

pulse@UM

A RESEARCH BULLETIN BY THE FACULTY OF MEDICINE, UNIVERSITI MALAYA



ABSENTLY PRESENT

“...Much satisfaction behind the dopamine of each notification,
Wanting more to stay without tension – is this social media addiction?...”

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- Breaking the Cycle: A New Hope for Knee Osteoarthritis
- A Multi-pronged Approach in Combating Knowlesi Malaria
- Work-Related Musculoskeletal Disorders Among Oil Palm Harvesters

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Foreword from The Deputy Dean of Research

Welcome to the third issue of Pulse Magazine for 2024!

I am pleased to welcome you to this edition of the Faculty of Medicine Research Bulletin. With the theme “Celebrating Health Awareness,” this issue is a tribute to the relentless pursuit of solutions to critical health challenges by researchers in the Faculty of Medicine. At its heart are the cover stories, each aligned with a health issue affecting millions.

These stories provide a deep dive into pressing health issues that transcend borders. From the growing concerns around digital addiction among youth on International Youth Day to exploring the nutritional and therapeutic potential of *Alternanthera sessilis* Red for Nutrition Month Malaysia, our researchers bring innovative perspectives to the forefront. On World Arthritis Day, we address osteoarthritis, a condition that significantly impacts the quality of life for millions, emphasizing the need for targeted interventions. Similarly, World Malaria Day reminds us of the ongoing fight against malaria, where our faculty has made groundbreaking strides in diagnostics, vaccine research, and vector control. Finally, in conjunction with World Physical Therapy Day, the bulletin highlights work-related musculoskeletal disorders among oil palm harvesters, shedding light on an often-overlooked occupational health issue.

The Special Highlights section complements these themes with updates on key events like the UM Health’s Academia Month & Research Carnival 2024 and insights from the Malaysian Medical Students’ Career Intention study. Together, they reflect the faculty’s dedication to fostering dialogue, addressing healthcare challenges, and shaping the future of medicine.

The Achievements and Awards section showcases our faculty’s achievements, which speak to their relentless drive for excellence. The Special Event section captures our efforts to groom the next generation of principal investigators. Lastly, the curated Read Tips feature offers an intellectual treasure trove, spotlighting books that bridge academic insights and practical applications.

This issue is a testament to the collective efforts of our academic community in addressing global and local health challenges. I invite you to delve into these pages, find inspiration, and join us in championing better health for all.

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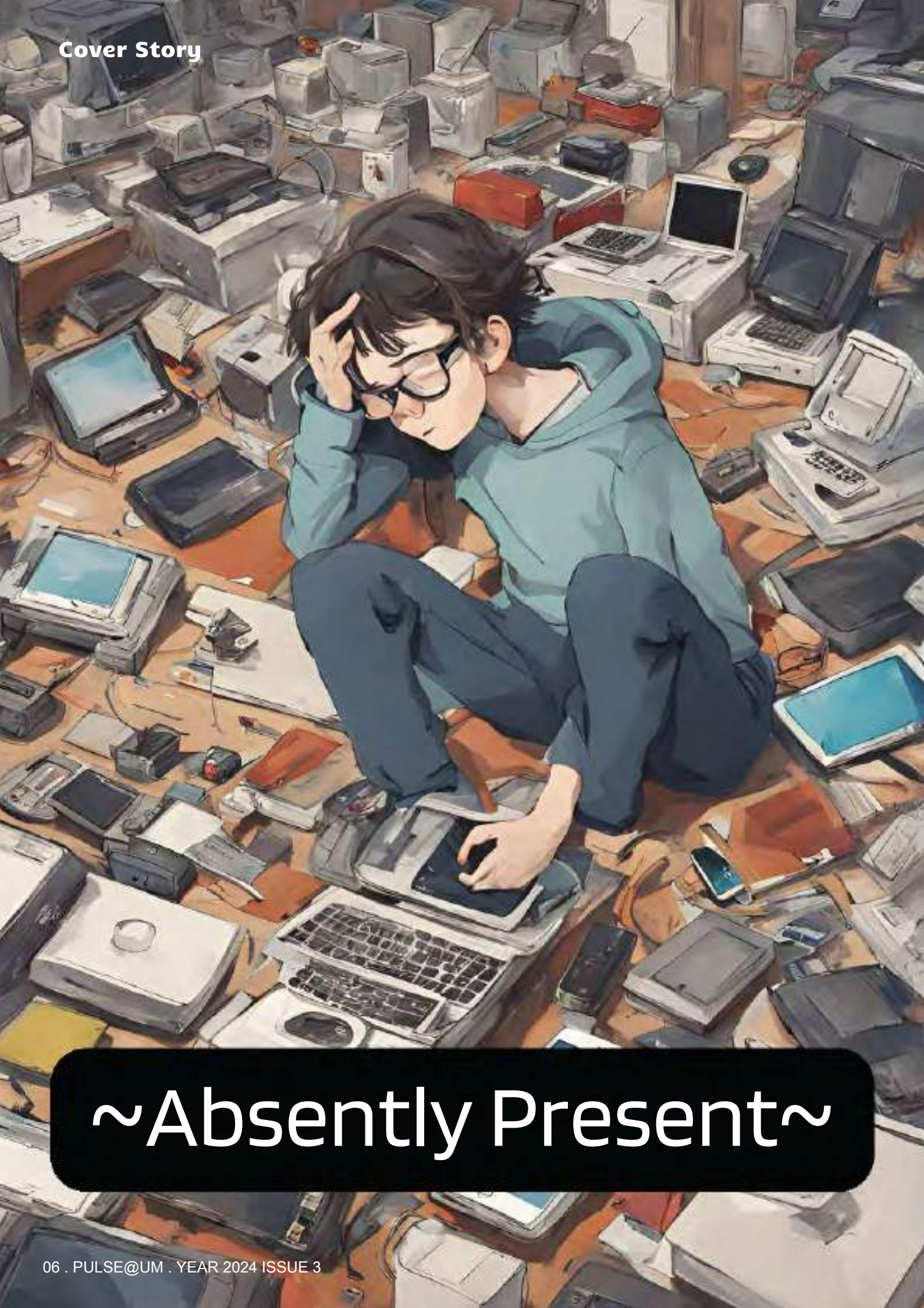
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An illustration of a young person with dark hair and glasses, wearing a teal hoodie and dark pants, sitting amidst a chaotic sea of electronic devices. They are holding their head in one hand, looking stressed. The floor is covered with various pieces of technology, including multiple laptops, desktop monitors, printers, and other peripherals, all in various states of use and disrepair. The scene is depicted in a detailed, painterly style with warm, slightly muted colors.

