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School of Pharmacy

School of Pharmacy

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EDITORIAL

Dear Readers,



It gives me a great pleasure to share the latest issue of our School of Pharmacy quarterly newsletter.

In this issue, we feature the orientation ceremony for our new students, who were welcomed with open arms to the pharmacy family. As part of their induction, our new students participated in a meaningful plantation drive on campus, demonstrating their commitment to sustainability and community service.

We also bring to you inspiring reflections from our final-year Pharmacy students who recently completed their COOP placements in leading pharmaceutical industries, hospitals and healthcare commission. Their experiences and insights offer valuable lessons for our readers.

Additionally, we celebrate World Pharmacist Day, recognizing the vital contributions of pharmacists to healthcare and society across the world.

I hope you enjoy reading about these exciting and inspiring achievements. We are grateful for your continued support and look forward to sharing more updates in the future.

Warm regards

Prof. Dr. Ejaz Cheema
Editor-in-Chief
Founding Dean SPH

News in Brief

- Pharm.D final-year students from the UMT School of Pharmacy (SPH) successfully completed their inaugural two-month Cooperative Education Program (COOP) across various pharmaceutical industries and hospitals.
- SPH warmly welcomed the Fall 2025 Pharm.D batch through an engaging Orientation Ceremony and a symbolic plantation drive, promoting unity, sustainability and professional growth.
- SPH celebrated World Pharmacists Day, honoring the pivotal role of pharmacists in advancing healthcare and improving lives globally.
- SPH hosted Mr. Toyib Olatunji, Head of Business at Evercare Hospital, to explore avenues for academic collaboration, clinical partnerships and joint training initiatives.
- A Memorandum of Understanding (MoU) was signed between SPH and Pakheim Pharma to enhance industry–academia collaboration and foster experiential learning.
- Faculty members from UVAS and UMT held a collaborative meeting to discuss the implementation of the revised Pharm.D curriculum in alignment with global educational standards.
- SPH proudly held the thesis defense of the inaugural M.Phil batch, celebrating the research achievements and academic excellence of its first postgraduate cohort.

SPH Activities

Orientation Ceremony for the Fall 2025 Batch

The orientation ceremony for the new batch of Pharm.D students at SPH was a warm and vibrant welcome to the pharmacy community. The event aimed to familiarize students with the academic environment, program structure, faculty, and various student support services available at the school. The Dean, faculty members and senior students extended their greetings, offering valuable insights and encouragement to help the newcomers embark on their professional journey with confidence and enthusiasm.

As part of the orientation activities, the students participated in a plantation drive on campus, symbolizing growth, responsibility and a collective commitment to environmental sustainability. This initiative not only fostered a sense of belonging and teamwork among the new students but also reinforced SPH's dedication to promoting ecological awareness and community engagement from the very beginning of their academic journey.



SPH Inaugural COOP Program

Final-year students from the UMT School of Pharmacy have successfully completed their two-month inaugural COOP (Cooperative Education) program across various pharmaceutical industries and hospitals including Highnoon Lab, CCL Pharmaceuticals, Pakheim, Genetics Pharmaceuticals, PKLI, Evercare Hospital & Punjab Healthcare Commission.

This initiative was aimed to provide students with experiential Learning bridging the gap between academic learning and professional practice.

During the program, students participated in various departmental rotations, gaining experience in production, quality control, quality assurance, and regulatory affairs. This hands-on training allowed them to understand the workflow, compliance standards, and operational challenges of Industry.





Workshop on Ethical Research Practices

The Center for Teaching and Learning (CTL), UMT, organized an insightful workshop on ethical research practices, aimed at equipping PhD supervisors with the knowledge and tools necessary to uphold research integrity and prevent paper retractions.

The session given by Dean SPH Prof. Dr. Ejaz Cheema, provided a platform for meaningful interaction and discussion on best practices in research supervision, emphasizing transparency, responsibility and academic honesty.





Dr. Hammad Ullah Honored with Pride of Pakistan Award



The UMT School of Pharmacy (SPH) proudly celebrates the achievement of Dr. Hammad Ullah (Assistant professor, SPH), who has received the Pride of Pakistan Award for his outstanding academic and research contributions.

