INTERNATIONAL RESEARCH CONFERENCE IN HEALTH SCIENCES 2026

Innovative and integrated healthcare for all

Book of Proceedings

15th & 16th July 2026

Faculty of Allied Health Sciences
University of Sri Jayewardenepura

Faculty of Allied Health Sciences
University of Sri Jayewardenepura

International Research Conference in Health Sciences 2026

"Innovative and integrated healthcare for all"

15th and 16th July 2026

University of Sri Jayewardenepura, Sri Lanka

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Message from the Vice-Chancellor, University of Sri Jayewardenepura



I am delighted to convey this congratulatory message for the "International Research Conference in Health Sciences 2026 (IRCHS 2026)", the annual research conference of the Faculty of Allied Health Sciences, University of Sri Jayewardenepura.

The theme of this year's conference, "Innovative and integrated healthcare for all " emphasizes the importance of novel innovations in the healthcare sector. Research in allied health sciences is a necessity for the development of healthcare setting of any country, and it is one of the best ways by which academics can serve the people of the country.

It gives me great pleasure to see academics of the Faculty of Allied Health Sciences taking the maximum benefit out of these opportunities as well. I would like to thank all the international speakers, resource persons and authors for sharing their expertise and valuable experiences in research and dedicating their valuable time and effort to join us at the International Research Conference in Health Sciences 2026.

I wish to extend my sincere thanks to the Former Dean, Present Dean, Chairperson and the Research Committee and the staff of the Faculty of Allied Health Sciences for their immense contribution to make this academic event a great success. I sincerely hope all participants will make the best out of this wonderful opportunity.

Senior Professor Pathmalal M. Manage
B.Sc. (Hons.), M.Sc. (Japan), Ph.D. (Japan), C.Biol.
Vice-Chancellor
University of Sri Jayewardenepura
Gangodawila, Nugegoda, Sri Lanka

Message from the Dean
Faculty of Allied Health Sciences
University of Sri Jayewardenepura



It is with great pleasure that I present this message for the proceedings of the sixth International Research Conference in Health Sciences (IRCHS)- 2026, organized by the Faculty of Allied Health Sciences (FAHS). As the Dean of the Faculty of Allied Health Sciences at the University of Sri Jayewardenepura, I am truly honored to host this prestigious event for the sixth consecutive year. The theme for IRCHS 2026, "Innovative and integrated healthcare for all," underscores the critical role of scientific inquiry in addressing pressing health concerns worldwide.

Since the inception of the research conference in 2021, IRCHS has served as a dynamic platform for researchers, academics, and practitioners to exchange knowledge, collaborate, and drive forward meaningful advancements in health sciences. This year, the enthusiasm for research has been outstanding; we received more than 120 abstracts, of which 109 were accepted after a rigorous review process for oral and poster presentations. These invaluable findings will be shared under diverse and impactful themes, including Nursing Management and Health Promotion, Nursing Education, Laboratory diagnostics, Health and Nutrition, Pharmacy Practice, Drug Discovery and Formulation, and Research in Natural Products. By fostering discussions and sharing this groundbreaking research, we aim to contribute to innovative solutions that enhance healthcare practices.

A key highlight of this year's scientific program is the symposium on "Innovative and integrated healthcare for all," which will be facilitated by four eminent speakers who will enlighten us on clinical pharmacy, nursing, and current trends in laboratory diagnosis. We are also privileged to have Professor Amanda Wheeler delivering the keynote speech on "Outcome-based learning: Overview of Entrustable Professional Activities in health education," as well as Professor A.M.B. Priyadarshani delivering the Faculty of Allied Health Sciences Oration under the title "From Diet to Diagnosis: Navigating the Biochemical continuum from Carotenoids to Clinical Laboratory Diagnostics". Their insights will undoubtedly provide valuable perspectives to all participants and inspire further research and innovation.

Additionally, as we celebrate remarkable milestones this year, including the successful publication of Volume 6 of our biannual Journal in Health Science Research, this conference serves as a vital extension of our faculty's expanding research capacity and academic drive.

I extend my heartfelt gratitude to the esteemed international professionals, keynote speakers, and panelists for their invaluable contributions. I also commend the organizing committee for their relentless dedication to making IRCHS 2026 a reality. As we gather to share knowledge and explore solutions, I encourage all participants to engage in thought-provoking discussions and build meaningful collaborations that will drive positive change in global healthcare.

I wish IRCHS 2026 every success and look forward to its impact on the future of health sciences.

Professor D.I. Uluwaduge
Dean - Faculty of Allied Health Sciences
University of Sri Jayewardenepura

Message from the Chairperson
Research Committee, Faculty of Allied Health Sciences



It is my great pleasure to present the conference proceedings of the International Research Conference in Health Sciences 2026, organized under the theme **"Innovative and Integrated Healthcare for All."** This theme embodies our collective commitment to advancing healthcare through innovation, multidisciplinary collaboration, and evidence-based research to improve health outcomes for individuals and communities.

The overwhelming response to the symposium reflects the growing enthusiasm for research and scholarly collaboration within the health sciences. We were privileged to receive approximately 120 abstracts from researchers, academics, healthcare professionals, and students representing diverse disciplines. Each submission underwent a rigorous peer-review process, and the accepted abstracts have been included in these proceedings. The high quality and diversity of the research presented are a testament to the dedication and scientific excellence of the contributors.

The scientific programme has been organized into seven thematic tracks, covering a broad spectrum of health sciences, including nursing management and health promotion, nursing education, laboratory diagnostics, health and nutrition, research in natural products**,** drug discovery and formulation, and pharmacy practice. These tracks provide an excellent platform for sharing new knowledge, fostering interdisciplinary collaboration, and promoting innovative approaches to contemporary healthcare challenges.

We are deeply honoured that our distinguished orator, guest of honour, keynote, and symposium speakers will be sharing their expertise, experience, and insights. Their valuable contributions will enrich the scientific programme and enhance the academic quality of the symposium. We sincerely thank them for accepting our invitation and for their willingness to contribute to the advancement of healthcare through the dissemination of knowledge and innovation.

Many individuals' dedication and collaborative efforts have made the publication of these proceedings possible. I wish to express my heartfelt appreciation to all reviewers for their careful and constructive evaluations, which have ensured the scientific quality of the abstracts included in this volume.

I extend my sincere gratitude to our respected Dean for the visionary leadership, continuous encouragement, and steadfast support that made this symposium possible. The Dean's commitment to fostering research excellence has been instrumental in the success of this event.

I extend my sincere appreciation to the conference secretaries for their exceptional commitment and meticulous coordination throughout the planning of the symposium. I also acknowledge the invaluable contributions of the members of the research committee**,** scientific committee, and all subcommittees**,** whose tireless efforts ensured the integrity and quality of the conference.

I gratefully acknowledge the faculty members from the Departments of Nursing and Midwifery, Pharmacy and Pharmaceutical Sciences, Medical Laboratory Sciences and Optometry for their enthusiasm, expertise, and unwavering support. Their collaborative efforts have greatly contributed to the success of this event.

Finally, I congratulate all authors whose work appears in these proceedings. Your valuable contributions enrich the scientific community and demonstrate the importance of research in advancing innovative and integrated healthcare.

I trust that these proceedings will serve as a valuable resource for researchers, educators, healthcare professionals, and students, fostering continued collaboration, inspiring future research, and contributing to improvements in healthcare practice.

On behalf of the Research Committee, I thank everyone who contributed to the success of this conference and wish all participants a productive and inspiring scientific meeting.

Dr. Abarna Nadeshkumar
Conference Chair 2026
Faculty of Allied Health Sciences
University of Sri Jayewardenepura

Faculty of Allied Health Sciences Oration

From diet to diagnosis: Navigating the biochemical continuum from carotenoids to clinical laboratory diagnostics

Professor A.M.B. Priyadarshani
(B.Sc. Special Human Biology (Biochemistry Specialization), PhD (Biochemistry))
Professor in Medical Laboratory Sciences
Department of Medical Laboratory Sciences
Faculty of Allied Health Sciences
University of Sri Jayewardenepura, Sri Lanka



Vitamin A deficiency has long been recognized as a major public health concern in Sri Lanka, with national nutrition surveys demonstrating that a substantial proportion of preschool children suffered from inadequate vitamin A status. As inadequate dietary intake was identified as the principal underlying cause of vitamin A deficiency, our research focused on evaluating the provitamin A carotenoid content of fruits and vegetables that are locally available throughout the year in Sri Lanka.

Comprehensive analyses of carotenoid composition revealed that carrot and pumpkin variety **'Arjuna'** are among the richest natural sources of provitamin A carotenoids. Several orange- and yellow-fleshed sweet potato varieties also contained substantial concentrations of β-carotene. Yellow-fleshed papaw was identified as an important dietary source of provitamin A carotenoid. In contrast, ripe jackfruit contained only trace amounts of provitamin A carotenoid, and palmyrah fruit possessed negligible quantities despite their characteristic yellow to orange pigmentation.

Recognizing that the nutritional value of provitamin A carotenoids depends not only on their content in foods but also on their bioaccessibility, the research further investigated the effects of traditional Sri Lankan household cooking practices on carotenoid bioaccessibility. Using an ***in vitro*** gastrointestinal digestion model, the studies demonstrated that heat treatment combined with the incorporation of dietary fat, particularly coconut milk, significantly enhanced carotenoid bioaccessibility. Consequently, vegetable curry preparations made with coconut milk provided a substantially greater contribution to the recommended daily allowance of vitamin A.

Maturation of *Lasia spinosa* stems resulted in a marked increase in provitamin A carotenoid content, while storage of orange- yellow-fleshed sweet potatoes under ambient conditions

stimulated post-harvest carotenogenesis, leading to a more than two-fold increase in β-carotene level.

The research further extended to the clinical implications of excessive dietary carotenoid intake through the investigation of infants presenting with yellowish skin discoloration. Comprehensive biochemical analyses confirmed the diagnosis of **hypercarotenemia**. Dietary assessments and serum analysis revealed that frequent consumption of carotenoid-rich foods, particularly carrot, papaw, and pumpkin, was the primary cause of the hypercarotenemia.

The second phase of the research transitioned from nutritional biochemistry to **clinical biochemistry**, with a focus on improving the analytical quality and reliability of medical laboratory investigations that underpin patient diagnosis and clinical decision-making.

Initial studies focused on serum creatinine measurement, a key biomarker for the assessment of renal function. Comparative evaluations demonstrated that **serum is the preferred specimen for creatinine estimation**, while investigations into bilirubin interference confirmed that the **creatinase enzymatic assay provides greater analytical accuracy** than the conventional Jaffe method, particularly with normal to moderately elevated bilirubin concentrations. However, the study also showed that at very high bilirubin concentrations, even the enzymatic assay may underestimate creatinine levels. Plasma separated immediately after blood collection was identified as the preferred specimen for the simultaneous determination of sodium (Na^+), potassium (K^+), chloride (Cl^-), and ionized calcium (iCa^{2+}). Studies on serum albumin stability demonstrated that **albumin should ideally be measured in serum separated immediately after blood collection.** When immediate analysis is not feasible, storage at **4°C for up to 24 hours** preserves stability more effectively than storage at ambient temperature for 6 hours. However, storage at **−20°C for 48 hours** is **not recommended**, as it compromises serum albumin stability. Exposure to sunlight produced a significantly greater reduction in bilirubin concentrations than exposure to artificial light, with unconjugated bilirubin being particularly susceptible to photodegradation. Furthermore, total, direct, and indirect bilirubin concentrations remained stable for **up to 24 hours at 4°C** and for **up to 2 hours at 33°C.**

The final component of the research investigated the relationship between **body mass index (BMI)** and selected serum biochemical markers among apparently healthy adults to better understand the biochemical alterations associated with increasing adiposity. The findings demonstrated that serum liver enzymes (ALT, AST, and GGT) and uric acid concentrations increased progressively with increasing BMI, with the highest levels observed among obese individuals and the lowest levels among the underweight group. A particularly significant finding was the identification of a strong inverse relationship between BMI and serum total bilirubin concentration. This observation led to the development of a mathematical model capable of predicting serum bilirubin concentrations from BMI.

Keynote Speech

Innovative and integrated healthcare for all

Professor Amanda Wheeler
Professor of Mental Health at Griffith University, Australia, registered pharmacist

Outcome-based learning: overview of Entrustable Professional Activities in health education



Health professional programs provide students with opportunities to undertake Work Integrated Learning (WIL) placements. WIL is a critical component of student training designed to support them actively apply their learning into real-world tasks; developing professional capability (or competency) through participation, reflection and contribution in addition to observation.

Entrustable professional activities (EPAs) appeared in the literature around 2005, introduced by Olle ten Cate in medical education (1), and are defined as being "a unit of professional practice (a task or group of tasks) that can be fully entrusted to a trainee, as soon as he or she has demonstrated the necessary competence to execute this activity unsupervised" (2). EPAs extend competency-based health professional education to the assessment or evaluation of a trainee or learner undertaking observable professional activities. A supervisor is able to assess the trainee/learner demonstrating the required competency to the level that they are trusted to execute the task or activity safely and successfully without being supervised or observed in practice (3-5).

EPAs are structured descriptions of activities and tasks undertaken by competent professionals in the work setting and form an integral part of workplace-based assessments for health professional undergraduate education and entry-level education to becoming a qualified health professional e.g. the year following graduation with allied health, nursing, pharmacy or medical degree (internship). EPA use is reported in the literature globally including UK, Europe, USA, Canada, and Australia, across an increasing range of health professions including medicine, pharmacy, dietetics, physiotherapy, nursing, speech pathology, and dietetics.

This presentation will discuss entrustment as the core focus for prospective assessment of a health professional trainee's readiness to practice, work-place based assessments to inform entrustment decisions, levels of entrustment aligned with task performance and levels of supervision, and implementation of an EPA-based curriculum in academic and healthcare settings as part of professional practice. Examples from Australian EPA-based programs in

pharmacy student education, and pharmacy and medical intern practice will be integrated into the presentation with resources and tips for developing and implementing an EPA framework in practice

References:

1. ten Cate O,. Entrustability of professional activities and competency-based training. Medical Education 2005; 39:1176-1177.
2. ten Cate O, Carraccio C, Damodaran A, Gofton W, Hamstra S, Hart D, Richardson D, Ross S, Schultz K, Warm E, Whelan A, Schumacher D. Entrustment decision making: extending Miller's pyramid. Academic Medicine 2021;96:199-204.
3. ten Vate O, Scheele F. Competency-based postgraduate training: can we bridge the gap between theory and clinical practice? Academic Medicines 2007;82(6):542-547.
4. ten Cate O, Chen H, Hoff R, Peters H, Bok H, van der Schaaf M. Curriculum development for the workplace using Entrustable Professional Activities (EPAs): AMEE Guide No. 99. Medical Teacher 2015; 7(11):983-1002.
5. ten Cate O, Tobin S, Stokes ML. Bringing competencies closer to day-to-day clinical work through entrustable professional activities. Medical journal of Australia 2017;206(1):14-16.

Scientific Programme – IRCHS 2026
16th July 2026

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Prof. Nirmala Rathnayake</td></tr>
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Prof. Menaka Hapugoda</td></tr>
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<tr><td>04.00 p.m.– 4.30 p.m.</td><td colspan="3">Awards Ceremony, Vote of Thanks and Closing Remarks
(Senate Board Room)</td></tr>
</table>

Symposium on
"Innovative and integrated healthcare for all"



Professor Ian Coombes
BPharm, MSc, PhD, Adv. Pract Pharm
School of Pharmacy
University of Queensland
Australia



Dr Judith Coombes
Adjunct Senior Lecturer
School of Pharmacy
University of Queensland
Australia



Professor Nirmala Rathnayake
BSc in Nursing, SJP;
PhD in Nursing RUH
Department of Nursing
Faculty of Allied Health Sciences
University of Ruhuna



Professor Menaka Hapugoda
Molecular Medicine Unit
Faculty of Medicine
University of Kelaniya

Research perspectives in pharmacy practice



Professor Ian Coombes
BPharm, MSc, PhD, Adv. Pract Pharm
School of Pharmacy, University of Queensland

Australia's two Leading professional bodies set an agenda for pharmacy practice research. These areas include expanded scope of practice. Such as working in areas such as emergency and trauma centers and outpatient clinics and pre admission clinics. In all of these areas pharmacists have an increasing scope of practice and therefore responsibility for their performance, their role within the team and their interaction with patients.

The areas of the healthcare service that is a national and in fact global challenge as part of WHO commitment is medication safety and in particular the yea caution of patients from home to hospital and back to their home.

I will share my research associated with three expanded roles of pharmacy practice within transitions of care. Nationally funded remain home study which demonstrated the benefit of placing pharmacists in GP primary care practices and reducing unplanned readmissions to hospital. The MRFF funded ASPIRE project that is intended to illustrate if post discharge home medication review after a patient's discharge will also prevent patients re admissions. The third nationally funded project is RECARD which is targeting patients after an acute coronary event identified as being at high risk of readmission for a patient centered post discharge support initiative.

Other research will describe the benefits of standard systems for prescribing which have been developed with doctors and nurses after analysis of medication errors.

The third area of research is associated with the use of competency based evaluation and feedback which significantly improves the performance of pharmacy nursing and medical staff.

Research perspectives in pharmacy practice



Dr Judith Coombes
Adjunct Senior Lecturer, School of Pharmacy, University of Queensland

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Leading change: Nursing's contribution to innovative and integrative health care



Professor Nirmala Rathnayake
Professor
BSc in Nursing, SJP; PhD in Nursing RUH
Department of Nursing, Faculty of Allied Health Sciences
University of Ruhuna

Healthcare systems worldwide are undergoing rapid transformation driven by technological advancement, demographic transitions, emerging health threats, increasing chronic disease burdens, and growing demands for equitable, accessible, and person-centred care. In this changing landscape, nurses, as the largest group of healthcare professionals globally, are uniquely positioned to lead healthcare transformation. Nursing's contribution to innovative and integrative healthcare encompasses technological innovation, digital health, interdisciplinary collaboration, education, research, evidence-based practice, leadership, and the advancement of health equity.

Innovation in nursing extends beyond the adoption of technology to include creative and contextually relevant approaches that improve health outcomes, strengthen care delivery, and address complex healthcare challenges. The increasing use of digital technologies, telehealth, artificial intelligence, and clinical decision-support systems highlights the need to strengthen digital literacy, informatics competencies, and technological adaptability among nurses. At the same time, integrative healthcare requires effective interdisciplinary collaboration that addresses the physical, psychological, social, cultural, environmental, and spiritual dimensions of health and wellbeing.

The evolution of university-based nursing education in Sri Lanka has contributed significantly to the development of nurses as clinicians, educators, researchers, leaders, and policymakers. Strengthening nursing research and evidence-based practice is essential for generating contextually relevant knowledge, improving patient outcomes, informing healthcare policy, and translating evidence into practice. Research and collaborative initiatives in women's health, healthy ageing, sarcopenia, chronic disease, and palliative care demonstrate the growing contribution of Sri Lankan nurses to innovative and evidence-informed healthcare solutions.

Empowered nurses with strong clinical, research, digital, leadership, and collaborative competencies are essential for building equitable, integrated, person-centred, and sustainable health systems. Continued investment in nursing education, research capacity, professional leadership, innovation, and interprofessional collaboration is therefore vital to advancing healthcare in Sri Lanka and beyond. By leading change through evidence, innovation, and compassionate practice, nurses can contribute significantly to improving health outcomes, strengthening health systems, and advancing health equity for individuals, families, and communities.

Advanced molecular diagnostics for Vector-Borne Diseases (VBDs)



Professor Menaka Hapugoda
Molecular Medicine Unit, Faculty of Medicine, University of Kelaniya

Diseases that are spread by Arthropod or small animal vectors are named as Vector-Borne Diseases (VBD). Vectors act as the main mode of transmission of infection from one host to another. They form an essential stage in the transmission cycle. Diagnosis of VBDs is based on exposure history, clinical presentation and laboratory findings. Molecular diagnosis is important for early, rapid and definitive laboratory diagnosis of VBDs which will facilitate proper management of patients. Further, molecular assays can be used for strain identification which is important for epidemiological studies. Polymerase Chain Reaction (PCR), Isothermal amplification-based tests, DNA microarray, Next Generation Sequencing (NGS) and CRISPR Cas 12/13 are important molecular assays. Multiplex single tube quantitative PCR is becoming popular for molecular diagnosis of VBDs. Isothermal amplification-based tests namely Loop-Mediated Isothermal Amplification (LAMP) and Recombinase Polymerase Amplification (RPA), amplify target DNA using a single temperature which are useful for rural areas where there are no thermocyclers, thus reducing the costs. Integrated isothermal RPA-CRISPR will be another novel method where RPA and CRISPR function as the amplification engine and specificity filter respectively. Therefore, RPA-CRISPER will enable rapid, sensitive and highly specific detection.