Cover Story

~Absently Present~

The virtual stations,
With words of admiration,
And piles of pictures with captions,
Being the luckiest youth of all generations,
Grabbing some likes and gaining undivided attention,
Delving into the digital society, building a constant connection,
Wondering – why is there so much commotion over this spark of sensation?

World without intrusion,
Gently slipping into isolation,
Distancing from human interaction,
Disconnected from reality and relation,
Dependent on a dose of media for daily function,
Much satisfaction behind the dopamine of each notification,
Wanting more to stay without tension – is this social media addiction?

Reaping the repercussion,
Dealing with negative self-perception,
Reduced attention span and sleep disruption,
As eye refuses to shut when the screen is in action,
Wrestling uninvited thoughts, fighting days of depression,
Not many would search for information or take up investigation,
Digital disorder, nomophobia – whatever could be the cause of this position?

Seeking a solution,
Researchers with compassion,
Investigating methods of persuasion,
Identifying factors with positive association,
Attempting to rebuild one's torn academic reputation,
Combating the challenge of resisting texting compulsion,
Gadget dependency impacts health-related quality of life in all dimensions!

It has garnered attention,
But not a diagnosis in classification,
Reported among half the adolescent population,
Problematic internet use needs tailored intervention,
And dissemination of creative public health communication,
Future studies to look for evidence-based strategies for prevention,
Adolescents absently present – a call for relentless run for recommendations!



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Beyond the Vibrant Hue: Unveiling the Nutritional Potential of *Alternanthera sessilis* Red

Often dismissed as a marsh weed, *Alternanthera sessilis* is a nutritional powerhouse from the Amaranthaceae family. This plant, far from ordinary, comes in two main varieties: green and red. The red variant, particularly prevalent in Malaysia and Singapore, boasts not only aesthetic appeal but also a surprising array of nutritional benefits.



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A Splash of Colour: A Hallmark Feature

Alternanthera sessilis Red (ASR), sometimes called red sessile joyweed, *Hong Tyan Wu* in Chinese, and Keremak Merah in Malay, stuns with its vibrant red-purple stems and elongated, pointed leaves that share the same fiery hue, complemented by white flowers (Figure 1). This enchanting colour comes from betalains, a class of water-soluble pigments known for their powerful antioxidant properties. Our research has primarily identified flavonoids among the polyphenols present in ASR [1,2,5]. Additionally, we have uncovered a betalain compound in ASR [5], highlighting its potential not only as nutritional powerhouse but also as a natural food colourant. This discovery makes it a plant worth further exploration.

Duality: From Ornamental to Edible

Originating from marshy environments, this plant transcends its aesthetic appeal by serving dual roles: as an ornamental beauty, a cultivated vegetable, and a medicinal herb. In Malaysia, it is used in a variety of culinary applications including teas, ulam or salads, stir-fries and soups. Most commonly, the plant is brewed into tea to support general well-being, particularly in managing hyperlipidaemia, cholesterol, and hypertension. Nutritionally, ASR contains macronutrients, carotenoids, and minerals [2,4], making it a beneficial addition to diets. Our studies indicate that the leaves possess a

higher antioxidant capacity than the stems, providing cytoprotective properties against oxidative damage.[2] This makes ASR a versatile plant that blends visual allure with practical health benefits, worthy of both decorative gardens and nutritious meals.