This national honor recognizes Dr. Hammad's dedication to advancing pharmaceutical sciences through innovative work and scholarly excellence. His success is an inspiration for both faculty and students, reflecting SPH's commitment to quality education and meaningful contributions to the scientific community. UMT–SPH congratulates Dr. Hammad Ullah on this well-deserved recognition.

Thesis Defense of the Inaugural M.Phil Batch at SPH



Heartiest congratulations to the inaugural batch of MPhil Pharmacology students and their supervisors on the successful defense of their thesis. Their hard work and commitment reflect the school's dedication to fostering research excellence and advanced learning in pharmaceutical sciences. Special thanks to Prof. Mahtab Ahmad Khan, Dean, Faculty of Pharmacy, University of Central Punjab (UCP), for serving as the external examiner and providing valuable insights and feedback that enriched the examination process.

SPH Exam Board, Spring 2025



SPH successfully conducted the Exam Board for the Pharm.D and MPhil programs for the Spring 2025 semester. The session marked an important academic milestone for the school, ensuring fair assessment, transparency in evaluation and the maintenance of high academic standards.

SPH Represents Pakistan at MyDispense Global Symposium 2025 in Italy

The UMT School of Pharmacy (SPH) proudly represented Pakistan at the MyDispense Global Symposium 2025, organized by Monash University in Prato, Italy. Prof. Dr. Ejaz Cheema, Founding Dean of SPH, participated as an invited speaker, presenting on the use of AI in enhancing OSCE preparation and assessment. His session emphasized innovative assessment design and the integration of technology in pharmacy education. The symposium provided a valuable platform for global collaboration and exchange of best practices in modern pharmacy teaching. SPH extends gratitude to Monash University for hosting the event and to Mr. Ibrahim Hasan Murad, President UMT, for his continued support in fostering international academic engagement.





Implementation of the Revised Pharm.D Curriculum

A delegation from the Faculty of Pharmacy, University of Veterinary and Animal Sciences (UVAS), led by Dr. Tahir Khan, visited SPH to discuss the implementation of the revised Pharm.D curriculum. The meeting centered on aligning academic practices with contemporary pharmaceutical education standards and enhancing collaboration between the two institutions. Both faculties reaffirmed their shared commitment to advancing pharmacy education in Pakistan through academic innovation, knowledge exchange and continuous improvement in teaching and assessment.



Industry Academia Linkages

Building Partnerships in Healthcare: SPH Meets with Evercare Hospital Leadership

UMT School of Pharmacy had the honor to host Mr. Toyib Olatunji, Head of Business at Evercare Hospital, to discuss potential collaborations in education and clinical practice. The meeting served as a productive platform to exchange ideas on advancing academic partnerships, enhancing professional training and developing impactful joint initiatives. SPH extends sincere appreciation to the Evercare Group for their visit and their commitment to fostering meaningful academic and healthcare collaborations.





MoU Signed Between SPH and Pakheim Pharma

SPH signed a Memorandum of Understanding (MoU) with Pakheim Pharma to strengthen industry–academia collaboration and enhance experiential learning for students. The partnership aims to promote internship and COOP opportunities, initiate joint research and development projects, and introduce a faculty secondment program to bridge academic expertise with industrial practices.



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Programs Offered

Doctor of Pharmacy
MPhil Pharmacology



Why Choose UMT School of Pharmacy?

- State-of-the-art Labs
- Foreign qualified Dean & Faculty
- Innovative Teaching & Assessment Strategies
- Experiential Learning through Internships and Community service projects.
- Focus on Skill development

Merit-Based Scholarships – PharmD

- 20 seats for students with 90% above marks in FSC pre-medical (50% scholarship),
- 15 seats for 85% above marks (40% scholarship) and
- 15 seats for 80% above marks (30% scholarship).

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Student Corner

SPH Students Participate in Medicine Distribution Camp for Flood-Affected Communities

Students from SPH actively took part in a medicine distribution camp organized to aid flood-affected communities. Collaborating with pharmacists and healthcare professionals, they ensured the safe and effective delivery of essential medicines to those in need. The initiative offered valuable hands-on experience in humanitarian healthcare, reinforcing the importance of teamwork, ethics, and patient-centered service. Beyond medical support, the students extended compassion and empathy to affected families, reflecting SPH's commitment to nurturing socially responsible pharmacists dedicated to serving communities in times of crisis.







