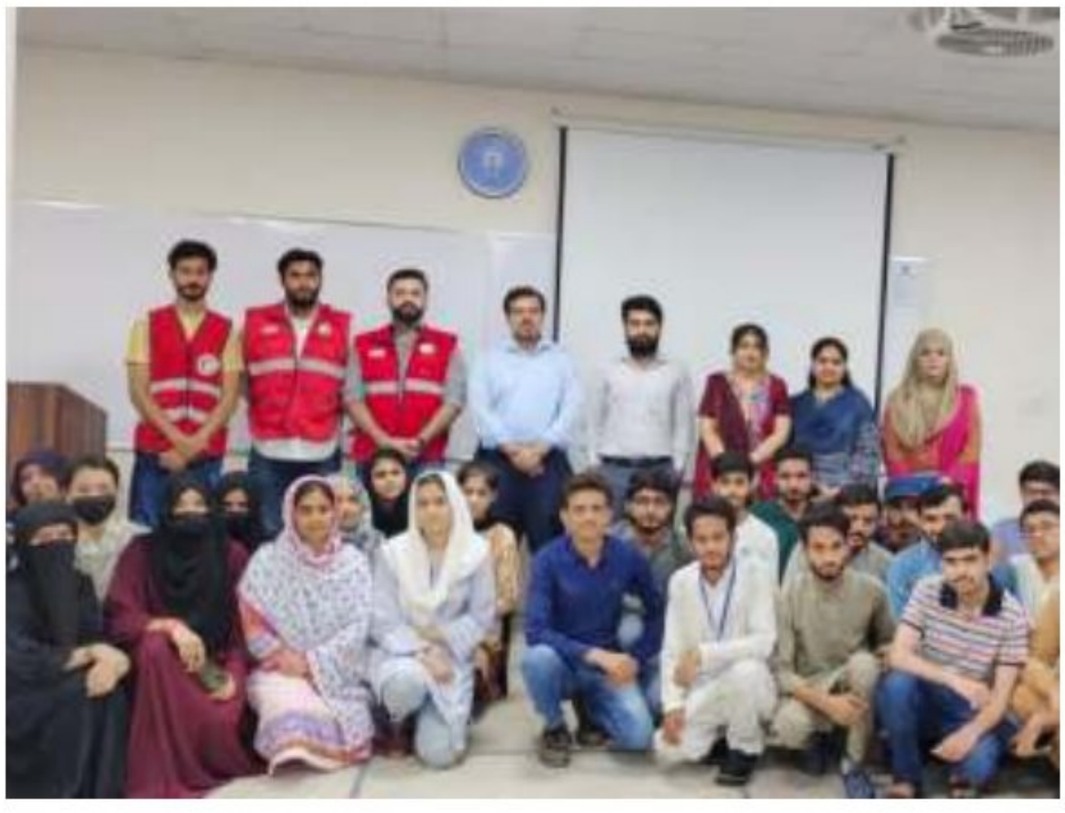
Mr Mehmet Celepoglu, CEO of Total Parco Pakistan and Dr Abdul bari Khan, CEO of Indus Hospital addressed the audience and appreciated UMT students for their participation. This event provided an excellent opportunity for students to develop their public relations skills and also to put their efforts into a noble cause.

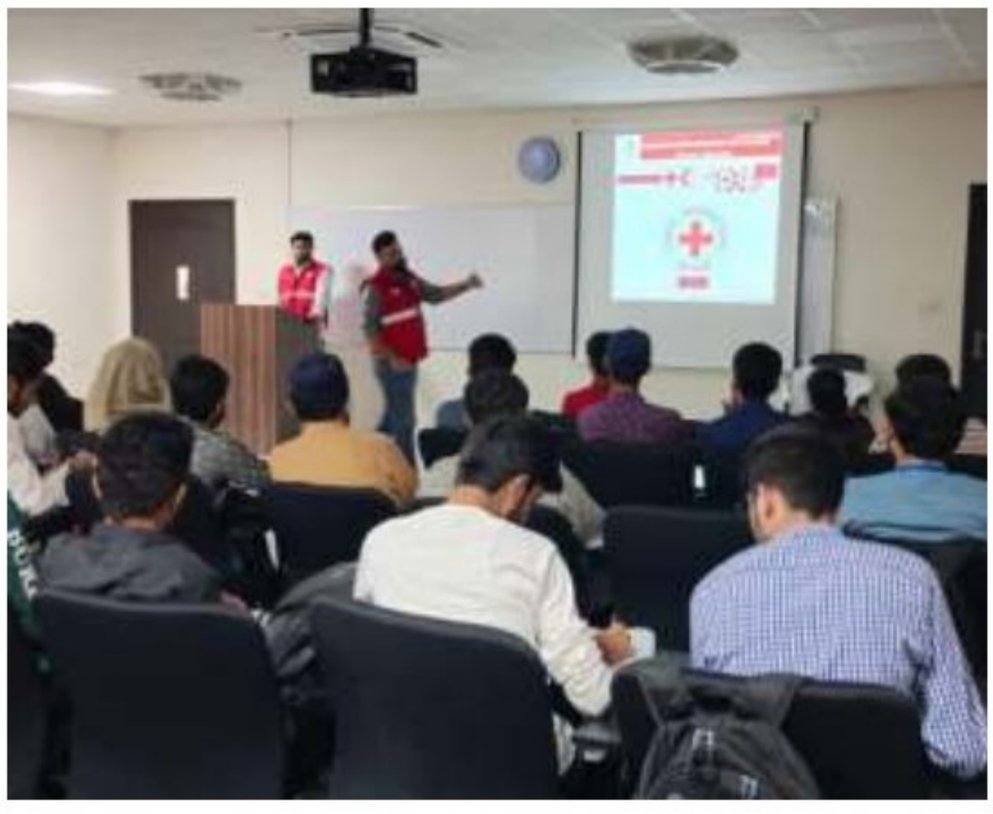




First Aid Training Session

The UMT School of Pharmacy is committed to equipping students with various skills and competencies. The school organized a two days training program on First Aid in collaboration with Pakistan's Red Crescent Society on the 4th and 5th of July 2022. The training session was attended by students, faculty and staff of SPH. The session was important and useful for the attendees. The participants were awarded certificates from the Red Crescent society.

