

# PRESCRIPTION

Latest news and updates from the Faculty of Pharmacy



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## NATURE'S MEDICINE TO REDUCE INFLAMMATION AND PREVENT DISEASE

Inflammation is the body's natural response to protect itself from harmful stimuli, such as infections, injuries, or toxins. However, when inflammation becomes chronic, it can lead to various diseases, such as diabetes, cancer, arthritis, and Alzheimer's disease (Figure 1). Chronic inflammation is also associated with ageing, obesity, and stress.

Many conventional drugs, such as steroids and NSAIDs, are used to treat inflammation, but they often have serious side effects, such as ulcers, bleeding, liver damage, and cardiovascular problems [1]. Moreover, some of these drugs may lose effectiveness over time or worsen the condition by suppressing the immune system [2].

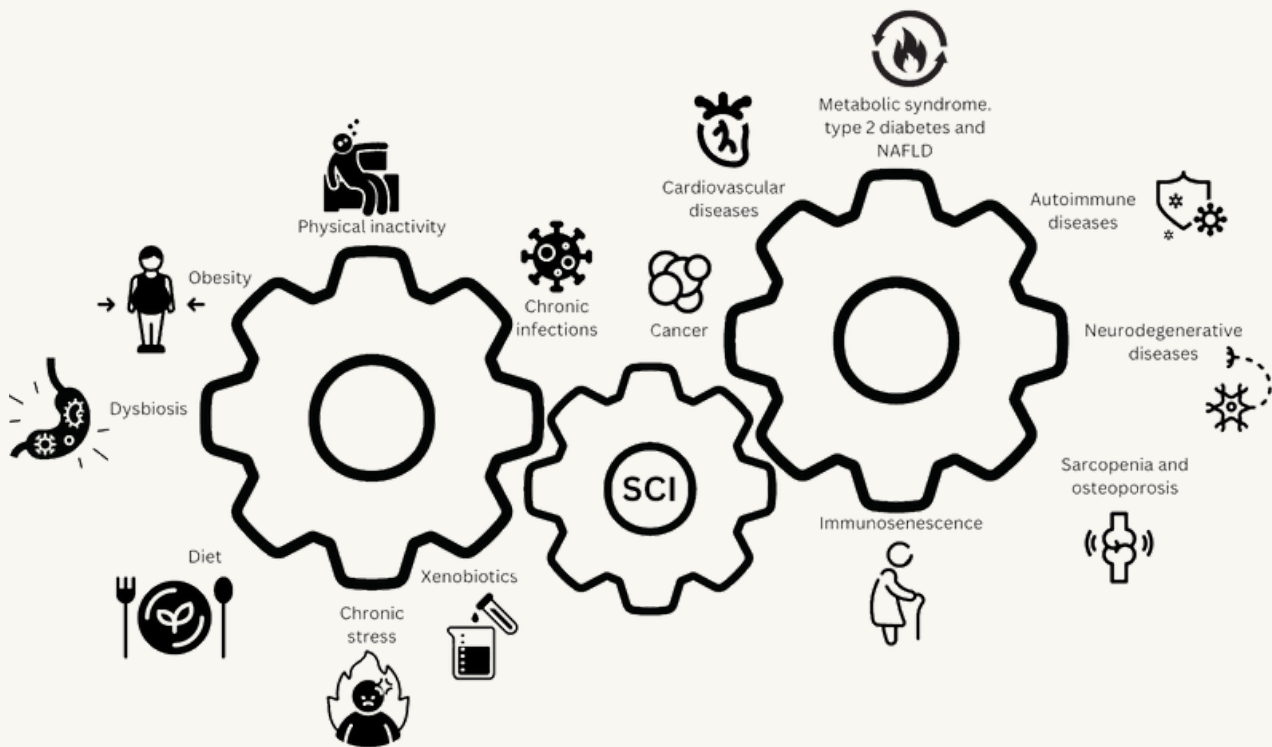


Figure 1: Many causes and effects of low-grade systemic chronic inflammation (SCI) have been found, which include chronic infections, physical inactivity, (visceral) obesity, intestinal dysbiosis, diet, psychological stress, and xenobiotics like air pollutants, hazardous waste products, industrial chemicals, and tobacco smoking are the most common SCI triggers. SCI causes metabolic syndrome, type 2 diabetes, non-alcoholic fatty liver disease (NAFLD), cardiovascular disease, cancer, autoimmune illnesses, neurodegenerative diseases, sarcopenia, osteoporosis, and immunosenescence.

