



UMT

School of Pharmacy Newsletter

Volume 2 | Issue 2 | April-June 2023



Editor in Chief:

Prof Dr Ejaz Ullah Cheema

Editorial Board:

Sarah Rehman (member), Dr Rabia Altaf (member)



TABLE OF CONTENTS

News in Brief	3
SPH Activities	4
Industry Academia Linkages	7
Student Corner	8
Research Corner	12
Health Corner	15



Message from Editor in Chief:

We are pleased to share the 2nd issue (Volume 2: April – June) of the School of Pharmacy (SPH) quarterly newsletter. This newsletter would give an insight into recent activities at SPH including a symposium on strengthening industry academia linkages successfully organized by SPH. It will also highlight the International webinars held for SPH faculty and students. The student corner will represent the poster and argumentative essay writing competitions held for SPH students. The health corner includes awareness about heat stroke. I hope you will enjoy this issue thoroughly.

News in Brief

- UMT School of Pharmacy is pleased to announce the publication of the inaugural issue of its peer-reviewed open-access journal, "Currents in Pharmaceutical Research" (CPR). CPR provides a platform to researchers and academics worldwide to publish their innovative and original research in the field of pharmaceutical sciences.
- SPH has successfully implemented OBE in assessment activities including mid-term and final examination.
- The SPH faculty members successfully conducted peer observation activity whereby they used a predefined rubric and provided constructive feedback to fellow colleagues in order to promote the culture of continuous learning and ensure teaching excellence at school.



SPH ACTIVITIES

Seminar on Emerging Role of Pharmacists in Regulatory Affairs

A seminar on the emerging role of pharmacists in regulatory affairs was organized by SPH. The guest speaker Mr Irfan Sohail, head regulatory affairs Qarshi industries Pvt Ltd delivered an informative session to SPH students. The seminar highlighted the crucial role of pharmacists in ensuring that pharmaceutical products are safe, efficacious and meet the necessary regulatory standards and guidelines set by the health authorities. Pharmacists in regulatory affairs collaborate with regulatory agencies, pharmaceutical industries and healthcare professionals to evaluate the drug safety and efficacy data besides providing their expertise in drug development and labelling.



Webinar on the Use of AI in Healthcare

The UMT SPH - School of Pharmacy hosted a webinar on the use of AI in healthcare. The guest speaker Prof Dhiya Al-Jumeily OBE from Liverpool John Moores University, UK delivered the webinar titled "Artificial intelligence for accomplishing better health for everyone". The webinar focused on the various applications of AI and machine learning in healthcare including improved diagnostics, data analysis, personalized treatment, enhanced workflow, prediction of Adverse Drug Reactions (ADRs) and Adverse Drug Events (ADEs), sound clinical decision making and patient monitoring. It is important to acknowledge that while AI has a significant potential to revolutionize healthcare, it must be used carefully and ethically taking into account the privacy, security, and regulatory considerations.



Webinar
"Artificial Intelligence for accomplishing better health for everyone"

Guest Speaker
Prof. Dhiya Al-Jumeily OBE
Chair in Artificial Intelligence/Senior Member of IEEE.
PhD, MPhil, MSc, BSc, PGCHE, CITP, FHEA.
President of eSystems Engineering Society.
Liverpool John Moores University, UK

<https://zoom.us/j/94161969987>
Meeting ID: 941 6196 9987

Tuesday 13th June-2023
10:00 am UKT
02:00 pm PST
2s-05, SHS Campus, UMT, Raiwind road, Lhr.



International Webinar on "How to Improve Presentation Skills"

The graphic is a dark blue rectangular poster with a gold banner at the top. It features the UMT School of Pharmacy logo in the top left and right corners. The central text reads 'INTERNATIONAL WEBINAR' on a gold banner, followed by 'HOW TO IMPROVE PRESENTATION SKILLS' in large white letters. Below this is a portrait of Dr. Mathias Rhein, a man with short brown hair wearing a light blue button-down shirt. To the right of the portrait, his name and title are listed in gold and white text. Below the name, his affiliation with Hannover Medical School and Hochschule Hannover is listed in white. At the bottom left, there are three icons: a calendar, a clock, and a video camera, each followed by text indicating the date (Thursday, 15th June 2023), time (2 PM - PST), and invitation status (You're Invited to join). A gold box contains the meeting ID '979 6272 3742' and the text 'FREE ENTRY' is to its right. The bottom of the graphic is a solid gold bar.

