

FACULTY OF NURSING NEWSLETTER



Volume 4 Issue 1

Faculty of Nursing **Newsletter 2025** Volume 4, Issue 1

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ACKNOWLEDGEMENTS

The Dean, the Heads of departments, the members of the academic staff and the students are greatly appreciated for providing information for this newsletter. Further, we would like to acknowledge the photo credit for the pictures included in this newsletter.

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Articles

Reemergence of Chikungunya in Sri Lanka After 16 Years: Insights into the 2025 Outbreak and Control Strategies

Chikungunya, a mosquito-borne viral disease, reemerged as a significant public health concern in Sri Lanka in 2025 after 16 years. Though the virus is no longer novel, recent climatic shifts, urbanization trends, and deficiencies in long-term surveillance have contributed to its reappearance. This article outlines the current outbreak, contributing factors, public health interventions, and strategic recommendations for controlling further transmission.

Chikungunya is an acute viral illness caused by the chikungunya virus (CHIKV), a positive-sense RNA virus of the *Togaviridae* family and *Alphavirus* genus. The virus is primarily transmitted by *Aedes aegypti* and *Aedes albopictus* mosquitoes, which are also vectors of dengue and Zika viruses. Clinically, it presents with sudden-onset high fever and severe polyarthralgia, which can be debilitating. Other symptoms include myalgia, headache, nausea, rash, and fatigue. While the acute phase typically lasts 3–10 days, some patients experience persistent joint pain for weeks or months (Albarrán et al., 2025). Currently, there is no antiviral therapy or licensed vaccine; management is supportive, focusing on pain relief and hydration (Millsapps EM et al, 2022).

The present outbreak began in late 2024 and escalated rapidly during early 2025. By July 2025, the Ministry of Health reported over 16,500 suspected cases, with 7,611 cases localised in the Western Province alone. Initial sentinel surveillance in March 2025 recorded 173 laboratory-confirmed cases, primarily in Colombo, Gampaha, and Kandy districts (WHO, 2025). Whole-genome sequencing has identified the circulating strain in Sri Lanka as belonging to the Indian Ocean Lineage (IOL), closely related to strains from Southeast Asia. Key adaptive mutations—E1:K211E and E2:V264A—enhance viral replication efficiency in *Aedes aegypti*, the predominant urban vector. Unlike the 2006–2008 outbreak strain, the current lineage lacks E1:A226V, a mutation linked to *Aedes albopictus* transmission (Thanesh et al., 2025). Preliminary evidence suggests the emergence of novel non-structural protein mutations (nsP3:T224I, nsP4:S90A) with unknown implications for pathogenicity and immune evasion.

Several interrelated factors have contributed to the reemergence and rapid transmission of chikungunya in Sri Lanka. Increased *Aedes* vector density has played a central role, as

prolonged monsoon rains created abundant breeding grounds, including uncovered water tanks, blocked drains, and discarded containers, leading to a surge in mosquito populations. Unplanned urbanization and poor waste management have further exacerbated the situation. Rapid urban growth combined with inefficient drainage systems has resulted in stagnant water accumulation, particularly in densely populated neighborhoods, providing ideal conditions for vector proliferation.

Climate variability has also contributed, as irregular rainfall patterns and rising temperatures have extended the breeding season and geographic range of *Aedes* mosquitoes, thereby increasing transmission potential. Population susceptibility remains high, given the long interval since the last major outbreak. Many individuals lack protective antibodies, creating a largely immunologically naive population susceptible to infection (Thanesh et al., 2025). Viral evolution has further amplified the outbreak. Mutations such as E1:K211E and E2:V264A enhance viral adaptation to *Aedes aegypti*, improving the efficiency of urban transmission (Herriman, 2025).

Further, the concurrent dengue epidemic has compounded challenges for public health. The simultaneous circulation of the dengue virus has overburdened healthcare systems, hindered accurate clinical differentiation, and disrupted entomological surveillance, allowing chikungunya transmission to intensify (Ngwe Tun et al., 2025).

The Ministry of Health, Sri Lanka, has expanded vector and case surveillance, especially in high-risk districts. Laboratory diagnostics, including qPCR and serological assays, have been scaled up to differentiate chikungunya from dengue and other febrile illnesses (WHO, 2025). Government-led mosquito control campaigns have been launched in Western Province and other hotspot areas. These focus on environmental cleanup, larviciding, and public education. Effective outcomes require strengthened collaboration between health, municipal, and environmental sectors to implement integrated vector management.

Awareness campaigns via media platforms emphasize preventive measures such as eliminating breeding sites, wearing protective clothing, using repellents, and seeking early medical attention. Schools and public institutions are required to implement vector control protocols, with legal penalties for non-compliance (The National Dengue Strategic Plan 2024–2030). The plan emphasizes early case detection, surveillance, community education, vector control, and multisectoral coordination in these programs. Updated

clinical guidelines and reporting protocols have been distributed to healthcare professionals (Epidemiology Unit).

The World Health Organization and other global partners have extended technical and financial assistance to bolster Sri Lanka's outbreak response capacity. To enhance outbreak preparedness, real-time genomic sequencing should be expanded to monitor viral evolution and identify emerging strains. Continuous surveillance will allow for timely prediction of outbreaks and more targeted public health responses. Predictive models that link environmental factors such as rainfall and temperature to vector density should be deployed. These models can guide early interventions, optimize resource allocation, and reduce mosquito proliferation before outbreaks escalate. Effective control of Chikungunya requires active community participation. Localised enforcement of vector control measures, combined with public education campaigns, can incentivise residents to eliminate breeding sites and adopt protective behaviors. Laboratory diagnostic capacity must be strengthened to ensure rapid and accurate differentiation between dengue and chikungunya infections. Enhanced diagnostic infrastructure will support timely clinical management and improve epidemiological reporting. Further studies are needed to assess the pathogenicity of novel viral mutations and to evaluate potential vaccine candidates in endemic regions. Strategic research investments will inform long-term prevention strategies and improve preparedness for future outbreaks.

The resurgence of chikungunya in 2025 in Sri Lanka exemplifies the evolving threat of arboviral diseases in the context of climate change, urbanization, and viral adaptation. While the public health response has been commendable, long-term success depends on continued surveillance, community participation, and integrated vector management. Strengthening these pillars is vital to prevent chikungunya from becoming a recurrent public health threat.