Fortunately, nature offers a rich source of compounds and extracts that have anti-inflammatory properties without the adverse effects of synthetic drugs [3,4]. These natural products can modulate inflammatory pathways, reduce oxidative stress, and enhance the body's healing mechanisms [3]. They can also provide other benefits, such as antioxidant, anticancer, antidiabetic, and neuroprotective effects [4].

Some of the most promising natural products for inflammation are turmeric, ginger, garlic, grapes, pineapple, green tea and others [5-7]. Examples of the bioactive compounds include:

- Curcumin, the main component of turmeric, is commonly used in Asian food and traditional medicine. It reduces pro-inflammatory cytokines such as TNF- $\alpha$ , IL-6, and IL-1 $\beta$  and suppresses NF- $\kappa$ B activation. Curcumin improves mood, metabolism, and cognitive function with antioxidant, anticancer, and neuroprotective properties.
- Gingerol and shogaol are phenolic compounds found in ginger that have anti-inflammatory and analgesic effects. They can inhibit the enzymes that produce inflammatory mediators and modulate the immune system.
- Allicin is a sulfur compound found in garlic with anti-inflammatory and antioxidant properties. It can block the activation of inflammatory pathways and reduce the production of pro-inflammatory substances.

- Resveratrol is a polyphenol in grapes, red wine, berries, and peanuts. It modulates COX-2, iNOS, and Nrf2 inflammatory genes. Resveratrol promotes metabolism and ageing protein SIRT1. Resveratrol prevents cardiovascular disease, diabetes, cancer, and neurodegeneration.
- Bromelain is an enzyme in pineapple that can modulate the immune system and decrease inflammation in conditions such as arthritis, sinusitis, and colitis.
- Catechin is a natural substance found in green tea extracts and plants like cocoa and berries with antioxidant and anti-inflammatory effects. It has a ring-shaped structure with two mirror forms. It can help protect the cells from damage and prevent diseases.
- Omega-3 fatty acids are essential fats in fish, flaxseeds, walnuts, and algae. Omega-3 fatty acids decrease inflammation by lowering prostaglandins and leukotrienes and raising resolvins and protectins. They can prevent heart disease, diabetes, depression, and cognitive loss.

However, natural and synthetic inflammatory treatments have advantages and disadvantages [8]. Synthetic drugs have a stronger, faster anti-inflammatory effect than natural products, which may have various targets and mechanisms [8]. Nevertheless, natural products are a major source of oral drugs 'beyond Lipinski's rule of five' (bRo5), where higher doses and formulations may improve oral bioavailability [9]. Some studies have indicated that curcumin and resveratrol are as effective as synthetic drugs [10].

Natural products from plants or other sources are presumed to be safer than synthetic medicines. However, depending on the dose, formulation, and individual characteristics, natural products can have adverse effects, interactions, or toxicity [11]. Ginger can cause bleeding, heartburn, or allergic reactions in some people [12]. Synthetic medicines are tested and regulated before approval, and their safety profiles are well-established. Yet, as mentioned earlier, synthetic drugs like steroids and NSAIDs can produce major side effects such as gastrointestinal ulcers, liver damage, and cardiovascular difficulties, especially with long-term use or high doses [1].

The biggest benefit of natural products—food, supplements, and herbal remedies—is their accessibility and affordability compared to manufactured pharmaceuticals [13]. Natural product quality and purity vary by source, extraction, and processing [4]. Pesticides, heavy metals, and other contaminants may contaminate these products [13]. However, synthetic drugs are more standardised and controlled in dosage and composition but may be too expensive or limited in developing countries and remote areas [8].

In a nutshell, natural products and synthetic drugs have different pros and cons when treating inflammation. The best option for each person may depend on their needs, preferences, and medical conditions.