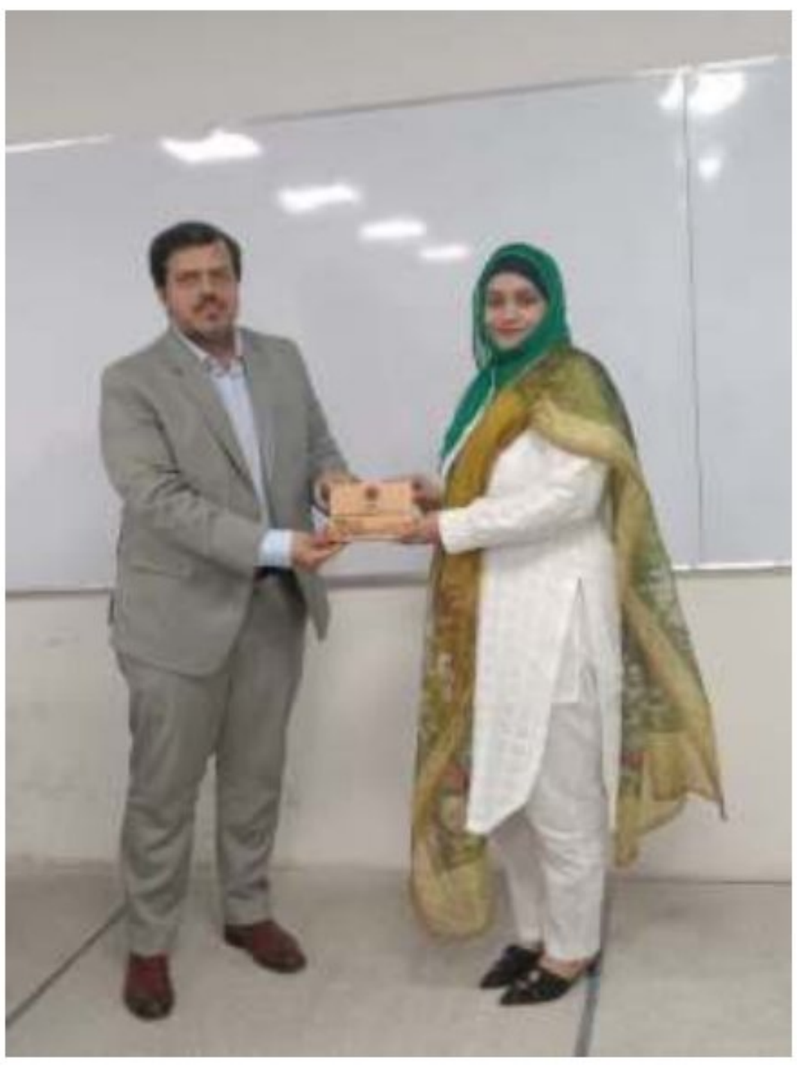




Faculty Development Program

Training Session on Outcome-Based Education

A full-day interactive session was organized on 2nd September 2022 on "Outcome-Based Education from Academic Quality Assurance Perspective" by AAQIQ for the faculty of the School of Pharmacy and Health Sciences. The training session was held at the health sciences campus whereby Dr Usman Rashid and Mr Asif Saeed Haider shared insightful information regarding Program Education Objectives (PEOs) and Program Learning Outcomes, (PLOs). They engaged the participants of the workshop in effective workshop activities. The session was exhilarating, engaging and efficacious.