Learning Beyond the Classroom: COOP Reflections by SPH students



Adan Ali Mir — COOP Intern at Pakheim Pharmaceuticals

Pharmaceutical industries are known for their precision, discipline, and constant challenges and my two-month internship at Pakheim Pharmaceuticals under the COOP Program allowed me to experience all of these firsthand. During this journey, I worked across five core departments — Quality Assurance, Quality Control, Production, Warehouse, and Microbiology. Each area opened a new dimension of learning, from running analytical tests and maintaining documentation to observing manufacturing operations and understanding the vital role of quality compliance.

One of the most memorable milestones was when under the supervision and guidance of the Production Pharmacist, my co-interns and I successfully manufactured a batch of paracetamol. Witnessing a complete production process from raw material to finished product was a proud achievement that truly connected classroom knowledge with real industry practice.

What made this internship especially valuable was the chance to witness real-time challenges and contribute to solutions that aligned with GMP and cGMP standards. Beyond technical growth, the experience also shaped me personally teaching patience, responsibility, and adaptability in a demanding work environment.This internship was more than just training ,it was a turning point that strengthened my passion for pharmacy.



Muhammad Shair Shah — COOP Intern at Pakistan Kidney and Liver Institute (PKLI)

Everything in this universe is constantly evolving — and so am I. I realized that my evolution at UMT's School of Pharmacy bore fruit during my four-week internship at the Pakistan Kidney and Liver Institute. JCI regulations didn't seem foreign, clinical rounds no longer felt challenging, and I took on patient counseling with confidence. Sterile preparations and dispensing seemed very familiar, and I found myself blending effortlessly into PKLI's system, learning and growing each day. The confidence, knowledge, teamwork and professionalism I exhibited didn't present overnight — they were nurtured in me by my faculty and mentors over the years, shaping the person I am today.



Nabgha Imran — COOP Intern at Evercare Hospital Lahore

My COOP internship (2 months) at Evercare Hospital was an invaluable learning experience that helped me bridge the gap between theory and real-world clinical practice. Working under the guidance of skilled professionals, I gained deeper insight into patient care, clinical procedures, and the importance of effective teamwork. The experience greatly enhanced my confidence, refined my communication skills, and strengthened my sense of responsibility as a future healthcare professional. Overall, this internship not only broadened my practical understanding but also reinforced my commitment to continuous learning and compassionate care.

Throughout my internship, I was able to actively participate in daily ward routines and observe how patient care is managed with precision and empathy.

I learned the importance of maintaining professionalism under pressure and the value of effective communication within a healthcare team. Each day presented new learning opportunities that deepened my understanding of clinical judgment and patient interaction. This experience not only strengthened my practical skills but also gave me a clearer vision of the kind of healthcare professional I aspire to become.



Abdul Rehman — COOP Intern at Highnoon Laboratories Limited

My co-op training at Highnoon Laboratories Limited was a valuable opportunity that strengthened my understanding of industrial pharmacy. During this experience, I worked in key departments including Production, Product Development, Quality Assurance, and Quality Control. This gave me practical exposure to the entire manufacturing and quality system workflow. In the Production department; I observed key processes such as granulation, compression, coating, encapsulation, packaging and syrup manufacturing processes. In the Product Development section, I improved my understanding of formulation design, excipient selection, and trial batch evaluation according to ICH guidelines. Exposure to Quality Assurance and Quality Control deepened my knowledge for inprocess parameters to ensure quality, documentation, validation, raw material testing, stability testing and analytical testing. Overall, this co-op experience connected theory with practice, enhanced my technical and professional skills, and strengthened my commitment to pursue excellence in the field of industrial pharmacy.