UMT
University of Management and Technology

School of Pharmacy

INTERNATIONAL WEBINAR

"HOW TO IMPROVE PRESENTATION SKILLS"

GUEST SPEAKER
DR MATHIAS RHEIN
HANNOVER MEDICAL SCHOOL (MHH), GERMANY,
MEDIZINISCHE HOCHSCHULE HANNOVER,
DEUTSCHLAND

THURSDAY, 15TH-JUNE-2023

2 PM - PST

You're Invited to join

MEETING ID: 979 6272 3742 **FREE ENTRY**

UMT School of Pharmacy organized an international webinar on improving presentation skills. The guest speaker Dr Mathias Rhein from Hannover Medical School Germany gave some insightful take home points on how to improve presentation skills: Do not overload your PowerPoint slides, relate to your audience through visual and verbal communication, use animation very carefully in your slides and keep it as simple as possible.



Industry-Academia Linkages

Symposium on Industry-Academia Linkages

A symposium on strengthening academia industry collaboration was organized by SPH. The discussion was attended by representatives of leading local and international pharmaceutical industries, regulatory affairs and academia. The discussion focused on the opportunities and challenges in industry-academia collaboration including capacity building and training knowledge and technology transfer, promotion of research and innovation, ways to improve funding mechanisms and regulatory issues.

The panelists unanimously agreed that industry and academia collaboration is pivotal in driving innovation, fostering economic growth and bridging gap between theoretical knowledge and practical applications.



Student Corner

Orientation session on Outcome-Based Education (OBE)

An orientation session on OBE was conducted by SPH to educate the pharmacy students about the OBE philosophy and its applications within the pharmacy profession. The session began with an introduction to OBE by focusing on the core principles, its benefits and frame work. The session highlighted the significant role of OBE in developing the competencies and skills required by the future pharmacy practitioners.

The facilitator Ms Sonia Gondal encouraged the students to ask questions and seek clarifications to help them develop a comprehensive understanding about OBE. The session laid a strong foundation for the students to embark on a learner-centered and outcome-driven educational journey. The school of Pharmacy hopes that OBE will go a long way in equipping the students with all the tools required for the provision of quality healthcare patients.



Argumentative Essay Writing and Presentation Activity

A four-day long Class activity (from June 19 - June 22, 2023) was held at the Pharmacy Department (SHS Campus) in the ENG-B class with the students of the second semester. It was a competition of well-researched Argumentative Essay writing and its presentations, in the mode of Panel Discussions moderated by the group leaders of each group. The students (moderators and panelists) took part in the discussions enthusiastically and expressed their opinions, arguments, and counterarguments on the basis of strong supporting details (evidence). At the end of the competition, certificates were awarded to the best panel discussions by the class teacher and Dr Sarah Rehman.



Community Service by SPH Students

UMT School of Pharmacy students visited Waduha care home. The students played games, read books, and shared stories with the children. It is amazing to see how much joy and happiness we can bring to others lives by just spending a few hours with them. Commendable work by SPH students!



Biochemistry Poster Competition

Biochemistry is a fascinating and complex field that has many practical applications, from developing new medicines to understanding how the human body works. A poster competition was held on the topic of biochemistry among 2nd semester students. The competition was open to all the students and the posters were judged on criteria such as creativity, scientific accuracy, and overall impact. The posters covered a wide range of topics from biochemistry, including Glycolysis, Krebs cycle and other metabolic pathways. Many of the posters featured colorful illustrations and diagrams that helped to explain the complex concepts in an easy-to-understand way. The judges were impressed by the high quality of the submissions. It was a fruitful activity for students.



Workshop on Effective Notes Taking Strategies

A workshop was conducted on effective note taking strategies. The workshop was conducted by Dr Amber Assistant Professor SPH who explained to students how to read the book, and how to extract data from text books. The students were explained various strategies of making notes along with advantages and disadvantages of each strategy, also examples related to various subjects of pharmacy were shown to them. Furthermore, students were given the opportunity to gain hands on experience of making notes in the subjects of their choice.





Research Corner

The following research abstracts have been taken from the inaugural issue of Currents of Pharmaceutical research (CPR) by UMT School of Pharmacy.

