College of Pharmacy
Experiential Education Newsletter

جامعة قطر
QATAR UNIVERSITY
كلية الصيدلة
COLLEGE OF PHARMACY
القطاع الصحي HEALTH SECTOR

QU CPH Experiential Education Newsletter

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College of Pharmacy, Health Sector, Qatar University

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Editorial Board

We welcome you to the College of Pharmacy (CPH) Experiential Education Newsletter. The aim from this letter is to shed the light on the activities and updates of the experiential program and to showcase the skills and abilities of CPH students during their SPEP and PharmD rotations and their preceptors.

The newsletter will cover different highlights from the experiential team, preceptors and CPH students.

Dr. Ziad Nasr (Editor-in-Chief)

Dr. Hazem Elewa (Assistant Editor)

Dr. Stephanie Atweh (Associate Editor)

Clinical Intervention of the Month

During my rotation in the MICU, I encountered a patient undergoing mechanical ventilation who was sedated with propofol at 30 mcg/kg/min for several days. The patient was a 43-year-old male with a history of hypertension, obesity (BMI 32), and hyperlipidemia. Upon reviewing his laboratory results, I noted a marked elevation in triglyceride levels (from 190 mg/dL pre-ICU admission to 650 mg/dL over three days). This raised concern for propofol-induced hypertriglyceridemia (PIH), a known adverse effect of prolonged propofol use due to its lipid emulsion formulation. Recognizing the risks associated with hypertriglyceridemia, including pancreatitis and worsening systemic inflammation, I communicated my findings to the ICU team and discussed the clinical guidelines. I recommended discontinuing propofol and transitioning the patient to an alternative sedative agent. Based on the patient's hemodynamic stability and clinical condition, I suggested initiating dexmedetomidine at 0.2–0.7 mcg/kg/hour, as it is non-lipid-based and provides effective sedation without significantly impacting triglyceride levels. The team approved the recommendation, and propofol was weaned off while dexmedetomidine was titrated to achieve the desired sedation level. Subsequent triglyceride levels decreased to 350 mg/dL within 48 hours, and the patient's clinical condition remained stable. This intervention highlighted the importance of monitoring for medication-related adverse effects in critically ill patients and tailoring therapy based on individual risk factors and

lab findings. By advocating for this change, I contributed to preventing potential complications and optimizing patient care.

Submitted by:

Kaoutar Barakat, PharmD student

References:

Page V, McKenzie C. Sedation in the intensive care unit. Current Anesthesiology Reports. 2021Jun;11(2):92-100.Rowe K, Fletcher S. Sedation in the intensive care unit. Continuing Education in Anaesthesia,Critical Care & Pain. 2008 Apr 1;8(2):50-5.

SPEP Program Updates

In this section we will summarize the main updates of the SPEP program within the current cycle

- Introduction of the **first male batch** of students into the final year internships
- The successful completion of the first rotations at a new private hospital site **"The View Hospital"**

- Signing of a memorandum of understanding (MOU) between Qatar University and Qatar Pharmaceutical Industries – QPI[1] **and QLife Pharma**. Industry rotations to commence in Summer 2025

1 - Click here for more information[2]

- Signing of a clinical training agreement with IKOP Pharma in Malaysia where students had the chance to complete an international industrial pharmacy rotation

[1]https://www.bing.com/ck/a?!&&p=1bb8e8e1957efd19eec5527345ef4a9370b72a88aa933a72a547066cca265a3eJmltdHM9MTczNjk4NTYwMA&ptn=3&ver=2&hsh=4&fclid=383f00f5-9d7e-677e-14cc-14129c7e66f6&psq=QPI+qatar&u=a1aHR0cHM6Ly9xcGktcWEuY29tLw&ntb=1

[2]https://www.qu.edu.qa/en-us/newsroom/Pages/newsdetails.aspx?newsID=12797

- Introduction of a new coursework aimed at mitigating **immunization awareness**. The objectives of this assignment include highlighting the role of pharmacists in the immunization process such us education, advocacy and history documentation as well as vaccine adverse event reporting. This aims to drive change towards expanding the scope of pharmacy practice in community pharmacy and outpatient settings in Qatar.