Sobiqa Sarwat — COOP Intern at Evercare Hospital Lahore

A reflection of my internship at evercare hospital Lahore: Sobiqa Sarwat, a recent intern at Evercare Hospital Lahore, I had the privilege of working there as a Resident pharmacists in ICU pharmacy for two months, applying theoretical knowledge gained from our talented and respectful professors of PharmD program to real-world scenarios as part of the COOP program initiated by the UMT School of Pharmacy. COOP program is -a full time paid, merit based cooperative education program. The rigorous case study discussions and pharmacotherapy lectures provided a solid foundation for evaluating patient cases and developing treatment plans. I was able to utilize my knowledge to participate in clinical rounds, conduct medication appropriateness reviews, and identify potential drug interactions. The emphasis on evidence-based practice and critical thinking skills enabled me to make informed decisions and contribute to the healthcare team. This internship experience not only honed my clinical skills but also instilled confidence in my ability to provide patient-centered care. In the last week of internship I was particularly humbled to receive a surprise farewell from the ICU pharmacy team, which served as a testament to the strong relationships and collaborative work environment that we built during my tenure. I am grateful for the opportunity to apply my knowledge in a practical setting and appreciate the strong foundation provided by SPH-UMT.



Muhammad Salman Sajid — COOP Intern at Pakheim

My internship at Pakheim Pharmaceuticals provided an exceptional opportunity to directly experience pharmaceutical production and quality management. Observing the structured workflow and professional standards gave me valuable practical insight. This experience enhanced my understanding of industrial pharmacy and will remain a significant achievement in my professional journey.

Zainab Amin — COOP Intern at Pakheim Pharmaceuticals

Getting into Pakheim International Pharma's co-op program felt like winning a golden ticket to see how medicines truly come to life. For two months, I rotated through Production, Quality Control, Quality Assurance, Microbiology, and Warehouse, exploring every corner where science meets precision.

In Production, I watched raw materials flow through mixers and granulators, transforming into perfectly compressed tablets. Each sound — the hum of a machine, the click of a blister pack — felt like part of a rhythm only the industry understands.

My most unforgettable experience came during the Pakheim Project — the manufacturing of Paracetamol. Seeing this familiar medicine produced before my eyes, from the first blend of powder to the final packaged strip, felt almost cinematic. What I had studied for years in textbooks — dissolution tests, batch records, and GMP guidelines — now unfolded right in front of me as living processes.

In the Quality Control lab, I observed raw material testing, ran assays, and learned how every reading from the spectrophotometer reveals the truth about a drug's quality. The Quality Assurance department showed me how documentation, CAPA, and validation ensure that no step ever goes unchecked. In Microbiology, I discovered how something as invisible as a microbe could determine whether a batch passes or fails.

By the end, I realized that pharmacy is not just about formulas — it's about trust. Every pill carries the efforts of hundreds of people working in perfect coordination. My internship at Pakheim didn't just teach me how medicines are made — it showed me why they matter.

Amna Waqar — COOP Intern at Pakistan Kidney and Liver Institute (PKLI)

My clinical internship at the Pakistan Kidney and Liver Institute (PKLI) was an insightful journey into evidence-based patient care. During ICU clinical rounds, I actively participated in head-to-toe patient assessments and learned to correlate clinical findings with pharmacotherapy decisions. I also gained hands-on experience in preparing various drug preparations and dilutions, enhancing my understanding of accurate dosing and aseptic techniques. A major highlight was presenting a Decompensated Chronic Liver Disease (DCLD) case using EASL and AASLD international guidelines, where I integrated global standards into patient management. This experience strengthened my clinical reasoning, teamwork, and practical understanding of real-world therapeutic care.

My internship at Pakheim Pharmaceuticals provided an excellent opportunity to gain hands-on experience in pharmaceutical production and quality management. It enhanced my practical skills and professional understanding of industrial pharmacy. This experience will remain a significant milestone in my career.during internship



Muhammad Sharjeel Anjum — COOP Intern at Pakheim Pharmaceuticals

My internship at Pakheim Pharmaceuticals was a highly valuable experience that deepened my understanding of industrial pharmacy. Working in a professional environment enhanced my practical knowledge of production and quality management. This experience marks an important step in my professional growth.