Evaluation of Near-Infrared Chemical Imaging (NIR-CI) for the Authentication of Antibiotics

Sulaf Assi¹, Sarah Rowlands, Panos Liatsis, Mana Al Hamid, Jamila Mustafina, Maitham Ghaly Yousif, Thomas Coombs, and Dhiya Al-Jumeily OBE.

ABSTRACT

Counterfeit medicines represent a public health threat that results in treatment failure and may even have lethal effects in the worst-case scenario. Near-infrared Chemical Imaging (NIR-CI) offers an informative and in-depth tool for several applications in the pharmaceutical industry, particularly for medicine authentication. The current study aimed to authenticate antibiotic tablets using NIR-CI. These tablets were measured non-destructively using a near-infrared microscope within their blister packaging, without their blisters, sectioned and crushed. The results showed that there was no marked difference in measuring the tablets within or without their blister packaging. The mean spectra of tablets showed high correlation coefficient values against the active pharmaceutical ingredient, in case of authentic tablets. On the other hand, counterfeit tablets showed key differences from their authentic

Research Corner

alternatives with low correlation coefficient values. More specifically, counterfeit tablets showed poor distribution of the active pharmaceutical ingredient and excipients. It has been proved from the results that NIR-CI process is an authentic process for the evaluation of counterfeit tablets, non-destructively.

Assessment of Human Interleukin-24 Expression in Thalassemic Patients and Investigation of Current Prescription Pattern in Thalassemia

Babar Saeed, Mariam Busharat, Fardah Farooq, Muhammad Ikram, Zia Uddin, Nabi Shah, and Muhammad Imran Amirzada

ABSTRACT

Interleukin (IL)-24 or melanoma differentiation-associated gene-7 (MDA7) belongs to the family of cytokines initially obtained from malignant tissues and manifests itself in various types of cells (of a large size). Thus, they play a crucial part in anemias. The current study aims to analyze the activation and involvement of IL-4 in thalassemia patients. For this purpose, a study population of 50 patients was randomly selected to study the prescription pattern and blood samples for the activation of IL-24 by utilizing the RT-PCR procedure. Extraction of mRNA was followed by cDNA synthesis, further followed by real-time polymerase chain reaction (RT-PCR). Based on RNA extraction, 31 samples were selected to study the expression of MDA-7 gene in blood samples. Patients were randomly divided into two groups based on the number of transfusions at the time of blood sampling. Group 1 comprised patients with more than 100 transfusions, while Group 2 comprised patients with less than 100 transfusions. Prescription patterns showed the recommendation of approximately the same classes of drugs which are particularly used for thalassemic patients. The findings from gel electrophoresis were analyzed visually. These showed the IL-24 expression in the majority of patients included in Group 1, while no expression was found in individuals included in Group 2. The results revealed the relationship of IL-24 with thalassemia owing to its expression; however, the exact mechanism and contributing factors still remain unknown. Hence, further investigation is needed to rule out the involvement of IL-24 in thalassemia.

Current Pharmacotherapy Trends for Hepatitis C in the Hospitals of Faisalabad, Pakistan

Madeeha Fatima , Aamna Habib , Faiza Habib , Kashaf Saleem , Ramsha Riaz , Sana Gulnaz , Aqsa Ahmed , Zaryab Fatima , Momina Shahid , Sadaf Waseem , Nayab Sajid , and Aneeb Nadeem

ABSTRACT

Hepatitis C infection is a global health issue. It is a growing challenge in Faisalabad, Pakistan, where at least 24% of the population is currently suffering from hepatitis C. If left untreated, HCV infection may lead to liver cirrhosis and hepatocellular carcinoma. The current study aimed to describe various prescription trends of hepatitis C medication therapy in Faisalabad,

Research Corner

Pakistan. It also aimed to evaluate the effectiveness of therapy and the satisfaction level of patients with their treatment. A comparative cross-sectional survey was carried out among patients receiving HCV medication therapy. For this purpose, a structured and close-ended questionnaire was completed by 270 patients. Comparative data analysis was performed based on selected variables, namely age, gender, marital status, current medication and its adverse effects. The prevalence of HCV in age group >40 was 63.3% and in age group 40 (34.1%) than patients in age group.