Oral Presentations

1. **OP 01: Knowledge, intended responses and perceived barriers related to experiencing myocardial infarction symptoms among patients attending a selected hospital in Colombo District, Sri Lanka**

Perera P [1], Goonewardena S [2,3]
[1]*Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka*
[2]*Non-Communicable Diseases Research Centre, University of Sri Jayewardenepura, Nugegoda, Sri Lanka*
[3]*Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka*

2. **OP 02: Health-related quality of life and associated factors among government school teachers of selected schools in the Homagama Education Division, Sri Lanka**

Sanjaya HWL, Damayanthi LC
Department of Nursing and Midwifery, University of Sri Jayewardenepura

3. **OP 03: Nurses' attitudes and associated factors related to patients' family involvement in nursing care among nurses working in the Neuro Trauma Unit at the National Hospital of Sri Lanka**

Keshani WM [1], Amarasekara AATD
Department of Nursing and Midwifery, University of Sri Jayewardenepura, Nugegoda

4. **OP 04: Knowledge and associated factors on patient fall prevention among nursing officers in Sri Jayewardenepura General Hospital (SJGH), Sri Lanka**

Malsha AS[1], Ranasinghe RDS[2]
[1]*Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura.*
[2]*Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura*

5. **OP 05: Employability and career outcomes of nursing graduates: Findings from a tracer study at the University of Sri Jayewardenepura, Sri Lanka**

Rathnayake BAMD, Amarasekara AATD
Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura.

6. **OP 06: Factors associated with post-stroke leisure time activities among patients attending follow-up clinics in the National Hospital, Galle**

Randeniya KKL, Sulochana GPK, Vathsala BVV, Kariyawasam GPN, Dias MPHK
Department of Nursing, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka

7. **OP 07: Measuring healthcare educators' readiness for simulation-based learning: Development and validation of a new scale based on a preliminary study**

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8. **OP 08: Nurses' attitudes and perceived barriers regarding preceptorship at Sri Jayewardenepura General Hospital, Sri Lanka**

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9. **OP 09: Respiratory functions of traffic control police officers in Colombo, Sri Lanka**
Farniz AA[1], Bandara WMAK[1], Perera PGAM[1], Harishkanth V[1], Gunawardhana RGUN[1], Gunawardana KDSH[1], Jayaweera GU[2]
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10. **OP 10: Self-reported impact of violent video games and cartoons on education among school children in a selected school in Jaffna education division**
Aathirai M, Lalitha Meegoda MKD
Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka.

11. **OP 11: Validity and reliability of the Sinhala version of the Global Inter-professional Therapeutic Communication Skills Scale among nurses**
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12. **OP 12: Hidden metabolic burden among lean healthy Sri Lankan adults - vitamin D deficiency, insulin resistance, and dyslipidemia**
Dissanayake DMPK[1], Wijayarathna L[3], Wijesinghe DDGM[1], Ravihari KP[1], Weerasekara JAAUR[1], Weerakoon HTW[1], Weerakoon KGAD[2], Senadheera SPAS[1]
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[3]Department of Physiology, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka

13. **OP 13: The relationship between dietary iron intake, hemoglobin levels, and the severity of cirrhosis in patients at the Colombo North Teaching Hospital, Ragama, Sri Lanka**
Weerathunga UC[1], Adassooriya ALDC[1], Nishrin MRF[1], Dassanayake U[2], Samarasekara TG[3], Rajapaksha DIG[4]
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14. **OP 14: Factors affecting long-term glycemic control among type 2 diabetic patients in a tertiary care hospital clinic in Sri Lanka: a comprehensive institutional-level analysis**
Mathangaweera HH[1], Withanaarachchi A[1], Ekanayake EMS[2]
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[2]National Hospital, Kandy, Sri Lanka

15. **OP 15: The slope of the steepest part of the haemolysis curve: a novel osmotic fragility test-based parameter in assessing red blood cell storage stability**
Jayalath STD, Halgahawaththa HWIN, Gurubevila GLCV and Darshana LGT
Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka

16. **OP 16: Salivary pH and blood leukocyte changes attributed to plaque accumulation in patients undergoing fixed orthodontic treatment**
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[2]Department of Community Dental Health, Faculty of Dental Sciences, University of Peradeniya
[3]Department of Oral Pathology, Faculty of Dental Sciences, University of Peradeniya

17. **OP 17: Tissue response patterns of three common zoonotic parasitic infections in Sri Lanka: Leishmania donovani, Dirofilaria repens, and Rhinosporidium seeberi**

Ratnayake RMSM[1], De Silva WAPP[1], Vithanage A[2]
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[2]*Department of Pathology, National Hospital, Kandy, Sri Lanka*

18. **OP 18: Characterization of sugar-fermenting bacteria from Tecoma stans floral nectar and assess their fermentation potential in kithul treacle for food preservation**

Perera EWBK, Jayasuriya TL, Silva UBK, Samarakkody AHA, Ravi K, Sewwandi PA, and Dharmasiri RBN
Faculty of Life and Medical Sciences, BMS Campus, Colombo 06, Sri Lanka

19. **OP 19: Characterization of epiphytic yeast from underutilized sapodilla (*Manilkara zapota*) and its potential on fermented beverage production**

Serasinghe TC, Mummullage SA, Shafqat HM, Vincent LM, Arachchi GJB, Hettithanthrige OV, Fernando SN, Suriyaarachchi DT, Sewwandi PA,Dharmasiri RBN
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20. **OP 20: Development of green tea extract-incorporated wheat bread with enhanced functional properties**

Kularatne BUT, Jayasinghe MA
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21. **OP 21: Cytogenetic evaluation of areca catechu (arecanut)–induced toxicity using the Allium cepa assay**

Attanayake MASM[1], Suresh S[2], Chandrika UG[2], Dias G[3], Mahawithanage S[2], Jeewandara C[1], Karunarathna KAAU[4]
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22. **OP 22: Body size orientation and related eating behaviors among adolescent schoolchildren in Galle District, Sri Lanka**

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Department of Community Medicine, Faculty of Medicine, University of Ruhuna, Sri Lanka

23. **OP 23: Fabrication of Halochromic Polysaccharide-Based Intelligent Packaging Films for real-time food freshness detection**

GHP Ganegoda[1], Danushika C Manatunga[1], KK Asanka Sanjeewa[1], KGLR Jayathunge[1], Renuka Nilmini[2], Rohan S Dassanayake[1]
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24. **OP 24: Antibiotic use in a selected paediatric ward in a teaching hospital in Colombo District, Sri Lanka**

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[2]*Department of Paediatrics , Faculty of Medical Sciences, University of Sri Jayewardenepura*

25. **OP 25: Awareness and disposal practices of medication waste among patients attending the teaching hospital in Jaffna, Sri Lanka**

Sivakaran M, Nadeshkumar A, Herath HMDR, Senadheera GPSG
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26. **OP 26: A retrospective audit of antipsychotic prescription patterns in a teaching hospital in Sri Lanka**

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27. **OP 27: Inpatient antibiotic consumption and availability during 2020 - 2024 in selected hospital in Sri Lanka**

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28. **OP 28: Medication management issues and barriers to medication management among older patients (above 70 years) with hyper-polypharmacy attending the cardiology clinic in a selected teaching hospital in Sri Lanka**

Nethmini KAM, Samaranayake NR
Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura

29. **OP 29: *Assessment of redundant antibiotic coverage in selected medical and surgical wards of Colombo South Teaching Hospital of Sri Lanka***

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30. **OP 31: Formulation and evaluation of losartan and metoprolol single- layer combination tablet for treatment of hypertension**

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31. **OP 32: Formulation of nanoemulgel using selected herbal oils available in Sri Lanka**

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[2] *Linda Crnic Institute for Down Syndrome, University of Colorado, Anschutz Medical Campus*

32. **OP 33: Synthesis and evaluation of curcumin-modified silver nanoparticle coatings for antimicrobial and antibiofilm activity on Foley catheters**

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34. **OP 34: *In Vitro* Anti-inflammatory potential and *In Vivo* zebrafish embryo acute toxicity of 3-(4-Hydroxy-3-methoxybenzylidene)indolin-2-one**

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[3]*Department of Chemistry, University of Sri Jayewardenepura, Nugegoda 10250, Sri Lanka*

35. **OP 35: Utilization of *Artocarpus heterophyllus* seed starch, *Artocarpus heterophyllus* fruit mucilage, and *Cucumis sativus* peel pectin as film forming agent in tablet coating**

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Poster Presentations

1. **PP 01: Awareness and knowledge on breast cancer and practices on breast self-examination among healthcare students from selected higher education institutes in Colombo District**

Jeyaseelan K[1*], Silva SDD[1], Fernando SM[1], Karunarathna HMDI [2], Anuruddhika MEU[2]
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2. **PP 02: A predictive analytics framework for estimating recovery time in pneumonia patients**

Wickramarathne UC[1]*, Jayawickrama JPMG[1], Perera GND[2], Tissera PSS[1]
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3. **PP 03: Factors influencing job satisfaction and retention among nursing officers at Base Hospital Homagama, Sri Lanka**

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4. **PP 05: Maternal attitudes and socio-demographic influences on feeding practices of children aged 6–23 months in Rideegama region, Sri Lanka**

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[1]*Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Colombo, Sri Lanka*
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[3]*Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Colombo, Sri Lanka*

5. **PP 06: Mental health, well-being and associated factors among farmers in selected Grama Niladhari divisions in Kurunegala District, Sri Lanka**

Rathnayake RMPN[1]*, Damayanthi LC[1]
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6. **PP 07: Strengthening primary eye care through Optometry: Opportunities in Sri Lanka**

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[4]*Kilimanjaro Christian Medical Centre University, Kilimanjaro, Tanzania*
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7. **PP 08: Knowledge on epilepsy, seizure first aid and associated factors among primary teachers in selected school in Akuressa educational zone, Matara district, Sri Lanka**

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[1]*Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka* [2]*Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka*

8. **PP 09: Prevalence and association between homesickness and well-being among hostel dwelling undergraduates in Faculty of Allied Health Sciences, University of Sri Jayewardenepura**

Sewwandi ME*[1], Meegoda MKDL[1]
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9. **PP 10: Knowledge, attitudes, and practices among parents and guardians regarding early childhood vaccination in the Kandy Municipal area, Sri Lanka**

Gamage GDD[1*], Bagywantha NMYK[1], Jaysinghe PP[2], Sonnadara T[1]
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10. **PP 11: Barriers and facilitators in the implementation of evidence-based fall prevention practices among physiotherapists in Sri Lanka**

Chellapillai FMD [1,2*], Dissanayaka TD [3], Tiedemann A[4], Hill KD[e], Kariyawasam A[2]
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11. **PP 13: Quality of nursing work life among Intensive Care Unit nurses at the National Hospital of Sri Lanka**

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12. **PP 14: Evaluation of partially purified lectins from selected Sri Lankan plants as alternative reagents for ABO blood grouping**

Abdul MAA[1], Naseem PN[1], Ahamed FH[1], Kajenthirasenan L[1], Jeyasingam M[1], Rasaratnam K[1*]
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13. **PP 17: Association between *Helicobacter pylori* infection and endoscopic findings among dyspeptic patients attending the Gastroenterology clinic at Teaching Hospital, Jaffna**

Vithushan V[1], Kolinsan K[1], Kisnujan S[1], Saseevan S[1*], Gnanakarunyan TJ [1], Mark Mithulan FJ[2], Kajendran A[3]
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14. **PP 18: Assessment of hematological parameters and neutrophil-to-lymphocyte ratio as indicators of glycemic control in a selected type 2 diabetes mellitus patients attending a tertiary care hospital, Sri Lanka**

Sankalpana LS[1], Thennakoon TASH[1], Sanjeewani LGNH[1], Shehara LWD[1], Shahmy S[2], Silva FHDS[3] and Withanage ND[1*]
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15. **PP 19: Photocatalytic removal of antibiotic residues from aquaculture systems using bare and modified TiO_2**

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[4]*Department of Multidisciplinary Studies, Faculty of Urban and Aquatic Bioresources, University of Sri Jayewardenepura, Sri Lanka*

16. **PP 20: Total white blood cell count and platelet count as accessible predictors of cardiovascular disease risk among patients attending to medical clinic at a tertiary care hospital in Sri Lanka**

Mendis HRH[1], Senaratne GKM[1], Ahmad ARA[1], Wijesekara GUS[1]*, Matthias AT[2]
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17. **PP 21: Impact of regular blood donation on lipid profile among male blood donors registered at National Blood Center, Sri Lanka**

Shashiprabha GD[1], Kaushalya WKC[1], Raleena MRF[1], Tharuka SHD[1], Galhenage JV[2], Senanayake SD[2], Shakoor JS[2], Shahmy S[3], Withanage ND[1], Senarathne TKRR[1*]
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[3]*National Science and Technology Commission, Sri Lanka*

18. **PP 22: The prevalence and association of asymptomatic microalbuminuria and serum creatinine among female undergraduates residing in hostels of the University of Sri Jayewardenepura**

Dilmini WT[1], Fernando BHSD[1], Wimalarathna WPHA[1*] and Perera PPR[2]
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[2]*Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka*

19. **PP 23: Prevalence of asymptomatic microalbuminuria and kidney function parameters among young adults in Maharagama, Sri Lanka**

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20. **PP 24: Serum protein analysis of *Haemonchus contortus* infected goats using Sodium Dodecyl Sulphate - Polyacrylamide Gel Electrophoresis (SDS-PAGE) technique**

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21. **PP 25: Demographic drivers of bloodstream infections in northern Sri Lanka: insights from a dual-framework statistical approach**

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22. **PP 26: Salivary heavy metal content in patients with periodontal disease**

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23. **PP 27: Correlation between age, osmotic fragility, and mean corpuscular volume among the adults in the community of University of Sri Jayewardenepura**

Gurubevila GLCV*, Halgahawaththa HWIN, Jayalath STD and Darshana LGT
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24. **PP 28: Assessment of haematological parameters in Sri Lankan patients with periodontal diseases- A pilot study**

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25. **PP 29: Overrepresentation of lower respiratory tract pathogens in comorbid-respiratory patients: A retrospective study at the National Institute of Infectious Diseases, Sri Lanka**

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26. **PP 30: Impact of reusable sample cups and delayed analysis on serum phosphate levels**

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27. **PP 31: *In vitro* evaluation of the synergistic effects of *Cinnamomum verum* and *Syzygium aromaticum* extracts combined with vancomycin against methicillin-resistant *staphylococcus aureus***

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[2]*Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Gangodawila, Sri Soratha Mawatha, Nugegoda, Sri Lanka*

28. **PP 32: Impact of cooking and cooling on starch digestibility, gelatinization, rehydration properties, and granular morphology of selected starchy foods**

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29. **PP 33: Investigation of antifungal activity of silver nanoparticles synthesized from *Moringa oleifera* and *Pongamia pinnata* plant extracts against *Candida albicans***

Senadheera SAAD[1], Wijekoon HPSK*[1], Uluwaduge DI[2]
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30. **PP 34: Evaluation of *ex vivo* hepatoprotective activity of different fractions obtained from 70% iso propyl alcohol extracts of *Vernonia cinerea***

Jayasinghe HJ[1], Rukaiya MR[1]*, Shaima MRFH[1], Karunarathna KAAU[2], Suresh TS[3], Hemalika DVD[4]
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[3]*Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura*

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31. **PP 35: *In vitro* evaluation of anticandidal and antioxidant activities of Sri Lankan ginger (*Zingiber officinale* Roscoe) and garlic (*Allium sativum* L.*)* extracts: Individual and combined effects**

Kaveesha BY[1*], Leuke Bandara D[2], Senanayake MRDM[2], Weerasekara SHK[2], Jayatilake JAMS[2], Jayasinghe L[3], Jayasinghe RD[2]
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[3]*National Institute of Fundamental Studies (NIFS), Kandy, Sri Lanka*

32. **PP 36: Effect of commercial bark grade and geographical origin on trans-cinnamaldehyde yield in steam-distilled Ceylon cinnamon with valorization of processing residues**

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[2]*Department of Basic Sciences, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka*

33. **PP 37: An investigation of the synergistic antibacterial activity of Sri Lankan raw honey with *Allium sativum* (garlic)**

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Department of Pharmacy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka

34. **PP 38: Comparative *in vitro* pediculicidal activities of *Azadirachta indica* (Neem), *Citrus aurantiifolia* (Lime), and *Elaeocarpus serratus* (Veralu) leaf extracts**

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35. **PP 39: Effects of heating with garlic, curry leaves, fenugreek seeds and mustard seeds on the *in vitro* antioxidant activity and *in vitro* cholesterol inhibitory activity of coconut oil**

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36. **PP 40: Determination of total alkaloid content, moisture and pH of selected smokeless tobacco and areca nut products in the Maharagama MOH Division**

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37. **PP 41: Phytochemical screening, heavy metal determination and cytotoxicity evaluation of aqueous extract of rhizome of *Musa paradisiaca***

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38. **PP 42: Antibacterial activity and phytochemical quantification of *Cocos nucifera* extracts**

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39. **PP 43: Evaluation of antioxidant properties of *elaeocarpus serratus l.* (ceylon olive) root extracts using *in vitro* methods**

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40. **PP 44: Anticandidal effect against *Candida albicans* and antioxidant properties of Sri Lankan curry leaves (*Murraya koenigii*)**

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41. **PP 45: Ethnobotanical study of the medicinal plants used for rheumatological disorders among patients attending rheumatology clinic in Teaching Hospital Jaffna**

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42. **PP 46: Storage stability assessment and spectroscopic modeling for rapid determination of free fatty acids in desiccated coconut**

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43. **PP 47: Green synthesis and characterization of hydroxyapatite nanoparticles using fenugreek (*Trigonella foenum graecum*) seed extract for flucloxacillin delivery**

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44. **PP 48: Evaluating steric and electrostatic factors governing the self-assembly of 2-pyridylalkylamides**

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45. **PP 50: Identification of stigmasterol as a potential antiviral compound targeting African swine fever virus DNA polymerase X: A comprehensive *in silico* analysis**

Hameem GS[1], Somarathna MSSP[3], Kavindi PHMA[1], Jeyakrishnan HP[2], Ariyasinghe AHTDK[3], Manathunga MJB[1], Adhikari AAHR[1], Ranathunga LN[3]*

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46. **PP 51: Identification of natural compounds from *Brucea javanica* with potential as inhibitors of the African Swine Fever Virus pE296R protein: a study based on computational docking and dynamics**

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47. **PP 52: *In silico* design and characterization of novel sirtuin 1 activator**

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48. **PP 53: *In Silico* identification of Docosane from *Cyclea Peltata* (Kahipiththan) root as a potential inhibitor of Monkeypox Virus E8L protein**

Wijekoon WMHNTK [1], Gunathilake PKHD [2], Jayampathi JANP [2], Adhikari AAHR [1], Manathunga MJB [1], Aberathna WAKL [2], Somarathne MSSP [2], Ariyasinghe AHTDK [2], Ranathunga LN [2 *]

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49. **PP 54: Exploratory computational investigation of Curcumin tautomers and their interactions with Histone Deacetylase 8 (HDAC8)**

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50. **PP 55: *In-silico* druggability assessment of the leaf extract of *Sphagneticola trilobata* (Wedelia) against androgenetic alopecia**

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51. **PP 56: *In silico* screening of *Gymnema sylvestre* compounds, Longispinogenin and Sitakisogenin, as potential inhibitors of African Swine Fever Virus DNA Ligase**

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52. **PP 57: Development and validation of a UV-Visible spectrophotometric method for the assay of Budesonide in aqueous nasal spray for in-process analysis**

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53. **PP 58: Post-marketing pharmaceutical quality surveillance of empagliflozin 10 mg tablets in Sri Lanka**

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54. **PP 59: Antibacterial activity of formulation containing methanolic extracts of *Moringa oleifera* and *Pongamia pinnata* against *Staphylococcus aureus***

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55. **PP 60: Combined antibacterial activity of *Psidium guajava* and *Cinnamomum verum* extracts and their application in an alcohol-free herbal sanitizer**

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56. **PP 61: Evaluation of in-process hold time on assay and microbial limits of salbutamol 400 µg inhalation powder (pre-metered)**

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57. **PP 62: Evaluation of antioxidant and antimicrobial activities of selected medicinal plants for the development of a polyherbal plaster**

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58. **PP 63: Antibacterial Activity of N-Acetylcysteine alone and in combination with selected antibiotics against bacterial species causing urinary tract infections in dogs**

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59. **PP 64: Preliminary study on polyherbal gel formulation containing *Abelmoschus esculentus* (okra pods) and *Salvia hispanica L.* (chia seeds) for oral candidiasis**

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60. **PP 65: Knowledge and awareness of factors contributing to iron deficiency anaemia among married women in Sri Lanka**

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61. **PP 67: Assessment of patient radiation dose in paediatric skull radiography: A descriptive cross-sectional study at a major children's hospital in Sri Lanka**

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62. **PP 68: Green synthesis of iron/bentonite nanocomposite and evaluation of its efficiency in the removal of antibiotic residues from aqueous solution**

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63. **PP 69: Patients' satisfaction on medication counseling by registered pharmacists in the outpatient department of the state hospitals in Jaffna District**

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64. **PP 70: Treatment satisfaction among hemodialysis patients: A descriptive cross-sectional study in hemodialysis clinic, National Institute for Nephrology Dialysis and Transplantation**

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65. **PP 71: Evaluation of the availability of Patient Information Leaflets (PILs) and the quality of information provided on the packaging and PILs of oral paediatric antibacterial suspensions available in Sri Lanka**

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66. **PP 72: Development and validation of device-specific scorecards for the evaluation of patient information leaflets and pictograms of metered dose inhalers and dry powder inhalers**

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67. **PP 73: Assessment of knowledge on food and alcohol-drug interactions among hospital pharmacists in Kandy District: A cross-sectional study**

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68. **PP 74: Public perceptions of community pharmacists and community pharmacy services in Gampaha District, Sri Lanka**

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OP 01

Knowledge, intended responses and perceived barriers related to experiencing myocardial infarction symptoms among patients attending a selected hospital in Colombo District, Sri Lanka

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Background: Timely medical intervention is critical in the management of myocardial infarction (MI). Evidence of patients' knowledge and responses to MI is limited in Sri Lanka.
Objective: To describe knowledge, intended responses and perceived barriers related to experiencing myocardial infarction symptoms among patients attending a selected hospital in Colombo district, Sri Lanka.
Methods: A cross-sectional study was conducted among 250 patients attending a selected hospital in Colombo district, Sri Lanka using systematic random sampling. "Adults aged ≥ 18 years diagnosed with MI" or attending cardiology follow-up for MI related comorbidities for ≥ 6 months were included. Data was collected using a structured, pre-tested and validated interviewer-administered questionnaire. Responses were considered hypothetical. Ethical approval was obtained from the relevant research ethics committee. Descriptive statistics were used for data analysis and chi-square tests were performed to identify associations.
Results: Majority (97.2%) knew to seek immediate care for MI symptoms. However, only (33.2%) identified traveling by ambulance as the fastest transportation method to hospital. Regarding intended responses, most participants (59.6%) indicated that their first action for someone with heart attack symptoms would be to take them to the hospital, followed by call an ambulance (17.6%). Among perceived barriers to timely medical care, delays were mainly due to lack of knowledge (70.8%) about MI and denial of the seriousness of symptoms (53.2%). Lack of knowledge significantly associated with poor educational level ($p = 0.015$), unemployed ($p=0.046$) and poor information about MI ($p= 0.004$) in reasons for delaying medical care.
Conclusions: Despite high knowledge of urgency of immediate care for MI symptoms, gab in practical emergency response knowledge for timely care highlight the need for targeted patient education. Future studies should include diverse communities and assess the influence of prior health education.