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Natural antioxidants of Sri Lankan Functional Foods: A Promising Approach to Prevent Non-Communicable Diseases

Non-communicable diseases (NCDs) are chronic conditions that are not transmitted from person to person. They typically arise from combined factors of genetic, physiological, environmental, and behavioral factors. Major NCDs including cardiovascular diseases, diabetes mellitus, cancer, and neurodegenerative disorders are among the leading causes of death globally (WHO, 2024). In Sri Lanka, the burden of NCDs is rising steadily due to lifestyle changes, urbanization, and unhealthy dietary patterns (WHO, 2019). One of the key contributors to the development and progression of NCDs is oxidative stress which is caused by an imbalance between reactive oxygen species (ROS) and the antioxidant defense mechanisms in the body (Budreviciute et al., 2020). Sri Lankan functional foods are rich in natural antioxidants, which play a key role in preventing NCDs by combating oxidative stress. Functional foods are those that offer health benefits beyond basic nutrition due to the presence of biologically active compounds. In the Sri Lankan context, many traditional foods including herbs, spices, fruits, teas, are rich in natural antioxidants that are effective in preventing oxidative stress and related chronic diseases (Chandrasekara and Darshani, 2014).

Oxidative stress results from an excess of ROS which damages cellular lipids, proteins, and DNA leading to inflammation, mitochondrial dysfunction, and apoptosis. These processes lead to cause atherosclerosis, insulin resistance, neurodegeneration, and carcinogenesis (Afzal et al., 2023). In cardiovascular disease, oxidative stress promotes the oxidation of LDL cholesterol, leading to endothelial dysfunction and plaque formation. In type 2 diabetes, it disrupts insulin signaling and β -cell function, contributing to hyperglycemia (Tangvarasittichai, 2015). In neurodegenerative diseases like Alzheimer's and Parkinson's, oxidative damage leads to neuronal loss. In cancer, ROS facilitate DNA mutations, support tumor growth, and inhibit apoptosis (Afzal et al., 2023).

Antioxidants play a critical role in counteracting oxidative stress which is a key contributor to the pathogenesis of non-communicable diseases. Antioxidants can neutralize ROS, thereby preventing cellular damage to lipids, proteins, and DNA. Antioxidants operate through both enzymatic mechanisms such as superoxide dismutase, catalase, and glutathione peroxidase and non-enzymatic pathways involving dietary compounds like vitamins C and E, polyphenols, and carotenoids. Many Sri Lankan functional foods are rich in polyphenols, flavonoids, carotenoids, and other bioactive

compounds known for their antioxidant activity (Baddegama et al., 2024). These bioactive compounds not only scavenge free radicals but also regenerate endogenous antioxidant enzymes and modulate inflammatory signaling pathways. Therefore, regular consumption of antioxidant-rich foods such as berries, greens leafy vegetables, nuts, seeds, green tea and green coffee has been shown to reduce oxidative stress and reduce the incidence and severity of NCDs (Kurutas, 2016).

Maintaining a balanced diet is essential for preventing non-communicable diseases and promoting overall health. A balanced diet provides the appropriate proportions of macronutrients including carbohydrates, proteins, and lipids alongside essential vitamins and minerals. In the Sri Lankan context, traditional meals typically consist of a mixed diet that includes animal-based foods, plant-based proteins like dhal, and a variety of vegetables. Rice or other grains serve as the primary source of carbohydrates, supplying energy, while lipids from coconut, sesame, and nuts contribute to hormone biosynthesis and cellular membrane integrity. Vegetables commonly consumed in Sri Lanka are rich in vitamins A, C, and K, minerals such as iron and calcium, and antioxidants, which help reduce inflammation, support immune function, and promote overall health. After meals, Sri Lankans often enjoy fruits, which are excellent sources of vitamin C, potassium, dietary fiber, and natural antioxidants aiding digestion, boosting immunity, and helping to combat oxidative stress. Therefore, individuals should incorporate a variety of fruits and vegetables into the daily diet to enhance antioxidant intake. In the Sri Lankan context, incorporating antioxidant rich foods into the daily diet is both practical and culturally aligned with traditional eating habits. Many locally available fruits, vegetables, spices, and teas are naturally high in antioxidants such as polyphenols, carotenoids, and flavonoids. For example, consuming seasonal fruits like guava, papaya, mango, and wood apple provides vitamin C and polyphenols that help to neutralize ROS. Green leafy vegetables such as Gotu kola (*Centella asiatica*) contain asiaticoside and flavonoids that improve antioxidant enzyme activities and protect against oxidative neuronal damage (Wong et al, 2021). Goraka (*Garcinia cambogia*) contains hydroxycitric acid and polyphenols that inhibit lipid peroxidation and reduce oxidative damage in hyperlipidemia. Cinnamon (*Cinnamomum zeylanicum*) contains cinnamaldehyde, a potent antioxidant and anti-inflammatory agent that reduces ROS production (Dissanayake, Liyanage, and Ranasinghe, 2020). Turmeric (*Curcuma longa*) is rich in curcumin, which is known to modulate oxidative stress-related signaling pathways (Sharifi et al, 2020). Green tea and green coffee contain catechins and chlorogenic acid respectively which neutralize free

radicals and support cardiovascular and metabolic health (Wijesooriya and Gunathilaka, 2024).

In order to maximize the antioxidant potential of these functional foods, appropriate preparation and storage methods are crucial. Many antioxidants in fruits, vegetables, and spices such as polyphenols, carotenoids, and flavonoids are sensitive to factors like heat, light, oxygen, and prolonged storage, which may degrade their potency (Zahoor and Allai, 2020). It is recommended to use gentle cooking methods such as steaming instead of prolonged boiling or deep-frying, which can destroy heat sensitive antioxidants like vitamin C and some polyphenols. Cutting fruits and vegetables only shortly before consumption and minimizing exposure to air can reduce oxidative loss of bioactive compounds. Storage of food in airtight containers, preferably in the refrigerator and away from direct sunlight helps to maintain antioxidant stability. In the Sri Lankan context, traditional methods such as quick stir frying leafy green vegetables or preparing raw sambols from freshly grated coconut, lime, and herbs help to preserve their antioxidant properties. Additionally, the use of spices such as turmeric and cinnamon not only add flavor but also helps to stabilize oxidative processes during cooking (Zahoor and Allai, 2020). By adopting such mindful practices in food preparation and storage, individuals can better preserve the antioxidant capacity of their meals and enhance protection against oxidative stress and related non-communicable diseases. Integrating antioxidant-rich foods into daily nutrition is a practical and evidence-based approach to disease prevention. Unlike pharmacological interventions, dietary antioxidants offer a low-risk accessible strategy to reduce oxidative stress and improve overall health outcomes. Nurses and healthcare professionals can play a pivotal role in promoting this approach through patient education and community health initiatives to achieve nutritional balance and reduce the burden of chronic illness.