## Questions

Let's dive deeper into the article and evaluate your comprehension. We have 5 questions for you [here](#).

## About the Author

Dr. Mizaton Hazizul Hasan, an Associate Professor of Pharmacology at Universiti Teknologi MARA, Malaysia, joined UiTM in 2007 after completing her PhD. She was a National Science Fellowship awardee. Her over forty pharmacology and toxicology articles demonstrate her dedication to scientific progress. As the main supervisor, Dr. Mizaton has graduated six PhD candidates and many Master's students, developing the next generation of scientific professionals. Her primary research area is comprehensive pharmacological and safety assessments of natural and synthesised substances.

Her study involves developing natural compounds to treat inflammation-related disorders like cancer, diabetes, and hypercholesterolemia. Dr. Mizaton's research also predicts synergistic drug combinations using computational methods, which could lead to new treatments. Her research has earned Dr. Mizaton national funding of RM 1 million, demonstrating her academic excellence.



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# INSIGHTS INTO THE ROLE OF ENDOLYSOSOMAL CALCIUM SIGNALLING IN EPITHELIAL-TO-MESENCHYMAL TRANSITION, AUTOPHAGY AND CHEMOSENSITIVITY OF COLORECTAL CANCER

Colorectal cancer (CRC) is a prevalent and deadly disease. In 2020, nearly 2 million cases were diagnosed globally, resulting in approximately 1 million fatalities annually [1]. The burden of CRC is projected to escalate to 3.2 million new cases and 1.6 million deaths by 2040. In Malaysia, CRC ranks as the second most common cancer and the third leading cause of cancer-related deaths [2]. The CRC treatment plan hinges on the tumour location and disease stage. Surgery is the primary approach, and radiotherapy or chemotherapy may be recommended to enhance prognosis. However, in metastatic CRC, chemotherapy often leads to drug resistance and disease progression. Two critical factors that contribute to this resistance are autophagy and epithelial-to-mesenchymal transition (EMT) [3].

Autophagy, a normal physiological process, maintains cellular vitality and homeostasis. Surprisingly, studies have revealed its significance in cancer, particularly its association with drug resistance. Metastatic cancer cells activate autophagy in response to cytotoxic drugs, thereby evading cell death. Interestingly, inhibiting autophagy can sensitise cancer cells to cell death stimuli and anticancer agents [4].

EMT is a critical process during embryogenesis that is later physiologically suppressed. However, it can be reactivated in adulthood in a variety of conditions, including wound healing, fibrosis, and cancer. In the early 1990s, a hypothesis emerged linking EMT to chemoresistance. Since then, numerous malignancies have been found to overexpress EMT markers following therapy with diverse chemotherapeutic drugs. For instance, cyclophosphamide resistance in transgenic mice with breast cancer was linked to EMT markers *Zeb1* and *Zeb2* expression, diminished proliferation, and apoptotic tolerance. Additionally, patients with the mesenchymal subtype of CRC (CMS4) displayed chemoresistance profiles in response to Hsp90 inhibitors in preclinical models [5] and unresponsiveness to adjuvant 5-fluorouracil therapy in a clinical cohort [6].

Endolysosomal (EL) calcium homeostasis is critical in maintaining endosomes and lysosomes physiological functions such as protein and lipid trafficking, protein degradation and autophagy. Perturbations of the homeostasis may lead to diseases such as cancer [7]. Two key calcium-permeable channels, mucolipin-1 (TRPML1) and two-pore channels (TPC), are responsible for preserving this homeostasis. Loss of TRPML1 has been shown to cause autophagy defect. Impaired lysosomal pH, accumulation of autophagosomes and abnormal mitochondria were among signs of autophagy defects observed with TRPML1 failure [8]. Interestingly, pharmacological stimulation of TRPML1 promotes autophagosome maturation [9]. TPC has also been shown to regulate autophagy as demonstrated by Sun et al [10]. Pereira and colleagues also demonstrated that calcium released via TPC induced autophagy in rat astrocytes [11]. Another group has proposed the involvement of TPC2 in leucine-rich repeat kinase-2 (LRRK2) induced autophagy [12].