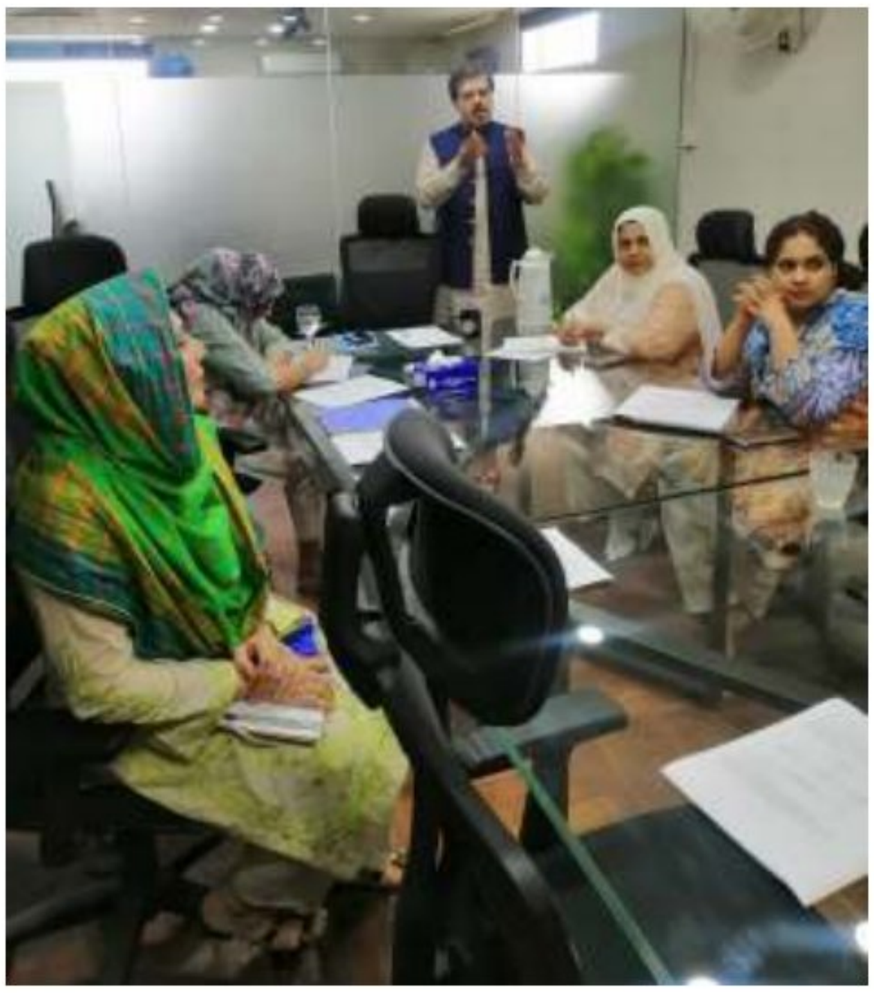


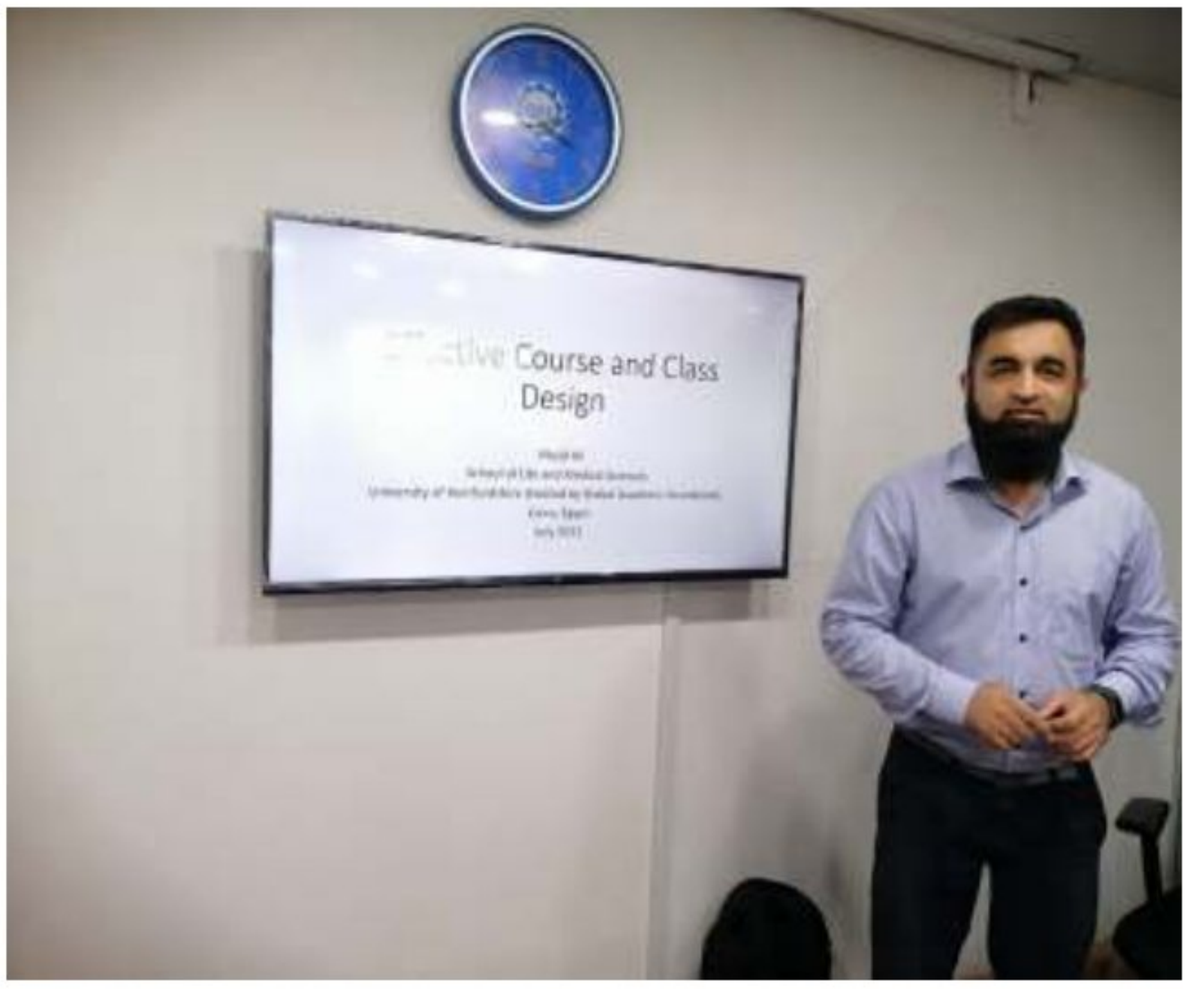
Workshop on Effective and Engaging Presentation Delivery and Design