A Glimpse into Potential Health Benefits

Although traditional communities have used various parts of *Alternanthera sessilis* for food and medicinal purposes, scientific research on its red variant is still in its early stages, including our team's research. As mentioned earlier, ASR is rich in polyphenols, mainly flavonoids, as well as betalains. These compounds are known for their powerful antioxidant capacity and potential to protect against cellular damage which may offer preventive benefits against chronic diseases. Other research reveals that ASR possesses antioxidant and anti-inflammatory effects, potentially preventing endothelial activation, a pivotal early event in the onset of atherosclerosis.[3] Our latest research is particularly focused on investigating the lipid-lowering property of ASR. Findings indicate that ASR can reduce lipid build-up and affect the expression of genes associated with lipid metabolism in liver cells, which could be beneficial for treating fatty liver disease and related conditions.[6]

In a nutshell, *Alternanthera sessilis* Red is not just a visually captivating plant; it is emerging as a nutritional powerhouse. The preliminary findings offer an exciting glimpse into the future of this underutilised plant. Nevertheless, further research is imperative to fully ascertain its efficacy and safety for use in nutraceutical, pharmaceutical and medicinal applications. The next time you encounter the fiery ASR, remember that there is much more than meets the eye!



Figure 1. (A) *Alternanthera sessilis* Red in its habitat and (B) the whole plant

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BREAKING THE CYCLE: A NEW HOPE FOR KNEE OSTEOARTHRITIS



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Osteoarthritis (OA), the leading cause of knee pain globally, presents a significant challenge for Malaysia's healthcare system. According to the Global Burden of Disease 2010 study, an estimated 251 million people worldwide suffer from knee OA, and Malaysia is no exception. Studies suggest a prevalence rate of 10% to 20% among the elderly Malaysian population, with adults aged 40 and above, particularly those of Indian ethnicity, experiencing a higher burden.

The Community Oriented Program for the Control of Rheumatic Diseases (COPCORD) study in Malaysia revealed a concerning trend. Over 64% of joint complaints involved the knee, with more than half exhibiting clinical symptoms of OA. Furthermore, the prevalence of knee pain steadily increased with age, affecting 23% of individuals over 55 and a staggering 39% of those over 65. This translates to a substantial impact on daily life, with limitations in activities such as walking (22%), carrying objects (18.6%), and even dressing (12.8%) [1].

Current management of knee OA in Malaysia primarily relies on anti-inflammatory medications and, in severe cases, knee replacement surgery. However, researchers from the tissue engineering group at the National Orthopaedic Centre of Excellence for Research & Learning (NOCERAL) in collaboration with the musculoskeletal research group from the Department of Physiology and Arthritis Foundation Malaysia are pioneering a new approach. Their focus lies in delving deeper into the underlying mechanisms of OA progression, specifically the vicious cycle of inflammation that fuels the disease.

Researchers at NOCERAL believe that by breaking this inflammatory cycle [2], they can pave the way for improved symptom management and potentially even tissue regeneration. This innovative approach could significantly enhance the quality of life for patients by reducing knee pain and restoring their ability to perform daily activities with greater ease.

One avenue of exploration involves utilizing the circulatory system as a tool for monitoring joint health. By analysing specific proteins



Figure 1. Worn-out knee cartilage. *Image copyright belongs to the author*

including cytokines/chemokines or micro-level molecules like microRNA released by affected joint cells, researchers aim to develop a non-invasive diagnostic approach for early-stage OA detection.

Another key area of research lies in understanding the cellular and tissue-level processes within the joint itself. OA is not merely cartilage degeneration; it's a complex interplay of factors affecting the entire joint structure. By deciphering the intricate mechanisms at play, researchers hope to identify potential targets for intervention before the condition progresses significantly. While factors like age, obesity, and past injuries can initiate OA, the research team emphasises the crucial role of inflammation in driving the disease forward. Their goal is to develop strategies to disrupt this inflammatory cascade, potentially leading to improved outcomes for patients.

This research holds immense promise for the future of knee OA management in Malaysia. Early detection, coupled with novel therapeutic interventions aimed at breaking the inflammatory cycle and promoting tissue regeneration, could significantly improve the lives of millions living with this debilitating condition.

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A Multi-pronged Approach in Combating Knowlesi Malaria



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Malaria, a disease caused by *Plasmodium* spp. via an Anopheles mosquito bite, led to 249 million cases and 608,000 deaths worldwide in 2022. Malaysia has reported zero indigenous cases of human malaria for five consecutive years since 2018. However, *Plasmodium knowlesi*, which originates from monkeys, is now the leading cause of human malaria cases, with 2500 cases and nine deaths reported in 2022. Malaysia is now the predominant source of *knowlesi* malaria, contributing to 90.5% of global human *knowlesi* cases. The ways forward in tackling *knowlesi* malaria include rapid and accurate diagnosis, malaria vaccine development, and mosquito vector control. These are indeed the focus areas of our malaria research team over the past 15 years.

In collaboration with the Ministry of Health Malaysia, passive screening for malaria has been conducted in various high-incidence states in Peninsular Malaysia including Johor, Pahang, Kelantan, and Selangor. Blood samples were collected from the individuals working in proximity with forests and forest fringes such as hunters, natural resource collectors, and army personnel. Asymptomatic and low-density malaria infections have been diagnosed in these individuals, primarily involving *knowlesi* malaria. This is deemed to become a threat to malaria elimination initiatives, and guidance policies on the importance of low-density malaria infections are needed.