SPEP Outreach Activities

SPEP students participated in several outreach campaigns including but not limited to:

- World Mental Health Day
- Nuclear Medicine and Molecular Imaging Campaign
- World Stroke Awareness Campaign
- World Pharmacists Day
- World Heart Day
- Infection Prevention and Control Week
- Medication Safety Awareness Campaign
- World Antimicrobial Resistance Awareness Week

- Pain Management Outreach Campaign
- World Thrombosis Awareness Day
- World Sepsis Awareness Day

Highlights from International SPEP Rotations

Mint Pharmacy, Glasgow, Scotland

“I had the privilege of completing an international rotation at a community pharmacy in Scotland, UK, from August 26 to September 20th, 2024. This experience offered me a unique opportunity and gave me a new perspective to compare the scope of practice of community pharmacists between Qatar and Scotland. I was impressed by the pivotal role that independent

prescriber pharmacists play in the National Health Service (NHS) alongside dispensing prescription medications, offering services like smoking cessation, clinical examinations for minor illnesses, vaccination and travel clinic services. It was interesting to witness that with this healthcare accessibility the public there approaches their community pharmacists first with trust for common minor conditions. This experience highlighted the potential for Qatar to adopt similar advancements, further bridging the gap between pharmacy practice and patient-centered care."

Roaa Rustom and Rouaa Elhani, P4 students

"We came away inspired by the trust placed in pharmacists in Scotland to perform physical assessments and prescribe medications. These responsibilities helped relieve the burden on hospitals and clinics. Witnessing these practices firsthand ignited our passion to advocate for more progressive practice in Qatar, including pharmacist-led vaccination services and expanded prescribing authority. Overall, this experience united us in our commitment to broaden the impact of community pharmacy, and it reaffirmed our belief that empathy, collaboration, and innovation are key to delivering exceptional patient care."

Hassan Mohammadian, Omar Abd Elrahman, Ghaith Alali, P4 students

IKOP Pharma, International Islamic University Malaysia, Kuala Lumpur, Malaysia

"IKOP Pharma was a beautiful and welcoming place, and the people there were incredibly kind and supportive. During the month of December 2024, we had the opportunity to rotate through departments like Research and Development (R&D), production, quality control, quality assurance, and sales. A major highlight was observing their strong adherence to Good Manufacturing Practices (GMP) standards and halal certification processes. While IKOP's operations were on a smaller scale, relying more on manual processes compared to Qatar's larger, more tech-driven industry, their commitment to quality, safety, and resourcefulness was impressive.

Participating in the international SPEP rotation at IKOP Pharma, Malaysia, was a transformative journey that introduced us to the intricacies of pharmaceutical manufacturing, GMP, and the unique 'Halal Tayyiban' concept. This experience not only deepened our technical knowledge but also emphasized the importance of interprofessional collaboration and innovation for advancing the pharmaceutical industry in Qatar."

Haneen Hunaiti, Ayesha Ahmed, Salah Almoflehi and Mohammed Haitham Elsayed - P4 students

Drug Information Question (DIQ) of the Month

In adult patients with uncontrolled type 2 diabetes and recent myocardial infarction, does the use of low dose colchicine in comparison to placebo improve cardiovascular outcomes and prevent recurrence of MI?

Background:

Type 2 diabetes mellitus (T2DM) is a chronic metabolic disorder characterized by insulin resistance and eventual pancreatic beta-cell failure, leading to hyperglycemia. Risk factors include genetic predisposition, obesity, physical inactivity, and age over 45. T2DM significantly increases the risk of adverse cardiovascular outcomes, particularly myocardial infarction (MI) and heart failure. Given the inflammatory pathways involved in both T2DM and cardiovascular disease, anti-inflammatory therapies like colchicine have garnered attention for their potential to mitigate cardiovascular events in diabetic populations.