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Artificial Intelligence in Nursing

Rewarding or Challenging?

Today, we are moving through the Fourth Industrial Revolution, which is characterised by rapid advances in automation and artificial intelligence. Artificial Intelligence (AI) is the technology that enables computers and machines to simulate human learning, comprehension, problem-solving, decision-making, creativity and autonomy. This technology utilises techniques and algorithms that enable computers to perform tasks that typically require human intelligence and understanding. These tasks involve making decisions, solving complex problems, pattern recognition, and learning, all of which are all part of these duties. Data and diverse algorithms are key to enhancing AI capabilities. AI aims to create machines that mimic human cognitive processes to increase automation, accuracy, and efficiency.

In the context of nursing education, AI can provide instant feedback, helping students learn from their mistakes and improving their competencies. AI can provide personalised learning experiences that cater for each unique requirement/s of each student. Adaptive learning platforms can analyse students' strengths and weaknesses, tailoring educational content to meet individual needs. This ensures that each student progresses at their own pace, enhancing understanding and realization of complex nursing concepts. AI can revolutionise education by acting as a personalised tutor for each student. Nursing instructors' ability to modify classes to meet each student's unique learning needs might be significantly enhanced by offering individualised tutoring. AI has the potential to be a tool for the development of students' clinical judgment. The lecturers trained to utilise these new AI-based patient care support tools can guide students on the productive and efficient use of these technologies.

AI tools can help nursing students and healthcare professionals to collaborate and communicate more effectively. To prepare nursing students for teamwork in actual healthcare settings, AI-powered online platforms can establish collaborative learning environments where they interact with peers from fields of medicine, pharmacy, and other disciplines. AI can help analyse large datasets from clinical simulations, student performances, and outcomes to identify patterns and trends. This data-driven method enhances overall educational efficacy by helping teachers improve their educational effectiveness.

AI-driven simulations and virtual reality (VR) environments allow nursing students to practice clinical skills in a risk-free setting. By simulating realistic patient scenarios, students can refine their clinical judgment, critical thinking, and decision-making abilities. Despite the advantages, incorporating AI into nursing education presents challenges. Additionally, educational institutions must update curricula to include AI literacy, preparing future nurses to work effectively alongside these technologies.

Patient monitoring is one of the primary applications of artificial intelligence (AI) in healthcare, specifically in nursing. AI-powered monitoring systems can continuously collect and analyse patient data, such as vital signs and behaviours. Through remote monitoring, nurses can track patients more closely, quickly identifying changes in their condition. These systems can also notify nurses of potential issues before they become critical, enhancing early intervention and reducing the risk of complications. AI technology can quickly sift through vast amounts of data, providing nurses with valuable insights to inform their decisions. For example, predictive analytics can identify patients at risk of falls or developing certain conditions. However, the use of AI in education, especially when gathering and utilising student data, raises concerns about privacy and ethics. Ensuring that AI systems comply with privacy laws, such as the Family Educational Rights and Privacy Act (FERPA) in the U.S. and the General Data Protection Regulation (GDPR) in the European Union, is crucial.

Moreover, AI-powered systems can assist in medication management by verifying prescriptions and checking for potential drug interactions, which reduces the likelihood of errors and enhancing patient safety. It can help computers transcribe clinical notes, reduce paperwork, and support clinical decisions. Further, AI in nursing can tailor treatments to individual patients, leading to more effective care and, facilitating personalized medication. For example, AI can analyse genetic data, lifestyle factors, and medical history to recommend the best treatment options, making healthcare more precise and effective.

The use of AI in nursing raises several ethical concerns. Patients must be informed about how their data is used, and AI decision-making processes must be transparent. Since AI can make important decisions about patient care, accountability is a concern. AI should enhance, not replace, the human touch in nursing. Clear ethical guidelines and transparency in AI development can help address these issues.

Although AI offers promising solutions in the context of nursing, it also has limitations. Healthcare professionals may also worry that AI would lead to job losses. This may be true in the future, but the tools that are already available and being developed are meant to supplement human labor, not to replace it. They're intended as enhancements. Additionally, many people have concerns about confidentiality and privacy related to the use of AI. There are risks, just as with any system that handles sensitive data. However, these risks can be reduced with careful preparation and execution.

Maximizing the opportunities and navigating the challenges that AI presents in nursing requires a strategic and collective approach. As AI technologies evolve, continuous professional development opportunities should be provided to keep nurses up-to-date and competent. Insights into the practical needs and challenges of clinical practice can guide the development of user-friendly AI solutions. In this regard, AI developers, IT specialists, and nurses must work together effectively. The sophisticated understanding of AI technologies that nurses possess can benefit the development of user-friendly AI solutions. Regular training sessions on data security for nurses and other staff can also help maintain high standards. Ethical frameworks should be established to address issues such as data privacy, algorithmic bias, and patient consent. Security breaches can have a serious impact on patients and students, so it is essential to establish strict data management policies. Healthcare organizations need to prioritize transparency, accountability, and ethical guidelines to determine the responsibility of AI technology in nursing practice. By embracing AI-driven innovations, nurses can embrace a future where technology serves as a valuable ally in providing compassionate, personalized care to all patients. As the power of AI is harnessed, attention must be given to the challenges and ethical considerations to ensure that its full potential is realized in nursing practice.

AI algorithms must be transparent and equitable to avoid biases in clinical and educational decision-making. Additionally, healthcare professionals must understand how these algorithms work to ensure appropriate and fair use.

AI can perpetuate existing biases when used in nursing education if not properly managed. This underscores the importance of integrating bias awareness and AI literacy into nursing curricula. Nursing students are better prepared to use AI responsibly and effectively when these factors are incorporated into the curriculum. Ongoing education and training are mandatory to equip the nursing workforce with the necessary skills and knowledge to execute these evolving responsibilities. Educating nurses in this regard is

essential in ensuring that AI is used as a tool to develop competent, empathetic, and technologically confident nurses today and in the future.