Evaluating Frontiers in Nanotechnology: A Review of Novel Nanoparticle Technology in Drug Delivery Systems (DDS)

Zainab Naeem, Tayyaba Rana, Sumiyya Javaid, and Nayab Sajid

ABSTRACT

Nanotechnology is a groundbreaking field that manipulates materials at the nanoscale, enabling unprecedented control over their properties. In medicine, nanoparticles enable targeted drug delivery and precise diagnostics. In electronics, they contribute to miniaturized devices and high-performance sensors. Additionally, nanoparticles also encompass their role in environmental remediation techniques. The current review article aims to provide a comprehensive and updated overview of recent developments in nanotechnology by highlighting the key advancements, novel applications, and future directions. Moreover, this article also contributes to the current understanding and impact of nanotechnology on multiple sectors by providing valuable insights for the future researchers. For this purpose, different preparation methods can be used to prepare nanoparticles and offer various advantages due to their varying size, as they can cross the blood-brain barrier and skin, they are used in cosmetics, and they have many applications in drug therapy and diagnostics

Call to Pharmacists to Report Quality Control and Quality Assurance Test Results on Labels

Muhammad Ahmer Raza, Shireen Aziz, Adil Tursun, Misbah Noreen, Danyal Iftikhar, and Shahid Masood

DEAR EDITOR Quality control and quality assurance both are crucial to the production and release of different medical products [1]. Both tests aim to verify a given medicine at various stages of its production in order to ensure that every product is of the highest quality. Without these two functions of quality management, a pharmaceutical organization would struggle to achieve consistency in its output [2]. Quality assurance pharmacist acts like a bridge between the quality control and production sections. The above pharmacist is responsible for any activity related to the release and testing of results. The said pharmacist is an expert in using all the machines and equipment utilized during the testing process and has tremendous knowledge about drugs. Therefore, it is their responsibility to print the quality results on labels.

Heat Stroke and its Management

Dr Rabia Altaf, Associate Professor SPH

Heat Stroke and its Management

Abrupt climatic changes round the globe are a witness to the drastic human steps as establishing industries and factories rising the atmospheric temperature as well as playing a role to increase pollution, consumption of fuel to the peak level contributing to destroying the ozone layer, juggling with nature and its parameters. This all has paved the way for the height of calamities, one of which is the harshness of weather, either heatstroke or frostbite.

Heatstroke or commonly known as sunstroke is the most serious form of heat injury that may be associated with body temperature as high as 104-105 degrees Fahrenheit. Healthy human body cells are destined to function properly in a specific range of temperatures as 98-99.5 degrees Fahrenheit. Once the temperature crosses the threshold limits, the cascade of events causes damage to the body and shuts down the systems.

The human body has a set thermostat system that may work to protect it from the extremes of temperature. The central nervous system, the temperature sensors of skin, and the preoptic area in the brain's hypothalamus, all coordinate to lower the temperature combating the deleterious effects of heatstroke. This leads to sweating which helps the body in thermoregulation, dilation of blood vessels, and an urge to move indoors.



Types of Heatstroke

There are two types of heat strokes:

1. Classic: During heat waves, the passive heating from the external environment affects the most vulnerable population including children and the elderly since they are less able to regulate their body temperature.
2. Exertional: Strenuous exercise in severe temperatures may also lead to heatstroke. It affects mostly athletes and military personnel heating up the skeletal muscles when it consumes energy.

Signs and Symptoms of Heatstroke

The classical symptom of heatstroke is a high body temperature of 104-105 F. Other associated symptoms indicating the severity are throbbing headaches, red, hot, and dry skin, rapid, shallow breathing, muscle weakness or cramps, nausea, vomiting, lack of sweat despite the heat, dizziness, lightheadedness, seizures, and unconsciousness.

Management of Heatstroke

The following measures can help to avoid heatstroke:

1. Keep yourself hydrated with frequent intake of fluids and liquids
2. Apply ice wrapped in towels to the neck, groin, or extremities
3. Keep your head covered while moving around
4. Consume homemade fresh foods to avoid GIT-disturbances
5. Wear lightweight and light-colored clothes
6. Use sunscreen with a sun protection factor of 30 or more

Heatstroke can be managed by increasing public awareness, better education, and prompt treatment. The work schedules may need to be adjusted during the summer period to minimize the risks of heatstroke.



UMT

**APPLY
NOW!**

ADMISSIONS
Fall 2023

www.umt.edu.pk