OP 02

Health-related quality of life and associated factors among government school teachers of selected schools in the Homagama Education Division, Sri Lanka

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Background: School teachers face occupational stressors that may negatively affect their health-related quality of life (HRQoL). However, evidence on HRQoL among government school teachers in Sri Lanka remains limited.
Objectives: This study assessed HRQoL and associated factors among government school teachers in selected schools in the Homagama Education Division, Sri Lanka.
Methods: Descriptive cross-sectional study was conducted among 220 teachers from four 1AB-grade government schools using a stratified random sampling. Data were collected using a validated questionnaire, including the WHOQOL-BREF and items on demographic, occupational, and health-related factors. Physical activity was assessed as a self-reported yes/no variable. Ethical approval was obtained from the REC of the FMS, USJ, with permission from relevant educational authorities. Data were analyzed using SPSS version26.0. Descriptive statistics including (mean, standard deviation), Pearson's correlation and independent t-tests compared mean HRQoL scores across groups.
Results: Most participants were female (74.1%), and aged 31–50 years. The highest mean score was in the environmental domain (M = 80.77, SD = 13.40), followed by social relationships (M = 72.77, SD = 15.02), psychological health (M = 67.69, SD = 9.29), and physical health (M = 61.41, SD = 8.04). HRQoL showed a strong positive correlation with current health status ($r = 0.470$, $p < 0.01$) and teaching environment satisfaction ($r = 0.621$, $p < 0.01$). Chronic illness, high workload, and poor work-life balance were associated with lower scores in physical and psychological domains No significant differences in HRQoL were found by gender, educational level, or physical activity.
Conclusions: Teachers reported higher environmental and social scores, while physical and psychological health were lower. HRQoL was significantly influenced by health status, teaching environment satisfaction, workload, and chronic illness. Interventions focusing stress reduction, workload management, and health promotion are recommended to improve teachers' well-being.

OP 03

Nurses' attitudes and associated factors related to patients' family involvement in nursing care among nurses working in the Neuro Trauma Unit at the National Hospital of Sri Lanka

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Background: Family involvement is an essential part of family-centered care, improving patients' emotional well-being and recovery. However, nurses' attitudes and associated factors affecting family participation remain underexplored in specialized settings in Sri Lanka.

Objectives: To describe nurses' attitudes related to patients' family involvement in nursing care and to determine the associated factors among nurses working in the Neuro Trauma Unit at the National Hospital of Sri Lanka.

Methods: A descriptive cross-sectional study was conducted among 152 nurses in the Neuro Trauma Unit using stratified random sampling. Eligible participants were nurses with >3 months' experience, excluding those in administrative positions and on leave/training during data collection. Data were collected using a self-administered questionnaire including socio-demographic data and the standardized Family Importance in Nursing Care–Nurses' Attitudes (FINC-NA) instrument, with the author permission. Ethical approval was obtained. Data were analyzed using descriptive and chi-square tests to assess associations.

Results: The findings showed that most participants (55.9%) had supportive attitudes and 21.1% had excellent attitudes related to patients' family involvement in nursing care, while 23% showed less supportive attitudes. Nurses' attitudes were significantly associated with marital status ($p=0.006$), experience in the neuro trauma unit ($p=0.025$), workplace ($p=0.008$), neuro-trauma training ($p=0.036$), and overall job satisfaction ($p<0.001$).

Conclusions: The study emphasizes promoting family-centered care in neuro-trauma settings. Improving nurses' awareness, education, and supportive institutional policies may enhance positive attitudes toward family involvement and patient care quality. However, the single-center, cross-sectional design and small sample size limit generalizability to other settings.

OP 04

Knowledge and associated factors on patient fall prevention among nursing officers in Sri Jayewardenepura General Hospital (SJGH), Sri Lanka

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Background: Patient falls remain a common yet preventable adverse incidents in hospital settings leading to morbidity, extended hospital stays, and increased healthcare costs. Nursing officers play a vital role in fall prevention significantly influencing patient safety outcomes. However, there is limited research assessing nursing officers' knowledge on fall prevention and factors influencing it.
Objectives: This study aimed to assess the level of knowledge of nursing officers regarding patient fall prevention, and to identify the factors associated with knowledge at Sri Jayewardenepura General Hospital (SJGH), Sri Lanka.
Methods: A descriptive cross-sectional study was conducted among 339 nursing officers working in inpatient wards at SJGH using simple random sampling from 10th March to 11th April 2025. Data were collected using a pre-tested, self-administered questionnaire. Statistical analysis was performed using SPSS version 26.0. Knowledge scores were assessed on a 14-point scale and classified as poor (<8.5), moderate (8.5–10.5), and good (>10.5) based on a previously published literature. Associations between knowledge and selected variables were tested using the Chi-square test with a significance level of $p<0.05$.
Results: Participants were mainly female nursing officers (92.6%, n=314) aged 21-40 years (91.1%, n=304) with varied experience and most had no prior fall prevention training (88.2, n=299). Moderate knowledge levels were observed among 60.8% (n= 206) of participants, while only 16.5% (n=56) had good knowledge. Significant associations with higher knowledge were found for age (p=0.004), ward/unit (p=0.003), educational qualifications (p=0.002), prior training on fall prevention (p=0.000), experience of a patient fall (p=0.043) and the time since the last fall incident (p=0.025).
Conclusions: The majority of nursing officers possess moderate knowledge on fall prevention, with only a small proportion demonstrating good knowledge. Factors including age, ward/unit, educational qualifications, prior training and experience with patient falls were significantly associated with knowledge levels. Targeted in-service training and regular updates on fall prevention practices are recommended to enhance nurses' knowledge and reduce patient fall risk in hospital settings.

OP 05

Employability and career outcomes of nursing graduates: findings from a tracer study at the University of Sri Jayewardenepura, Sri Lanka

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Background: Graduate tracer studies are widely used to evaluate academic programme outcomes and graduates' transition into the workforce. In Sri Lanka, limited evidence exists on the employability and career outcomes of nursing graduates. This study aimed to assess the employability and career outcomes of nursing graduates from the University of Sri Jayewardenepura (USJ), Sri Lanka.
Objectives: To assess the employability and career outcomes of nursing graduates from the USJ, Sri Lanka.
Methods: A descriptive cross-sectional tracer study was conducted using a structured self-administered questionnaire developed in Google forms. Population - based sampling technique was used, whereby 341 of passed-out nursing graduates were studied. However only 192 complete responses were obtained. Nursing graduates from batch 1 to 15 were participated. Data were analyzed using SPSS software version 26.0. Ethical approval was obtained from the Research Ethics Committee of Faculty of Medical Sciences.
Results: A total of 192 graduates responded (response rate: 56%). The majority were female (77.1%), and most had obtained a Second-Class Upper Division (38.5%). Nearly all respondents (96.9%) reported that their degree was sufficient for employment. At the time of the survey, 94.8% were employed, mainly as nurses (58.9%) within the government sector (52.6%). Many participants reported positive experiences related to the use of subject knowledge, alignment between their degree and job, and social recognition. However, dissatisfaction was noted in relation to salary (28.5%). Graduates highlighted the need of improvement of infrastructure, teaching techniques and evaluation methods in the nursing degree programme.
Conclusion: Nursing graduates from USJ demonstrate strong employability, and overall satisfaction with their professional roles. However, improvements in infrastructure, teaching and evaluation strategies and salary-related aspects are needed to further enhance graduate outcomes and programme quality.

OP 06

Factors associated with post-stroke leisure time activities among patients attending follow-up clinics in the National Hospital, Galle

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Background: Stroke is one of the leading causes of death worldwide and a major contributor to long-term disability. Engaging in leisure activities helps to overcome physical, psychological, emotional, social, and environmental consequences, and assessing leisure engagement is pivotal in post-stroke rehabilitation. There is a significant gap in evaluating leisure engagement and associated factors among stroke survivors in the Sri Lankan context.
Objectives: To assess the patterns and associated factors of leisure time activities among stroke survivors attending follow-up clinics at the National Hospital, Galle.
Methods: A descriptive cross-sectional study was conducted among 200 stroke survivors selected using a convenient sampling method, using the locally validated Sinhala version of the Nottingham Leisure Questionnaire (NLQ). Data were analyzed with descriptive statistics, independent sample t-test, one-way ANOVA, multiple linear regression, and Pearson correlation using SPSS version 26.
Results: There were 200 participants with a mean (SD ±) age of 59.61 (±11.54) years. 57% (n=114) were males, and 43% (n=86) were females. The total mean (SD ±) score of the NLQ was 15.71 (±5.33), and the scores ranged from 5 to 31. Most of the participants engaged in watching TV 85.5% (n=171), listening to music, radio, or browsing social media 56.5% (n=113). There was a significant association between total NLQ score and age ($t=3.694, p<0.001$), living situation ($F(3,196)=3.643, p=0.014$), employment status ($F(3,196)=3.010, p=0.031$), income ($F(2,197)=7.414, p=0.001$), time since stroke ($t=-2.064, p=0.042$), disabilities ($F(7,192)=6.506, p<0.001$), rehabilitation and follow-up care ($F(5,194)=6.714, p<0.001$), level of disability ($F(5,194)=6.551, p<0.001$), activities of daily living (ADL) ($F(2,197)=22.144, p<0.001$), and quality of life (QoL) ($r=0.427, p<0.001$).
Conclusion: The study identified that post-stroke leisure time activities were significantly associated with several sociodemographic and clinical factors. These findings underscore the importance of incorporating leisure-related rehabilitation interventions tailored to personal and health-related factors to improve overall quality of life and social reintegration of stroke survivors.

OP 07

Measuring healthcare educators' readiness for simulation-based learning: Development and validation of a new scale based on a preliminary study

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Background: Simulation-Based Learning (SBL) is an active learning strategy where healthcare students and professionals practice clinical scenarios in a safe, controlled environment without harming actual patients. SBL offers significant advantages to both students and healthcare educators. The successful implementation of SBL largely depends on the readiness of educators. However, no standardized tools exist in Sri Lanka, as well as at the global level, to assess healthcare educators' readiness for SBL. Therefore, this study aimed to develop and preliminarily validate a scale to measure healthcare educators' readiness for SBL.
Objective: To develop and preliminarily validate a scale to measure healthcare educators' readiness for SBL in Sri Lanka.
Methods: A study instrument, "Readiness for Simulation-Based Learning in Healthcare Education (RSBL-HE)" was developed using an extensive literature search. Content validation was performed by four experts, and content validity indices (CVI) were calculated. Preliminary construct validity of the scale was assessed by performing Exploratory Factor Analysis (EFA). All eligible healthcare educators from state universities in Sri Lanka were invited to participate in the study. However, in total, 125 respondents participated in EFA. Internal consistency was assessed using the Cronbach α coefficient.
Results: The RSBL-HE scale was developed with 15 items. All the items achieved I-CVI values 1.00, and the S-CVI/Average of the tool was 1.00. The Kaiser-Meyer-Olkin value was 0.80, and Bartlett's test was significant ($p < 0.01$), confirming sampling adequacy and suitability for factor analysis. Principal Axis Factoring revealed four factors, namely Professional Readiness, Resource Readiness, Personal Readiness, and Infrastructure Readiness. The overall internal consistency of RSBL-HE achieved a Cronbach's alpha of 0.83..
Conclusion(s): The preliminary construct validity and reliability testing indicate that the RSBL-HE scale is an acceptable, reliable, and valid instrument for measuring healthcare educators' readiness for SBL.

OP 08

Nurses' attitudes and perceived barriers regarding preceptorship at Sri Jayewardenepura General Hospital, Sri Lanka

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Background: Preceptorship is a structured professional relationship between an experienced health professional (preceptor) and a undergraduate trainee or new graduate (preceptee) within a clinical setting, aimed at integrating theoretical knowledge into clinical practice. Although widely recognized globally, it remains underdeveloped in many low- and middle-income countries, including Sri Lanka. Limited evidence exists regarding nurses' preparedness for preceptorship roles.
Objective: To assess nurses' attitudes and perceived barriers to preceptorship at Sri Jayewardenepura General Hospital, Sri Lanka.
Methods: A descriptive cross-sectional study was conducted among 322 nurses (response rate: 76.3%) selected using stratified random sampling. Data were collected using a pretested (N = 20), validated, self-administered questionnaire with permission from the original authors. Descriptive statistics summarized the data, and chi-square tests examined associations. Participants were categorized as having good or poor attitudes based on the mean total attitude score percentage. Ethical approval was obtained from the relevant authorities.
Results: Overall, 53.7% (n = 173) of participants demonstrated poor attitudes towards preceptorship, while 46.3% (n = 149) demonstrated good attitudes. Half of the nurses (50.3%) agreed that students placed additional demands on their time, and 51.9% agreed or strongly agreed that financial remuneration would motivate them to undertake the preceptor role. Barriers to preceptorship were assessed across four subscales: Role-related and workload barriers (M=3.5), structural and organizational barriers (M=3.26), competency and preparedness barriers (M=3.06), and student-related and interpersonal barriers (M=3.06). Having primary responsibility for patient care was identified as the most prominent individual barrier (M = 3.89) within the role-related and workload barriers subscale.
Conclusions: More than half of the nurses demonstrated poor attitudes towards preceptorship. Role-related and workload factors were the main barriers, particularly primary responsibility for patient care. These findings highlight the need for improved workload management to support preceptorship implementation.

OP 09

Respiratory functions of traffic control police officers in Colombo, Sri Lanka

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Background: Traffic control police officers are heavily exposed to vehicle exhaust during their working hours. Thus, duration of exposure to traffic-related air pollution (TRAP) may affect their vulnerability to respiratory diseases.

Objective: To determine the association between duration of exposure to TRAP and respiratory functions of traffic control police officers in the Colombo area, Sri Lanka.

Methods: Descriptive cross-sectional study was conducted among male traffic control police officers (n=174) recruited by systematic random sampling. Duration of exposure to TRAP was assessed using an index; TR-API = hours/day × days/week × service in years. Respiratory functions were assessed using standard spirometry (Vitalograph Ltd, Ireland) and was classified as normal (FEV_1/FVC >0.70, FVC >80%); obstructive (FEV_1/FVC <0.70); restrictive (FEV_1/FVC >0.70, FVC <80%); and small (FEV_1/FVC >0.70, FVC >80%, $FEF_{25–75}$% <65%) airway diseases. Data were analysed using SPSS Version 26. Ethical approval was obtained (ERC NO: RP/S/2025/30)

Results: Their mean age was 34.7 years ± 11.0 with TR-API of 443.8 ± 449.7. All spirometric parameters were lower than predicted values of Indians ($p<0.05$). 56.9% were smokers but no statistically significant difference in FEV1 between never-smokers and smokers ($p>0.05$). Restrictive airway disease was most prevalent (62.1%), followed by obstructive (5.7%) and small airway diseases (5.2%). TRAP correlated with FEV1 ($r=-0.219$, $p>0.05$) however, only height ($\beta=0.250$, $p<0.05$) and age ($\beta=-0.187$, $p<0.05$) were significant independent predictors of FEV1 when adjusted for smoking status and other respiratory comorbidities.

Conclusion: Despite combined exposure to tobacco smoking and TRAP, obstructive airway disease prevalence remained low. This likely reflects the cohort's young age at which such pulmonary pathologies may not yet be clinically apparent, and the limited sensitivity of conventional spirometry in detecting early or subtle changes in small airways.

OP 10

Self-reported impact of violent video games and cartoons on education among school children in a selected school in Jaffna education division

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Background: Increased exposure to violent media content, such as video games and cartoons, has become a growing concern in child development, particularly due to its potential impact on physical health, psychological well-being, behavior, and academic performance. In Sri Lanka, the impact of such media on adolescents remains under researched, especially in the context of school education.
Objective: To assess the self-reported impact of violent video games and cartoons on education among school children in a selected school in Jaffna education division.
Method: A descriptive cross-sectional study was conducted among 422 students in grades 8 to 10 selected from a school in Jaffna district. Using a validated, self-administered questionnaire. The tool assessed demographics, media consumption habits, and self-reported physical, psychological, behavioral, and educational effects of exposure to violent media. Data were analyzed using SPSS 25.0 with descriptive statistics and chi-square tests.
Results: Of the participants, in grade 8 to 10 males accounted for 57.8%, while females represented 42.2%. 47.6% reported frequent exposure to violent content, particularly shooting/fighting games and action cartoons. Restlessness, trouble sleeping or headaches were reported by 34.4% of students and 9.5% experienced fear as a result of exposure to such cartoons and games, and 20.9% reported that they need violent content for entertainment. Of the participants 13.5% reported sometimes copying violent behavior, and 11.8% reported sometimes increased aggression. Educational effects included difficulty concentrating (30.8%), skipping homework (44.6%), and academic decline (18.7%). Significant gender differences ($p \leq 0.01$) were observed, with males more likely to imitate violent behavior and feel excited (21.3%), while females reported more fear and anxiety (12.9%).
Conclusion: The findings indicate that violent media consumption has measurable negative effects on a subset of school children in terms of health, behavior, and education. These results underscore the importance of promoting media literacy, parental supervision, and school-based awareness programs to mitigate the adverse effects of violent content.

OP 11

Validity and reliability of the Sinhala version of the global inter-professional therapeutic communication skills scale among nurses

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Background: The Global Inter-Professional Therapeutic Communication Skills (GITCS) is an instrument that assesses core communication competencies, including empathy, power sharing, and trust and rapport building among healthcare providers.
Objective: To validate and assess the psychometric properties of the Sinhala version of Global Inter-professional Therapeutic Communication Skills Scale among hospital-based nurses in Sri Lanka.
Methods: A cross-sectional validation design was used. The study was conducted among registered nurses from three tertiary hospitals in Colombo, Sri Lanka. A total of 280 nurses were selected using systematic random sampling between March and May 2024. The 28-item GITCS was translated and culturally adapted following established guidelines. Data were collected using self-administered questionnaires. Construct validity was assessed by confirmatory factor analysis, convergent and discriminant validity, and reliability were assessed using Statistical Package for the Social Sciences (SPSS) version 27 and Analysis of Moment Structures (AMOS) version 21.
Results: Response rate was 100%. The mean age of the 280 participants was 32.7 years (SD =6.7), with a mean work experience of 7.1 years (SD=6.6). The majority (64.3%, n=180) had a diploma in nursing. Cronbach's alpha of Sinhala version of GITCS was 0.93. Confirmatory factor analysis supported the three-factor model ($\chi^2/df = 3.13$, RMSEA = 0.08, 90% CI [0.070–0.085], CFI = 0.92, TLI = 0.91) of the original scale. All standardised factor loadings were ≥ 0.69. Convergent validity was established with Average Variance Extracted (AVE > 0.60) and Composite Reliability (CR > 0.90). Discriminant validity was also confirmed as the square root of AVE exceeded its inter-construct correlations.
Conclusion: The Sinhala version of the GITCS demonstrated excellent reliability and strong evidence for construct, convergent and discriminant validity. Its application in educational, clinical, and research contexts is recommended to strengthen therapeutic communication and improve the quality of health care delivery in Sri Lanka.