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Bridging Gaps in Palliative Care: Readiness for Community-Based Approaches in Sri Lanka

Palliative care is increasingly recognized as an essential element of universal health coverage, aiming to relieve suffering and enhance the quality of life of patients and families facing life-limiting illnesses. The World Health Organization (WHO) defines palliative care as an approach to improve the quality of life for patients and their families facing life-threatening illnesses, by preventing and relieving suffering through the early identification, assessment, and treatment of physical, psychosocial, and spiritual problems. (WHO, 2023). In Sri Lanka, the growing burden of chronic non-communicable diseases (NCDs), including cancer, cardiovascular disease, and chronic respiratory illness, underscores the urgent need to expand palliative care beyond hospital settings. Community-Based Palliative Care (CBPC) offers an adaptable and culturally aligned model that can bridge current service gaps, improve accessibility, and promote equity.

Globally, an estimated 56.8 million people require palliative care annually, with more than 78% living in low and middle-income countries where access remains extremely limited (WHO, 2018). The Lancet Commission on Global Access to Palliative Care and Pain Relief asserts that the absence of palliative care constitutes a global health inequity, particularly for vulnerable populations in resource-constrained settings (Knaul et al., 2018).

CBPC models have demonstrated efficacy and sustainability in diverse contexts. For example, the Kerala model in India integrates palliative care into primary healthcare through trained volunteers, strong community ownership, and a decentralized approach. This model has achieved broad coverage despite limited financial resources (Rajagopal, 1999). Lessons from such models suggest that success depends on political commitment, integration with existing health systems, workforce development, and active community participation.

Sri Lanka's health system has a strong primary healthcare foundation, with an extensive network of Medical Officer of Health (MOH) areas and Public Health Midwives (PHMs) providing outreach services to rural communities. The National Policy and Strategic Framework on Palliative Care (Ministry of Health, 2018) outlines clear directives for integrating palliative care at all levels of care, including community settings.

However, implementation challenges persist. Palliative care services are primarily concentrated in tertiary care hospitals, and there is a shortage of healthcare professionals trained in palliative care principles. Additionally, there is limited public awareness, and misconceptions about palliative care as solely end-of-life care hinder early integration. Financial constraints, insufficient home-based service infrastructure, and fragmented intersectoral coordination further limit readiness for CBPC.

Table 1. SWOT Analysis for CBPC Implementation in Sri Lanka (Ho et al., 2024)

Strengths	Weaknesses
Established primary healthcare network covering rural areas	Limited trained palliative care workforce
Strong community and family support structures	Lack of awareness among healthcare providers and the public
Government recognition of palliative care in health policy	Insufficient funding and infrastructure at the community level
Opportunities	Threats
Integration of CBPC into existing primary care services	Increasing burden of chronic illnesses
Potential partnerships with NGOs and faith-based organizations	Risk of service inequity between urban and rural areas
Adoption of successful regional models (e.g., Kerala)	Economic constraints affecting health budget allocations

The CBPC model aligns with the Sri Lankan sociocultural context, where patients often prefer to receive care within the home environment, supported by family members. By integrating palliative care into community and primary health services, early symptom management, psychosocial support, and caregiver education can be provided at a lower cost and with greater accessibility than hospital-based models. This reduces avoidable hospital admissions. According to the World Health Organization (WHO, 2018), a successful integration of palliative care into public health systems requires a strategy built on four key pillars. The first pillar, policy development, emphasizes the establishment of a legislative and regulatory framework to support palliative care implementation. The second pillar, education and training, focuses on building the capacity of healthcare workers at all levels to ensure the provision of quality care. The third pillar, medication

availability, highlights the importance of ensuring access to essential palliative medicines, particularly opioids required for effective pain management. The fourth pillar, service delivery, advocates for the integration of palliative care into all levels of healthcare, including community-based services, to ensure comprehensive and equitable access for all patients in need.

Advancing community-based palliative care (CBPC) readiness in Sri Lanka requires a multidimensional approach that addresses workforce, community, and systemic needs. The integration of palliative care into undergraduate and in-service training curricula for doctors, nurses, and allied health professionals is essential to ensure a skilled and competent workforce. Community engagement should be strengthened by mobilizing local volunteers and leaders to provide social, emotional, and logistical support, drawing inspiration from successful models implemented in Kerala and Bangladesh. Partnerships and resource utilization through collaboration among government agencies, non-governmental organizations, and international partners can facilitate access to technical expertise and financial support. Furthermore, strengthening home-based services is vital by developing standardized home-visit protocols, ensuring the availability of essential medications, and incorporating mobile health technologies for remote monitoring and consultation. Finally, awareness campaigns must be conducted using culturally sensitive strategies to enhance public understanding, reduce misconceptions, and promote early uptake of palliative care within disease trajectories.

Sri Lanka's readiness to implement CBPC is at a formative stage, with policy recognition and a strong primary care infrastructure serving as critical enablers (Perera et al., 2019). However, readiness is constrained by workforce limitations, funding shortages, and low public awareness. By strategically leveraging existing strengths and opportunities, particularly community cohesion, NGO partnerships, and lessons from regional best practices, Sri Lanka can build a scalable, sustainable CBPC model (Saxon et al., 2020). Such an approach would not only align with the WHO's global call for universal palliative care access but also uphold the nation's commitment to equity and compassionate care.

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Submitted by

Dr. Nirosha P. Edirisinghe

Head/ Senior Lecturer

Department of Basic Sciences and Social Sciences for Nursing

Faculty of Nursing

University of Colombo

Academic Contribution

Invited Speeches

Professor S.S.P. Warnakulasuriya, Dean, Faculty of Nursing, was invited as the guest of honor and keynote speaker for the oath ceremony of the Diploma in Nursing at the College of Nursing Kandana, on 21st April 2025. He delivered the ceremonial speech by highlighting the importance and values of the nursing profession.



Professor Sudath Warnakulasuriya, Dean, Faculty of Nursing was invited as the guest of honor and the keynote speaker for the Diploma Awarding Ceremony of the College of Nursing, Colombo on 28th April 2025. He delivered the ceremonial speech by highlighting the importance and values of nursing profession.



Professor Sudath Warnakulasuriya, Dean, Faculty of Nursing was invited as the guest of honor and the keynote speaker for the Diploma Awarding Ceremony of the College of Nursing Kaluthara on 31st April 2025. He delivered the Keynote speech by highlighting the importance and values of nursing profession.



Professor Sudath Warnakulasuriya, Dean, Faculty of Nursing was invited as the guest of honor and the keynote speaker for the oath ceremony of the Diploma in Nursing at Cinec Campus Malambe on 27th March 2025. He delivered the ceremonial speech by highlighting the importance and values of nursing profession.