Study Overview:

A systematic review and meta-analysis conducted by Dr. Micha Kuzemczak and colleagues in 2021 evaluated colchicine's efficacy in patients with coronary artery disease (CAD), including diabetic subgroups. This study analyzed four randomized controlled trials (RCTs) involving 11,594 patients, 19.6% of whom had diabetes and 47.8% presented with acute coronary syndrome (ACS). Major cardiovascular events were the primary endpoint, while trials assessing biomarkers or angiographic endpoints were excluded.

Key Findings:

- Among 11,594 patients, 869 cardiovascular events occurred, with 273 events in diabetic patients and 596 in non-diabetics ($p < 0.001$).
- Diabetic patients experienced a 27% relative risk reduction (RR 0.73, 95% CI 0.57–0.93, $p = 0.01$), while non-diabetic patients had a 31% reduction (RR 0.69, 95% CI 0.59–0.82, $p < 0.001$).
- Absolute risk reduction (ARR) was greater in diabetic patients (3.94%, 95% CI 1.28–6.6, $p = 0.004$) compared to non-diabetics (2.32%, 95% CI 1.32–3.31, $p < 0.001$). The number needed to treat (NNT) was 25 for diabetics versus 43 for non-diabetics.
- Colchicine demonstrated a larger absolute risk difference in diabetics versus non-diabetics (ARD 1.62%, $p < 0.001$).

Conclusion:

The findings highlight colchicine's efficacy in reducing cardiovascular events in diabetic patients with CAD, emphasizing its potential as a targeted anti-inflammatory strategy. Despite limitations, including study-level design and variability in dosing regimens, the study's robust sample size and statistical analysis underscore its relevance. These results suggest that colchicine could play a significant role in managing cardiovascular risks in diabetic populations, particularly those at higher risk for recurrent MI.

Click here for the references[3].

Ghaith Alali, P4 student

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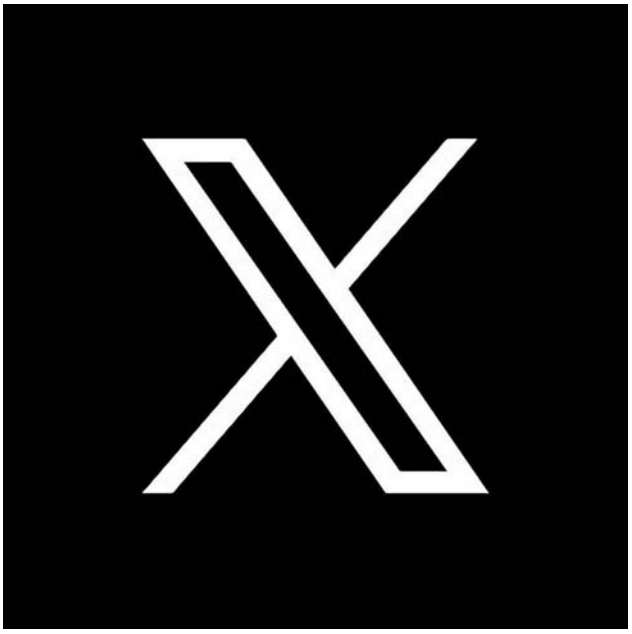

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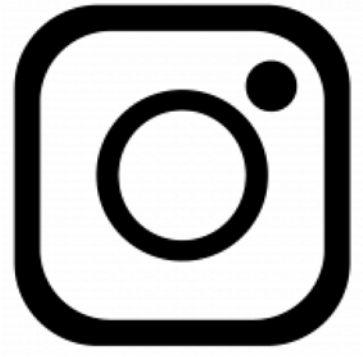

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[4] https://twitter.com/cph_qu?lang=en
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[6] https://www.qu.edu.qa/en-us/colleges/pharmacy/departments/programs/programs