Besides this, the team has also delved in many studies on the potential malaria vaccine candidates/antigens, including PkMSP-1, PkMSP-3, PkSPATR, PkTRAMP, PkRON2, PkRAP-1, PkDBP α , β protein, γ protein, with scopes varying from phylogenetic analysis, immunogenicity studies using animal models to immunoprotectivity studies using in vitro culture, epitope mapping, parasite ligand and receptor binding studies, genome editing, modelling of *knowlesi* malaria transmission, and many more. Most of the proteins are found to have distinct haplotypes in different geographical areas (Peninsular Malaysia and Malaysia Borneo), and some of the animal-raised antibodies from these candidates are showing protective effects.

Loop Mediated Isothermal Amplification (LAMP) for all five human *Plasmodium* spp.

is indeed a notable innovation for malaria diagnosis produced by our team. This technique can be carried out at a constant temperature and results can be obtained within one hour. Hence, rapid diagnosis with simple facilities makes it suitable for use in remote areas. After combining LAMP with lateral flow assay (allowing results to be visualized with the naked eye), the team is currently working on developing a bedside rapid diagnostic kit. Apart from this, other molecular and serological methods including polymerase chain reaction (PCR), droplet digital PCR (ddPCR), recombinase polymerase amplification (RPA), Western Blot, and ELISA have also been deployed for development of malaria diagnostic testing.



Figure 1. The malaria research team lead by Prof. Dr. Fong Mun Yik and Prof. Dr. Lau Yee Ling



Figure 2. Blood sampling from communities in malaria-high incidence areas

Beyond humans/patients, efforts have also been spent on the natural reservoir host macaques and mosquito vectors. Blood samplings on monkey populations from 12 states throughout Peninsular Malaysia revealed that 29% of the macaque population harbours *P. knowlesi*, posing a risk of zoonotic transmission to humans. The team also successfully adapted new *knowlesi* lines in in vitro culture, where the adaptation from field isolates into the in vitro setting took approximately one year. With these new lines resembling isolates currently circulating in the field, more research such as drug susceptibility assays and screening of new antimalarial compounds, can be conducted. On the other hand, with the availability of an insectarium, the colony of mosquito vectors for *P. knowlesi*, *Anopheles cracens*, was successfully established in the department. This allows for a better understanding of not just of the life cycle of the parasites but also the transmission mechanisms and biology/immunological regulations in the vector host.

All these achievements are a result of our concerted effort to combat this infection. Over 30 postgraduate students have graduated from this programme, and the findings were published in various indexed journals. We hope that these contributions will assist in improving the quality of life for the general population. The studies on malaria are still ongoing, and the team looks forward to contributing further to the community and society in the future.



Work-Related Musculoskeletal Disorders Among Oil Palm Harvesters



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Malaysia is the second largest producer of palm oil globally, with approximately 5.9 million hectares of land dedicated to oil palm cultivation as of 2019 [1]. The industry is a crucial part of the country's agricultural sector, contributing significantly to its Gross Domestic Product and providing employment for nearly one million workers [2]. However, the physically demanding nature of the work has led to concerns about the health and safety of these workers, particularly regarding work-related musculoskeletal disorders (MSDs).

Harvesting oil palm involves activities such as cutting and collecting fresh fruit bunches (FFBs) and loose fruits. Studies have shown that palm oil harvesting workers in Malaysia face a range of work-related musculoskeletal disorders, including back pain, joint pain, and muscle fatigue. These problems are often attributed to the physically demanding nature of work, which involves activities such as prolonged bending or squatting, lifting heavy loads, and repetitive motions. Workers typically perform these tasks for long hours, often under harsh environmental conditions, which exacerbates the strain on their bodies [3]. The use of heavy machinery and equipment, as well as hot and humid working conditions, can also contribute to these musculoskeletal issues.

Additionally, inadequate ergonomic practices and limited access to mechanical aids often force workers to rely solely on physical strength. The lack of proper training on safe work techniques and insufficient rest periods further increases the risk of MSDs. Consequently, many workers experience back pain, shoulder injuries, and joint problems, which can lead to long-term health issues and decreased

productivity. A cross-sectional study conducted previously in Malaysia indicated that the 12-month prevalence of MSDs among oil palm harvesting workers was highly elevated, ranging from 86 to 99% [4].

Impact and Mitigation Strategies

MSDs have a profound impact on palm oil workers in Malaysia. These conditions not only affect the health and well-being of workers, but also the overall productivity and competitiveness of the palm oil industry. Chronic pain and injuries lead to absenteeism, reduced work capacity, and in severe cases, early retirement, which impacts both the workers' livelihoods and the productivity of the plantation [2].

It is crucial to implement effective strategies to mitigate the risks of work-related MSD. Improving working conditions and implementing ergonomic interventions through a participatory ergonomic approach can help reduce the risk of work-related musculoskeletal disorders and increase productivity. These strategies include introducing ergonomic tools and machinery, as mechanized harvesters to reduce physical strain on workers. Proper training in safe lifting techniques, encouraging regular rest breaks, and rotating tasks to avoid repetitive strain are also important measures.