OP 12

Hidden metabolic burden among lean healthy Sri Lankan adults – vitamin D deficiency, insulin resistance, and dyslipidemia

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Background: Metabolic derangements in lean Sri Lankans are significant silent drivers towards non-communicable-diseases. Despite being lean, low adiponectin and low vitamin D (VD) status are evident factors causing metabolic derangements.
Objective: The present study aimed to assess the lipid profile, adiponectin, VD and insulin resistance (IR) in a cohort of apparently healthy lean adults in Anuradhapura District, Sri Lanka.
Methods: Fasting blood samples were collected from 54 volunteers, recruited via convenience sampling, aged 30–59 years with normal body mass index (BMI), waist circumference, and fasting plasma glucose. Lipid profile, plasma insulin, adiponectin, and VD were measured using colorimetric-enzymatic-assay, immunoenzymatic-assay, enzyme-linked-immunosorbent-assay and chemiluminescent-microparticle-immunoassay respectively in an accredited medical laboratory. South Asian cutoffs where applicable were used when interpreting the results. Triglyceride-Glucose (TyG), Homeostatic Model Assessment (HOMA) -β% and HOMA-IR indices were calculated to identify IR. VD levels ≥30ng/mL, 20–29.9ng/mL and <20.0ng/mL were classified as normal, insufficient, and deficient respectively. Serum adiponectin levels <4µg/mL were classified as low.
Results: The study included 28 males and 26 females with a mean age of 43±8.1 years and 41±6.7 years. Of the total, 20.4 %(n=11), 55.5%(n=30), and 46.3%(n=25) had high levels of triglyceride, total cholesterol, and low-density lipoprotein respectively while 70.4%(n=38) had low level of high-density lipoprotein. At least one deranged lipid parameter was detected in 96.3 %(n=52). Insufficient and deficient VD levels were detected in 46.3 %(n=25) and 42.6%(n=23) participants respectively while 25.9%(n=14) had low adiponectin. According to HOMA-IR and TyG scores, 20.4 % (n=11) and 42.6 % (n=23) had IR while low β-cell function (HOMA-β%) was observed in 88.9%(n=48) of the participants.
Conclusion: Detection of dyslipidemia, IR, and suboptimal VD status among the majority of apparently healthy lean adults with normal anthropometry highlights the limitations of BMI-based risk assessment. More stringent metabolic screening and implementing targeted preventive strategies are imperative within lean populations, particularly in South Asian settings.
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OP 13

The relationship between dietary iron intake, hemoglobin levels, and the severity of cirrhosis in patients at the Colombo North Teaching Hospital, Ragama, Sri Lanka

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Background: Cirrhosis is a serious consequence of chronic liver disease, moreover a leading cause of death worldwide. Alterations in red blood cell (RBC) parameters often reflect the disease severity of cirrhosis and are commonly associated with anemia. The liver performs a major role in iron homeostasis, as it is the principal organ responsible for the production of the iron-regulatory hormone, hepcidin. Therefore, understanding the relationship between dietary iron intake, haemoglobin levels, and the severity of cirrhosis in patients warrants further investigation.
Objectives: This study aimed to investigate the correlation between hemoglobin levels and the disease severity of cirrhosis as measured by the Model for End-Stage Liver Disease (MELD 3.0) score, and to determine how dietary iron intake of cirrhosis patients affects hemoglobin concentrations and disease severity.
Methods: A cross-sectional study was conducted among 65 cirrhosis patients at the Colombo North Teaching Hospital, Sri Lanka. Ethical approval was obtained from the Research Ethics Committee, Faculty of Medical Sciences, University of Sri Jayewardenepura. Data were collected using interviewer-administered questionnaires and 24-hour dietary recalls for three non-consecutive days to minimize systematic bias. Hematological parameters were obtained from full blood count reports, while disease severity was determined using the MELD 3.0 scoring system.
Results: In the study population, MELD scores ranged from 6 to 33, and the mean hemoglobin level was 10.94±2.16 g/dL. Hemoglobin level showed a significant inverse correlation with MELD score ($r=-0.401$, $p=0.000$). The median dietary iron intake was 6.4 mg/day. Iron intake demonstrated a weak but significant inverse correlation with MELD score ($r=-0.249$, $p=0.046$). A moderate positive correlation was observed between iron intake and hemoglobin level ($r=0.351$, $p=0.004$), as well as between iron intake and RBC count ($r=0.304$, $p=0.014$).
Conclusions: In this study, a significant inverse relationship between hemoglobin levels and MELD score was identified, indicating that hemoglobin decreases with increasing disease severity. Furthermore, lower dietary iron intake was associated with higher MELD scores as well as reduced hemoglobin and RBC counts, supporting the clinical relevance of impaired nutritional intake in advanced liver disease.

OP 14

Factors affecting long-term glycemic control among type 2 diabetic patients in a tertiary care hospital clinic in Sri Lanka: a comprehensive institutional-level analysis

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Background: Type 2 diabetes mellitus (T2DM) is a metabolic disease characterized by chronic hyperglycemia due to insulin deficiency or resistance. Glycated hemoglobin (HbA1c) is the standard test for assessing long-term glycemic control. In Sri Lanka, T2DM affects approximately 9.8% of adults, with many remaining undiagnosed. Institutional level evidence on factors influencing long-term glycemic control, including multifactorial determinants and patients' perspectives, remains limited.
Objective: To identify factors affecting long-term glycemic control among T2DM patients attending a tertiary care Endocrine Clinic in Sri Lanka and explore patients' perceptions on their glycemic control.
Method: A mixed-method cross-sectional study included 200 T2DM patients attending the Endocrine Clinic, National Hospital, Kandy. Data were collected in person through surveys and clinical records. Glycemic control was assessed using HbA1c (%), with change in HbA1c (ΔHbA1c; Follow-up minus Baseline, HbA1c value over 3-months), and HbA1c ≥7% defining poor control according to American Diabetes Association guidelines. Quantitative analysis included descriptive statistics, Elastic Net (prediction), Random Forest (model performance), Double Machine Learning (causal inference), SHAP-Shapley Addictive exPlanations (predictor interpretability), and Partial Least Squares Structural Equation Modeling (PLS-SEM) (theory validation). Qualitative data were analyzed using content analysis. Statistical significance was set at $p<0.05$.
Results: Mean baseline and follow-up HbA1c were 9.02% and 8.96%, respectively, with 86.50% (n=173) showing poor control. The mean change in HbA1c (ΔHbA1c) was −0.06±2.34. Random Forest outperformed Elastic Net (RMSE=2.887) identified non-linear relationships between demographic, clinical, behavioral, socioeconomic, healthcare, and institutional factors with glycemic control. Key predictors included chronic disease (β=−0.351), alternative medicine use (β=0.216), and drug cost (β=0.181). PLS-SEM explained 7.20% of variance, reflecting modest explanatory power, and identified medication adherence as the only significant predictor (β=0.838, p=0.029), that strongly influencing HbA1c.
Conclusion: Glycemic control remains suboptimal despite treatment efforts. Medication adherence alone is insufficient, highlighting multifactorial influences. Require integrated behavioral, psychosocial, and institutional interventions to improve long-term glycemic control.

OP 15

The slope of the steepest part of the haemolysis curve: a novel osmotic fragility test-based parameter in assessing red blood cell storage stability

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Background: Median Corpuscular Fragility (MCF) is the standard indicator of red blood cell (RBC) fragility. However, it lacks the sensitivity to detect subtle RBC kinetic shifts occurring during prolonged storage. The slope of the steepest part of the haemolysis curve (S_{max}) (% haemolysis per g/dL) offers a novel index for the assessment of membrane stability and storage-related deterioration.
Objective: To investigate the ability of the new numerical parameter; S_{max} to assess RBC stability during refrigerated storage.
Method: A mixed experimental design involved 30 healthy adults, and they were equally divided into three age groups: 20-39, 40-59, and ≥60 years. Venous blood (5mL) collected in lithium heparin tubes was stored at 4-8°C. Osmotic fragility tests were conducted on Day 0, 1, 2, 4, and 7 of storage. Python was used for haemolysis curve generation based on haemolysis percentage at each NaCl concentration and for parameter calculation, while ANOVA was used to analyze storage and age-related variations.
Results: MCF increased significantly in young and middle-aged adults ($p<0.001$), while older adults showed no significant change ($p=0.315$) during storage compared to other age groups. For older adults, S_{max} increases significantly by ~38 units/day ($p=0.001$), although MCF showed no significant change. Middle-aged adults showed no difference from older adults ($p=0.887$) while young adults demonstrated a significantly faster rate of change, increasing by an additional ~42 units/day ($p=0.011$). For young adults, pairwise comparisons revealed both MCF ($p=0.002$) and S_{max} ($p=0.032$) varied significantly between day 4 and 7. Older adults revealed significant variations in MCF on day 1 ($p<0.001$) and significant overall variation in S_{max} during storage ($p=0.012$). Incidentally, no significant correlation was found between MCF and S_{max} ($r=-0.005$, $p=0.980$).
Conclusion: The results demonstrate that S_{max} may serve as an additional parameter to detect underlying cellular heterogeneity and progressive structural degradation during storage that MCF unable to detect.

OP 16

Salivary pH and blood leukocyte changes attributed to plaque accumulation in patients undergoing fixed orthodontic treatment

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Background: Fixed orthodontic treatment is used to treat malocclusion and improve dental function and aesthetics. Placement of these appliances creates spaces that trap food and plaque, which may lead to alteration in the salivary pH, leading to tooth demineralization and gingival inflammation.
Objectives: This study aimed to evaluate the association between salivary pH alterations and leukocyte changes in blood with plaque accumulation in patients undergoing fixed orthodontic treatment.
Methods: An analytical cross-sectional study was done with 60 participants (aged 18 to 28) who had fixed appliances for 1-2 years attended the orthodontic clinic of the Dental Teaching Hospital, Peradeniya. Participants were allocated to four plaque groups (Silness-Loe Plaque index 0, 1, 2, 3), 15 per group. Unstimulated salivary samples and finger-prick blood samples were collected. Salivary pH was measured using a digital pH meter and blood film was stained and leukocytes were counted under the microscope. Statistical analysis was performed using one-way ANOVA for patients with different plaque indices according to the distribution.
Results: Salivary pH decreased with increasing plaque index, from 6.83 ± 0.286 at plaque index 0 to 6.54 ± 0.190 at plaque index 3. One-way ANOVA showed a significant difference in salivary pH among plaque index groups ($p=0.005$). Post-hoc analysis revealed significantly lower salivary pH in plaque index 3 compared with plaque index 0 ($p=0.032$) and 1 ($p=0.005$). Pearson correlation analysis showed a significant negative correlation between salivary pH and plaque index ($r=-0.388$, $p=0.001$), indicating reduced salivary pH with increased plaque accumulation. Leukocyte count between different plaque groups was not significant ($p>0.05$).
Conclusion: The findings suggest that increased plaque retention in orthodontic patients leads to a significant reduction in salivary pH, which underscores the critical importance of proper oral hygiene practices throughout orthodontic treatment to prevent plaque-induced reduction in salivary pH and associated oral complications.

OP 17

Tissue response patterns of three common zoonotic parasitic infections in Kandy and Anuradhapura Districts in Sri Lanka: *Leishmania donovani*, *Dirofilaria repens*, and *Rhinosporidium seeberi*

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Background: Cutaneous leishmaniasis (CL), subcutaneous dirofilariasis (SD), and rhinosporidiosis (RS) are highly prevalent, endemic parasitic zoonoses in Sri Lanka. Histopathological examination remains the primary diagnostic method in regional, resource-limited settings.

Objective: To systematically evaluate histopathological profiles of three common parasitic infections (CL, SD, RS) in Kandy and Anuradhapura districts in Sri Lanka.

Method: A retrospective census analysed 140 tissue biopsies (n_{CL}=75, n_{SD}=35, n_{RS}=30) from Kandy and Anuradhapura hospitals since 2020 to 2025. Haematoxylin and Eosin and special-stained sections were evaluated at high-power field, scoring features (0-3) by visual estimation of tissue area occupancy. Associations between parasite burden and tissue response were analysed using Fisher's exact and Spearman's rank correlation using Minitab (V 22.1) Principal component (PC) and hierarchical cluster analyses identified dominant morphotypes and subtypes. Level of significance was set at $p<0.05$.

Results: Cutaneous leishmaniasis demonstrated plasmalymphocytic dominant infiltrate, ill-formed granuloma, and high parasite discernibility (74.67%). Parasite load correlated positively with plasmalymphocytic infiltrates (ρ=0.33, p=0.003) and inversely with suppuration (ρ=-0.141, p=0.049). Multivariate analyses yielded a dominant morphotype of plasmalymphocytic infiltration. Parasite-linked PC2 and PC4 indicated inverse correlation between parasite load and giant cells and fibrosis. Dirofilariasis exhibited eosinophilic and lymphocytic infiltrates, fibrosis, and foreign body giant cells surrounding degenerating nematodes (34.29%). Splendore–Hoeppli phenomenon correlated positively with parasite presence (ρ=0.470, p=0.004). Dominant morphotype PC1 was characterized by foreign body giant cells and plasmacytic infiltration, and parasite-linked PC5, by necrosis. Rhinosporidiosis showed lymphocytic and suppurative infiltrates, with foreign body giant cells and well-formed granulomas surrounding sporangial stages (100%). Parasite load, correlated positively with suppurative infiltrate and necrosis (ρ=0.389, p=0.033). Dominant morphotype PC1 was characterized by lymphocytic and suppurative infiltrates. Parasite-linked PC5 showed granulomatous response.

Conclusion: Study findings recognised reproducible histopathological criteria to be integrated with conventional parasite detection to resolve diagnostic uncertainty and reduce misdiagnosis in parasite indiscernible cases.

OP 18

Characterization of sugar-fermenting bacteria from *Tecoma stans* floral nectar and assess their fermentation potential in kithul treacle for food preservation

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Background: Nowadays, artificial food additives have been widely utilized despite safety and health concerns in food processing. Meanwhile, the role in food preservation of natural microbial resources is relatively underexplored. Bacterial sugar fermenters facilitate food preservation through fermentation, producing metabolites which can enhance the quality of food. Floral nectar serves as a natural microbial reservoir for sugar-fermenting bacteria and *Tecoma stans* flowers produce sugar-rich nectar, may harbour these sugar-fermenting bacteria.
Objective: To characterize sugar-fermenting bacteria from *Tecoma stans* nectar using morphological and biochemical methods and assess their food preservation potential using kithul treacle.
Method: Floral nectar from *Tecoma stans* flowers was collected and serially diluted to obtain morphologically distinct isolates. Sugar fermentation ability of isolates were assessed using glucose, fructose, and sucrose. The identified sugar-fermenting bacteria were subjected to antagonistic assay and characterized by Gram staining. Most potent isolates were inoculated to pure kithul treacle (*Caryota urens)* and allowed to ferment for 21 days. Subsequently, antimicrobial activity assay and electronic nose (E-nose) analysis were performed.
Results: Morphologically distinct, 14 bacterial isolates were obtained, and 10 strains were able to ferment all sugars. Among them, 3 most potent isolates were selected, namely TS-BP-01, TS-BP-03 and TS-BP-13 to ferment kithul treacle. Fermented kithul treacle exhibited antimicrobial activity against all tested microorganisms and highest inhibition zone observed for *Staphylococcus aureus* (16±3.5 mm) while smaller zones were observed for others between 0.5±0.0-3.0±0.0 mm highlighting these bacteria produce antimicrobial compounds. The responses of E-nose analysis may be associated with volatile compounds such as organic acids, aromatic compounds which are known for antimicrobial properties, indicating food preservation potential.
Conclusion: These findings highlight that sugar fermenting bacteria from *Tecoma stans* ferment kithul treacle, producing bioactive compounds which have food preservative potential, making it as a novel ecological ingredient.
Acknowledgement: The authors acknowledge BMS Campus, Sri Lanka for the financial assistance.

OP 19

Characterization of epiphytic yeast from underutilized sapodilla *(Manilkara zapota)* and its potential on fermented beverage production

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Background: Sapodilla (*Manilkara zapota*) is an underutilized fruit in Sri Lanka due to limited research. Its high fermentable sugar content makes it a suitable substrate for fermentation and a natural habitat for epiphytic yeasts. However, their diversity and potential for beverage fermentation remain unexplored.

Objectives : The aim of this study is to isolate and characterize the epiphytic yeasts from *Manilkara zapota* and assess their fermented beverage production and bioactive potential.

Methods- Sapodilla fruits were aseptically collected, and epiphytic yeasts were isolated and purified. Morphological characterization used lactophenol cotton blue staining, and sugar fermentation screening test determined the best fructose, sucrose and glucose fermenters. Antagonistic activity was assessed with spot test, and selected isolates were identified by polymerase chain reaction (PCR) targeting the internal transcribed spacer (ITS) region and Sanger sequencing. Fermentation potential was evaluated using sapodilla juice with *Saccharomyces cerevisiae* as the positive control and the selected isolates for 21 days. Volatile profiles were analyzed using an electronic nose (E-nose), while antimicrobial (*Staphylococcus aureus, Escherichia coli, Klebsiella pneumoniae, Candida* spp.) and anti-inflammatory activities were evaluated.

Results: Fifteen morphologically distinct epiphytic yeast strains were identified, with SLS-TS2, SLS-TS3, SLS-TS6, and SLS-TS8 were the best fermenters. No inhibitory activity was observed, demonstrating their significance in co-culture. PCR yielded bands between 600-800 bp and E-nose analysis indicated distinct response in consortium-fermented sapodilla juice, in R8 (66.932). Relatively higher antimicrobial activity was observed against *Staphylococcus aureus* than against *Candida* spp supporting their possible functional applications. Anti-inflammatory activity showed variability, likely due to alcohol interference.

Conclusions: This study provides the first molecular and functional investigation of the diversity of sapodilla- associated epiphytic yeasts in Sri Lanka and demonstrated the potential of epiphytic yeasts for the production of fermented beverage.

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OP 20

Development of green tea extract-incorporated wheat bread with enhanced functional properties

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Background: Bread is a widely consumed staple, and there is increasing demand for functional bakery products. Green tea (*Camellia sinensis*) extract (GTE) is rich in catechins, providing multiple health benefits.

Objective: To develop a functional wheat bread by completely replacing water with GTE at three different concentrations and evaluate its physicochemical and functional properties.

Method: GTE concentrates were prepared by hot-water extraction (80 °C, 30 min) from Sri Lankan Radella estate Fannings grade green tea using tea-to-water ratios of 1:50, 2:50, and 3:50 (g/mL) and were used to replace all water in a standard bread recipe. Breads were analyzed for total polyphenol content (TPC) using the Folin-Ciocalteu method, DPPH radical scavenging activity (IC_{50} method), FTIR-ATR spectroscopy, leavening index, specific volume, colour (L*a*b*), and starch digestibility (TDS). All experiments were performed in triplicate (n=3). Data were analyzed using two-way ANOVA followed by Tukey's HSD (α=0.05).

Results: GTE breads showed significantly higher TPC (2121.00–5334.00 µg GAE/g) than control (876.00±42.00 µg GAE/g), with levels increasing proportionally with GTE concentration. Antioxidant activity improved as IC_{50} decreased from 6.24±0.31 mg/mL (control) to 1.03±0.09 mg/mL (3:50 GTE bread). FTIR revealed a distinct aromatic peak at 1540 cm^{-1} only in GTE bread, confirming catechin incorporation. Leavening index, specific volume and crumb lightness (L*) decreased with increasing GTE, while redness (a*) and greenness (b*) increased. TDS was significantly lower in GTE breads (47.4±1.8% for 1:50) than control (71.5±2.1%) ($p<0.001$).

Conclusion: Complete replacement of water with GTE significantly enhanced the functional properties, antioxidant activity, and reduced starch digestibility of wheat bread. The 2:50 formulation provided the optimal balance between functional benefits and baking quality.