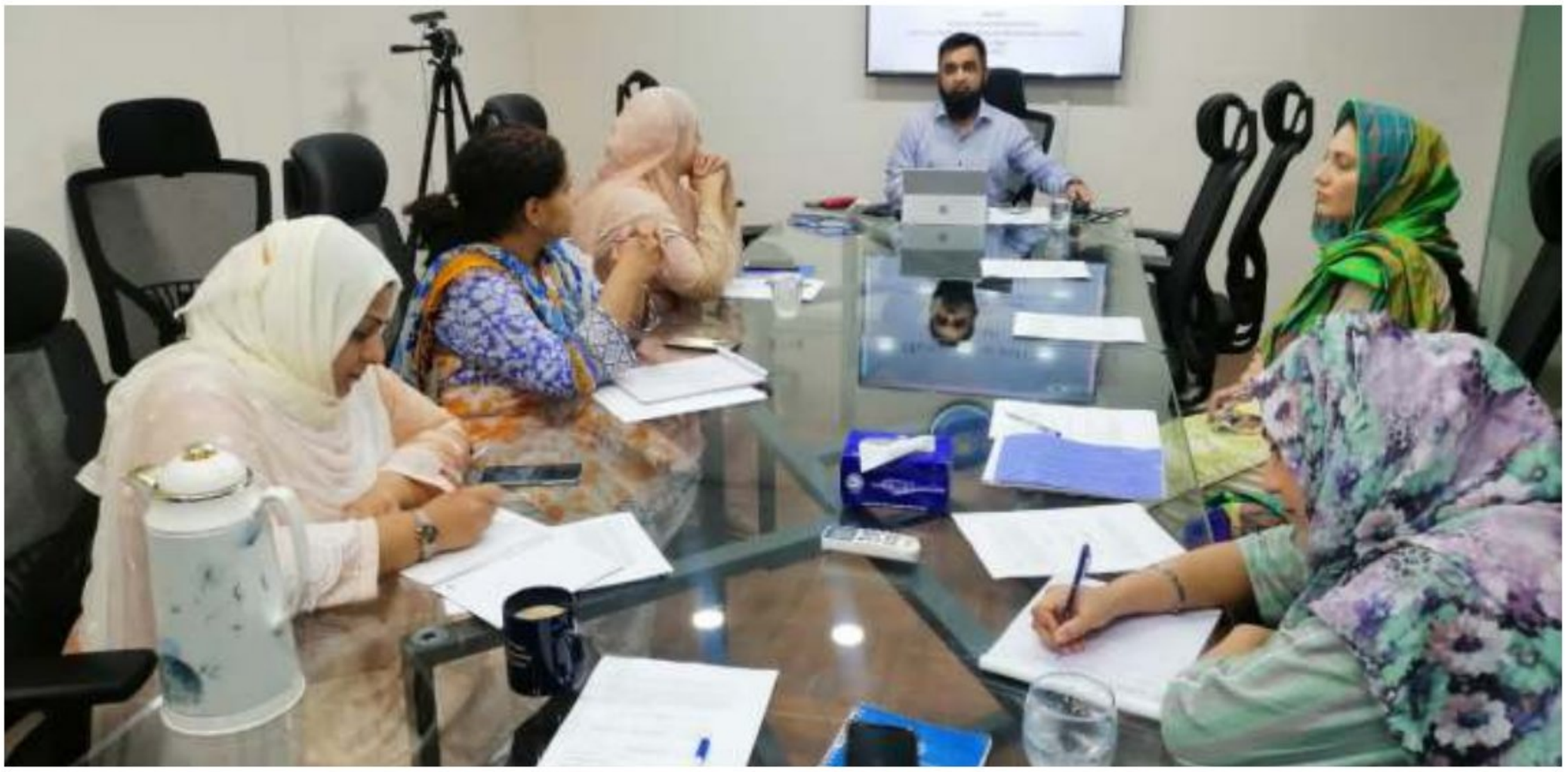
UMT School of Pharmacy organized a Faculty Development Workshop on effective and engaging presentation delivery and design on 30th August 2022 at SHS Campus. Faculty members from both SPH and SHS attended the workshop. The resource person was Ms Sadia Gondal who is a senior fellow at higher education Academy UK and an Associate Member at the Chartered Institute of Personnel and Development UK. She discussed novel and effective tools to be incorporated into the presentations to make them more interesting for students. The workshop was concluded with a question-and-answer session. Dean SPH and Director SHS Dr Ejaz Cheema thanked the resource person for such an informative workshop.

Workshop on Effective Course and Class Design

Faculty development is the key to fostering a learning environment and enhancing the academic performance of students. A workshop titled "Effective Course and Class Design" was organized by the UMT School of Pharmacy on 15th July 2022. Guest speaker Dr Majid Ali from the School of Pharmacy, University of Herefordshire started the workshop with an introduction to instructional designing, identification of commonly used instructional design models and a comparison of different learning theories. The workshop concluded with the design of a course teaching session using the ADDIE model.







Industry-Academia Linkages

MOU with Remington Pharmaceuticals

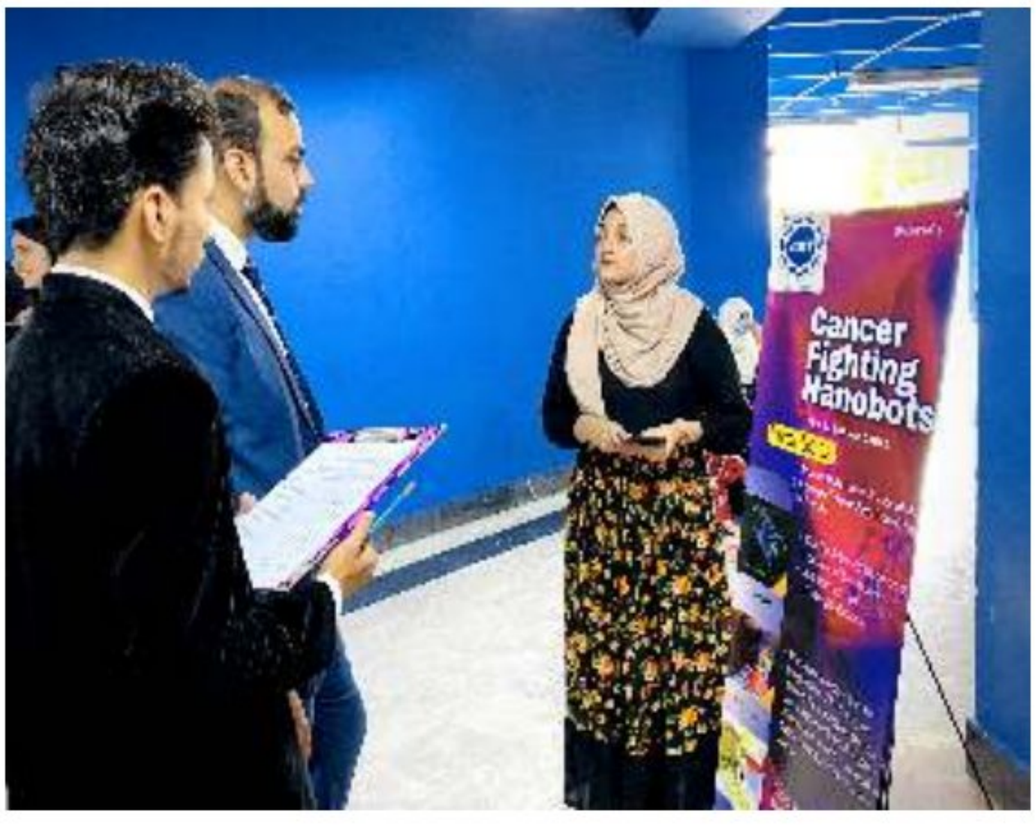
A Memorandum of Understanding (MoU) has been signed between the University of Management and Technology (UMT) and Remington Pharmaceutical and DRK Pharma Solutions GmbH. Remington Pharmaceuticals Pakistan - a specialist branded generics pharmaceutical company having state-of-the-art cGMP-compliant manufacturing facilities and manufacturing eye drops, tablets, capsules, syrups, dry suspensions, ointments, ear drops and cephalosporins.