Employers should prioritize the well-being of workers by adopting comprehensive occupational safety and health (OSH) programmes that focus on ergonomics and injury prevention. Collaboration between industry stakeholders, including government agencies, employers, and workers, is essential to address this issue and improve the working conditions in the palm oil sector ■

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UM HEALTH'S ACADEMIA MONTH & RESEARCH CARNIVAL 2024 (UM HAMRC)

Brave New Frontiers of Research, Bright Futures of Education



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UM Health's Academia Month & Research Carnival 2024 (UM HAMRC) was led by the Faculty of Dentistry for the first time. It was a three-day event between 8th to 10th of October 2024 themed "Brave New Frontiers of Research, Bright Futures of Education". The esteemed event was co-organised with all UM Health partners i.e. Faculty of Medicine, Faculty of Pharmacy, Universiti Malaya Medical Centre (UMMC) and UM Specialist Centre (UMSC). Together, the UM Health community celebrated and discussed excellence in research and education, recognising that medical speciality training in Malaysia has been successful for over 50 years. The event engaged not just UM Health alumni, academicians, researchers, and healthcare workers but also involved their external collaborators and industrial partners as speakers. It also featured fun, educational activities, training sessions, and health awareness initiatives, in the form of free health checks at the exhibition booths at Centrepoint, Level 4 of the Faculty of Medicine. Booths were set up by all faculties, UMSC and UMMC, including the Centre of Clinical Research.

There were over 250 officially registered delegates on top of the 70 staffs who were involved in keeping the three-day event engaging for all. In addition, the event was live streamed on the Faculty of Dentistry's YouTube Channel, reaching researchers, students, educators and industry partners around the world. These participants were not limited to UM researchers, students, alumni, industry collaborators, stakeholders and members of the public but also included prospective students, such as school children and teenagers.

The Faculty of Medicine was involved across the three days nonetheless had the privilege to lead the Scientific Programme on the 9th of October 2024 with the aid of Associate Professor Dr. Retnagowri Rajandram from the Department of Surgery and all the Faculty of Medicine Research Office staffs. Some of the interesting sessions that had strong involvement from the Faculty of Medicine members were the forum "Redefining Healthcare Education: Adapting to AI, Social Media, and an Informed Public" which featured Professor Dr. Vairavan Narayanan as one of the panellists. Another forum, "Frontiers in Robotic Surgery" was led by members of the Department of Surgery including our former Dean and Deputy Dean, Professor Dr. April Camilla Roslani and Professor Dr. Ong Teng Aik, respectively, in a lively, thought-provoking

session. The Primary Care Medicine team also conducted a forum on “Embedding Telemedicine in Healthcare Delivery” and the Department of Anatomy hosted both an activity booth at Centrepont and a webinar on the “Evolution of Anatomy Teaching & Learning”. Similarly, Professor Dr. David O’Regan from MERDU, one of our “sensei” as he likes to call himself, had a surgical station at Centrepont and delivered an exceptional talk on “Deconstructing Basic Surgical Skills” using martial arts concepts.

As one of the purposes of the homegrown event was to increase awareness of international funding and collaboration opportunities, some of the collaborators

opportunities, some of the collaborators working with the Faculty of Medicine also delivered talks such as “Brave New Frontiers in Skin Research: Minimally Invasive Sampling and Patient-Centred Care through Industry Partnerships, and Cutting-Edge Clinical Trials” and “From Bench to Bedside: Leveraging Minimally Invasive Sampling and In Silico Skin Models through Strategic Industry Partnerships in Academic Research”. Prof. Dr. Tarl Prow and Dr Miko Yamada from the University of York and Dr Andrew Kassianos from the University of Queensland hosted webinar on “Molecular and Cellular Drivers in Kidney Progression”. Additionally there was an industrial sponsored talk by RING Solutions Sdn. Bhd ■



Figure 1: Professor Dr. April Camilla Roslani and Professor Dr. Ong Teng Aik discussed the transformative impact of robotics on precision, efficiency, and patient outcomes in modern surgery.



Figure 2: A hub of excitement and engagement at Centrepont: The exhibition booths buzzed with interactive activities, free health checks, and educational showcases by UM Health faculties, UMMC, UMSC, and the Centre for Clinical Research, bringing research and healthcare closer to the community.

Staying or Straying: The Future of Malaysian Medical Graduates



Teng Zhi Sean
UM MBBS Class of 2024



Gerald Ser Tze Zhen
UM MBBS Class of 2024

Where Are Our Future Doctors Going?

Malaysia's healthcare system is at a critical juncture, marked by the rising frustration and resignations among doctors in the Ministry of Health (MOH). While some research has explored the career trajectories of medical officers, limited data exists on medical students' career intentions. These students represent the future of Malaysia's healthcare workforce, making it essential to understand their aspirations to inform effective policies.

The Malaysian Medical Students' Career Intention (MMSCI) study is a national, multicentre, student-led initiative and the largest and most comprehensive of its kind. It involves 859 Malaysian medical students from 21 Malaysian medical schools. This study examined medical students' post-graduation plans, motivations, and their potential implications for Malaysia's healthcare landscape.