Muhammad Aftab Bilal — COOP Intern at Pakheim Pharmaceuticals

My co-op experience at Highnoon Laboratories Limited was an exceptional learning journey that enhanced my understanding of pharmaceutical manufacturing and industrial practices. During my training, I had the opportunity to work in core departments including Production, Product Development, Quality Control, and Quality Assurance. Each department provided valuable hands-on exposure to processes such as granulation,compression,coating,encapsulation, formulation development, and analytical testing. In the Product Development department, I learned how new formulations are designed and optimized by selecting suitable excipients and evaluating trial batches in line with ICH Q8 (R2) guidelines to ensure product quality and efficacy. I also learned about GMP standards, Stability testing, validation work, and the importance of proper documentation. Overall, this experience helped me connect my classroom knowledge with real-world practice and strengthened my interest in the field of pharmacy.



Abdul Hafeez — COOP Intern at Highnoon Laboratories Limited



Ume Rubab — COOP Intern at Highnoon Laboratories Limited

My journey at HIGHNOON harmaceuticals Laboratories was a truly enriching experience that helped me see how the knowledge and concepts I learned at the UMT-school of pharmacy come to life in a real industrial setting. During my time at Highnoon, I observed how various departments collaborate to ensure the quality, safety, and effectiveness of pharmaceutical products. The small-scale formulation practices and quality testing I performed at UMT-SPH played a key role in helping me understand the large-scale manufacturing and analytical procedures followed in the industry. The academic foundation, professional ethics, and confidence instilled by UMT enabled me to adapt quickly, communicate effectively, and leave a positive impression on the professionals I worked with. This experience not only strengthened my technical and practical understanding but also deepened my passion for the pharmacy profession and its meaningful impact on people's lives. My time at HIGHNOON pharmaceuticals has truly inspired me to continue striving for excellence and to carry forward the values and skills into my future career. I just want to thanks my school of pharmacy for giving the opportunity of completing the COOP internship at HIGNOON pharmaceuticals that definitely helped me to direct my future career.

Maryam Fatima — COOP Intern at Genetics Pharmaceuticals

I am pleased to reflect upon my enriching internship experience at Genetics Pharmaceuticals, where I had the privilege of working within the Quality Operations department under the esteemed guidance of Dr. Ahmed Junaid Rashid. This immersive tenure afforded me profound insights spanning the development of formulations to critical facets of quality operations, doing proper documentation, and how to give training sessions to other departments.
This experience will help me do better in future!

Javeria Rasheed — COOP Intern at Punjab Healthcare Commission (PHC)

I completed my Internship at the Punjab Healthcare Commission, where I gained firsthand insight into how healthcare facilities are assessed for quality and compliance. Observing inspections and understanding the regulatory framework helped me see how patient safety and service standards are maintained in practice. It was a meaningful experience that connected my academic learning with real healthcare governance in Pakistan.

Sometimes, a single experience can open your eyes to an entire world of possibilities---
My internship at PKLI & RC was one such turning point. Representing the University of Management and Technology (UMT), I felt proud to step into a professional environment that truly reflected the essence of learning beyond books. The journey was full of opportunities under international standards, where I not only observed but experienced how dedication, compassion, and knowledge come together in patient care.
Through this internship, I realized the true worth of a pharmacist — not just as a dispenser of medicines, but as a vital part of a healthcare team that impacts lives every day. It gave me a clearer picture of what it means to be in clinical pharmacy and helped me envision the kind of professional I aspire to become in the future.



Samia Irfan — COOP Intern at Pakistan Kidney and Liver Institute & Research Centre (PKLI & RC)

Knowledge, persistence, compassion, and confidence — these are the key elements that define a capable Clinical Pharmacist. During my brief yet transformative stay at the Pakistan Kidney & Liver Institute (PKLI), I had the privilege of observing and becoming part of a JCI-accredited institution.
My four-week internship at PKLI opened numerous avenues of critical thinking, evidence-based medication use, Antimicrobial Stewardship, and hands-on clinical learning — an invaluable experience for a student like me, who thrives in real-world, patient-centered environments.
At PKLI, I witnessed the true essence of everything our School of Pharmacy has taught us: the collaborative power of a multidisciplinary healthcare team, the technical expertise a clinical pharmacist contributes, the continuous exchange of knowledge, and most importantly, the conviction and confidence with which a well-trained pharmacist approaches each case.
This internship was not merely a learning opportunity — it was a life-altering experience that deepened my passion for clinical pharmacy.