OP 21

Cytogenetic evaluation of *Areca catechu* (arecanut)–induced toxicity using the *Allium cepa* assay

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Background: Arecanut (AN) is a Group 1 human carcinogen and a primary risk factor for oral cancers, with its main alkaloid, arecoline, driving this carcinogenicity. Therefore, evaluating AN's cytogenetic toxicity is vital.

Objectives: This study aimed to evaluate the cytotoxicity and genotoxicity of AN using the *Allium cepa* assay.

Methods: Pre-germinated *Allium cepa* root tips were exposed to aqueous AN extracts (10-250 µg/mL) alongside positive and normal controls. For genotoxicity (48 h exposure), acetocarmine-stained root tips were assessed for mitotic index (MI), percentage mitotic inhibition (PMI), and percentage of chromosomal aberrations (PCA). Cytotoxicity (96 h exposure) was evaluated via root lengths and macroscopic abnormalities. Data were analyzed using Pearson's and Spearman's correlations and one-way ANOVA (Tukey's test) in SPSS. Statistical significance was set at $p<0.05$.

Results: The mean root growth (MRG) was significantly suppressed across treatment groups compared to the normal control ($p=0.000$), with root growth inhibition showing a strong linear relationship with AN concentration ($r=0.996$, $p=0.000$). Concentration-dependent macroscopic abnormalities, including root tip swelling, gelling, and hook-like bending, were also observed. The EC50 was 12.59 µg/mL (95% CI: 8.45 - 18.75 µg/mL). At the microscopic level, AN concentration strongly correlated with PMI ($r=0.961$, $p=0.009$). The PCA varied significantly across the treatment groups ($p=0.000$) with a significant dose-dependent elevation from 10-100 µg/mL ($p=0.000$); however, it declined significantly at 250 µg/mL ($p=0.019$) due to extensive cellular necrosis. The MI significantly correlated with MRG ($r=0.942$, $p=0.016$), establishing that tissue-level growth retardation is driven by cellular mitotic arrest. The LC50 for cytotoxic lethality was 73.79 µg/mL (95% CI: 54.08 - 100.93 µg/mL).

Conclusions: AN extract exerts severe dose-dependent cytogenetic and morphological toxicity, transitioning from extensive chromosomal damage at mid-range doses to acute cellular necrosis at peak exposure. The strong correlation between tissue-level growth failure and MI confirms that AN constituents drive macroscopic root deformities through underlying cellular arrest and genetic instability.

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OP 22

Body size orientation and related eating behaviors among adolescent schoolchildren in Galle District, Sri Lanka

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Background: Body size orientation and eating behaviors have important implications for nutritional and psychological health of adolescents. However, there is limited evidence on body size orientation and related eating behaviors among adolescents in Sri Lanka.
Objective: This study was conducted to assess body size orientation and related eating behaviors among adolescent schoolchildren in Galle district, Sri Lanka.
Methods: A school-based, cross-sectional study was conducted among 876 adolescents aged 16-19 years in Galle district, selected using cluster sampling technique. Body size orientation and related eating behaviors were assessed using validated, Sinhala versions of gender specific Body Image Questionnaires. Data were analyzed using Statistical Package for Social Sciences software.
Results: The mean age (SD) of the participants was 16.3 (±0.58) years and 51.7% (n=452) were females. Among male adolescents, 45.5% thought that their "tummy is too large", while 22.8% thought that their "hip is too large". Furthermore, 9.9% of them reported that they had always felt that they were fat. Approximately 33% of the male adolescents had skipped meals, 35.6% had considered controlling their diet, and 20.5% had practiced fasting to reduce their weight. Among female adolescents, 26.3% thought that their "hip is too large" and 57.1% considered their "tummy is too large". Of the females, 18.6% reported that they had always felt that they were fat, while 24.3% felt that they were overly concerned about body weight. Among female adolescents, 51.5% had skipped meals, 49.8% had considered controlling their diet and 21.0% had practiced fasting to reduce weight. Similarly, 38.2% had refused foods and beverages due to concerns about body weight.
Conclusions: A considerable proportion of adolescents reported body size concerns and weight-control eating behaviors, which were more pronounced among females. The findings highlight the need for nutrition education interventions focusing on healthy body image and appropriate eating behaviors among adolescents to promote their well-being.
Acknowledgements: Faculty Research Grant (FOM/RG/2024/01) of Faculty of Medicine, University of Ruhuna is acknowledged for funding for the study.

OP 23

Fabrication of halochromic polysaccharide-based intelligent packaging films for real-time food freshness detection

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Background: Foodborne illnesses are major global health concerns caused by consuming contaminated or spoiled food. Conventional packaging materials provide physical protection for food products but cannot indicate the actual freshness of the food. Halochromic, polysaccharide-based intelligent packaging materials (PBIP) that detect real-time food freshness are a promising
solution to enhance food safety and reduce the health effects of foodborne illnesses.

Objective: To develop novel halochromic PBIP films from natural, sustainable materials to detect food freshness through visible color changes.

Method: Alginate from Sri Lankan brown seaweed was used as the primary film-forming polymer, with guar gum serving as the structural co-polymer to enhance the stability and mechanical performance. A natural pH- sensitive anthocyanin indicator was extracted from Butterfly pea (*Clitoria ternatea*) flowers and embedded within the network to induce halochromic responses. The solution- casting technique was used to create the film. The physicochemical properties of the films were evaluated using Fourier transform infrared spectroscopy (FTIR), energy-dispersive X-ray analysis (EDX), scanning electron microscopy (SEM), and X-ray diffraction (XRD). The colorimetric response of the films was assessed under different pH environments and in real food systems, including meat and strawberries, under refrigerated storage conditions. The Total Color Difference (ΔE) was measured using a handheld chromameter.

Results: Statistical optimization using Minitab identified an optimal guar gum-to-alginate ratio (1:7) and anthocyanin concentration (10%), which significantly improved mechanical properties ($p < 0.05$). The final optimized film exhibited a tensile strength of 56.38±0.22 MPa ($p < 0.001$) and an elongation at break of 7.48±0.04% ($p < 0.001$). During meat spoilage, the film color changed from dark blue (ΔE=79.61) to green (ΔE=80.20), whereas exposure to deteriorating strawberries resulted in a shift to purplish black (ΔE=76.44).

Conclusion: This study demonstrates a high-performance, locally sourced, sustainable, and eco-friendly PBIP with significant potential to enhance food safety and reduce waste.

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OP 24

Antibiotic use in a selected paediatric ward in a teaching hospital in Colombo District, Sri Lanka

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Background: Antibiotic misuse cause resistance. Surveillance is essential for prevention from newborns to adolescent.
Objective: To quantify the antibiotic use (ABU) in a selected paediatric ward in Colombo South Teaching Hospital (CSTH) in Sri Lanka.
Method: A hospital based cross sectional study was conducted in the paediatric unit of CSTH from December 2024 to March 2025. Data from all discharged patients who fulfilled the inclusion criteria were collected from Bed Head Tickets (BHTs). Information was extracted using a pre-designed form based on WHO point prevalence survey and Anatomical Therapeutic Chemical/Define Daily Dose (ATC/DDD) classification systems. Data were analysed using standard indicators of drug utilization.
Results: Out of 437 discharged BHTs, 136 patients received at least one antibiotic. ABU was highest in aged one to six years (44.65%) and weighing 10-25kg (55.88%). Most BHTs were for respiratory tract infections (37.56%). Total ABU was 376.37 (DDD)s, 86.12 DDD/100 discharge, 28.95 DDD/100 bed days, 488.79 DDD/100 patient days, 731.62 Prescribed Daily Dose (PDD) and 747 Days of Therapy/100 bed days (DOT/100 bed days). The average Length of Therapy (LOT) for meningitis was 13 days. Beta lactams wares the leading group (44.07%) while co-amoxiclav was the leading antibiotic (37.44%) watch and access group antibiotics were nearly equal. Eight antibiotics contributed to Drug Utilization (DU) (90%). Fever occurred in 76.42% cases.
Conclusion: Antibiotic utilization was high among hospitalized children, predominantly for respiratory tract infections. Beta-lactams and co-amoxiclav were the most used antibiotics. This study emphasizing the need for antimicrobial stewardship.

OP 25

Awareness and disposal practices of medication waste among patients attending the teaching hospital in Jaffna, Sri Lanka

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Background: Improper disposal of medication waste is a growing global concern, contributing to environmental contamination, health risks, and antimicrobial resistance.
Objectives: To describe awareness and disposal practices and to identify strengths and barriers related to medication waste disposal among outpatients attending a teaching hospital in Jaffna, Sri Lanka.
Methods: A descriptive cross-sectional study was conducted among 368 patients using systematic sampling. Data were collected using an in-house developed, pre-validated interviewer-administered questionnaire containing open- and closed-ended questions. Content and face validation ensured clarity and relevance. Awareness was calculated using binary scoring (correct=1; incorrect/not sure=0), and total awareness scores were computed for medication waste (0–6), environmental and health impact (0–7), and disposal practice (0–5). Quantitative data were analyzed using descriptive statistics in SPSS, while qualitative data were analyzed thematically using predefined themes.
Results: Most patients were female (59.5%), with a mean age of 44.38 ± 16.33 years. The mean awareness of medication waste was 4.81 ± 1.16, with 35.6% achieving total scores; awareness was highest for expired (97.0%), damaged (96.7%), and improperly closed medicines (96.2%). The mean score for environmental impacts was 4.74 ± 2.74, with 43.2% achieving full scores, although awareness of antimicrobial resistance was low (53.3%). The mean score for medication disposal practices was 2.99 ± 0.95, with only 7.3% achieving full scores. Common disposal practices included disposal into household garbage and municipal waste collection. Only 10.6% had received guidance regarding safe disposal, although most supported medication take-back programs and awareness initiatives. Thematic analysis identified barriers including limited knowledge, medication management issues, behavioural and structural limitations, while strengths included willingness for education, support for take-back programs, and recognition of healthcare workers' roles.
Conclusions: Patients are aware of medication waste but continue unsafe disposal methods, highlighting the need for clear guidance and accessible take-back programs to reduce environmental harm and antimicrobial resistance.

OP 26

A retrospective audit of antipsychotic prescription patterns in a teaching hospital in Sri Lanka

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Background: Antipsychotics are used to treat patients with psychiatric disorders.
Objectives: This study aimed to identify patterns of typical and atypical antipsychotics prescribing, off-label use of antipsychotics, high-dose use of antipsychotics, and the frequency of using poly-antipsychotics in a selected tertiary care hospital in Sri Lanka.
Method: A retrospective cross-sectional prescription audit was conducted over two months at a selected psychiatric clinic of a tertiary care hospital in the Colombo district. Adult patients with prescriptions containing at least one antipsychotic were included, while prescriptions with incomplete data and pregnant / breastfeeding women were excluded. Three hundred ten prescriptions were selected using systematic sampling as the unit of analysis. Data were extracted from clinic records. Off-label use was defined according to Maudsley Prescribing Guidelines, while high-dose prescribing was determined using the total daily dose to maximum daily dose ratio (>1) based on the British National Formulary 80th edition. Antipsychotic polypharmacy was defined as the concurrent use of two or more antipsychotics in a patient. Data were analyzed using descriptive statistics, with $p < 0.05$ considered as statistically significant. Ethical approval was obtained from relevant ethics review committees.
Results: Among 310 patients, 58.10% were female, and most were 51–60 years. Schizophrenia was the most common diagnosis (41.60%), followed by depression (21.60%) and bipolar affective disorder (17.40%). Atypical antipsychotics predominated (74%) over typical agents (26.40%), with Olanzapine being the most commonly prescribed (32.50%). Off-label use was observed in 15.50% of prescriptions, most commonly for substance use disorders (1.90%). High-dose prescribing was identified in 3.50% of patients. Antipsychotic polypharmacy occurred in 35.50% of prescriptions, most commonly Fluphenazine and Olanzapine.
Conclusion: Atypical antipsychotics were more frequently prescribed than typical antipsychotics. Antipsychotic polypharmacy was present in one-third of prescriptions. However, high-dose prescribing and off-label uses of antipsychotics were infrequent.

OP 27

Inpatient antibiotic consumption and availability during 2020–2024 in a selected state hospital in Sri Lanka

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Background: Antibacterial resistance (ABR) is a major public health threat. Monitoring antibiotic consumption and availability promotes the rational use of antibiotics and supports efforts to combat ABR.
Objectives: To describe the availability of antibiotics and quantify inpatient antibiotic consumption from 2020 to 2024 in a selected state hospital in Sri Lanka.
Methods: A hospital-based longitudinal study was conducted in a selected Divisional Hospital Type A. Data were extracted from indoor pharmacy record books and inpatient admission records from 2020 to 2024 using a structured proforma. Antibiotics were classified according to the Anatomical Therapeutic Chemical (ATC) classification system and the AWaRe classification. Antibiotic consumption was quantified using Defined Daily Doses (DDD) and DDD per 100 admissions. The analysis focused on identifying antibiotics available during the study period and comparing them with the Essential Medicines List (EML) for Divisional Hospital Type A facilities in Sri Lanka. Antibiotic availability and consumption were presented using standard indicators.
Results: A total of 33 inpatient antibiotic formulations were available in the selected hospital from 2020 to 2024, including 15 parenteral and 18 oral formulations. Most antibiotics demonstrated continuous availability throughout the study period. Total inpatient antibiotic consumption increased from 69.09 DDD per 100 admissions in 2020 to 101.90 DDD per 100 admissions in 2023. Beta-lactam antibacterials were the leading pharmacological subgroup, accounting for 279.68 DDD per 100 admissions over the five-year period. Co-amoxiclav was the most frequently consumed antibiotic, with a cumulative consumption of 168.1 DDD per 100 admissions. Access-group antibiotics accounted for the majority of total antibiotic consumption. The highest broad-to-narrow spectrum antibiotic ratio (16.89) was reported in 2021.
Conclusions: Most essential antibiotic formulations were available throughout the study period. Beta-lactam antibacterials accounted for the highest level of antibiotic consumption. Continuous monitoring of antibiotic availability and consumption is important to promote rational antibiotic use and strengthen antimicrobial stewardship practices.

OP 28

Medication management issues and barriers to medication management among older patients (above 70 years) with hyper-polypharmacy attending the cardiology clinic in a selected teaching hospital in Sri Lanka

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Background: Very old patients face more difficulties in managing their medications due to physical and cognitive decline, which can affect medication safety, treatment outcomes, and quality of life.
Objective: To assess Medication Management Issues (MMIs) and barriers to medication management among patients aged >70 years (septuagenarians and above), taking more than ten medications (hyper-polypharmacy), and attending the cardiology clinic in a selected teaching hospital in Sri Lanka.
Method: A cross-sectional study was conducted among the above population and setting using systematic sampling. Best Possible Medication History (BPMH), medication reconciliation, interviewer-administered questionnaire (in-house, content/face validated), and direct observation of selected mock medication management activities were used to identify MMIs. Cognitive status was assessed using the Montreal Cognitive Assessment (MoCA) validated for Sri Lanka. Chi-square test was used where $p<0.05$ was considered significant.
Results: The study included 356 patients, and most were aged 70–74 years (41.60%) (Mean 76.50±5.07) and were males (51.40%). Most (87.40%) took 10-14 medications. BPMH and reconciliation identified medication discrepancies in 135 patients. Twenty-one types of MMIs were identified through the questionnaire survey, where most had experienced at least one MMI related to, sensory/functional-(97.20%), medication administration-(96.30%), and medication adherence-(89.90%). Direct observation showed that most were unable to break a bar-scored tablet-(59.60%), open a child resistant screw cap-(57.60%), and read a mock medication label-(52.00%). Mild cognitive impairment was highly prevalent (93.50%). Medication recognition related issues were associated with age ($p=0.030$), education ($p<0.001$), gender ($p=0.010$), and having mild cognitive impairment ($p=0.030$). Cognitive related issues were associated with age ($p=0.020$), living arrangement ($p=0.010$), and having mild cognitive impairment ($p=0.020$).
Conclusion: Patients aged >70 years with hyper-polypharmacy experienced substantial MMIs. Mild cognitive impairment was high among them and MMIs were influenced by ageing, living alone, having mild cognitive impairment, inadequate medication related knowledge, sensory and functional limitations, and practical problems in medication handling.

OP 29

Assessment of redundant antibiotic coverage in selected medical and surgical wards of Colombo South Teaching Hospital of Sri Lanka

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Background: Redundant Antibiotic Therapy (RAT) is defined as the usage of two or more antibiotics that are overlapping in spectrum of activity without clinical justification.
Objectives: Aim of the study was to determine the prevalence and the factors related to RAT in the medical and surgical wards of Colombo South Teaching Hospital.
Methods: The study was a retrospective cross-sectional study based on the review of Bed Head Tickets (BHT) for 8 weeks of inward adult patients in medical and surgical wards which were administered two or more concurrent systemic antibiotic therapy exceeding 24 hours. Patients who received antibiotics for regular and surgical prophylaxis were excluded. WHO Antimicrobial Stewardship principles and the AmRAT structured tool and the National Antibiotic guideline was used to identify RAT. Chi square and logistic regression were used to identify statistically significant associations.P <0.05 was determined as statistically significant.
Results: Study included 350 BHT reviews. The prevalence of RAT among inclusion as in methodology was 24 %, which constituted 84 instances of RAT. RAT prevalence was higher in the surgical wards (n=64, 28.70%) compared to medical wards (n=24,15.75%) (p>0.05) Co-amoxiclav and clindamycin was the most common redundant combination (38.1%). The infection that was most frequently associated with RAT was cellulitis (54.76% of redundant cases).
Multivariate logistic regression identified age (AOR=1.06 95% Cl 1.028-1.094: p<0.001), duration of therapy (AOR=1.864 95% Cl 1.453-2.391: p<0.001) and Availability of culture results (AOR=0.02 95% Cl 0.003-0.129: p<0.001) as associated factors for RAT.
Conclusion: Redundant antibiotic therapy is a problem within this tertiary care hospital. The results suggest that stewardship measures should be aimed at enhancing compliance with local guidelines and appropriate prescribing from a validated framework to avoid unnecessary exposure to antibiotics.

OP 31

Formulation and evaluation of Llosartan and metoprolol single-layer combination tablet for treatment of hypertension

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Background: Fixed-dose combinations (FDCs) improve treatment adherence by simplifying antihypertensive therapy. Metoprolol and losartan exhibit synergistic antihypertensive effects when co-administered.
Objectives: To formulate and evaluate an immediate-release single-layer FDC tablet containing metoprolol (50mg) and losartan (50mg) and assess its short-term accelerated stability.
Methods: Tablets were prepared by direct compression method. The formulation consisted of losartan potassium and metoprolol succinate along with suitable excipients including microcrystalline cellulose, lactose 11SD, magnesium stearate, sodium starch glycolate, crosspovidone, talc. Accurately weighed quantities of active pharmaceutical ingredients and excipients were sieved, blended, and slugged under four-ton pressure. The slugs were milled, re-sieved, blended with remaining excipients, and compressed into tablets using a rotary tablet press. Powder blends were evaluated for pre-compression parameters, while tablets were assessed for weight variation, hardness, friability, disintegration time, dissolution and assay. Tablet dissolution was evaluated using USP Apparatus II in simulated gastric fluid at 100 rpm and 37 ± 0.5°C for 30 minutes. The dissolved drug content was quantified by HPLC. Accelerated stability studies were conducted at 40 ± 2°C/75 ± 5% RH for three months. Statistical analysis was performed using a paired t-test in Jamovi at $p < 0.05$ significance level.
Results: Flowability issues were improved through slugging and lubricant optimization. All tablets complied with USP limits for weight variation and friability. Hardness and disintegration time showed no significant change ($p = 0.745$ and $p = 0.317$). Metoprolol dissolution remained stable ($p = 0.598$), while losartan dissolution significantly decreased after stability testing ($p = 0.043$), falling below pharmacopeial limits. Assay value, remained within acceptable limits for both drugs
Conclusions: The developed FDC tablet demonstrated acceptable physical stability and assay compliance during accelerated stability testing. However, reduced losartan dissolution after storage indicates the need for further formulation optimization.
Acknowledgements: The authors acknowledge the facilities provided by Celogen Lanka (Pvt) Ltd.