TL;DR: Summary of Findings

While most medical students (91.2%) plan to join and complete the MOH's Housemanship programme immediately after graduation, a significant drop in MOH retention is evident after this period. Ultimately, only 57.5% of students envision a long-term career in the public sector. Notably, 27.1% intend to work abroad, with a majority considering a return to Malaysia after gaining experience or completing specialisation training. Additionally, 85% aim to specialise, highlighting a strong desire for professional growth.

MMSCI Team Members:

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Gerald Ser Tze Zhen (*UM MBBS Class of 2024*)
Hong Wei-Han (*MERDU*)
Teo Chin Hai (*Department of Primary Care Medicine*)
Jamunarani S Vadivelu (*MERDU*)
Yang Faridah Abdul Aziz (*The Dean*)

Staying or Straying?

Although 91.2% of students plan to start their careers with MOH housemanship, retention uncertain: only 57.5% anticipate remaining with MOH long-term. This indicates that nearly half may explore private sector roles, opportunities abroad, or non-clinical careers, potentially impacting Malaysia's healthcare workforce capacity in coming years.

Seeking Greener Pastures

Over a quarter of students (27.1%) plan to emigrate in search for better working conditions, job security, and a supportive work culture. Popular destinations include Australia, the United Kingdom (UK), and Singapore. Encouragingly, most of these respondents (80.7%) intend to return to Malaysia, likely after completing specialisation. However, the immediate departure of these students could exacerbate workforce shortages in Malaysia's public healthcare system.

Aiming for the Top

Specialisation is a high priority, with 85% of students expressing a strong desire to pursue it. This ambition presents both an opportunity and a challenge for Malaysia's healthcare sector. A specialised workforce could enhance patient care, but the limited spots within MOH's training programmes complicate this path. Consequently, many students view overseas training as a more viable option for achieving their professional goals, even if it means contributing to foreign healthcare systems during pivotal years of their careers.

Echoes of a Troubled System

The students' frustrations reflect the challenges faced by current healthcare professionals in Malaysia. Resignations among contract medical officers have risen sharply since 2017, driven by long hours, poor work-life balance, low pay, and uncertain career progression. These systemic issues contribute to a growing desire among students to explore alternative career paths.

What Does This Mean for Malaysia?

The MMSCI study highlights the urgent need for reforms within MOH. With nearly half of medical students potentially leaving the public sector after housemanship, and over a quarter consider working abroad, systemic changes are necessary to retain young doctors. Improving working conditions, job security, and specialisation opportunities within MOH is essential. Measures such as competitive pay, balanced workloads, and clear career pathways could foster long-term commitment to Malaysia's public sector. Establishing an annual survey to track students' career intentions would provide valuable insight to inform policy decisions and support a sustainable healthcare workforce.

The findings underscore the urgent need for reform, but with well-planned strategic interventions, Malaysia has a potential to retain its talent and maintain a resilient healthcare system. The time to address these issues is now, before they become insurmountable.



References:

1. Teng, Z.S., Ser, G.T.Z., Hong, W.H. et al. Malaysian Medical Students' Career Intention (MMSCI): a cross-sectional study. Hum Resour Health 22, 59 (2024). <https://doi.org/10.1186/s12960-024-00939-4>

Grooming Early Career Researchers to Become Principal Investigators at the Faculty of Medicine



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In research universities, academic staff members are expected to teach and conduct research as principal investigators who must conceptualise research ideas, secure funding for the proposed work, and manage the awarded grants towards achieving the preset goals. These challenges can be overwhelming for many, especially for new academic staff. Of these challenges, grant application is one of the biggest obstacles. Hence, the Faculty of Medicine (FOM) Research Management Unit (RMU), in collaboration with the Research Training Unit (RTU), launched an initiative to prepare early career researchers (ECRs) for the world of competitive research. The initiative consisted of two workshops, namely the 'Research Induction Workshop', held on 24th April 2024, and the 'Grant Proposal Development Workshop' which was organized from 7th to 8th of August 2024.

The Research Induction Workshop was the first ECR-targeting workshop by RMU. The workshop was conducted to provide an overview of the research career trajectory within the university. Furthermore, it introduced the research resources available in the faculty to the participants, namely funding opportunities, central laboratory facilities, and various research training offered. The Research Induction Workshop aimed to assist ECRs to identify their research niche while fostering networking and collaborations. This workshop was attended by a total of 55 participants. This one-day event systematically introduced the structure of academic research career, the local and global research ecosystem, as well as tips in grant proposal writing. Through fun and engaging group work, the young academics were encouraged to define their research direction and shape their research ideas into proposals based on the concepts shared by the instructors.

In conjunction with the launch of ECR-specific internal grant call by the university, the 'Grant Proposal Development Workshop' was organised with the specific objectives of providing on-the-spot assistance to ERCs in research proposal writing, improving the quality of their research proposals, and encouraging them to apply for the ECR-targeting grants. A total of 40 participants signed up for this workshop. Each of the enthusiastic researchers was requested

to prepare some research idea ahead of the workshop. Unlike the theory-based Research Induction Workshop, the Grant Proposal Development Workshop placed greater emphasis on the technical aspects of grant proposal preparation. Participants were guided through different sessions, from the initial step of consolidating research ideas to shaping methodology, defining research outcomes and impact projections, development of graphical abstract, budgeting, and drafting the executive summary and project title. Hands-on sessions were incorporated into every part of the workshop, enabling participants to develop their proposal drafts immediately after the briefing. Furthermore, many experienced Faculty of Medicine (FOM) academic staff members with strong track records in securing grants were recruited as instructors, to ensure a low ratio of participants to instructors. Indeed, majority of the participants left the workshop with improved proposal drafts. Notably, further assistance via one-to-one grant clinic consultations were introduced to the ECRs.