Despite these findings, the functional significance of TRPML1- and TPC-mediated calcium release in autophagy and EMT in CRC remains largely unexplored. Furthermore, their potential to sensitise cancer cells to anticancer agents remains unknown, despite their proposed roles in autophagy and EL trafficking [7]. Given that inhibiting autophagy has been shown to sensitize cancer cells to chemotherapy [13], it would be intriguing to explore if TRPML1 and TPC inhibition would produce similar outcomes. In addition, the presence of functional EL calcium signalling in metastatic CRC cells and the involvement of TPC1 in modulating foetal calf serum-induced calcium signals, proliferation, and extracellular signal-regulated kinase and Akt phosphorylation suggest a potential role of EL calcium in the progression and metastasis of CRC [14]. Thus, this study is proposed to investigate the role of TRPML1 and TPC in CRC. Their potential in sensitising cancer cells to anticancer agents will also be evaluated.

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## **A SHARING SESSION BY A VISITING RESEARCH FELLOW OF THE OXFORD CENTRE FOR CLINICAL MAGNETIC RESONANCE RESEARCH (OCMR)**

Dr. Shubashini Gnanasan, a senior lecturer from the Faculty of Pharmacy, UiTM presented her research experience of being part of a clinical trial team at the University of Oxford. She has been conducting ethnography to understand the facilitators and the challenges of running a clinical trial under the supervision of Professor Masliza Mahmud from University of Oxford. She provides individualised pharmaceutical care to participants in the 'Follow-up, Open-Label, Research Evaluation of Sustained Treatment with Aficamten in Hypertrophic Cardiomyopathy (FOREST-HCM)'.

**The title of her presentation was “FOREST: A reflection from an ethnographic and clinical perspective.”**

Her presentation covered the practice and clinical aspects of the open-label extension trial. She described the research culture of the clinical trial team as a Fabulously Organised Research culture with Exemplary work ethics, Shared responsibility and Teamwork (FOREST).

She presented some case studies on hypertrophic cardiomyopathy, which is a genetic condition that causes the heart muscle wall to become abnormally thick. This condition can cause sudden cardiac death, especially in young adults.

She explained that aficamten, a small molecule cardiac myosin inhibitor was found to be effective in reducing left ventricular outflow tract obstruction but long-term safety data are needed.

Her talk enriched the knowledge on aficamten which is next-in-class targeting the underlying pathophysiology of the disease. The sharing session was attended by 37 lecturers and 2 students from the Faculty of Pharmacy, UiTM.

**Dr. Shubashini Gnanasan**  
Faculty of Pharmacy, UiTM

# EXPLORING THE RICHNESS OF KNOWLEDGE AND CULTURE:

## A Journey through a Research Conference in Kyoto, Japan

The experience of attending International Conference of Bioscience, Biochemistry and Bioinformatics 2024 (ICBBB 2024) that took place in Kyoto University, from Jan 12 -15, 2024 offers numerous opportunities to enhance our professional knowledge, expand our professional network, and immerse ourselves in a new cultural experience.

### The Setting: Kyoto's Timeless Charm

Kyoto is a unique city characterized by its well-preserved ancient architecture and serene gardens, which have been maintained in their original state for many years. With its UNESCO World Heritage buildings, tranquil temples, and impeccably preserved gardens, the city provides a compelling setting for tourists. The city's combination of contemporary elements and traditional aspects provides conference participants with a distinctive chance to fully experience Japan's diverse cultural heritage while actively participating in intellectual discussions.

### The Conference: A Meeting of Minds

The study conference is a lively place where researchers from different fields - Bioinformatics, Bioscience, and Biochemistry, can share their latest discoveries, talk about ideas, and find ways to work together. Researchers from Japan, Thailand, Malaysia, China, Korea, Sweden, and other places attend the conference and bring a wide range of views to it. Each session opens the door to the vast world of academic study and encourages people to look for new ways to do things in their own fields. During the conference, we presented our research findings entitled “Discovering dengue antiviral lead compounds from existing medications using in silico target prediction and subsequent in vitro confirmation” and “Molecular interactions of kratom alkaloids: Mitragynine, 7-hydroxymitragynine and mitragynine pseudoindoxyl with DPPC lipid bilayers”. We were pleasantly surprised to receive the award for best oral presentation in our session, a recognition that fills us with immense pride and gratitude.