Professor Sudath Warnakulasuriya, Dean, Faculty of Nursing and the president of Sri Lanka Nurses Association, delivered the theme speech of International Nurses Day at the International Nurses Day celebration on 18th of May 2025 at Neurotrauma Auditorium, National Hospital, Sri Lanka.



Professor Sudath Warnakulasuriya, Dean, Faculty of Nursing attended the freshers meet certificate awarding ceremony at the New Arts Theatre University of Colombo and awarded the certificates to the winners of different events who represented the Faculty of Nursing.



Professor Sudath Warnakulasuriya, Dean, Faculty of Nursing attended the Medical Campaign organized by the Ministry of Health at the Sri Lanka parliament and served as a resource person in psychological counselling.



Academic Programmes

Orientation Programme B.Sc. (Hons). Nursing Degree (2023/2024 Intake)



The inauguration ceremony of the B.Sc. (Hons) in Nursing degree programme for the 2023/2024 intake was held on 23rd of April 2024, at 8:30 am at the New Arts Theatre, University of Colombo. The faculty welcomed approximately 100 new undergraduate students for the academic year. The event was graced by Dr. Thanuja Assurakkody, Acting Dean of the Faculty of Nursing, who delivered the welcome speech. Additional addresses were delivered by Dr. Rajitha Silva, Senior Student Counselor, and the Acting Deputy Chief Marshal of the University. The ceremony was attended by the Heads of Departments and the staff of the faculty. Recreational performances by the students from the 2022/23 intake added a festive touch to the event. Mr. I. Thayaparan, Senior Assistant Registrar, concluded the ceremony with vote of thanks.



The Orientation Programme for the B.Sc. (Hon's) Nursing degree (2022/2023 intake) was conducted from April 24th to May 16th, 2025. It featured insightful sessions led by resource persons, including the Dean of the Faculty of Nursing, Heads of Departments, the Senior Student Counselor, and guest lecturers from other universities and the health sector. The key topics included university rules and regulations, an overview of the Faculty of Nursing and the Nursing degree, online teaching, blended learning, outcome-based curriculum, learner-centered teaching methods, and sexual and gender-based violence. Department introductions were given by the respective Heads and their staff. Additionally, to enhance the students' English language skills, an intensive English course was conducted by the Department of English Language Teaching (DELT), Faculty of Arts, of the university. Student feedback was collected for each session and the entire programme, and the orientation concluded successfully with great enthusiasm from the participants.



Submitted by

Dr. Thilina Gunathilaka

Coordinator (Orientation Programme)

Senior Lecturer (Grade II)

Department of Basic Sciences and Social Sciences in Nursing

Achievements and Awards

**Sri Lanka University sports games Color winner for netball 2024
(ceremony date – 2025.06.30)**



B.H.H.S.R. Sanjeewa – 2020n00385

2019/2020 Batch

**The spell 2025 - University of Kelaniya -invitational university
scrabble encounter on 2025 June 29**



Sriyathas Thuvarakan

2020n00401

Represented the team of University of
Colombo B men

**Inter district table tennis tournament for 49th national sports games
2025 on 29th May 2025**



Men's team champion
Men's double champion
K.D.M.H. Kiriwaththuduwa
2022/2023 Batch
2023n00715

**Mora 9's invitational hockey tournament at Astro Hokey Turf- Colombo
on 29th March 2025**



2nd Runners up
G.H.A. Manathunga-2021n00488
2020/2021 Batch

Mora 9's invitational hockey tournament at Astro Hokey Turf- Colombo on 29th March 2025



Champions

T.M.T.S. Thennakoon

2021n00524

2020/2021 Batch

Pera 6's invitational hockey tournament 2025 on 10th May 2025



1st Runners up

T.M.T.S. Thennakoon

2021n00524

2020/2021 Batch

Freshers Kabaddi Championship 2025 – University of Colombo on 12th of February 2025



2nd runners up

2022/2023 Batch

S. Santhosh - 2023n00745

R.Thilaksan - 2023n00751

R.Ratheeshan - 2023n00736

M.Pirinthan - 2023n00770

A.M.E.K.Ramanayaka -

2023n00780

S.A.M.Anas - 2023n00764

S.Rathushikn - 2023n00737

M.Nishanthan - 2023n00732

Freshers Hockey (Men) Championship 2025 – University of Colombo on 10th of February 2025



2nd runners up

2022/2023 Batch

K.D.M.H. Kiriwaththuduva -
2023n00715

S. Rathushikn - 2023n00737

M. Pirinthan - 2023n00770

R. Ratheeshan - 2023n00736

W.G.K.S. Weerasinghe -
2023n00754

M.G.D.L. Akalanka- 2023n00674

S.A.M. Anas - 2023n00764

M.N.M. Nasmir - 2023n00774

**Freshers Scrabble (Men) Championship 2025 – University of Colombo
on 9th February 2025**



2nd runners up

2022/2023 Batch

T.M.A.S. Gajanayaka - 2023n00698

A.S.J.K. Jayarathna- 2023n00707

D.M.D.P. Dissanayake- 2023n00693

J.D.P. Madawa-2023n00793

M.R. Vidusanka-2023n00785

**Freshers Basketball (Men) Championship 2025 – University of Colombo on
27th January 2025- 2nd runners up- 2022/2023 Batch**



H.M.A.S. Bandara - 2023n00677

R. Ratheeshan - 2023n00736

M.T.M. Thahasheen - 2023n00748

R.K.N. Lenora - 2023n00718

M.T.M. Thahasheen - 2023n00748

S.A.M. Anas - 2023n00764

R. Thilaksan - 2023n00751

D.M.D.P. Dissanayake - 2023n00693

D.L. Munagama - 2023n00686

**Freshers Volleyball (Men) Championship 2025 – University of Colombo
on 25th January 2025 - 2nd runners up- 2022/2023 Batch**



M.N.M.Nishkan - 2023n00775

R.Thilaksan - 2023n00751

R.Ratheeshan - 2023n00736

H.M.A.S.Bandara - 2023n00677

W.G.K.S.Weerasinghe - 2023n00754

M.T.M.Thahasheen - 2023n00748

S.A.M.Anas - 2023n00764

**Freshers Karate under 80kg (Men) Championship 2025 – University of
Colombo on 15th of February 2025**



2nd runners up

2022/2023 Batch

S. Santhosh - 2023n00745

Freshers Athletic Championship 2025 – High Jump (Men) University of Colombo on 15th of February 2025