DRK Pharma is a premier solution provider to the pharmaceutical and biopharmaceutical industries in the areas of Product Development, Clinical Research, Bioavailability/ Bioequivalence Studies and GxP and regulatory advisory. The MoU was signed through the Office of Corporate Linkages and Placements (OCLP) and the School of Pharmacy (SPH) to strengthen the Industry and Academia linkages and to facilitate UMT students.

Student Corner

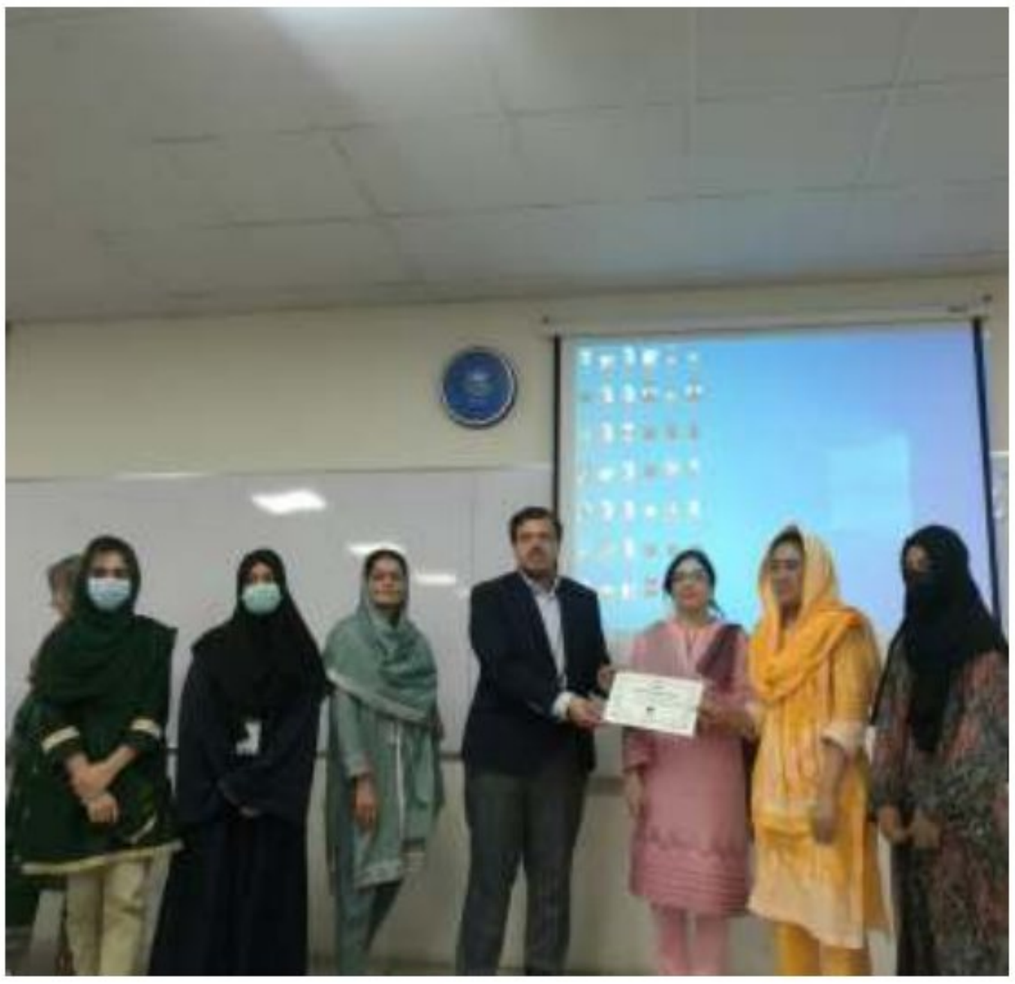
Poster Competition

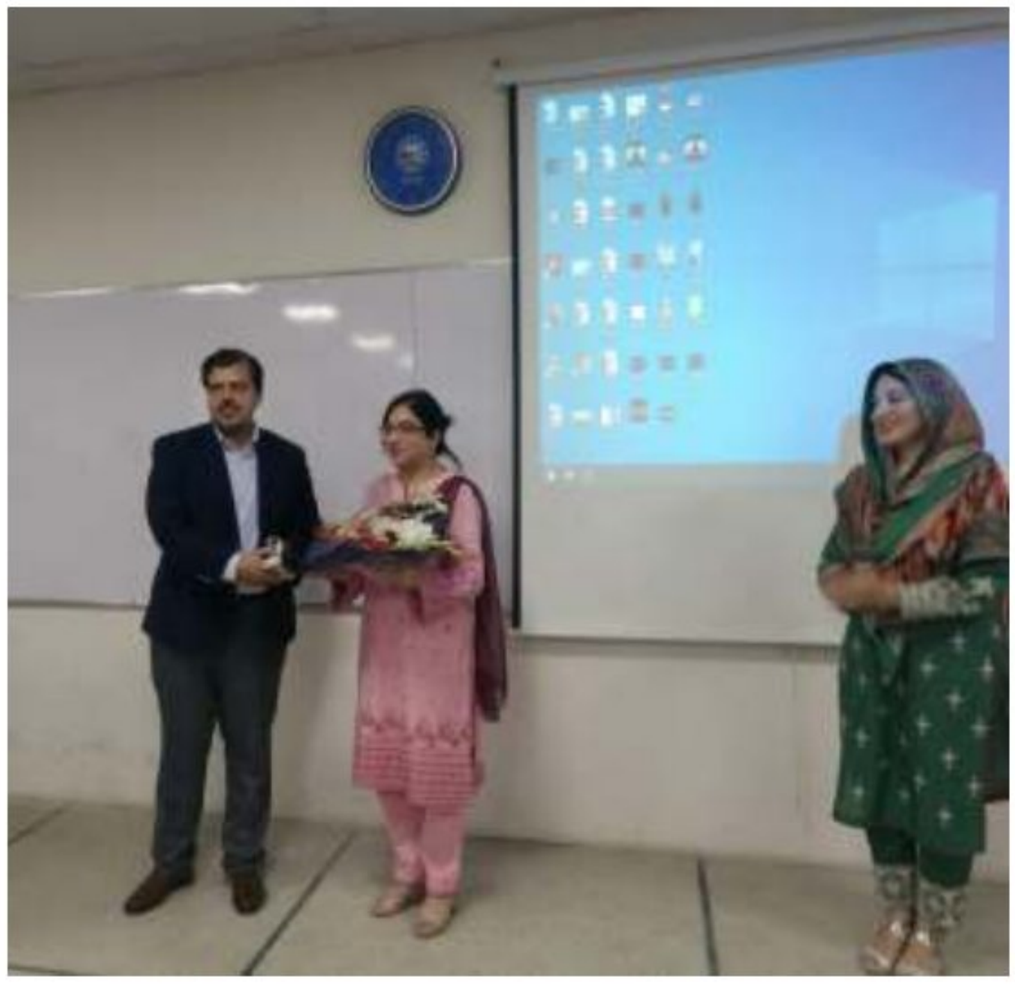
An in-house poster presentation competition was held among SPH students on 24th September 2022 on the second day of the Third International Innovation in Pharmacy Conference held at UMT's main campus. The theme of the competition was "The Recent Innovation in Pharmacy Profession". Students of UMT School of Pharmacy presented their posters, demonstrating recent advancements in pharmaceutical sciences and the newly discovered novel drug delivery systems. The judges' panel comprised of a team from "Giving Back to Pharmacy in Pakistan" (GBTPP). They appreciated the students for their efforts. The top three winner groups of the competition were awarded cash prizes. It was a great learning activity for SPH students.