In short, these principal investigator-grooming initiatives served as the catalysts to boost the confidence of our ECRs to embrace competitive research. Importantly, these workshops equipped them with the fundamental skills needed to develop research proposals, which are crucial for sustainable research career development



Figure 1: Group photo of organizers, guests, and participants of Research Induction Workshop 2024.

Congratulations!



Asia-Pacific Paediatric Association Outstanding Paediatrician Award

Prof. Dr. Muhammad Yazid Jalaludin
Department of Paediatrics



The Sandosham Gold Medal Award by the Malaysian Society of Parasitology and Tropical Medicine

Prof. Dr. Yvonne Lim Ai Lian
Department of Parasitology



Star Golden Hearts Award

Prof. Dr. Thong Meow Keong
Department of Paediatrics



Research Excellence Award by Elsevier from the Ministry of Higher Education

Prof. Dr. Chua Kek Heng
Department of Biomedical Science



FOM Researchers Listed Among the World's Top 2% Scientists in 2024 Recognized by Stanford University and featured in the Elsevier Data Repository

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- Datin Professor Dr. Indra a/p Vythilingam
- Professor Dr. Yvonne Lim Ai Lian
- Professor Dr. Hesham Mahyoub Sarhan Al-Mekhlafi

Department of Pharmacology

- Professor Dr Mohammed Abdullah Mahdi Alshawsh

Department of Paediatrics

- Honorary Professor Lee Way Seah

Department of Medical Microbiology

- Professor Dr. Tay Sun Tee

Department of Physiology

- Professor Dr. Naguib Salleh

Department of Primary Care Medicine

- Professor Dr. Lai Siew Mei Pauline

Department of Molecular Medicine

- Honorary Professor Dr. Tan Nget Hong

Department of Otorhinolaryngology

- Dr. Jeyasakthy Saniasiaya

Department of Biomedical Imaging

- Emeritus Professor Dr. Ng Kwan Hoong

Department of Pathology

- Distinguished Professor Datuk Dr. Looi Lai Meng

Department of Social and Preventive Medicine

- Professor Dr. Victor CW Hoe
- Professor Dr. Claire Choo Wan Yuen
- Professor Dr. Wong Li Ping
- Professor Dr. Maznah Dahlui
- Professor Dr. Noran Naqiah Mohd Hairi
- Professor Dr. Sanjay Rampal
- Professor Dr. Rafdzah Ahmad Zaki
- Professor Dr. Moy Foong Ming

Department of Medicine

- Professor Dato' Dr. Adeeba Kamarulzaman
- Emeritus Professor Dr. Liam Chong Kin
- Professor Dr. Sanjiv Mahadeva
- Professor Dr. Chan Wah Kheong
- Professor Dr. Tan Maw Pin
- Assoc. Professor Dr. Lim Lee Ling

New Members and New Affiliate Members of the Young Scientists Network - Academy of Sciences Malaysia (YSN-ASM) for 2024/2025

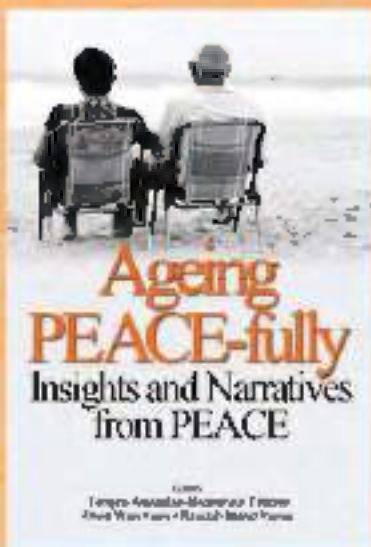
New Member

Assoc. Professor Dr. Foong Chan Choong (MERDU)

New Affiliate Members

Dr. Arutchelvan Rajamanikam (Department of Parasitology)

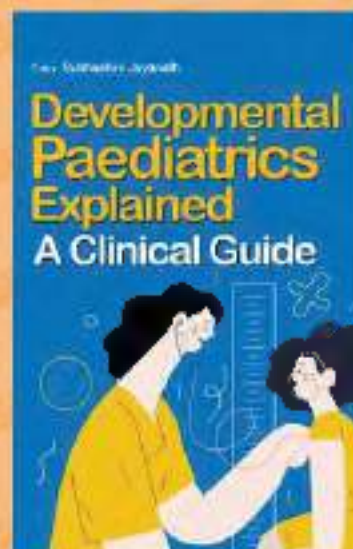
Dr. Ng Aik Hao (Department of Clinical Oncology)