2nd runners up

2022/2023 Batch

S. Rathushikn - 2023n00737

Freshers Athletic Championship 2025 – 400 Hurdles (Men) University of Colombo on 2nd of February 2025



2022/2023 Batch

R. Ratheeshan

2023n00736

Freshers Athletic Championship 2025 – Shot put (women) University of Colombo on 1st of February 2025



1st Place

2022/2023 Batch

U.G.A.S. Weerasinghe

2023n00760

**Freshers Swimming Championship 2025 – 100m Individual Medley (Men)
University of Colombo on 8th of February 2025**



2nd Place

2022/2023 Batch

M.G.D.L. Akalanka

2023n00674

**Freshers Swimming Championship 2025 – 100m Individual Medley (Men)
University of Colombo 8th of February 2025**



2nd Place

2022/2023 Batch

M.G.D.L. Akalanka

2023n00674

**Interfaculty Swimming Championship 2025 -University of Colombo 21st of
June 2025**



200m Freestyle 2nd Place

100m Backstroke 2nd Place

100m Individual Medley 2nd Place

2022/2023 Batch

M.G.D.L. Akalanka

2023n00674

Interfaculty Hockey (Men) Championship 2025 -University of Colombo on 21st of June 2025- 2nd Runner up



T.M.T.S. Thennakoon - 2021n00524 – 2020/21 Batch

H.D.L.Lakmal - 2022n00595 - 2022/23 Batch

S.A.M.Anas - 2023n00764 - 2021/22 Batch

S.Rathushikn - 2023n00737 - 2022/23 Batch

R.Ratheeshan - 2023n00736- 2022/23 Batch

F.K.A.Sakeer - 2024n00866 - 2023/24 Batch

I.A.Ahamad - 2023n00792 - 2023/24 Batch

P.Vijitharan - 2024n00890 -2023/24 Batch

A.Sharanran - 2024n00878 -2023/24 Batch

S.Thaniskar - 2024n00918 - 2023/24 Batch

Interfaculty beach Volleyball Championship – University of Colombo on 13th of July 2025



1st Runner up

A.D.I.M. Weerasinghe 2022n00655 (2021/22 Batch)

R.K.T. Kalpage 2023n00713 (2022/23 Batch)

International Affairs

13th IAGG Masterclass on Aging in Asia- Kuala Lumpur, Malaysia from 23rd-25th May 2025

Ms. U.G. Nirmala Priyadarshani, Lecturer (Probationary), Department of Clinical Nursing attended the 13th International Association of Gerontology and Geriatrics Masterclass on Aging in Asia held in Kuala Lumpur, Malaysia, from 23rd -25th May 2025. She represented Sri Lanka as one of the 50 delegates across Asia engaging in geriatric care and research masterclass themed “Integrated Care”.



At the masterclass Ms. Priyadarshani presented a poster abstract titled “Cognitive function and its association with socio-demographic factors and depression among institutionalized older adults in Colombo District, Sri Lanka.”



Submitted by,

Ms. U.G.N. Priyadarshani

Lecturer (Probationary)

Department of Clinical Nursing

Leading University project for International Corporation (LUPIC)

The Korean Government Scholarship Program (KGSP) has served as a vital bridge between the Korean government and the Ministry of Health, Sri Lanka in fostering collaboration and development in both undergraduate and postgraduate nursing education. It is with great pride and gratitude that Dr.T.Asurakkodi shares an important milestone in her professional journey, which highlights the continued collaboration between the Korean government and the Ministry of Health, Sri Lanka.

As requested by the Korean government through Inje University, Dr.T.Asurakkodi recently (September, 2025) submitted a promotional video outlining the significant contributions she has made to the healthcare and higher education sectors in Sri Lanka following her postgraduate education in Korea. Dr.T.Asurakkodi is a proud alumna of the Korean Government Scholarship Program (KGSP), through which she obtained both her MSc and PhD in Nursing.



In her video, she reflected on the transformative journey from being a Nursing Tutor under the Ministry of Health to becoming a Senior Lecturer and now Head of the Department of Fundamentals of Nursing at the Faculty of Nursing, University of Colombo. This progression was made possible through the strong academic foundation and support she received via Inje University collaborative project.

The Korean government has continued to show a genuine interest in the impact of its scholarship recipients by monitoring the ways in which alumni contribute to their home countries. Dr.T.Asurakkodi is honored to be an example of how such international academic partnerships can lead to meaningful national development.



In her current role, she actively contributes to undergraduate and postgraduate nursing education, curriculum development and curriculum revision, and research initiatives. These efforts are directly aligned with the advancement of nursing education in Sri Lanka and are part of the lasting legacy of Korea-Sri Lanka cooperation in higher education and healthcare.

Dr.T.Asurakkodi extends her sincere thanks to the Korean government and Inje University for their continued support and commitment in building global academic bridges that strengthen health systems and professional capacity worldwide.

Submitted by

Dr. (Mrs.) T.A. Asurakkody

Senior Lecturer/Head

Department of Fundamentals of Nursing

Faculty of Nursing

University of Colombo

Research, Conferences and Workshops

Indexed Research Articles Published by the Academics of the Faculty of Nursing

Edirisinghe, N.P., Makuloluwa, P.T.R., Amarasekara, A.A.T.D. and Goonewardena, C.S.E., 2025. "Mitigating cancer pain: What else matters?"—A qualitative study into the needs and concerns of cancer patients in Sri Lanka

PLOS ONE

RESEARCH ARTICLE

"Mitigating cancer pain: What else matters?"—A qualitative study into the needs and concerns of cancer patients in Sri Lanka

N. P. Edirisinghe^{1,2*}, P. T. R. Makuloluwa³, A. A. T. D. Amarasekara⁴, C. S. E. Goonewardena^{5,6}

1 Faculty of Nursing, Department of Fundamental Nursing, University of Colombo, Colombo, Sri Lanka, **2** Faculty of Graduates Studies, University of Sri Jayewardenepura, Sri Jayewardenepura, Sri Lanka, **3** Faculty of Medicine, Department of Clinical Sciences, General Sir John Kotelawala Defence University, Dehiwala-Mount Lavinia, Sri Lanka, **4** Faculty of Allied Health Sciences, Department of Nursing and Midwifery, University of Sri Jayewardenepura, Sri Jayewardenepura, Sri Lanka, **5** Faculty of Medical Sciences, Department of Community Medicine, Cancer Research Center, University of Sri Jayewardenepura, Sri Lanka, **6** Faculty of Medical Sciences, Cancer Research Center, University of Sri Jayewardenepura, Sri Lanka



De Silva, D.K.M., Dissanayake, D.M.B.M., Thilakarathna, P.K.I.S., Kumara, G.L.S., Shamen, U.J.L., Dharmasiri, W.D.D.S., Rozni, A.G.M., Minna, N.F., **Ubhayawardana, D.L.N.L.** and **Elvitigala, D.A.S.**, 2025. Energy Drinks Consumption Among Undergraduate Students at a Sri Lankan State University. Sri Lankan Journal of Nursing, 4(1).