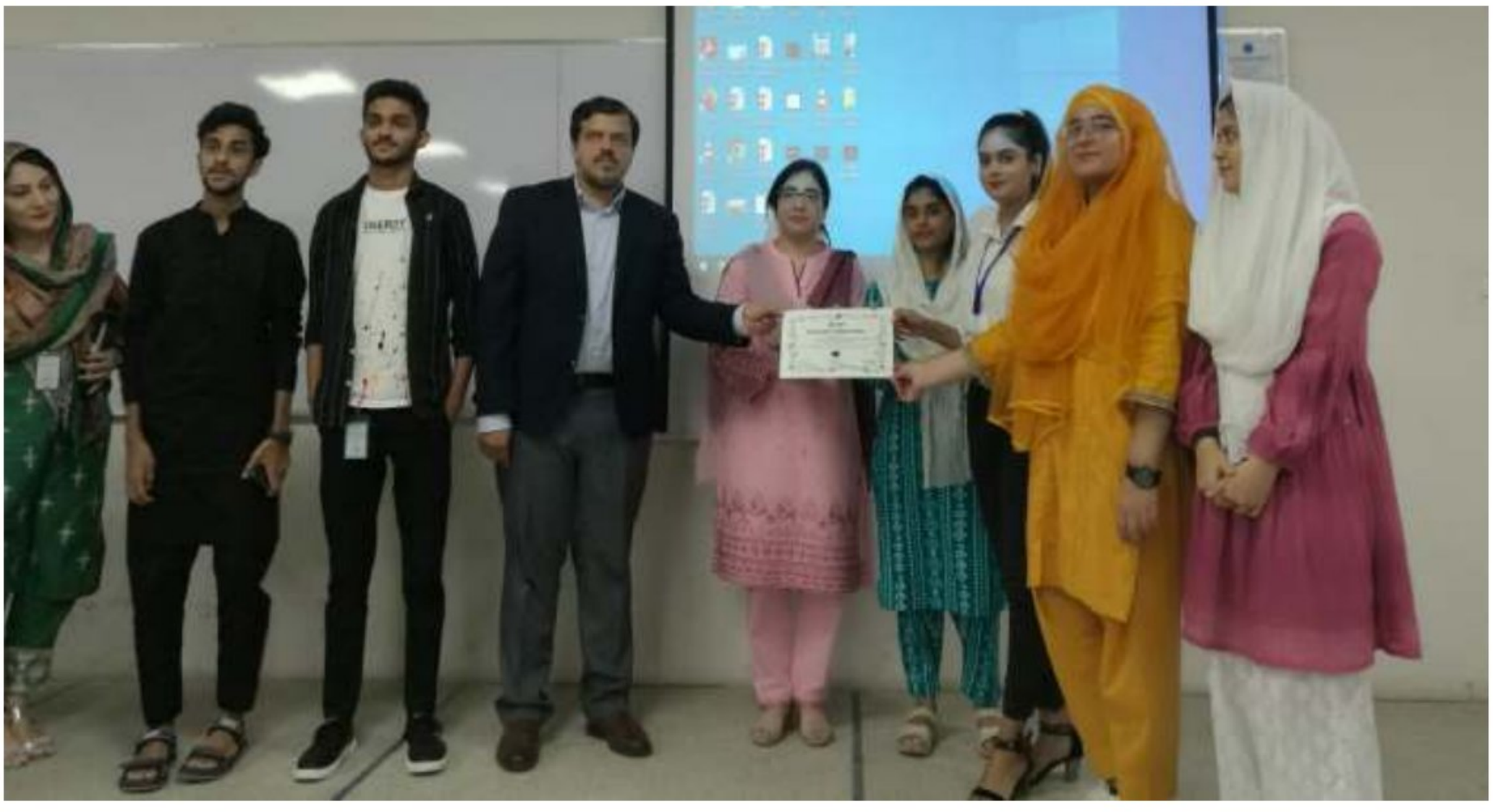


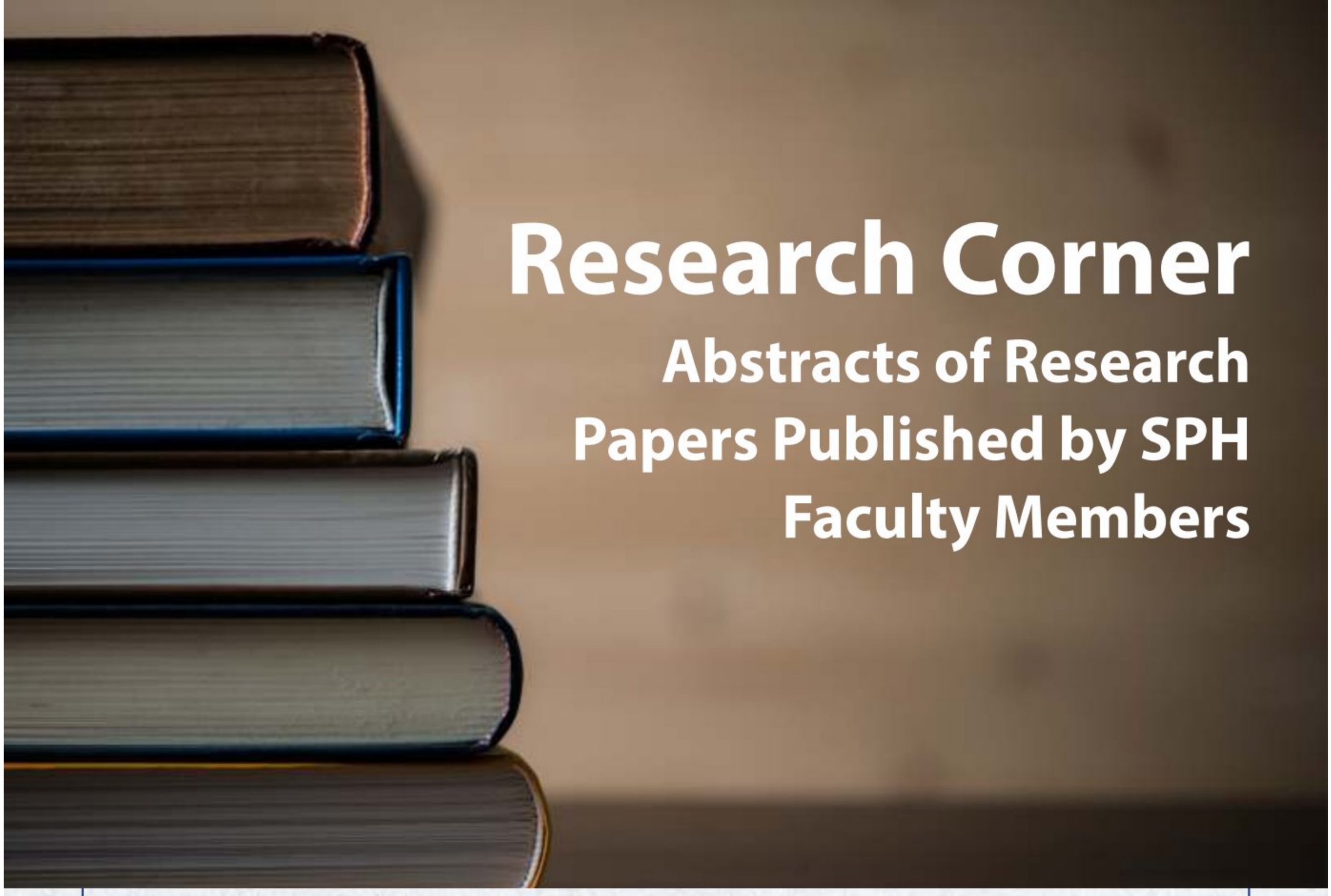
Documentary Competition

A documentary competition was held among SPH students on 19th September 2022 as a final project of their English course. The purpose of this competition was to practice their English communication and research skills in the context of Pakistani social issues to bring awareness and to bring forth the students' creativity in the form of short documentaries. Dr Nadia Anwar was invited as the chief guest and judge of the competition. The top three achievers were awarded certificates of appreciation.









Research Corner

Abstracts of Research Papers Published by SPH Faculty Members

Dr Ejaz Cheema

Development and evaluation of clinical reasoning using 'think aloud' approach in pharmacy undergraduates – A mixed methods study

Faisal Altalhi……..Ejaz Cheema, Majid Ali

Abstract:

Given the widespread use of clinical reasoning (CR) in the healthcare practice, it is essential to inculcate the CR practice in undergraduate pharmacy education which can not only facilitate their clinical education and clinical rotations but can also help them become better clinical pharmacists. There is very limited CR employed in the pharmacy curriculum and practice in Middle East countries. This study aimed to develop and evaluate CR practice in pharmacy undergraduates in one college of pharmacy in Saudi Arabia.