OP 32

Formulation of nanoemulgel using selected herbal oils available in Sri Lanka

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Background: Plant-based medicines reduce topical infections and antibiotic resistance. Nanoemulgels provide increased surface area, enhanced free energy, higher drug loading, improved skin permeation, and sustained drug release compared with synthetic antimicrobial drugs.
Objectives: This study aims to formulate a nanoemulgel with antimicrobial activity, by using herbal oils.
Methods: Based on detailed literature review and antimicrobial assay an essential oil and a fixed oil were selected for formulation development. Conventional emulsions (CE) were formulated using 2:2:1 and 4:2:1 ratios of oil:water:Tween 80. Nano-emulsion was developed by using ultrasonic emulsification. Gel base for nano emulgels was prepared. The stability of CEs and nano-emulgels was checked throughout one month. Physiochemical stability, particle size (dynamic light scattering), pH, zeta potential value, phase separation was observed. The disc diffusion assay and well diffusion assay was done in triplicate to determine the zone of inhibition for bacteria (*Staphylococcus aureus*/*Pseudomonas aeruginosa*), and fungus (*Candida albicans*). Gentamicin and fluconazole were used as positive controls for bacteria and fungi respectively. One-way ANOVA followed by appropriate post hoc analysis was used ($p< 0.05$).
Results: Ceylon cinnamon oil and blackseed oil were selected to formulation. Particle sizes of the formulated nano-emulsions with Ceylon cinnamon oil and blackseed oil were 74.40nm and 62.31nm respectively and their Zeta potential were -10.41mV and - 34.00mV respectively. All the formulations showed antimicrobial activity against the tested organisms. Antimicrobial activity differed significantly among CEs (7.06±4.24mm), nano-emulsions (16.19±9.57mm), and nano-emulgels (13.67±8.58mm) ($p=0.001$). Nano-emulsions showed highest, while CEs showed lowest activity. No phase separation occurred in CE, nano-emulsion, or nano-emulgel at room temperature.
Conclusions: The study successfully developed an effective and stable topical antimicrobial nanoemulgel containing Ceylon cinnamon oil and blackseed oil, demonstrating promising physicochemical and antimicrobial properties for potential topical applications.

OP 33

Synthesis and evaluation of curcumin-modified silver nanoparticle coatings for antimicrobial and antibiofilm activity on Foley catheters

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Background: *Proteus mirabilis* is a highly virulent uropathogenic organism due to its urease production, crystalline biofilm-formation, and antibiotic resistance. Long-term catheterization predisposes to catheter-associated urinary tract infections. Surface modification of urinary catheters is a timely need to prevent biofilm formation and encrustation.
Objectives: To synthesize and characterize curcumin-modified silver nanoparticles (Curcumin-AgNPs), and assess their antimicrobial and antibiofilm efficacy as a coating on Foley catheters.
Methods: Curcumin-AgNPs were synthesized using the chemical reduction method and characterized using X-ray diffraction(XRD), transmission electron microscopy(TEM), Fourier-transform infrared(FTIR), and scanning electron microscopy-energy dispersive X-ray (SEM-EDX) analysis. Foley catheters were coated with Curcumin-AgNPs through an optimized surface deposition method, and successful coating was confirmed by FTIR, SEM-EDX, atomic force microscopy(AFM), and contact angle assays. Antimicrobial effectiveness was examined by direct contact assay and time-kill assay. Biofilm formation was quantified using *in vitro* bladder model at day 2,7,14 and at the point of catheter blockage using crystal violet and tetrazolium salt 3-[4,5-dimethylthiazol-362-yl]-2,5-diphenyltetrazolium bromide(MTT) assays. SEM-EDX and Atomic Absorption Spectrometry (AAS) were used to assess structural changes and mineral deposition.
Results: XRD, XPS, TEM, SEM- EDX and FTIR analyses confirmed the successful synthesis of curcumin-AgNPs, while FTIR, AFM, and SEM-EDX analyses confirmed the successful coating of Foley catheters. The coated catheters exhibited hydrophobic properties and showed antimicrobial activity, with inhibition zones of 11.85±1.86 mm. Time-kill assays showed marked reduction in viable bacterial counts over 72 hours on the coated (<1.5 $\log_{10}$CFU/mL), compared to uncoated catheters (>6.0 $\log_{10}$CFU/mL). The curcumin-AgNPs coating showed strong antibiofilm activity, reducing biofilm biomass and metabolic activity by 60–80% within 14 days. SEM analysis revealed disrupted biofilm architecture, while EDX, AAS confirmed reduced $Ca^{2+}$and Mg^{2+}deposition on coated catheters.
Conclusions: Curcumin-AgNPs coatings effectively inhibit microbial growth, biofilm formation, and biomineralization on catheter surfaces, offering a promising strategy to prevent *P. mirabilis* colonization in urinary catheters.
Acknowledgement: University Research Grant, University of Sri Jayewardenepura (ASP/01/RE/AHS/2022/90).

OP 34

In Vitro Anti-inflammatory potential and *In Vivo* Zebrafish Embryo Acute Toxicity of 3-(4-Hydroxy-3-methoxybenzylidene) indolin-2-one

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Background: Inflammation is a physiological defence mechanism against infection, injury and harmful stimuli but prolonged inflammation can damage tissues and cause chronic diseases. Although Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) are widely used for inflammation, they are associated with severe adverse effects such as gastric ulcers, nephrotoxicity and cardiovascular complication. Therefore, developing novel anti-inflammatory agents with improved efficacy and safety is important. Recent studies on oxindole derived compounds showed effective anti-inflammatory activity.
Objective: To synthesize 3-(4-Hydroxy-3-methoxybenzylidene) indolin-2-one and evaluate anti-inflammatory potential and acute toxicity.
Method: The compound was synthesized via Knovenagel condensation between oxindole and vanillin using piperidine as a catalyst. The compound was characterized by FTIR (Fourier Transform Infrared) spectroscopy and melting point. *In vitro* anti-inflammatory potential was investigated using egg albumin denaturation and heat induced red blood cell (RBC) haemolysis assays, with diclofenac as the standard drug. *In vivo* acute toxicity was investigated using Zebra fish embryo acute toxicity model.
Results: Successful synthesis of compound was confirmed via characterization. In egg albumin denaturation assay, the compound showed an IC_{50} (Inhibition concentration 50%) value of 75.10±0.53 μg/mL compared to 284.41±0.74 μg/mL for diclofenac ($p<0.001$). In the heat-induced RBC hemolysis assay, the compound showed an IC_{50} of 80.73±0.82 μg/mL, whereas diclofenac showed an IC_{50} of 216.18±1.08 μg/mL ($p<0.001$). Zebrafish embryo acute toxicity evaluation revealed an LC_{50} (Lethal concentration 50%) value of 6.21±0.10 μg/mL.
Conclusion: 3-(4-Hydroxy-3-methoxybenzylidene) indolin-2-one demonstrated promising *in vitro* anti-inflammatory potential compared to the standard diclofenac by effectively stabilizing protein structures against heat-induced denaturation. These results indicate that compound exhibit promising anti-inflammatory potency with minimal embryotoxic effects, and its potential as a candidate for further anti-inflammatory drug development.

OP 35

Utilization of *Artocarpus heterophyllus* seed starch, *Artocarpus heterophyllus* fruit mucilage, and *Cucumis sativus* peel pectin as film forming agent in tablet coating

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Background: The coating of tablets plays a vital role in protecting the drug, improving appearance, and masking taste.

Objective: To investigate the possibility of using *Artocarpus heterophyllus* seed starch (AHSS), *Artocarpus heterophyllus* fruit mucilage (AHFM), and *Cucumis sativus* peel pectin (CSPP) as film-forming agents instead of hydroxypropyl methylcellulose (HPMC) in tablet.

Method: AHSS was prepared using alkali extraction, while AHFM and CSPP were extracted, precipitated with ethanol, and dried. Tablet granules were prepared by wet granulation. After the formulation was optimized using placebo granules, propranolol HCl 40 mg tablets were prepared. The tablets were coated separately with natural film-forming agents and HPMC using a coating pan with simultaneous spraying and hot air drying. Quality evaluation tests, including weight uniformity, thickness, hardness, friability, disintegration, assay, and dissolution, were conducted for all formulations.

Results: All tablets successfully passed the weight variation test, meeting BP standards. Statistically significant differences in crushing strength were observed between tablets coated with AHSS and AHFM compared to those coated with HPMC ($p=0.010$, $p=0.007$). The friability of all tablets complied with BP standards and was significantly reduced due to the coating process. All propranolol HCl 40mg tablets disintegrated within 17 minutes, with an assay value of 102.08±0.83% (mean±SD), showing no statistically significant differences with AHSS, AHFM, and CSPP ($p=1.000$, $p=0.998$, $p=0.854$). Furthermore, all propranolol HCl 40 mg tablets released over 80% of the active ingredient within 30 minutes.

Conclusion: Film-coating of core propranolol HCl 40 mg tablets with AHSS, AHFM, and CSPP did not significantly impact the immediate release nature. These extracts can be used successfully as film coating agents for tablets.

PP 01

Awareness and knowledge on breast cancer and practices on breast self-examination among healthcare students from selected higher education institutes in Colombo District

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Background: Breast cancer (BC) is the most common cancer among women globally and in Sri Lanka. Breast Self-Examination (BSE) is a simple, low-cost method for early detection and survival. Healthcare students are vital in promoting awareness.
Objectives: To assess breast cancer awareness and knowledge, evaluate BSE practices (frequency, accuracy, confidence), identify risk factors, warning signs, barriers and facilitators, compare findings among Biomedical Science, Physiotherapy, Nursing, Speech and Hearing Sciences, and Ayurvedic Medicine students, and analyse information sources influencing awareness and knowledge.
Methodology: A descriptive cross-sectional study included 105 healthcare students from one private and three government higher education institutions in Colombo District using convenient sampling. Data were collected March–May 2025 via a structured self-administered questionnaire adapted from a published survey assessing socio-demographic characteristics, awareness, knowledge, and BC/BSE practices. Reliability was confirmed with Cronbach's alpha. Data were analysed in SPSS 26 using descriptive statistics and correlation analysis.
Results: Overall, 92.4% were aware of breast cancer and 68.6% had heard of BSE. Awareness was high but knowledge moderate, with gaps in early menarche, multiparity, and correct BSE techniques. Family history (84.8%), breast lumps (78.1%), and late menopause (74.3%) were key risk factors, while breast lump (80%) and breast pain (67.6%) were warning signs. Only 46.7% practiced BSE; poor technique (53.3%) and shyness (33.3%) were barriers. The internet (65.7%) and lectures (19%) were main information sources. Academic discipline correlated with BSE awareness ($r=0.20$, $p=0.04$), and awareness with practice ($r=0.34$, $p<0.01$).
Conclusion: Healthcare students showed high awareness but moderate knowledge, with gaps in risk factors, correct BSE techniques, and regular practice. Targeted educational interventions are needed to strengthen knowledge, overcome barriers, and encourage consistent, accurate BSE practices.

PP 02

A predictive analytics framework for estimating recovery time in pneumonia patients

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Background: Pneumonia is a serious respiratory disease associated with high morbidity and mortality, especially among vulnerable patients. Accurate prediction of recovery time is essential for effective treatment planning and hospital resource management. However, traditional assessments rely heavily on clinical judgment and may lack consistency. Recent advances in AI enable the development of automated, data-driven systems for more reliable recovery prediction.
Objectives: This study aims to develop an AI-based framework to predict the recovery time period of pneumonia patients. As an initial phase, the study focuses on developing and evaluating an automated triage classification module as a foundation for future recovery prediction.
Methods: A prototype Flask-based web application was developed to facilitate patient data entry, generate unique patient identifiers, and perform automated triage assessment. A Decision Tree classifier was implemented using clinical parameters, including respiratory rate, oxygen saturation (SpO_2), systolic blood pressure (SBP), pulse rate and Glasgow Coma Scale (GCS) score. The model was trained and evaluated using synthetic patient data representing different severity scenarios. Patient records, predictions, and timestamps were stored in an Excel database for subsequent analysis and future model development.
Results: The system successfully performs synthetic data processing, unique ID generation and accurate triage classification. The Machine Learning (ML) model shows consistent performance in severity categorization when evaluated on synthetic data. However, recovery time prediction was not implemented in this phase, as real-world patient data collection is currently ongoing.
Conclusions: This study presents a prototype AI-based framework for pneumonia patient assessment with an automated triage classification module developed using synthetic data. The framework provides a preliminary foundation for future recovery time prediction, which requires validation using real-world clinical data and the implementation of recovery prediction models.

PP 03

Factors influencing job satisfaction and retention among nursing officers at Base Hospital Homagama, Sri Lanka

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Background: Job satisfaction significantly influences nurses' motivation, retention, and the quality of patient care. Studying job satisfaction among nurses in Sri Lanka provides insights into hospital functioning, staff retention, and nurses' overall well-being and perceptions of their work.
Objectives: To assess job satisfaction and associated factors among nursing officers at Base Hospital Homagama, Sri Lanka
Methods: A descriptive cross-sectional study was conducted at Base Hospital Homagama, Sri Lanka, to assess job satisfaction among nursing officers. Data were collected from 165 nurses with at least one year of experience, achieving a 64.7% response rate. A pretested questionnaire(n=20) was used to assess workplace, organizational, and social factors. The importance of each factor and the corresponding satisfaction categories were assessed using levels such as fully satisfied, satisfied, dissatisfied, and highly dissatisfied. Ethical approval was obtained from relevant authorities. Data were analyzed using SPSS 26.0 using descriptive and inferential statistics.
Results: The majority of nurses were female (n=137,83.03%) and aged 41–50 years (n=77,46.67%). Only 10 (6.06%) nurses reported being fully satisfied, while 61(37.00%) were dissatisfied. Salary was the most valued workplace factor among 143(86.67%) nurses, although only 22(13.33%) were satisfied. Staffing was considered very important by 126(76.36%), with 57(34.55%) dissatisfied. Nurses in intensive care reported the highest satisfaction(n=8,57.1%), whereas emergency unit nurses reported the highest dissatisfaction(n=13,72.2%). Lower job satisfaction was observed among nurses working >50 hours/week (n=33,30.8%;dissatisfied), approaching statistical significance(p=0.051). Respect from the community was the most valued social factor, with 38(23.03%) fully satisfied. Job satisfaction was significantly associated with marital status(p=0.028) and educational qualification(p=0.024), but not with gender(p=0.532), age(p=0.782), ethnicity(p=0.714), or religion(p=0.714).
Conclusion: Overall job satisfaction among nurses was low, particularly regarding salary, staffing adequacy, and career development. Improving salary schemes, staffing ratios, and strengthening organizational and professional support may enhance nurses' job satisfaction and retention in the nursing workforce.

PP 05

Maternal attitudes and socio-demographic influences on feeding practices of children aged 6–23 months in Rideegama region, Sri Lanka

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Background: Maternal attitudes and socio-demographic factors interact to shape infant and young child feeding practices. Understanding these influences is essential to optimize early childhood nutrition and growth.
Objective: The study aimed to assess maternal attitudes and socio-demographic influences on feeding practices of children aged 6–23 months in Rideegama region, Sri Lanka.
Method: A descriptive cross-sectional study was conducted in March 2025 among a convenience sample of mothers (n=415) with children aged 6–23 months attending child welfare clinics or field weighing posts in Rideegama Medical Officer of Health (MOH) area, Kurunegala District. Following ethical clearance, data were collected via an interviewer-administered questionnaire evaluating maternal attitudes using a 5-point Likert scale, comprising eight statements. Quantitative attitude scores were categorized into Good (76–100%), Moderate (51–75%), and Poor (0–50%) distinct tiers. Statistical analysis was performed using SPSS version 26.0, employing descriptive statistics and the Pearson Chi-Square test (Level of significance: $p<0.05$).
Results: The study involved 415 mothers aged 28.69±5.68 years. A significant majority of mothers exhibited a positive attitude toward child feeding practices (75.2%, n=312), whereas moderate and poor attitudes were observed in 11.1% (n=46) and 13.7% (n=57) of the cohort, respectively. Regarding specific beliefs, 78.1% (n=324) recognized that complementary feeding should follow six months of exclusive breastfeeding, and 97.8% (n=406) expressed a willingness to participate in community-based nutritional education programs. A substantially higher frequencies of positive attitudes were observed among mothers aged 25–34 years (46.3%,n=192;p=0.016), those residing in rural areas (74.7%,n=310;p=0.024), families with 4-6 members (45.3%,n=188; p=0.010), households with neutral family support structures (33.3%,n=138;p=0.046), mothers parenting a female child (41.4%,n=172;p=0.004), and families maintaining a monthly expenditure between 30,000–50,000 LKR (48.9%,n=203;p<0.001).
Conclusion: Mothers have highly prevalent positive attitude toward child feeding practices, alongside a near-universal willingness to participate in nutrition education. Specific maternal demographic profiles provide clear targets for optimizing future community-based nutritional interventions.

PP 06

Mental health, well-being and associated factors among farmers in selected Grama Niladhari divisions in Kurunegala District, Sri Lanka

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Background: Farmers in rural Sri Lanka face socio-economic and environmental stressors affecting mental health and well-being, with limited existing evidence. Kurunegala District is a predominantly rural agricultural region affected by climate variability and human–wildlife conflict. This is one the first community-based studies in Sri Lanka focusing on rural farmers' mental health and well-being.
Objective: To describe mental health, well-being, and associated factors among farmers in selected Grama Niladhari divisions in Kurunegala District, Sri Lanka.
Methods: A descriptive cross-sectional study was conducted among 221 farmers in Usgala Siyambalangamuwa and Thissapura Grama Niladhari divisions. Participants were selected using simple random sampling from a government-registered farmer list. Data were collected using a pre-tested interviewer-administered questionnaire covering socio-demographic, socio-economic, health, and social support factors, a researcher-developed mental health scale, and the WHO-5 Well-being Index. The mental health tool was expert validated and translated using forward–backward translation. Mental health was categorized as poor (0–20), moderate (21–39), and good (40–60), while well-being was classified as poor (≤50) and good (>50). Ethical approval and informed consent were obtained prior to data collection. Data were analyzed using SPSS version 25. Chi-square, Fisher's exact test, and simple linear regression assessed the relationship between mental health (dependent variable) and well-being.
Results: The response rate was 100%. Most participants were male (90.9%). Mental health levels were poor (17.2%), moderate (43.4%), and good (39.4%), while 74.7% had poor well-being. Mental health and well-being were associated with family support, farming type, income, land status, and chronic illness, with a positive relationship between them.
Conclusion: Moderate mental health and poor well-being were common among farmers and were associated with socio-economic and health factors. These findings suggest that the need for attention to improve mental health in rural farming communities.

PP 07

Strengthening primary eye care through Optometry: Opportunities in Sri Lanka

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Background: Primary eye care plays a vital role in reducing avoidable visual impairment. In Sri Lanka, limited evidence exists regarding the availability, distribution, qualifications, and integration of optometry services within the national eye care system.
Objectives: This study aimed to assess optometry services in Sri Lanka and identify opportunities to strengthen primary eye care delivery.
Methods: A mixed-methods situational analysis was conducted between July 7th to August 10th, 2024. Quantitative data were collected using a structured questionnaire administered online to practising optometry practitioners in public and private sectors, below 65 years. Purposeful sampling was used with recruitment through four national professional associations. The questionnaire was developed based on WHO eyecare work force guidelines, validated through expert review and translated into Sinhala and Tamil. Qualitative data were collected through semi-structured interviews with nine key stakeholders representing four professional and regulatory organisations involved in eye care, education, and health services. Quantitative data were analysed descriptively, while qualitative findings underwent thematic analysis.
Results: A total of 244 responses were received across nine provinces of Sri Lanka. Practitioners concentrated in the Western Province (46%) with 83% engaged in full-time or part-time private practice. Around 46% held diploma-level or higher qualifications and fewer than 15 graduate optometrists were identified nationally. Although practitioners reported confidence in basic refractive services (83%), many expressed interest in further training in slit-lamp examination (30%) and specialty contact lenses (30%) Stakeholders highlighted the need for standardised qualifications, stronger regulation, and better integration of optometry. Over 700 practitioners were identified nationally (in the four professional associations), equivalent to approximately 32 practitioners per million population.
Conclusion: Strengthening public sector optometry services presents an important opportunity to expand primary eye care access in Sri Lanka. Standardisation of optometry education, establishment of professional regulation, and greater integration into the public health system are essential to improve equitable access to quality eye care services.

PP 08

Knowledge on epilepsy, seizure first aid and associated factors among primary teachers in selected school in Akuressa educational zone, Matara District, Sri Lanka

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Background: Epilepsy is a common neurological disorder affecting millions worldwide, including school-aged children, where teachers play a critical role in managing health-related emergencies such as seizures.
Objectives: To describe knowledge on epilepsy, seizure first aid and associated factors among primary teachers in selected schools in Akuressa educational zone, Matara district, Sri Lanka.
Methods: A descriptive cross-sectional study was conducted among 238 primary teachers selected using stratified random sampling. Data were obtained using a validated, pre-tested, self-administered questionnaire and analyzed using descriptive statistics and chi-square tests with SPSS version 26.0. Epilepsy knowledge (scored out of 9) and seizure first aid knowledge (scored out of 5) were categorized using median cut-off values into poor and good knowledge.
Results: The majority [131 (55.0%)] had more than 15 years of teaching experience. Female teachers were 196 (82.4%) and only 3 (1.3%) had received formal training on seizure first aid. Poor knowledge of epilepsy was found among 144 (60.5%) teachers and poor knowledge of seizure first aid among 127 (53.4%). Most recognized symptoms such as eye rolling [155 (65.1%)], while few identified tonic-clonic [77 (32.4%)] or jerky movements [67 (28.2%)]. Harmful misconceptions were common; 76 (31.9%) believed in inserting objects into the child's mouth and 107 (45.0%) in dousing with water. Significant associations were found between better knowledge and having encountered an epileptic child in the classroom for both epilepsy ($p = 0.006$) and seizure first aid ($p = 0.011$). Teachers from the Welipitiya division showed significantly better seizure first aid knowledge ($p = 0.008$).
Conclusions: Majority of teachers had poor knowledge on both epilepsy and seizure first aid. Future studies are needed to include epilepsy education and seizure first aid training into teacher development programs.