## Cultural Excursions and Culinary Delights: Discovering Kyoto's Treasures

A trip to Kyoto is not complete without experiencing its rich culture. Between conference sessions, attendees can explore the city's historic streets, admire ancient buildings, and enjoy the natural beauty of Arashiyama. Most attractions are within walking distance, but you can also take the bus or train to get to places farther away.

Kyoto's food scene is a must-try for all visitors, with Halal options available to cater to Muslim travelers. From savory Wagyu Beef to flavorful Ramen and delicate Sushi, these culinary delights are easily accessible within walking distance from Kyoto's city center. They offer a delicious taste of Japanese culture while accommodating various dietary preferences.

In conclusion, a journey to Kyoto for a research conference is more than just a professional commitment; it is a profoundly intellectual, and enlightening experience that integrates scholarly investigation with cultural immersion. We extend our heartfelt gratitude to UiTM for funding our trip to this conference event.



**Mdm. Zafirah Liyana Abdullah, Dr. Siti Azma Jusoh**  
Faculty of Pharmacy, UiTM

# HEALTH AWARENESS CAMPAIGN @ ERISTANA



## “Karnival Perpaduan Eristana”

The Faculty of Pharmacy, UiTM took part in the Karnival Perpaduan Eristana event on February 24th, 2024, which was hosted in Rumah Bandar Eristana. The local council organised a full-day event that included a health awareness exhibition by the Faculty of Pharmacy, UiTM, health screening by Klinik Kesihatan Ijok, a fire drill briefing and demonstration, an exhibition by Askar Wataniah, colouring contests, children's activities, and promotional booths from various government agencies, industries, and food trucks. Approximately 300 members of the public and residents showed up throughout the event.



Health Awareness Campaign@ ERISTANA promotion at Stesen Radio UiTM by Dr. Norkasih Ibrahim and Dr. Mohd Shahezwan Abd Wahab



During this event, the Faculty of Pharmacy conducted a health awareness campaign with various approaches to engage with the public of all age groups which included displays of posters, exhibitions of materials, medication counseling, and interactive educational board games. Students from the Master of Pharmacy Practice and Bachelor of Pharmacy programs collaborated to advocate for public health issues. These issues encompassed topics such as the safe and effective use of medications in general and especially during the month of Ramadhan, the use of medication in sports, the issue of antibiotic resistance, the prevention of fall medications on the elderly, and the risks associated with chronic kidney disease. The medication counseling was overseen by the lecturers from the Department of Clinical Pharmacy. The faculty wishes to extend its appreciation to the volunteers from the public and industry partners for their generous in-kind donations. These include contributions from Kuin Forest Enterprise, Jabatan Kesihatan Negeri Melaka (Farmasi), Pureglo Trading, and Hospital USM Kubang Kerian.

**Dr. Norkasih Ibrahim**  
Faculty of Pharmacy, UiTM

# NEW WORLD, NEW PERSPECTIVE: A Learner in Community Pharmacy

*mm*

This Year In  
Final year

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March 19, 2024, marked my first venture into a new page of my life story. I recalled being apprehensive about people's expectations of me, given that I am a fourth-year student who should already know most of what I am supposed to know for community pharmacy settings. I was overthinking many possible scenarios that I may face later on while reading notes back-to-back for every mile I drove to my destination. But I am starting to look forward to it because they just warmly welcomed me every morning and eagerly taught me whatever I asked them for or what I did not know. Labelling, serving the patient, housekeeping, learning, restocking, testing blood pressure, and so much more became my routine at the pharmacy.