Gul-e-Zehra — COOP Intern at Pakistan Kidney and Liver Institute (PKLI)

Research Corner

The Research Corner highlights recent publications and research accomplishments by SPH faculty, showcasing their contributions to advancing pharmaceutical sciences.

Abstracts

Pharmacokinetic Implications of Pathophysiological Changes in Cachexia Syndrome: A Scoping Review
Safeer Khan, Muhammad Nasir Kalam..... Syed Muhammad Ali
European journal of drug metabolism and Pharmacokinetics

https://link.springer.com/article/10.1007/s13318-025-00967-y

Cachexia is a complex multi-organ syndrome characterized by systemic alterations that could impact drug pharmacokinetics. This scoping review aims to examine and synthesize existing research on the pathophysiological changes in cachexia that may influence drug pharmacokinetics.
A comprehensive literature search was conducted across five databases from inception to December 2024. Study selection was refined using the population, concept, and context (PCC) framework. The population included humans and animals with cachexia, the concept focused on cachexia-induced pathophysiological changes in relation to drug pharmacokinetics, and the context encompassed any clinical, healthcare setting, or laboratory settings.
Out of 2684 identified studies, 53 met the inclusion criteria: 25 were based on human data, 18 on animal data, and 10 were reviews. The findings suggest that cachexia may impair drug absorption due to reduced skinfold thickness, gut dysbiosis, and structural and functional alterations in the gastrointestinal (GI) tract. Similarly, drug distribution may also be affected by changes in body composition and decreased serum albumin levels.
Pathophysiological changes in cachexia may lead to alterations in drug absorption and distribution, contributing to variability in drug bioavailability. However, the lack of controlled clinical trials directly linking cachexia-induced physiological changes to specific drug pharmacokinetics renders these findings tentative.

Abstracts

Macroalgae Polysaccharides Enhance Brain Health by Mitigating Scopolamine-induced Oxidative Stress and Inflammation Via Nrf-2/TLR4/NF-kB Pathways
Zahir Shah, Arshad Iqbal, ... Hammad Ullah, ... Maria Daglia
Journal of Neuroimmune Pharmacology

https://link.springer.com/article/10.1007/s11481-025-10230-5

Alzheimer's disease (AD) is a neurodegenerative disorder commonly associated with memory loss and difficulties in performing daily activities, particularly in the aging brain. This study aimed to evaluate the neuroprotective effects of macroalgae-derived polysaccharides from seaweed against scopolamine-induced amnesia, oxidative stress, and amyloid plaque (A) production in rodents, following standard experimental protocols. Three novel polysaccharides were extracted from Chara vulgaris, Cladophora glomerata, and Spirogyra crassa, namely: methylated pectin-type polysaccharides (PS1), methylated pectin-type polysaccharides (homo galacturonan and rhamno galacturonan, PS2), Ulvan-type polysaccharide, and xyloglucan polysaccharides (PS3). These polysaccharides were characterized using a variety of analytical techniques, including SEM, FTIR, XRD, 1H-NMR, and 13C-NMR. The polysaccharides were administered at a dose of 30 mg/kg to male albino mice exposed to scopolamine (1 mg/kg) for three weeks. To assess their neuroprotective effects, Morris Water Maze (MWM) and Y-maze tests, antioxidant enzyme assays (Catalase, GSH, LPO), and western blotting were performed. The results showed that all three polysaccharides significantly ($p \leq 0.001$) mitigated redox imbalance and reduced ($p \leq 0.001$) microglial activation, thereby decreasing scopolamine-induced neuroinflammation and amyloid beta (A) accumulation. Additionally, these polysaccharides improved neuronal synapses and cognitive function by modulating the NRf-2/TLR4/NF-kB signaling pathway. The data analysis and graph generation were performed using GraphPad Prism software, version 5.0, with a significance level set at a p-value of < 0.05. The findings highlighted the potential of these three novel natural polysaccharides as promising candidates for the treatment of scopolamine-induced oxidative stress-mediated neurodegenerative disorders, such as Alzheimer's disease