PP 09

Prevalence and association between homesickness and well-being among hostel dwelling undergraduates in Faculty of Allied Health Sciences, University of Sri Jayewardenepura

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Background: Homesickness is a common psychological challenge experienced by students residing away from home, particularly those living in hostels. It can significantly impact their emotional stability, academic performance, and overall well-being. Understanding the extent of homesickness and its association with students' well-being is essential to guide effective interventions within a university setting.
Objectives: To assess prevalence and association between homesickness and well-being among hostel dwelling undergraduates in Faculty of Allied Health Sciences, University of Sri Jayewardenepura.
Methodology: A descriptive cross-sectional study was conducted among 234 (n=493) hostel dwelling undergraduates in the Faculty of Allied Health Sciences, University of Sri Jayewardenepura (USJP), Sri Lanka. Stratified random sampling was applied based on gender. Data was collected using a self-administered questionnaire consisting of Utrecht Homesickness Scale and validated well-being scale. Descriptive statistics were used to analyze the data. Correlation was assessed using Pearson's Correlation test and comparisons were done using Chi-Square test and Fisher's Exact test. Ethical approval was obtained from an Ethics Review Committee, Faculty of Medical Sciences, USJP.
Results: The prevalence of homesickness among hostel dwelling undergraduates was 86.75% (n=203). Among 234 participants, moderate level of homesickness was reported by 77.4% (n=181). Regarding well-being, 62.8% (n=151) of students had a moderate level. A significant negative correlation ($r = -0.513$, $p<0.01$) was found between homesickness and well-being. Homesickness was significantly associated with gender (p=0.004), degree program (p=0.004), first time hostel (p=0.001) and frequency of home visit (p=0.001). Female gender was significantly associated with higher homesickness. In contrast, well-being was significantly associated with gender, degree program and first-time hostel experience.
Conclusions: The majority of the hostel-dwelling undergraduates experienced moderate homesickness, which was significantly associated with reduced well-being. Homesickness was more prevalent among female students, indicating higher vulnerability in this group.

PP 10

Knowledge, attitudes, and practices among parents and guardians regarding early childhood vaccination in the Kandy Municipal area, Sri Lanka

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Background: Childhood vaccination is a highly effective public health intervention that prevents millions of deaths and reduces morbidity worldwide. Sri Lanka has achieved high immunization coverage through its National Immunization Programme. However, limited evidence exists on the knowledge, attitudes, and practices of parents and guardians regarding early childhood vaccination in the Kandy Municipal area. Understanding these factors is important to identify knowledge gaps that may influence vaccine acceptance and timely uptake.
Objectives: To assess the knowledge, attitudes, and practices of parents and guardians regarding early childhood vaccination in the Kandy Municipal area and identify associated factors.
Methods: A descriptive cross-sectional study was conducted in 2025 among parents and guardians of under-five children attending seven maternal and child welfare clinics in the Kandy Municipal area, recruiting 393 participants via convenience sampling. Data were collected using a validated interviewer-administered questionnaire assessing vaccination-related knowledge, attitudes, and practices. Domain scores were calculated and categorized as poor (<50%), moderate (50–75%), and good (>75%) based on predefined cut-off values. Data were analyzed using Jamovi software with descriptive statistics and inferential tests including Chi-square and Kruskal–Wallis tests. A p-value of <0.05 was considered statistically significant.
Results: Only 8.4% of participants demonstrated good overall knowledge. Considerable deficiencies were identified in knowledge of vaccine-preventable diseases, the national immunization schedule, and timing of multi-dose vaccines based on domain scores. Knowledge was significantly associated with education level ($p<0.001$), employment status ($p<0.001$), and number of children ($p=0.009$). Attitudes and practices were predominantly positive, with most participants demonstrating favorable scores.
Conclusions: Although participants showed positive attitudes and practices, notable knowledge gaps remain, potentially increasing vulnerability to vaccine misinformation. Targeted educational interventions at maternal and child health clinics maybe needed to address these deficits and sustain long term vaccine confidence.

PP 11

Barriers and facilitators in the implementation of evidence-based fall prevention practices among physiotherapists in Sri Lanka

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Background: Falls are a major cause of disability and mortality in older age. There is evidence of effective fall prevention interventions that have informed guidelines, however much of the evidence comes from high-income countries (HICs). The effectiveness of these interventions is inconclusive in Low-and Middle-Income Countries (LMICs) at least partly because of the contextual differences.
Objectives: This study explored the impact of a fall prevention education program and the barriers and facilitators to implement evidence-based interventions acquired from the education program by physiotherapists in Sri Lanka.
Methods: This qualitative study used semi structured interviews with randomly selected physiotherapists who had received an online fall prevention education program. Online interviews were conducted three months after the education program to explore the impact of the program, and the barriers and facilitators to translating acquired knowledge into practice. Each interview extended up to 30 to 45 minutes. An inductive thematic analysis was done.
Results: Twenty physiotherapists who received the education program were recruited to participate in semi-structured interviews. Overall, four themes were identified: impact of the education program, barriers to implement fall prevention programs, facilitators for successful implementation of fall prevention and strategies to overcome barriers and enhance facilitators. Participants reported that the education program improved knowledge and clinical behaviour. It was highlighted that implementation of evidence-based fall prevention programs was influenced by patient level, household, socioeconomic and system level barriers and facilitators.
Conclusions: This study highlighted patient, household, socioeconomic and system level barriers and facilitators that influence the implementation of fall prevention interventions. Strategies to overcome these barriers and strengthen facilitators were also suggested. Together, these findings imply that education programs can improve physiotherapists' knowledge, confidence and clinical behaviour in Sri Lanka but successful implementation requires strategies to overcome contextual and system-level barriers.

PP 13

Quality of nursing work life among Intensive Care Unit nurses at the National Hospital of Sri Lanka

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Background: Nurses working in Intensive Care Units (ICUs) face unique occupational challenges that may adversely affect their Quality of Nursing Work Life (QNWL), thereby compromising the quality of patient care. In Sri Lanka, where government hospitals contend with staffing shortages and resource constraints, evidence on ICU nurses' QNWL remains limited.
Objectives: This study aimed to identify the level of QNWL among ICU nurses at the National Hospital of Sri Lanka (NHSL).
Methods: A descriptive cross-sectional study was conducted among 232 ICU nurses at the NHSL. Participants were selected using proportionate stratified random sampling across 18 ICUs. Nurses with ≥1 year of ICU experience were included, while those on leave were excluded. Data were collected using the validated, self-administered Brooks' Quality of Nursing Work Life Survey, assessing four domains: Work-Life/Home-Life, Work Design, Work Context, and Work World. The instrument was pretested, with content and face validity confirmed, and demonstrated good reliability (Cronbach's alpha >0.70) without major modifications. Ethical approval was obtained from the Research Ethics Committee, Faculty of Medical Sciences, USJ. QNWL levels were categorized based on established scoring guidelines. Descriptive statistics were used for analysis with SPSS 26.
Results: Most participants were female (88.79%), and the majority were aged 25–34 years (75.86%). Overall, 61.64% of ICU nurses reported a moderate level of QNWL, 36.21% reported high QNWL, and 2.16% reported low QNWL. Across the four dimensions, responses were mostly moderate. The Work Context domain was most positively perceived, with 84.91% reporting high levels. Work-Life/Home-Life and Work Design were mainly rated moderate (71.12% and 68.53%), with fewer reporting high levels (28.45% and 28.88%). The Work World domain was also mainly moderate (65.52%) but showed the highest proportion of low ratings (5.17%).
Conclusions: Most ICU nurses experienced a moderate level of QNWL, with strengths in workplace relationships and organizational context. Variation across domains suggests the need for institutional strategies to improve nurses' professional well-being and sustain high-quality critical care services.

PP 14

Evaluation of partially purified lectins from selected Sri Lankan plants as alternative reagents for ABO blood grouping

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Background: Blood group antigens are critical in transfusion medicine, as ABO incompatibility can cause life-threatening reactions. Although commercial antisera are the standard for blood typing, high cost and limited availability may restrict access. Lectins, plant-derived carbohydrate-binding proteins with specific affinity for blood group antigens and agglutinating properties, may serve as low-cost alternatives. However, Sri Lankan plant sources remain unexplored.
Objectives: This study aimed to investigate the performance of partially purified lectins extracted from selected Sri Lankan plants for ABO blood grouping.
Methods: A laboratory-based experimental study was conducted to evaluate lectin activity. Plant materials (seeds, leaves, or fruits) were collected, cleaned, dried, and ground into powder. Crude extracts were prepared by macerating one part of the materials in three parts of phosphate-buffered saline (PBS), followed by filtration to remove debris. Aliquots of crude extracts were subjected to 90% ammonium sulfate fractionation and incubated at 4 °C for 6–8 h. The suspension was centrifuged at 2500 rpm for 10 min, and the precipitate was collected and dissolved in 2–3 mL PBS to obtain a partially purified lectin solution. Hemagglutination activity was tested against 40 samples, with 10 from each blood group, using the standard tube agglutination method.
Results: Of the 34 plant species screened, 26 demonstrated initial hemagglutination activity, while only 7 retained activities after partial purification. Crude extracts of *Dolichos biflorus* (Horse gram) and *Phaseolus lunatus* (Lima bean) seeds exhibited specific agglutination of 4+ reaction with A and AB blood groups. In contrast, crude extracts of seeds of *Lens culinaris* (Lentil), *Psophocarpus tetragonolobus* (Winged bean), *Pisum sativum* (Green pea), and crude extract of *Solanum lycopersicum* (Tomato) fruit showed pan-agglutination of 4+, lacking group specificity.
Conclusion: Sri Lankan *Dolichos biflorus* and *Phaseolus lunatus* showed specific agglutination activity with blood group A, indicating their potential as alternative reagents for ABO blood grouping. However, further investigation using a larger sample size is necessary before these can be considered for application as alternative reagents for ABO blood grouping.

PP 17

Association between *Helicobacter pylori* infection and endoscopic findings among dyspeptic patients attending the Gastroenterology clinic at Teaching Hospital, Jaffna

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Background: *Helicobacter pylori* (*H.pylori*) infection is a major cause of chronic gastritis, peptic ulcer, and gastric carcinoma. Endoscopy is often used to assess disease status and progression in dyspeptic patients while *H.pylori* infection may contribute to significant gastric mucosal changes. Presence of *H.pylori* infection could enhance the disease progression and leads to altered histological changes. Diagnosis of *H. pylori* infection in dyspeptic patients often requires invasive procedure, which may cause discomfort to patients.
Objective: To determine the association between *H.pylori* and endoscopic findings among dyspeptic patients attending the Gastroenterology clinic at the Teaching Hospital Jaffna.
Methods: A cross-sectional study was conducted among 66 dyspeptic patients. Endoscopic findings from each participant, including pangastritis, duodenitis, gastritis, gastric erosion, reflux oesophagitis, and mucosal oedema were recorded after upper gastrointestinal endoscopy. Two gastric biopsies were obtained from the gastric antrum subjected to genomic DNA extraction using silica-based spin column technique. The extracted DNA was subjected to real-time PCR targeting the *H.pylori* specific *UreA* gene. Positive and negative controls were used for test validation. Associations were assessed using the chi-square test using SPSS version 20.
Results: Endoscopic findings showed that 81.8% (n=54) had pangastritis, while 51.5% (n=34), 30.3% (n=20), 27.3% (n=18), 18.2% (n=12), and 3% (n=2) had reflux oesophagitis, duodenitis, mucosal oedema, gastritis, and gastric erosion, respectively. Among participants, 30.3% (n=20) were *H.pylori*-positive. However, majority of *H. pylori* positive cases were reported with duodenitis 40% (8/20), reflux oesophagitis 35.3% (12/34), mucosal oedema 33.3% (6/18) and pangastritis 31.5% (17/54) while none had gastric erosion. Findings showed there were no statistically significant association between *H.pylori* infection and any specific endoscopic findings ($p>0.05$).
Conclusion: The frequency of *H. pylori* PCR positivity within each endoscopic finding was highest among patients with duodenitis. However, no significant association was identified between *H. pylori* infection and specific endoscopic findings. Further studies with larger sample sizes are recommended.

PP 18

Assessment of hematological parameters and neutrophil-to-lymphocyte ratio as indicators of glycemic control in a selected type 2 diabetes mellitus patients attending a tertiary care hospital, Sri Lanka

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Background: Diabetes mellitus is a major global health concern due to its vascular complications. Poor glycemic control causes metabolic, cellular, immunological, and hematological disturbances. Type 2 diabetes mellitus (T2DM) is associated with chronic low-grade inflammation and altered neutrophil-to-lymphocyte ratio (NLR), but evidence from Sri Lanka is limited.

Objective: To assess the relationship between hematological parameters, NLR, and glycemic control among diabetic and non-diabetic individuals in a selected Sri Lankan population.

Methods: A comparative cross-sectional study was conducted among 106 age- and sex-frequency matched individuals (53 T2DM and 53 non-diabetic) aged 18–70 years from March to May 2025. Socio-demographic and clinical data were collected using an interviewer-administered questionnaire. Diabetic individuals were recruited from the Colombo South Teaching Hospital, Sri Lanka based on FBS (<200 mg/dL) and recent HbA1c (>5.6%), while controls were selected from the community with normal FBS (<100 mg/dL) and HbA1c (<5.6%) levels. Hematological indices (FBC) and inflammatory markers (CRP, ESR) were measured using automated analyzers. Individuals with evidence of inflammation [ESR (>14 mm/h) and CRP (>6 mg/L)] were excluded.

Results: Significant differences between study groups were observed in WBC count (p=0.000), neutrophil count (p=0.005), lymphocyte count (p=0.002), eosinophil count (p=0.029), RBC count (p=0.001), Hb level (p=0.003), HCT (p=0.048), MCV (p=0.016), MCHC (p=0.000), RDW (p=0.000), PLT count (p=0.004), and NLR (p=0.004). Among diabetic individuals, HbA1c showed significant positive correlations with neutrophil count, platelet count, and NLR, and a negative correlation with lymphocyte count (p=0.000). No significant correlations were found between HbA1c and haematological parameters in non-diabetic individuals. ROC analysis demonstrated good predictive performance of neutrophil count (AUC=0.838) and NLR (AUC=0.840) for poor glycaemic control (HbA1c >7%). An NLR cutoff of 1.740 effectively differentiated good and poor glycaemic control (p=0.000). Binary logistic regression identified NLR as an independent predictor of poor glycaemic control with 84.9% classification accuracy.

Conclusions: Neutrophils, lymphocytes, platelets, and NLR were significantly associated with HbA1c levels. NLR appears to be a reliable and cost-effective marker for monitoring glycemic control in T2DM, particularly in low-resource healthcare settings.

PP 19

Photocatalytic removal of antibiotic residues from aquaculture systems using bare and modified TiO_2

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Background-Antibacterial resistance develops when bacteria gain the ability to survive against antibacterial drugs. Extensive antibiotic use in aquaculture contributes to resistance, emphasizing the need for effective removal of antibiotic residues. Photocatalytic degradation represents a promising green strategy for this purpose.
Objective-. This study aimed to convert UV-active Titanium Dioxide (TiO_2) into a visible light-responsive photocatalyst and utilize it for degrading accumulated aquaculture antibiotics by harnessing the freely available visible component of solar light
Methods- TiO_2 was doped with gadolinium (Gd-TiO_2) using the sol-gel method. Gd-TiO_2 nanoparticles were characterized using Fourier transform infrared spectroscopy, X-ray diffraction, and Diffuse Reflectance Spectroscopy. Photocatalytic degradation experiments were performed under UV and visible light using an untreated control, a catalyst with 10 ppm concentration and a tailored setup and to simulate controlled irradiation conditions. The degradation of 14 ppm tetracycline solutions was evaluated through a decay curve depicting concentration over irradiation time and confirmed using HPLC analysis. The minimum inhibitory concentration (MIC) was determined for both pre-treated and post-treated antibiotic solutions using macro broth dilution method.
Results- Characterization tests revealed that Gd was successfully doped in to TiO_2 and Gd–TiO_2 effectively facilitates photocatalytic degradation under visible light. The Gd–TiO_2 treated solution showed nearly double the concentration reduction compared to TiO_2 (55.82% > 24.51%), with the highest degradation rate observed for the modified catalyst. HPLC revealed progressive reduction of the tetracycline peak, disappearing after 120 min irradiation. The MIC of the modified catalyst-treated antibiotic solution has increased (5.327 ppm) compared to the initial MIC of the untreated antibiotic (0.2 ppm) solution.
Conclusion-This demonstrate that the antibiotic was effectively degraded under visible light irradiation in the presence of Gd–TiO_2 compared to TiO_2. Increased MIC suggest the conversion of harmful drug into less-antibacterial by-products, offering a sustainable strategy for aquaculture water purification and potential mitigation of antibiotic resistance.

PP 20

Total white blood cell count and platelet count as accessible predictors of cardiovascular disease risk among patients attending to medical clinic at a tertiary care hospital in Sri Lanka

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Background: Cardiovascular disease (CVD) remains a leading cause of morbidity and mortality globally, with a high burden in Sri Lanka. Routinely available haematological markers, such as total white blood cell (WBC) count and platelet count may offer cost-effective tools for early CVD risk stratification.
Objectives: To investigate the associations between total white blood cell count and platelet count with the five World Health Organization/International Organization/International Society of Hypertension (WHO/ISH) 10-year CVD risk groups and to evaluate their discriminative abilities in identifying risk groups.
Methods: This analytical cross-sectional study enrolled 197 participants aged 40–79 years attending the medical clinic at the Colombo South Teaching Hospital, Kalubowila, Sri Lanka. Data, including age, sex, and smoking status, were collected, along with blood samples for full blood count, total cholesterol, and fasting blood glucose tests. Participants were classified into groups based on CVD group 1–5. Spearman's correlation was used to assess associations, and Receiver Operating Characteristic (ROC) curve analysis was used to evaluate discriminative ability.
Results: The participants were distributed into the groups as follows: group 1 (84), group 2 (55), group 3 (32), group 4 (17), and group 5 (9). The total WBC count showed a weak positive correlation with CVD risk, narrowly missing statistical significance ($\rho = 0.137$, $p = 0.055$), whereas platelet count did not show a statistically significant association with risk groups ($\rho = 0.053$, $p = 0.457$). ROC curve analysis demonstrated that both total WBC count (area under the curve [AUC] = 0.826; 95% CI: 0.70–0.94) and platelet count (AUC = 0.830; 95% CI: 0.72–0.93) effectively discriminated individuals in group 5 from those in the lower-risk groups (group 1–4). The optimal cut-off values for identifying WHO/ISH risk group 5 were a platelet count $\geq 190 \times 10^9$/L (sensitivity 55.6%, specificity 83.0%) and a total WBC count $\geq 5.355 \times 10^9$/L (sensitivity 100%, specificity 9.6%). Multivariable ordinal logistic regression showed no significant association between total WBC or platelet counts and higher WHO/ISH risk category after adjusting for age, smoking status and BMI.
Conclusions: WBC and platelet counts were not independently associated with WHO/ISH risk after adjustment but showed good ability to distinguish the highest risk group from lower-risk groups, suggesting limited supplementary value.

PP 21

Impact of regular blood donation on lipid profile among male blood donors registered at National Blood Center, Sri Lanka

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Background: Regular blood donation has been proposed to improve cardiovascular health by improving lipid profile parameters. However, the evidence on its effect on cardiovascular health remains inconclusive, particularly in South Asian populations.

Objective: This study aimed to assess the impact of regular blood donation on lipid profile parameters among regular and first-time male blood donors at the National Blood Center, Sri Lanka.

Methods: A comparative cross-sectional study was conducted among 90 age-matched male participants aged between 20-60 years, including regular donors (n=45) who had donated blood at least 6 times within the past 36 months and first-time donors (n=45) who had donated blood only once within the past 1-15 months. Females were excluded to avoid the influence of menstrual blood loss and hormonal variations on lipid parameters. Data on potential confounders including BMI, diet, smoking, alcohol use, physical activity, and family history were collected using an interviewer-administered questionnaire. Lipid profile parameters including total cholesterol (TC), triglycerides (TG), high-density lipoprotein (HDL), low-density lipoprotein (LDL), very low-density lipoprotein (VLDL), and TC/HDL ratio were compared between groups using the independent-sample t-test or Mann-Whitney U test according to data distribution. The level of statistical significance was considered as 0.05.