Truthfully told, my expectations were different before starting my attachment. I thought it would be like a real-life exam—I mean, you get the case and solve it by suggesting the appropriate treatment. It is similar, but it was not always a straightforward case, and the experiences that you hold make it different in terms of how you are handling it. So, for beginners like me, just be like a shadow (because some patients do not feel comfortable if they notice you are eavesdropping on their conversation with the pharmacist) and listen to every case that your pharmacist handles from afar. The staff was also fully equipped with the necessary knowledge and skills when handling patients' ailments or requests, so you will have plenty of chances to hear around and learn.

It was a fun and humbling experience. Be passionate about learning, ask away all those question marks in your mind, and be humble too. New topics are always there for you to explore, so do not shy away from questioning and learning. It is the nature of a learner. The application of knowledge can be different from the theory. A piece of advice from my preceptor: If you are considering becoming a community pharmacist in the future, you must have a passion for serving and treating patients, not just working for money, and leave everything when the time is up. It does not end there.

**Ms. Nur Syazana Izati Nizan**

Final Year Student (RX 19), Faculty of Pharmacy, UiTM

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# ALUMNI SERIES

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## The Significance of Community Pharmacies' Services Beyond Dispensing Separation (DS)

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The debate on dispensing separation (DS) for community pharmacists in Malaysia has been ongoing for decades, giving rise to numerous arguments [1, 2]. Despite the benefits of DS, which include optimizing patient safety, reducing medication errors, and lowering medication costs [3], the implementation of this policy in our country remains unachievable, despite strong public support and evidence [4].

In view of the evolving role of community pharmacists, who have transitioned from medication dispensing to providing patient care services, community-based pharmacist practitioners are now capable of developing innovative community pharmacy practices and offer patient care services as a step towards overcoming DS. Hence, Malaysian community pharmacists should explore alternative initiatives that hold more promise in enhancing healthcare quality and improving public health. The following are examples of services community pharmacists can provide at their pharmacies:

### COMMUNITY PHARMACIST-LED MEDICATION REVIEW

Community pharmacists are among the most accessible and trusted healthcare professionals due to their proximity to the community, which enables easy access to public health services. Owing to their accessibility, community pharmacies are appropriate locations for community pharmacists-led medication review, allowing for pharmaceutical care interventions, tackling poor medication management, addressing drug-related problems (DRPs), monitoring and optimizing use of medication, and managing poor compliance with drug therapy and inappropriate drug selection [5].

Community pharmacies are well-positioned to deliver medication review services, particularly in high-risk groups of patients who are taking high-risk medications such as warfarin, and those with asthma or chronic obstruction pulmonary disease (COPD) and post-discharged patients. Medication reviews performed by community pharmacists can encompass prescription reviews, compliance assessments, concordance reviews, and clinical medication reviews [6].

## **POST-DISCHARGE COMMUNITY PHARMACY-BASED MEDICATION RECONCILIATION AND ADHERENCE REVIEW**

After the hospital stay, patients are discharged home with new medications or changes to their pre-admission medication regimen. Some may transition to primary care or outpatient settings for ongoing treatment. This transition of care is a critical juncture where patients are vulnerable to medication-related issues, including medication discrepancies, non-adherence, and adverse drug events, which can lead to rehospitalization or even death [7].

In Canada, these issues have been addressed by community pharmacists through a medication reconciliation and adherence review program known as MedsCheck [8]. MedsCheck has reported a reduction in the risk of death and rehospitalization among older adults after discharge [9].

## **SPECIALIZED CARE SERVICES BY COMMUNITY PHARMACISTS**

Community pharmacies have the potential to offer specialized health services beyond traditional dispensing and counseling activities. These services include home health care, sports medicine, diabetic and hypertensive care, among others, and have been discussed for many years [10]. Community pharmacies are easily accessible without the need for appointments or referrals, making them ideal for extended patient-centered care services, which are in high demand today [11].

In addition to medication counseling and reconciliation, community pharmacies should prioritize specialized care services such as anticoagulation monitoring, diabetic and hypertensive care, asthma care, women's health initiatives, and minor ailment care when delivering patient-centered services to the community. Furthermore, community pharmacists can contribute to chronic disease management, including asthma, arthritis, cardiovascular diseases, diabetes, depression, hypertension, osteoporosis, and palliative care [12]. Evidence shows the effectiveness of pharmacist interventions in improving asthma control, reducing coronary heart disease (CHD) risk factors, lowering HbA1c levels, decreasing systolic blood pressure, enhancing antidepressant therapy adherence, and improving osteoporosis screening among elderly women [13-18].