Abstracts

Torreya grandis nut peptides regulate lipid-II inhibitors in high-fat diet-fed mice
Rabia Durrani, Sun Yutian, Hou Bowen, Hammad Ullah, ... Gao Fei, Song Lili
Food Chemistry: Molecular Sciences

https://www.sciencedirect.com/science/article/pii/S2666566225000346

Plant-derived bioactive peptides have drawn increasing attention in the field of nutrition and food science due to their biological activities, low cost, safety, and ease of industrial production. Functional peptides from Torreya grandis are being investigated due to their potential as dietary supplements. This study focuses on T. grandis nut peptides that regulate LIPID-II inhibitor in mice fed a high-fat diet. Proteome analysis identified a Vicilin-like antimicrobial peptide involved in host defense. 16S rRNA Sequencing revealed alteration in gut microbiota with T. grandis administration as manifested by increased Akkermansia and Parabacteroides concurrently by decreased Firmicutes. Beneficial bacteria i.e., Akkermansia improved intestinal functions and increased levels of short chain fatty acids (SCFAs). T. grandis supplementation in HFD mice reduced body weight, TC, TG, LDL, and decreased inflammation, while reducing oxidative stress and increasing HDL in the model group fed a high-fat diet. Lipid droplets in liver, muscles, and blood vessels were highly reduced, evoked by the high peptide group. Transcriptome analysis highlighted lipid regulation via the PPAR-□ pathway, with molecular docking revealing 4 potential lipid II inhibitory peptides. These findings suggested T. grandis as a promising supplement in food and a key nut for nutraceutical purposes.

Abstracts

Proteomic-based prediction of functional bioactive peptides in proteins extracted from Torreya grandis using choline chloride-based deep eutectic solvents
Rabia Durrani, Hou Bowen, ...Hammad Ullah, Zeyuan Ling, Gao Fei, Song Lili
Food Chemistry: X

https://www.sciencedirect.com/science/article/pii/S2590157525005383

Five deep eutectic solvents were used to extract T. grandis nut protein, with water as comparison. ChCl:Urea was the most effective, preserving integrity and functionality of extracted proteins. Cold ethanol purification yielded highest protein recovery rate 6.89 % ± 0.12 %. Time, temperature, and solid-liquid ratio, were optimized using response surface methodology and a Box-Behnken design. Extracted proteins were characterized via SDS-PAGE to assess digestibility and functional properties. Proteins extracted by DES were further analyzed via LC-MS/MS. De novo sequencing identified 600 peptides with 235 proteins in DES extract, compared to 349 peptides and 143 proteins in the water extract. Furthermore, 87 functional oligopeptides in DES, compared to 41 in water. DES extract contains 63 antioxidant peptides, with three distinct peptides GGE, CME, and YIY. CME peptide had highest antioxidant activity. These findings highlighted DES for extracting smaller functional proteins and peptides from T. grandis, demonstrating potential in food industry applications for protein extraction.

Strengthening Research Culture through FISCA and URISE Initiatives

A research coordination meeting was conducted at the UMT School of Pharmacy to review progress and explore collaborative opportunities under the FISCA (Focused Research Advancement, International Collaboration, Social Impact, Citations and Publications, AI Integration in Research) and URISE (Undergraduate Research and Innovation Support Endeavor) programs. Faculty members and research leads discussed strategies to enhance student participation, encourage interdisciplinary projects, and promote innovation-driven inquiry. These initiatives underscore UMT's dedication to fostering a vibrant research culture that empowers both faculty and students to contribute meaningful solutions to real-world challenges in health and pharmaceutical sciences.

Research Progress By Dr. Amber

The UMT School of Pharmacy (SPH) continues to advance its research excellence through hands-on experimental work. Dr. Amber Sharif, faculty member, along with the laboratory attendants, conducted dosing on a new rat model, marking a significant step in strengthening the school's preclinical research capabilities. This initiative not only contributes to ongoing scientific investigations but also serves as a valuable learning platform for future student researchers. By developing and optimizing in vivo models, SPH aims to promote high-quality research, foster innovation, and enhance experiential learning in pharmaceutical sciences.