Methods: We employed a mixed-methods methodology that included two phases. In Phase I, students were introduced to CR practice ('think aloud' method) and given geriatric clinical cases which they used in two sessions together with a tutor. This was followed by the writing of SOAP notes using the tutor's feedback and the completion of a survey that included a self-reflection about their experience of using the CR method. Phase II included face-to-face semi-structured interviews involving selected students that were recruited via convenience

sampling to further explore the issues identified in Phase I of the study. Results: Of the 155 students who completed the survey (response rate 94%), the majority of them agreed that CR using the 'think aloud' method was useful in gathering (92%) and interpreting (95%) relevant patient information, identifying medication-related problems (95%), exploring therapeutic options for the problem(s) (93%) and formulating a treatment plan for the patient (90%). Qualitative data analysis of the 12 interviews was consistent with these findings. Furthermore, it provided insight into the challenges faced by the students in applying this CR method. Conclusions: Students found the practice of CR using the 'think aloud' method helpful in working through given cases and taking clinical decisions. This method can be widely employed in pharmacy education and practice.

https://www.sciencedirect.com/science/article/pii/S131901642100205X

Dr Abdul Qayyum Khan

Ex vivo, in vitro, and in silico approaches to unveil the mechanisms underlying the vasorelaxation effect of Mentha Longifolia (L.) in porcine coronary artery

Alamgeer ……. ….Abdul Qayyum Khan, Alqassem Y Hakami

Abstract:

Mentha (M.) longifolia (L.) is traditionally used for various ailments. The current study was intended to explore the underlying vasorelaxation mechanisms of M. longifolia.