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# A.D.A.B. IN EDUCATION

It has always been the goal of the National Education Philosophy to mould a balanced individual - physically, emotionally, spiritually, and intellectually. This can be clearly seen through the Malaysian Education Plan 2015–2025 (Tertiary Education), which aims at enhancing a holistic education that goes beyond religion, ethnicity, and individual capability. In the ever-evolving global landscapes that we have immersed ourselves in, holistic human capitals are deemed necessary, with their connectedness to God, fellow human beings, and other creatures being an indispensable element in it.

This being said, CG A.D.A.B. is thus introduced as a way to guide the whole academe, academics particularly, towards a comprehensive design of delivery and learning which is based on adab and amanah.

In Education 5.0, adab means knowing one's proper place (in relation to others): the Creator (spiritual), human (social), and environment (non-living and living things). When this essence is grounded in education, individuals will be able to achieve a sense of respect, love, and appreciation for knowledge and its scholars, leading them thus towards proper and right action in the future. Adab in education can be seen as a catalyst, promoting civility, understanding, and mutual respect among fellow human beings and towards their surroundings. While amanah is upholding trust in God the Creator and playing a role as a vicegerent responsible for other people and the environment, this concept echoes the very essence of adab itself.

Source: <https://cidl.uitm.edu.my/CG-ADAB.php>

# A.D.A.B

“(Analyse, Design, Assess, Built-in Belief) is a model of learning delivery founded on the instillation of adab and trust in moulding a good human and citizen”

(CG A.D.A.B)



## THE A.D.A.B MODEL IN DESIGNING DELIVERY AND LEARNING EXPERIENCE

A

*Analyse*

- Align content to outcomes
- Anticipate learner needs
- Analyse learning context and learning environment
- Analyse current advances in the field
- Analyse community issues and challenges

D

*Design*

- Design connectedness to knowledge, people, environment and the Creator
- Design awareness of the world and workplace
- Deliver in context – contextual learning, real world
- Deliver within a respectful learning environment

A

*Assess*

- Assess learning continuously, ipsatively, synoptically with the purpose of improving learning
- Evaluate engagement, involvement and interaction with knowledge, people, and environment including respectfulness
- Assess essential transversal skills

B

*Built-in Belief*

- Embed reflection
- Espouse values
- Engender strong conviction
- Enhance faith



Provided By: CG A.D.A.B, CIDL, Office of Deputy Vice Chancellor (Academic and International), Universiti Teknologi MARA

**CIDL**  
Centre for Innovative Delivery & Learning Development

## Elements in the A.D.A.B Model

There are seven elements involved in the A.D.A.B Model which can be applied by the academics in their delivery and learning, with Element 1 being of utmost importance at the beginning of any delivery. The following elements are not necessarily sequential, with Elements 5, 6 and 7 are seen as unique in delivery processes.

### 7 ELEMENTS

1

#### Situate

Emphasize conduct, courtesy and respectful learning plus where students are in terms of their learning

2

#### Digest

Give students access to content – read, watch, observe and summarize

3

#### Synthesize

Get students to put info/facts together, relate and make conclusions

4

#### Create

Get students to create content, illustrate ideas or deliver facts/info etc

7

#### Value and Extend

Assist students to value and extend what they have learned to affect others (people, environment)

6

#### Reflect

Get students to reflect on content, experience, new discoveries etc

5

#### Connect

Give students the platform to connect with other people, with new knowledge, with the environment, community and with the Creator

*Seven Elements in the A.D.A.B Model*

All in all, the UiTM A.D.A.B Model is a model for designing academic delivery. It supports the embedment of value in delivery and learning to create balanced and holistic students, capable of being in sync with the Creator, fellow humans and other living and non-living things in their surroundings.