Health Corner



The Hidden Cost of Skipping Breakfast

By: Muhammad Muaaz Munir, Lecturer, School of Pharmacy

Breakfast has long been hailed as the most important meal of the day — and rightly so. Yet, in today's fast-paced academic and professional life, many students and staff either skip breakfast or replace it with caffeine and convenience foods. What seems like a harmless habit can actually have a ripple effect on health, mood, and long-term wellbeing.
As per a study conducted in Pakistan, 34% of participants reported consuming breakfast regularly, while 66% admitted to skipping breakfast in the morning. The most frequently cited reason for skipping breakfast was a lack of appetite or insufficient time in the morning (16%), whereas 34% stated that they had no specific reason for not eating breakfast. Skipping breakfast was found to be significantly associated with adverse effects such as hunger, lack of energy, headaches, irritability, lethargy, difficulty concentrating in class, and tiredness (91%), while 9% of participants reported experiencing stomach-ache and dizziness.

Why Breakfast Matters

After an overnight fast, our body needs energy to restart essential functions — from stabilizing blood glucose levels to fuelling the brain for learning and focus. A balanced breakfast helps:

- Maintain steady energy levels throughout the day
- Enhance memory, concentration, and academic performance
- Prevent overeating and unhealthy snacking later on

In fact, research shows that regular breakfast eaters tend to have better cognitive performance and a more stable mood compared to those who skip it.

What a Healthy Breakfast Looks Like

A nutritious breakfast isn't about eating more — it's about eating right. A good morning meal should contain:

- Complex carbohydrates (whole grains, oats, brown bread) for sustained energy
- Protein sources (eggs, milk, yogurt, nuts, or legumes) to keep you full longer
- Fruits or vegetables for vitamins, minerals, and fiber

Avoid sugary cereals or processed pastries that give a quick spike of energy followed by a crash. Instead, try simple combinations like oatmeal with fruit, brown bread with boiled eggs, or a smoothie with yogurt and nuts.

Effects of Skipping Breakfast on the Body (as reported in published studies):

Decreased energy levels: Skipping breakfast lowers blood glucose, leading to fatigue and reduced stamina throughout the day.
Impaired concentration and memory: Studies show that breakfast skippers experience poorer attention and cognitive performance, especially students.
Mood disturbances: Research indicates higher rates of irritability, stress, and mood swings among individuals who skip breakfast.
Headaches and dizziness: Commonly linked to prolonged fasting and hypoglycemia (low blood sugar).
Digestive issues: Irregular eating patterns can lead to stomach discomfort, acidity, or nausea.
Increased hunger and overeating: Skipping breakfast often leads to higher calorie intake later in the day, increasing the risk of obesity.
Metabolic slowdown: Missing breakfast may disrupt metabolism and insulin sensitivity.
Higher risk of chronic diseases: Epidemiological studies associate breakfast skipping with obesity, type 2 diabetes, and cardiovascular diseases.
Poor academic and work performance: Particularly in young adults and students, breakfast omission correlates with decreased alertness and productivity.

From a pharmacist's point of view, skipping breakfast can alter how certain medications work. For instance, some drugs like non-steroidal anti-inflammatory agents (NSAIDs) or metformin are better tolerated with food, as it minimizes gastric irritation or hypoglycaemia risk. Ignoring breakfast while taking morning medicines can thus lead to unwanted side effects.

Healthy habits start with small, consistent efforts. Setting aside even ten minutes for breakfast can:

- Improve focus in class or at work
- Support healthy metabolism
- Prevent nutritional deficiencies common among young adults

Let's remember — as health professionals and students — that wellness begins not in the pharmacy, but on our plate.

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🌿 Takeaway Note

As we move forward, let's continue to celebrate our shared passion for learning, innovation and excellence in pharmacy education. Every milestone we achieve together strengthens our commitment to shaping compassionate professionals who make a difference in the lives of others.

Let's keep inspiring, discovering and growing — because at the **School of Pharmacy,** every step we take is a step toward a healthier, brighter future. 🌟