Ageing PEACE-fully Insights and Narratives from PEACE

*By: Tengku Amatullah Madeehah T Mohd,
Choo Wan Yuen & Raudah Mohd Yunus*

Embark on a transformative exploration of ageing with “Ageing PEACE-fully: Insights and Narratives from PEACE.” Unveiling the untold stories of elder abuse, this book blends expert insights and real-life narratives, shedding light on the nature of this global dilemma and the harsh realities faced by victims. The chapters delve into research evidence on physical wellbeing in old age from the challenges of frailty to the nuances of chronic pain, and help readers understand the realm of health in late life while discovering practical insights into the promotion of physical well-being. In addition, authors diligently explore the intricate web of social support that weaves through the fabric of elderhood and the art of caregiving for older adults. Our study findings and creative pieces will surely resonate with every reader, connecting us through our collective experiences and conscience. Whether you are an expert or an older adult or a caregiver, or just someone curious about growing old and longevity, ‘Ageing PEACE-fully’ is your door towards understanding this remarkable – yet challenging – phenomenon. Immerse yourself in this precious edition that describes the unique Malaysian perspective of ageing and attempts to promote not merely healthy – but peaceful – ageing.

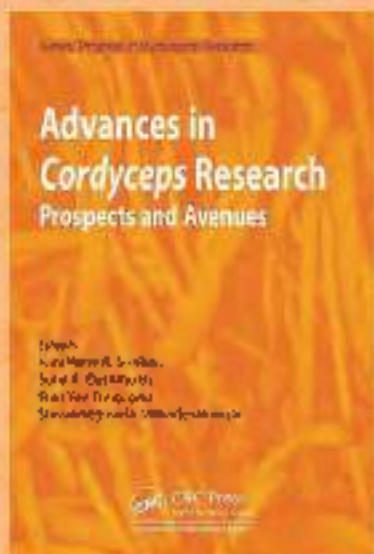


Developmental Paediatrics Explained A Clinical Guide

By: Subhashini Jayanath

This book will provide concise but comprehensive coverage of key developmental paediatrics topics, pitched at the paediatric trainee level. This will be aimed at Masters in Paediatrics (MPaeds) and MRCPCH postgraduate candidates, for preparation for their specialty examinations. Paediatric postgraduate students in the ASEAN region will also find this book useful.

This book will be useful as a clinical guide for doctors from several sectors of the market, namely: public and private universities, public health (Ministry of Health) and private healthcare. This book will help upskill doctors and trainees to provide better healthcare to the public. The parts and chapters are organized so that if read sequentially, the reader will have the essential foundations of development before delving into the specifics of child development. But the different chapters in the book can also be read separately and in no particular order if the reader requires concise reference for a particular aspect of child development. It's not meant to be only an exam preparation book as such, as in addition to the vital concepts to pass examinations, this book will also give trainees the scaffolding which they will need to learn the fundamentals of developmental paediatrics.

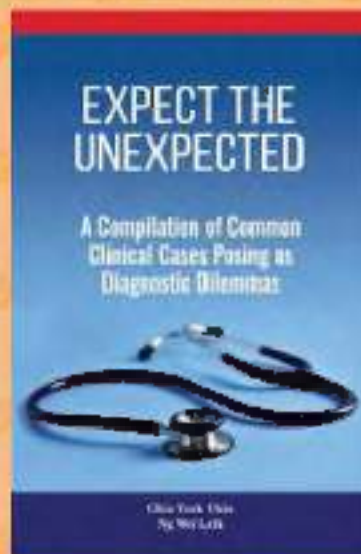


Advances in Cordyceps Research Prospects and Avenues

*By: Kandikere Sridhar, Sunil Kumar
Deshmukh, Shin-Yee Fung,
Shivanegowda Mahadevakumar*

The genus Cordyceps and allied species, such as entomopathogenic fungi, mainly parasitize insects and other arthropods and have been known since ancient times. They are a source of hundreds of metabolites of medicinal significance used in drug discovery and drug development.

The book reviews the developments in cordyceps research and its applications. It covers areas such as diversity, distribution, taxonomy, phylogeny, genetics, bioactive potential, nutraceutical values, biotechnological prospects, plant protection, safety concerns, and marketed products. Further, the impact of human interference as well as climate change on the habitats of Cordyceps has been discussed. The book is meant for readers with an interest in mycology and allied areas. It is also invaluable to personnel carrying out research in disciplines like applied biology, biochemistry, biotechnology, botany, ecology, entomology, environmental biology, field biology, forestry, and zoology.



Expect the Unexpected: A Compilation of Common Clinical Cases Posing as Diagnostic Dilemmas

By: Chia Yook Chin, Ng Wei Leik

This is a comprehensive anthology of cases featuring frequently encountered patient presentations in medical practice, with a focus on highlighting the diagnostic complexities. The curation stems from the years of experience and challenges faced by the authors. In each scenario, readers will find practical takeaways and succinct medical insights. These are aimed at fostering critical thinking and empathy skills among medical professionals. This book is also designed to help budding medical students, interns, as well as general medicine and family medicine trainees, to be familiar with the unfamiliar.



Happy reading!

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We warmly invite FOM researchers to book a slot with us to organise your own Science Cafe session (s). These sessions are anticipated to take the form of focus group discussions, aiming to initiate and strengthen collaborations with your target group of collaborators. RCU will provide necessary support, including venue arrangements, sponsored lunch, and/or promotional efforts.



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