DOI: <https://doi.org/10.4038/sljn.v4i1.84>

*SLJN, 2025
Vol. 4, No. 1 (pp. 20-37)*

Research Article

Energy Drinks Consumption Among Undergraduate Students at a Sri Lankan State University

De Silva, D.K.M.¹, Dissanayake, D.M.B.M.², Thilakarathna, P.K.I.S.², Kumara, G.L.S.², Shamen, U.J.L.², Dharmasiri, W.D.D.S.², Rozni, A.G.M.², Minna, N.F.², Ubhayawardana, D.L.N.L.³ & Elvitigala, D.A.S.³

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Rathnayake, N., Sundarapperuma, T., Nirmani, P., Wickramarachchi, B., De Silva, K., Herath, P., Dassanayake, D., **Warnakulasuriya, S.** and Persson, M., 2025. Bridging the gap in neurodegenerative disease care: a needs assessment for a Master's program in Sri Lanka. *BMC Research Notes*, 18(1), p.238.

Rathnayake et al. *BMC Research Notes* (2025) 18:238
<https://doi.org/10.1186/s13104-025-07305-0>

BMC Research Notes

RESEARCH NOTE

Open Access



Bridging the gap in neurodegenerative disease care: a needs assessment for a Master's program in Sri Lanka

Nirmala Rathnayake^{1*}, Thamudi Sundarapperuma¹, Pramudika Nirmani¹, Bimba Wickramarachchi¹, Kumari De Silva¹, Prasanna Herath², Damayanthi Dassanayake³, Sudath Warnakulasuriya⁴ and Martin Persson⁵

Dissanayake, D.M.A.P. and **Warnakulasuriya, S.S.P.**, 2025. A critical realist analysis of nursing educators' willingness to learn and teach patient safety in Sri Lanka: Study protocol. *PLoS One*, 20(5), p.e0323561.



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STUDY PROTOCOL

A critical realist analysis of nursing educators' willingness to learn and teach patient safety in Sri Lanka: Study protocol

D. M. A. P. Dissanayake S. S. P. Warnakulasuriya

Published: May 19, 2025 • <https://doi.org/10.1371/journal.pone.0323561>

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Comments

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Argyrides, M., Dasanayake, H.D.W.T., Drevenšek, G., Hagell, P., Jagomagi, T., Kisokanth, G., Nilsen, T., Prasanna, H., Rathnayake, N., **Warnakulasuriya, S.S.P.** and Persson, M., 2025. Enhancing Neurodegenerative Care: Insights From the nEUROcare Training Program Study. *Sri Lankan Journal of Nursing*, 3(2).

Publication date 10/01/2025

SLJN, 2024
Vol. 3, No. 2 (pp. 10-17)

DOI: <https://doi.org/10.4038/sljn.v3i2.57>

Research Article

Enhancing Neurodegenerative Care: Insights From the nEUROcare Training Program Study

Argyrides, M.¹, Dasanayake, H.D.W.T.², Drevenšek, G.³, Hagell, P.⁴, Jagomagi, T.⁵, Kisokanth, G.⁹, Nilsen, T.⁶, Prasanna, H.⁷, Rathnayake, N.⁸, Warnakulasuriya, S.S.P.⁹, & Persson, M.⁴

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⁷ Department of Nursing and Midwifery, Kotelawala Defense University, Sri Lanka

⁸ Department of Nursing, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka

⁹ Department of Clinical Nursing, Faculty of Nursing, University of Colombo, Sri Lanka

Attygalle, D.S.V., De Silva, D.K.M. and Warnakulasuriya, S.S.P., 2025. Prevalence of non-communicable disease risk factors and health-promoting lifestyle profiles, and Associations of nursing students in selected Schools of Nursing in the Western Province, Sri Lanka. *medRxiv*, pp.2025-04.

medRxiv

THE PREPRINT SERVER FOR HEALTH SCIENCES

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Prevalence of non-communicable disease risk factors and health-promoting lifestyle profiles, and Associations of nursing students in selected Schools of Nursing in the Western Province, Sri Lanka

Dona Samantha Vajiramali Attygalle,  Dewarahandi Kavishka Madushan De Silva,

 Sudath Shirley Pathmasiri Warnakulasuriya

doi: <https://doi.org/10.1101/2025.04.25.25326095>

This article is a preprint and has not been peer-reviewed [what does this mean?]. It reports new medical research that has yet to be evaluated and so should not be used to guide clinical practice.

Kisokanth, G., Banu, M.T.I., Ranaweera, R.A.N.D. and Warnakulasuriya, S.S.P., 2025. Perceptions of Educational Environment among Nursing Undergraduates at the Faculty of Nursing, University of Colombo, Sri Lanka. *Education in Medicine Journal*, 17(2), pp.51-67.



ORIGINAL ARTICLE
Volume 17 Issue 2 2025
DOI: 10.21315/eimj2025.17.2.5

ARTICLE INFO
Submitted: 02-04-2024
Accepted: 10-03-2025
Online: 30-06-2025

Perceptions of Educational Environment among Nursing Undergraduates at the Faculty of Nursing, University of Colombo, Sri Lanka

Gnanaselvam Kisokanth¹, Mohamad Thamby Ismath Banu², Ranaweera Arachchillage Nadini Disala Ranaweera³, Sudath Shirley Pathmasiri Warnakulasuriya¹

¹Department of Clinical Nursing, Faculty of Nursing, University of Colombo, Nugegoda, SRI LANKA
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³Department of Fundamental Nursing, Faculty of Nursing, University of Colombo, Nugegoda, SRI LANKA

Kumarasinghe, H.S., **Gunathilaka, T.L., 2025.** The Role of Seaweed Derived Bioactive Compounds in Preventing Cellular Senescence and Aging. *Natural Product Communications*. 20(6). doi:10.1177/1934578X251350769