Aqueous-methanol extract from the aerial parts of M. longifolia was prepared and subjected to activity-guided fractionation. The vasorelaxant activity was performed using porcine coronary arteries with intact and denuded endothelium. In-vitro PDE inhibitory activity of the active fraction was carried out using the radio-enzymatic assay. The active fraction was also subjected to GCMS. Docking and molecular dynamic simulation studies were also performed RESULT: We observed that aqueous-methanolic extract induced relaxation in the coronary artery in a dose-dependent manner when the endothelium was intact and denuded. n-butanol fraction (MLB) has produced a maximum effect, and it was selected for mechanistic studies. MLB has significantly enhanced the relaxation produced by cAMP and cGMP, elevating atrial natriuretic peptide, sodium nitroprusside, isoproterenol, and forskolin. The pre-treatment with MLB inhibited the contractile response produced by KCl, U46619 and CaCl2 without endothelium rings. MLB has non-selectively inhibited the PDE isoforms. GCMS analysis of MLB has revealed the presence of menthol, thymol, and carvacrol in the active fraction. Docking and molecular dynamic simulation studies have indicated that thymol can be a competitive inhibitor for PDE1.

Conclusion: It is postulated that an n-butanol fraction of Mentha longifolia produced endothelium-independent relaxation due to increased levels of cAMP and cGMP caused by the inhibition of various PDEs.

https://pubmed.ncbi.nlm.nih.gov/35759866/

Research Corner

Sarah Rehman

Evaluation of in-vivo hepatoprotective activity of methanolic extract of Mentha Spicata and Capsicum Annum leaves in albino rats

Sarah Rehman ……., Farheen Fatima,Asma Manzoor

Abstract:

This research work was performed to evaluate the hepatoprotective activity of methanolic extracts of Mentha spicata and Capsicum annum leaves in comparison with silymarin in paracetamol-induced hepatotoxicity in albino rats. Six groups each comprising six albino rats were treated orally for 15 days. Group-I served as a negative control and received 100mg/kg paracetamol, Group II received 200 mg/kg M. spicata + 100 mg/kg paracetamol, Group III received 200mg/kg C. annum + 100 mg/kg paracetamol, Group VI received 100 mg/kg M. spicata and 100mg/kg C. annum, Group V received 100mg/kg silymarin, Group IV served as normal control and received 10% DMSO. The hepatoprotective effect was evaluated by comparing serum bilirubin, serum ALP, serum glutamate pyruvate transaminase or (ALAT), serum glutamate oxaloacetate transaminase or (ASAT), albumin, globulin and total protein and liver histopathology. Results were represented as mean ±SEM. One-way ANOVA was done followed by post hoc Tukey's test with a high significance level of P 0.001. All the evaluated extracts exhibited hepatoprotective potential as compared standard drug silymarin.

https://www.isisn.org/BR-19-1-2022/266-271-19(1)2022BR21-543.

Health Corner

Dengue - A continuous threat of a seasonal shift

By: Dr Rabia Altaf

Either on the arrival of the Southern fall equinox or before catching the spring equinox, our country faces the backlash of blocked emergency centers of hospitals and occupied beds with dengue patients covered in nets of multiple types of fabrics. Our children are made on high alert to apply different mosquito repellants on their skin before moving outside any closed premises (2). The reason behind this is the high alert of dengue, which is a well-known viral disease native to tropical and subtropical areas of the world with huge impact on morbidity and mortality. According to WHO, the disease is now endemic in more than 100 countries in the WHO regions of Africa, the Americas, the Eastern Mediterranean, South-East Asia and the Western Pacific. The Americas, South-East Asia and Western Pacific regions are the most seriously affected, with Asia representing ~70% of the global burden of disease (1).

Dengue is a viral infection caused by bite of an infected Aedes species (Ae. aegypti or Ae. albopictus) mosquito. Dengue virus (DENV) has four separate but highly correlated genetic variants (DENV 1–4). The virus responsible for dengue fever belongs to Flaviviridae family and there are four distinct serotypes of virus (DENV-1, DENV-2, DENV-3 and DENV-4). Long life immunity is achieved against a specific serotype after recovery from infection but subsequent infections by other stereotypes may increase the risk of severe dengue.

Major sign of the dengue infection is severe dehydration, with dry mouth, lips and tongue along with high grade fever. Decreased urination and pale complexion are the initial symptoms indicating sudden loss of platelet level. The patients may or may not have severe nausea and recurrent episodes of vomit. Once the fever goes down, the next phase is more severe associated with extreme emaciation and skin rash. Restlessness, irritability and ultimately blood oozing from the throat, ears, nose, or gums in severe cases. There is no medicine or treatment yet available for dengue. Prevention is better than cure is the rule to be followed in such cases where we must avoid exposure in peak time zones of mosquito exposure. Initial symptoms may be treated by combination therapies of staying hydrated and engulfing papaya leaf soup at least thrice a day to recover the loss of platelets and compensate for severe water loss. One must have a lot of water intake, fresh juices etc. Cold water sponges must be used to reduce high-grade fever. The duration of symptoms may take 7 to 14 days to relieve the patient but after effects of dengue may leave the patient debilitated for a long time. It is owned towards reduced immunity against infections and a trend to fall for every seasonal disease especially related to chest infections. The existence of comorbidities has been reported to aggravate the symptoms and severity of dengue fever as well as symptoms and in some cases aftershocks and their duration (3). These chronic underlying diseases are diabetes mellitus-2 (DM2), hypertension (HTN), chronic kidney disease (CKD), end-stage renal disease (ESRD), stroke and ischemic heart disease (IHD). Particular attention must be given to those with prevalent diabetic history since they are reported to show higher incidences of severe gastrointestinal bleeding and profound thrombocytopenia. They should be targeting candidates for strict monitoring of the emergence of warning signs that require urgent treatment.

Adapting certain preventive and effective control measures may help to raise awareness among the community at the urban and rural levels. Community involvement through inter-sectoral coordination featuring dengue awareness programs and seeking immediate attention to the symptoms may help to reduce the mortality ratio.

1. https://www.who.int/news-room/fact-sheets/detail/dengue-and-severe-dengue#:~:text=The%20disease%20is%20now%20endemic,the%20global%20burden%20of%20disease.

2. https://doi.org/10.1016/j.amsu.2022.103670

3. https://doi.org/10.1016/j.jmii.2017.12.005

Acknowledgment:

A special thanks to the OCM team for their contribution to designing this newsletter. Your continued support is very much appreciated.