Provided By: CG A.D.A.B, CIDL, Office of Deputy Vice Chancellor  
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## CORRESPONDING AUTHORS OF THE MONTH

### WoS Q1/Q2 article

#### **PROF. DR. WONG TIN WUI**

Overcoming colloidal nanoparticle aggregation in biological milieu for cancertherapeutic delivery: Perspectives of materials and particle design.

Advances in Colloid and Interface Science Journal

<http://doi.org/10.1016/j.cis.2024.103094>



#### **DR. MATHUMALAR LOGANATHAN**

Impact of pharmacist interventions on immunisation uptake: a systematic review and meta-analysis.

Journal of Pharmaceutical Policy and Practice

<http://doi.org/10.1080/20523211.2023.2285955>

### WoS Q3/Q4 article

#### **ASSOC. PROF. DR. SYED ADNAN ALI SHAH**

Investigating Novel Thiophene Carbaldehyde Based Thiazole Derivatives as Potential Hits for Diabetic Management: Synthesis, In Vitro and In Silico Approach

ChemistrySelect Journal

<https://doi.org/10.1002/slct.202304601>



#### **DR. NORKASIHAN IBRAHIM**

Willingness and understanding of the safety and effectiveness of COVID-19 vaccines in young children: a cross-sectional study among parents in Malaysia

Journal of Pharmacy Practice and Research

<https://doi.org/10.1002/jppr.1901>

# CONGRATULATIONS

## Scopus-indexed Article

### **ASSOC. PROF. DR. SYED ADNAN ALI SHAH**

Synthesis of Indole Based  
Sulfonamide Derivatives as potent  
inhibitors of  $\alpha$ -glucosidase and  $\alpha$ -  
amylase in management of type-II  
diabetes

Chemical Data Collections  
<https://doi.org/10.1016/j.cdc.2024.101122>



### **ASSOC. PROF. DR. RICHARD MUHAMMAD JOHARI JAMES**

Predictor of academic performance:  
personality traits and catechol-O-  
methyltransferase polymorphisms  
International Journal of Evaluation  
and Research in Education.

<http://doi.org/10.11591/ijere.v13i2.25638>



### **ASSOC. PROF. DR. KHURIAH ABDUL HAMID**

Bioanalytical of UPLC Method  
Development and Validation of  
Xanthorizol and its Application to  
Pharmacokinetic Study  
International Journal of Applied  
Pharmaceutics

<https://doi.org/10.22159/ijap.2024v16i1.49340>



### **DR. MOHD SHIHABUDDIN AHMAD NOORDEN**

Identification of MicroRNAs Binding  
Site in the 3'Untranslated Region of  
Long Non-Coding RNA, MIR497HG:  
A Bioinformatic Prediction  
Malaysian Journal of Medicine  
and Health Sciences

<http://doi.org/10.47836/mjmhs.20.1.21>



# UPCOMING EVENTS

HYBRID!!



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## DISSECTING THE 2023 MALAYSIAN CPG OF HEART FAILURE

CALLING ALL HEALTHCARE  
PROFESSIONALS!!!



17 APRIL 2024, WEDNESDAY  
10AM-12 PM



DK 4, FACULTY OF PHARMACY  
UITM PUNCAK ALAM (UITM-STUDENTS)  
ONLINE (EXTERNAL)



**DR HANIS HANUM ZULKIFLY**

SENIOR LECTURER  
FACULTY OF PHARMACY, UITM PUNCAK ALAM  
10-11 AM  
EPIDEMIOLOGY & INSIGHTS INTO HEART FAILURE



**DR RAJA EZMAN RAJA SHARIFF**

CONSULTANT CARDIOLOGIST  
FACULTY OF MEDICINE, UITM SUNGAI BULOH CAMPUS  
11-12 PM  
HEALING HEARTS: TACTICAL INSIGHTS INTO THE MANAGEMENT  
OF ACUTE AND CHRONIC HEART FAILURE

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In the spirit of Ramadhan, let us take a break from our plastic habit and fast-track towards a cleaner and greener world



**Mdm. Nur Sabiha Md Hussin**  
Faculty of Pharmacy, UiTM

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