Marine Algae Compounds in Human Welfare – Review

The Role of Seaweed Derived Bioactive Compounds in Preventing Cellular Senescence and Aging

Natural Product Communications
Volume 20(6): 1-14
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DOI: 10.1177/1934578X251350769
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Hiruni S Kumarasinghe¹ and Thilina L Gunathilaka² 

Abstract

Aging is a major risk factor for many chronic diseases, including cancer, cardiovascular disease, and diabetes. The basic causes of aging are not fully known; nonetheless, extensive research indicates that several key biological pathways play critical roles in controlling the process. These proteins include the sirtuin family, AMP-activated protein kinase (AMPK), insulin-like growth factor (IGF), autophagy processes, and nuclear factor erythroid 2-related factor 2 (Nrf2). Targeting these pathways with genetic therapies or dietary changes has been proven to increase longevity and slow aging-related decline. Seaweeds are high in nutrients, such as dietary fiber, polyunsaturated fatty acids, vitamins, minerals, and bioactive substances. They are known for their health benefits, such as antioxidant, anti-inflammatory, and anti-obesity activities. Notably, recent studies have indicated that extracts or isolated compounds like fucoidan, fucoxanthin, phlorotannin and carotenoids from seaweeds can positively influence these aging-regulating pathways. Certain seaweed-derived compounds have been shown to activate sirtuins, enhance AMPK activity, modulate IGF signaling, promote autophagy, and upregulate Nrf2 pathways, all of which are associated with extended lifespan and improved health span in various animal models. So, this review focuses on the potential anti-aging bioactive substances found in seaweeds, emphasizing studies conducted on cellular and animal models and their underlying anti-aging mechanisms.

Gunathilaka, T. L., Kumarasinghe, H. S., Bandaranayake, U. E., Athapaththu, M., Samarakoon, K. W., Ranasinghe, P., & Peiris, L. D. C. (2025). Integration of In Vitro and In-Silico Analysis of *Gracilaria edulis* on Anti-Cancer Potential and Apoptotic Signaling Pathway Activity. *Cell Biochemistry and Biophysics*. <https://doi.org/10.1007/s12013-025-01685-7>.

Cell Biochemistry and Biophysics
<https://doi.org/10.1007/s12013-025-01685-7>

ORIGINAL PAPER



Integration of In Vitro and In-Silico Analysis of *Gracilaria edulis* on Anti-Cancer Potential and Apoptotic Signaling Pathway Activity

Thilina Lakmini Gunathilaka^{1,7} · Hiruni S. Kumarasinghe² · U. E. Bandaranayake³ · Maheshi Athapaththu⁴ · Kalpa W. Samarakoon⁵ · Pathmasiri Ranasinghe⁴ · L. Dinithi C. Peiris⁶

Accepted: 23 January 2025

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Abstract

Breast cancer, the most common malignancy in females, and rhabdomyosarcoma (RMS), the most prevalent soft tissue sarcoma in children, remain significant clinical challenges. This study evaluated the anticancer potential and apoptotic signaling pathways of *Gracilaria edulis* extracts and identified their mechanisms of action against RMS and breast adenocarcinoma (MCF-7) cell lines. Cytotoxicity was assessed using MTT assays, while apoptotic potential was evaluated through phase contrast and fluorescence microscopy, caspase 3/7 activity, DNA fragmentation, and gene expression analysis of apoptosis regulatory genes. In silico analysis was also performed to examine the molecular interactions of bioactive

Farween, M., Shamla, M., Ariyapala, I., Shahana, M., Poornima, R., De Silva, U., Rathnayake, R., Ranasinghe, P., & **Gunathilaka, M.D.T.L.** (2025). Determination of Glycemic index and the consumer preference of *Borassus flabellifer* treacle as an alternative sweetener among a selected group of undergraduates in Sri Lanka. *Sri Lankan Journal of Applied Sciences*, 3(2),36–40.

SLJoAS

*Sri Lankan Journal of
Applied Sciences*

Research Article

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Determination of Glycemic index and the consumer preference of *Borassus flabellifer* treacle as an alternative sweetener among a selected group of undergraduates in Sri Lanka

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Gunathilaka, T. L., & Kumarasinghe, H. S. (Eds.). (2025). Seaweeds as Silent Healers: Insight into the Pharmacological Potential of Marine Algal Metabolites. Cambridge Scholars Publishing. ISBN: 978-1-0364-184

Seaweeds as Silent Healers:

Insight into the Pharmacological Potential of Marine Algal Metabolites

Edited by

Thilina L. Gunathilaka
and Hiruni S. Kumarasinghe

Cambridge
Scholars
Publishing



Special Events

පැදිර 2025- Faculty of Nursing, University of Colombo



The event “පැදිර 2025”, was successfully held on 23rd June 2025 from 4:00 pm onwards at the open auditorium of the faculty with the participation of the students of all batches, academic and non-academic staff.



The event was designed as a traditional Paduru Party, featuring rustic decorations and mats (paduru) to recreate a classic Sri Lankan music night, creating a warm and musical atmosphere. The program commenced with a welcome speech by the Dean of the Faculty of Nursing, followed by an introduction to the cultural significance of the Paduru Party by the event organizer.



The evening included musical performances by students, academic staff, and non-academic staff, showcasing their talents, as well as a cultural dance segment featuring classical Sri Lankan dances. Logistics were carefully managed, including traditional seating arrangements, ambient lighting, decorations, and a fully equipped sound system with microphones and musical instruments.





The event was self-funded through contributions from academic and non-academic staff. Overall, පැළුර 2025 successfully promoted cultural engagement, strengthened community interaction within the Faculty, and provided an opportunity to celebrate Sri Lankan musical and dance heritage while highlighting the talents of students and staff alike. The event concluded with closing remarks and a vote of thanks, by Ms.H.S. Senarathne as the program coordinator, acknowledging the contributions of all participants and organizers.





Programme coordinator

Ms H.Shereen Senarathne, Lecturer (Probationary), Dept. of Clinical Nursing)

Organizing Committee members

Ms. Nadini Ranaweera, Lecturer (Probationary), Dept. of Clinical Nursing

Ms. Ishara Fernando Senanayake, Assistant Librarian, Faculty of Nursing

Students' union (especially art committee members)

Submitted by

Ms. H. Shereen Senarathne

Programme coordinator

පැළෑටි 2025

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