Results: Regular blood donors had a significantly higher mean HDL level compared to first-time donors (53.29±11.46 vs. 48.53±8.83; p=0.030). The mean TC (196.73±39.18 vs. 195.64±33.11; p=0.887), LDL (118.71±36.74 vs. 113.43±30.39; p=0.460), and TC/HDL ratio (3.82±1.02 vs. 4.14±0.97; p=0.127), as well as median TG [116 (79.50-151.00) vs. 121 (86.50-237.50); p=0.194] and VLDL [23.10 (15.85-30.15) vs. 24.10 (17.29-47.45); p=0.190] were comparable between regular and first-time donors, with no statistically significant differences.

Conclusion: Regular blood donation may be associated with increased HDL levels within the reference range, which could indicate a possible beneficial effect on cardiovascular health.

PP 22

The prevalence and association of asymptomatic microalbuminuria and serum creatinine among female undergraduates residing in hostels of the University of Sri Jayewardenepura

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Background: Chronic Kidney Disease (CKD) is a leading cause of death globally and in Sri Lanka. Hence, early detection is essential for effective management. Female undergraduates were selected due to their increased exposure to lifestyle-associated risk factors, such as poor dietary habits, physical inactivity, and stress, which may contribute to early renal damage, and their higher CKD prevalence relative to males. The study included females aged 20–27 years with no history of kidney disease or urinary tract infections (UTIs)

Objectives: The prevalence and association of asymptomatic microalbuminuria and serum creatinine among female undergraduates residing in hostels of the University of Sri Jayewardenepura.

Methods: A descriptive cross-sectional study was performed among 197 female undergraduates residing in hostels of the University of Sri Jayewardenepura, Sri Lanka, in 2025. The study was conducted after obtaining ethical approval from the Research Ethics Committee of the Faculty of Medical Sciences, University of Sri Jayewardenepura. A self-administered questionnaire was used to retrieve demographic details. Serum creatinine level (SCr) was determined using the sarcosine oxidase method, and microalbuminuria level was measured using the immunoturbidimetric assay method. Data analysis was done using IBM Statistical Package for Social Sciences (SPSS) version 27.

Result: The median values for microalbuminuria and SCr were 1.40 mg/dl and 0.68 mg/dl, respectively. The majority of participants had normal SCr levels (0.4-1.3mg/dl), which was 98.5% (194), while only 1.5% (3) had abnormal values. Among the study population, 60.4% (119) of participants had a normal level of microalbuminuria, whereas 39.6% (78) had abnormal microalbuminuria. There is no significant association between SCr and microalbuminuria (p=1.000), but according to the correlation results, there is a statistically significant weak negative correlation between them. (r = -0.195, P = 0.006)

Conclusion: There was a weak negative correlation between SCr and microalbuminuria association, but no association between SCr and microalbuminuria in the study population.

PP 23

Prevalence of asymptomatic microalbuminuria and kidney function parameters among young adults in Maharagama, Sri Lanka

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Background: Chronic kidney disease (CKD) affects over 850 million people globally, yet most cases remain undetected until irreversible damage has occurred. Microalbuminuria indicates early kidney damage even when conventional markers remain normal and disease is still reversible. However, baseline microalbuminuria prevalence in healthy young adults in Sri Lanka is unknown.
Objective: To determine the prevalence of asymptomatic microalbuminuria and characterize kidney function parameters among apparently healthy young adults in selected Grama Niladhari divisions within the Maharagama Divisional Secretariat Division, Sri Lanka.
Methods: A cross-sectional study was conducted among 152 (45.4% males, 54.6% females) apparently healthy young adults aged 18–30 years (mean age: 23.93 ± 2.56 years), recruited through systematic random sampling from selected Grama Niladhari divisions within the Maharagama Divisional Secretariat Division, Sri Lanka. Apparently healthy status was defined as the absence of diagnosed chronic conditions (e.g., diabetes and chronic kidney disease) or active conditions that could cause microalbuminuria (e.g., urinary tract infection). Microalbuminuria was assessed and defined as the urine albumin-to-creatinine ratio (UACR) of 30-300 mg/g. Serum creatinine was measured by the enzymatic method, and estimated glomerular filtration rate (eGFR) was calculated using the CKD-EPI equation. Data were analyzed using SPSS version 27.0.
Results: The prevalence of asymptomatic microalbuminuria was 3.3% (95% CI: 1.1–7.5%; 5/152 participants). Among microalbuminuria-positive cases, mean UACR was 105.96 ± 85.08 mg/g. Serum creatinine (mean: 0.78 ± 0.11 mg/dL) was within normal limits and eGFR (mean: 108.3 ± 20.9 mL/min/1.73m²) remained above the clinically significant threshold of 60 mL/min/1.73m².
Conclusions: This study found a 3.3% prevalence of asymptomatic microalbuminuria among apparently healthy young adults in an urban Sri Lankan setting, providing preliminary baseline data. Kidney function remained within normal limits in all microalbuminuria-positive individuals, despite elevated UACR values, highlighting the presence of subclinical renal abnormalities. Further studies with larger samples are needed to confirm these findings.

PP 24

Serum protein analysis of *Haemonchus contortus* infected goats using Sodium Dodecyl Sulphate - Polyacrylamide Gel Electrophoresis (SDS-PAGE) technique

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Background: *Haemonchus contortus* is a globally prevalent gastrointestinal hematophagous endoparasite that significantly affects the health and productivity of goats. Infection causes severe anemia, alters serum protein profiles, and immune responses, leading to substantial economic losses in the livestock industry. It is considered Sodium Dodecyl Sulphate - Polyacrylamide Gel Electrophoresis (SDS-PAGE) is a reliable analytical technique for detecting infection-induced changes in protein expression, providing insights for the diagnosis and control of haemonchosis.
Objectives: This study aimed to analyze the electrophoretic patterns of serum proteins in *H.contortus* infected goats over time and compare them with their pre-infection profiles.
Method: This experimental laboratory study involved four goats experimentally infected with *H.contortus*. Serum samples collected before infection (Day 0) and post-infection (Days 2, 7, 14, 21, and 28) were separated using SDS-PAGE based on molecular weight. Protein bands were visualized using the iBright Imager and analyzed with its software. Statistical evaluations were performed using the non-parametric repeated measures ANOVA (Friedman test) and paired sample t-tests.
Results: Selected serum protein bands did not show statistically significant changes over time according to the Friedman test for Band 1 (p=0.201), Band 2 (p=0.482), and Band 3 (p=0.121). Paired sample t-tests also showed no significant differences between pre- and post-infection samples (p>0.05). However, a distinct protein band within the 10–30 kDa range appeared transiently in all four goats, most prominently on Day 14, and diminished thereafter. Fecal Egg Count (FEC) values exhibited a significant upward trend, confirming the successful establishment and progression of *H.contortus* infection.
Conclusion: The findings suggest that there were no statistically significant changes in the pattern of selected protein bands in *H.contortus* infected goats over time. However, the appearance of a distinct new protein band on day 14 may indicate infection-induced protein expression.

PP 25

Demographic drivers of bloodstream infections in northern Sri Lanka: insights from a dual-framework statistical approach

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Background: Bloodstream infections (BSIs) remain a primary cause of morbidity and mortality globally, necessitating immediate and precise antibiotic intervention.
Objective: To evaluate the distribution of pathogens in BSIs by age and gender in the Northern Province, Sri Lanka.
Methods: A retrospective descriptive cross-sectional study was conducted among patients with BSIs admitted to the Jaffna Teaching Hospital from January 2023 to September 2024, encompassing the Jaffna Peninsula, Kilinochchi, and Mullaitivu districts. Patients lacking substantial information and contaminated cultures were excluded. Pathogens were identified using standard automated and manual microbiological procedures. Pearson's χ^2 test and Bayesian analysis evaluated the relationship between variables using R Language.
Results: Among 12,117 patients with suspected BSIs, 3,288 yielded positive blood cultures. After excluding contaminants, true primary pathogens were isolated from 1,532(46.6%) patients. Of these, the majority were male (850;55.5%). Age distribution (in years) included ≤14 (166;10.8%), 15-34(235;15.3%), 35-54(413;27.1%), 55-74(541;35.4%), and 75-94(174;11.4%). Primary pathogens were coliforms (694;45.3%), *Pseudomonas* (314;20.5%), *Staphylococcus aureus* (195;12.7%) including methicillin-resistant *S. aureus* (109;7.1%) and methicillin-sensitive *S. aureus* (86;5.6%), *Acinetobacter* (152;9.9%), *Candida* (82;5.4%), *Enterococcus* (61;4%), and *Streptococcus* (25;1.6%). No significant association was found between gender and pathogen types (χ^2 p-value = 0.105;BF_{10}<0.001). Although the χ^2 test yielded a statistically significant association between age group and identified pathogens (χ^2 p-value=0.004), a small effect size (Cramér's V=0.102) suggests limited practical significance. Furthermore, no pairwise comparisons reached statistical significance after Bonferroni correction (Z<±2.29), which may reflect sensitivity to a large sample size. The Bayesian approach supported the absence of a meaningful association between age groups and pathogen types (BF_{10}<0.001).
Conclusion: Despite statistical significance, age demonstrated minimal clinical relevance in predicting pathogen type, and no association was observed with gender. Consistent findings across both frequentist and Bayesian analyses indicate that demographic factors have limited value in predicting bloodstream infection pathogens in this setting.

PP 26

Salivary heavy metal content in patients with periodontal disease

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Background: Heavy metals are environmental risk factors that may contribute to periodontal disease by increasing tissue permeability, immune dysregulation, and oxidative stress. Saliva is a biologically informative, non-invasive medium reflecting systemic environmental exposure. Metals such as Cd, Zn, and Ni have been implicated in periodontal pathology; however, Sri Lankan evidence remains limited.
Objectives: This study compared salivary heavy-metal levels among individuals with periodontitis, gingivitis, and periodontal health and evaluated correlations with plaque scores.
Methods: Unstimulated whole saliva samples were collected from 30 participants, (periodontitis; n=10, gingivitis; n=10, and periodontally healthy individuals; n=10), using purposive sampling. Individuals with metal oral appliances/restorations were excluded. Periodontal status was diagnosed according to the 2017 periodontal classification. Mn, Fe, Cu, Zn, Cd, and Ni concentrations were analyzed using inductively coupled plasma-optical emission spectrometry (ICP-OES). Calibration and manufacturer-recommended quality-control procedures were performed. Data normality was assessed before statistical analysis. One-way ANOVA was applied for Mn; Kruskal-Wallis test was used for all other metals.
Results: Mn, Fe, Cu, Zn and Ni showed no significant differences among the three groups (all $p>0.05$). However, Cd levels were significantly higher in healthy individuals (6.90 ± 5.20 ppb) than in gingivitis (1.46 ± 2.05 ppb) and periodontitis (0.14 ± 0.22 ppb) groups ($p < 0.001$), showing a decreasing trend with disease severity. Zn showed an increasing trend with disease progression ($p=0.041$). A significant negative correlation was observed between plaque score and Ni concentration ($\rho = -0.584$, $p = 0.007$).
Conclusions: Salivary Cd was higher in healthy individuals, suggesting that Cd may not be a reliable biomarker of periodontal disease activity in this sample. Zn and Ni may reflect periodontal status changes, but findings should be interpreted cautiously due to the small sample size. Future studies should include microbial analysis to address potential confounding and validate findings in larger cohorts using sensitive methods such as ICP-MS.

PP 27

Correlation between age, osmotic fragility, and mean corpuscular volume among the adults in the community of University of Sri Jayewardenepura

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Background: The Osmotic Fragility Test (OFT) assesses red blood cell membrane integrity. Physiological aging induces structural and functional changes in erythrocytes, including alterations in membrane properties and Mean Corpuscular Volume (MCV), which may influence osmotic fragility and contribute to variability in erythrocyte osmotic fragility.
Objectives: To investigate the relationship between age, red cell osmotic fragility, and MCV to determine how these variables correlate and influence each other.
Method: An experimental study was conducted to assess the effects of age and MCV on erythrocyte osmotic fragility using OFT results. A total of thirty adults from the University of Sri Jayewardenepura community were recruited and equally categorized into three age groups, with ten participants for each group: 20–39, 40–59, and ≥60 years. 5 mL of venous blood was collected from each participant into two lithium heparin tubes (2.5 mL each). A FBC was performed and MCV was recorded. OFT was conducted on the same day and mean corpuscular fragility (MCF, gdL^{-1}) was derived from fragility curves. Python was used for fragility curve generation and data analysis.
Results: Shapiro–Wilk testing indicated non-normal distribution of age, while MCV and MCF were normally distributed ($p > 0.05$). Spearman's correlation demonstrated a moderate positive correlation between age and MCF ($r = 0.5355$, $p = 0.0023$) and no significant correlation was observed between the MCV and MCF. Multiple linear regression showed that age and MCV in combination predicted MCF, with Age identified as the only significant independent predictor for MCF. Fragility = $0.3206 + 0.0008 \times Age + 0.0006 \times MCV$ ($p = 0.0055$, $R^2 = 0.320$, VIF = 1.47)
Conclusion: Osmotic fragility of erythrocytes shows a stronger association with age than MCV, suggesting that age-related changes primarily affect red cell membrane stability rather than cell size. This indicates that increased fragility with aging is more likely due to alternations in membrane structure and deformability than changes in erythrocyte volume.

PP 28

Assessment of haematological parameters in Sri Lankan patients with periodontal diseases- A pilot study

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Background: Periodontal diseases are chronic immune-inflammatory conditions that may influence systemic health through alterations in haematological parameters, particularly leukocyte, red cells and platelet profiles. While this association has been explored globally, evidence from Sri Lankan populations is limited. Therefore, this study aimed to assess and compare haematological parameters [including white blood cell, red cell and platelet parameters] among individuals with gingivitis, periodontitis and healthy periodontium. Additionally, the association between clinical periodontal parameters and haematological outcomes were evaluated.
Method: A cross-sectional study was conducted among 30 adults (n=10 per group) attending the University Dental Teaching Hospital, Peradeniya. Participants were categorized into gingivitis, periodontitis, and healthy groups based on standard clinical criteria. Venous blood samples were analysed using an automated haematology analyser. Periodontal parameters, including plaque score, were recorded. Data were analysed using one-way ANOVA, Kruskal-Wallis, and correlation analysis ($p<0.05$).
Results: No significant differences in haematological parameters were observed among groups ($p>.05$). A slightly higher mean total WBCs (8.65 ±2.14, 7.97 ±1.23) and neutrophil counts (5.43±2.01, 4.89±1.00) were observed in gingivitis and periodontitis groups compared to healthy controls(mean total WBC=7.03 ±1.32 and neutrophil count= 4.23±1.26).However, plaque scores showed significant positive correlations with total WBC ($p = 0.032$), neutrophil ($p = 0.028$) and monocyte counts ($p = 0.027$) in the gingivitis group ($p<.05$).
Conclusion: Although no significant differences were observed, the identified correlations suggest a possible association between early periodontal inflammation and systemic immune markers. However, given the small sample size, these findings should be interpreted cautiously. Further studies with large sample size are required to assess the relationships between different white blood cell subtypes and their ratios, and to determine their potential clinical value.

PP 29

Overrepresentation of lower respiratory tract pathogens in comorbid-respiratory patients: A retrospective study at the National Institute of Infectious Diseases, Sri Lanka

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Background: Comorbid conditions compromise the structural and immunological integrity of the lower respiratory tract, creating a permissive environment for opportunistic pathogen colonization, increasing risk of acute-exacerbations, and challenging clinical management.
Objectives: To identify specific overrepresented pathogens that may complicate the management of lower respiratory tract infections (LRTIs), among patients admitted to the National Institute of Infectious Diseases (NIID), Sri Lanka.
Methods: A retrospective study was performed based on clinical records of patients admitted with LRTIs to the NIID, Sri Lanka (2021-2023). Eligible participants spanned all age groups and sexes, with inclusion requiring documented respiratory culture results from the NIID microbiology laboratory registry. Records lacking substantial clinical/microbiological data were excluded. Associations between pathogens, demographic factors, and comorbidities were assessed using Pearson's Chi-square test, using R language.
Results: Among the total of 1,953 LRTI records screened from patients aged 1–89 years, the majority were male (1059; 54.2%), and aged 41–60 years (947; 48.5%). The most predominant species were coliforms (942; 48.2%), followed by *Pseudomonas aeruginosa* (438; 22.4%), *Acinetobacter baumannii* (229; 11.7%), *Moraxella catarrhalis* (172; 8.8%), *Streptococcus pneumoniae* (77; 3.9%), and Methicillin-resistant *Staphylococcus aureus* (MRSA) (39; 2.0%). Coliforms were the most frequent across all age groups. No significant association was detected between age groups and pathogen type (p=0.969). Gender showed significant differences in pathogen distribution (p=0.005), with *S. pneumoniae* (5.6%) more frequent in females and coliforms (49.0%) in males. Significant associations were observed between pathogens and comorbidities; SARS-CoV-2 infection (p<0.000), with kidney failure (p=0.023), and with heart failure (p=0.011). MRSA and *Candida* were significantly overrepresented along with SARS-CoV-2 infection. *Enterococcus* predominated among patients with kidney failure, while *Acinetobacter* was frequent with heart failure. No significant associations were observed between pathogens and having diabetes (p=0.666), hypertension (p=0.157), malignancy (p=0.204), or liver disease (p=0.791).
Conclusion: This study suggests that distinct pathogens are strongly associated with selected, existing comorbidities (SARS-CoV-2, kidney and heart failure) than with metabolic/oncological factors. Large-scale studies are warranted to validate these findings and their clinical implications.

PP 30

Impact of reusable sample cups and delayed analysis on serum phosphate levels

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Background: Serum phosphate is an important biochemical marker used in the assessment of renal function, electrolyte balance, bone metabolism, and cardiovascular risk. Accurate measurement may be influenced by pre analytical and analytical factors.

Objective: To assess the effect of reusable sample cups and delayed analysis on serum phosphate levels.

Methods: A paired repeated measures experimental study was conducted using samples from 16 healthy undergraduates at the Department of Medical Laboratory Sciences, University of Sri Jayewardenepura. Venous blood (3 mL) was collected into plain tubes, centrifuged at 3500 rpm for 10 minutes, and serum aliquoted into three new and one reusable sample cup. One new and one reusable cup were analyzed within 2 hours using a paired t test. Reusable sample cups were rinsed with tap water, soaked in Teepol detergent for 24 hours, rinsed with tap and distilled water, and air dried before reuse. Another aliquot in a new cup was stored at room temperature (25°C) for 6 hours, while the remaining aliquot was refrigerated at 2–8°C for 24 hours before analysis using the Dimension EXL analyzer. Results were compared using one-way repeated measures ANOVA.

Results: Mean age of the study sample was 24.87 ±0.885 years and the majority were females (68.8%). Mean serum phosphate levels were 1.29 ± 0.185 mmol/L in reusable cups and 1.29 ± 0.184 mmol/L in new cups analyzed within 2 hours, with no significant difference ($p = 0.291$). Storage at room temperature for 6 hours also showed no significant difference ($p = 0.138$). Refrigerated storage at 2–8°C for 24 hours showed a statistically significant difference ($p = 0.015$), although the change showed limited clinical significance.

Conclusion: Properly cleaned reusable sample cups can be used as a reliable alternative in laboratory settings, while delayed analysis following refrigerated storage may significantly affect serum phosphate results.

PP 31

In vitro evaluation of the synergistic effects of *Cinnamomum verum* and *Syzygium aromaticum* extracts combined with vancomycin against methicillin-resistant *staphylococcus aureus*

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Background: Methicillin-resistant *Staphylococcus aureus* (MRSA) is a major cause of hospital and community-acquired infections. The increasing prevalence of vancomycin-resistant *Staphylococcus aureus* (VRSA) due to the widespread use of vancomycin has necessitated novel therapeutic strategies against MRSA. Recent studies suggest that synergistic interactions between herbal extracts and conventional antibiotics can enhance antibiotic efficacy and reduce dosage.

Objectives: To evaluate the antibacterial and synergistic effects of *Cinnamomum verum* bark oil, *Syzygium aromaticum* oil, their mixture, and vancomycin against MRSA through MIC determination and checkerboard assays.

Methods: For this study, a commercially available *Cinnamomum verum* bark oil was purchased, while *Syzygium aromaticum* oil was extracted using solvent extraction with dichloromethane. The chemical composition of cinnamon oil and clove oil was characterized through phytochemical screening. The minimum inhibitory concentrations (MICs) of cinnamon oil, clove oil, cinnamon and clove oil mixture, and vancomycin were determined using the broth microdilution method in 96-well plates in triplicate to evaluate the antibacterial efficacy against three clinical isolates of MRSA. The combined antibacterial effects were studied using the checkerboard assay, with results expressed as MICs. The synergistic interactions of cinnamon oil and clove oil with vancomycin were interpreted through calculation of the Fractional Inhibitory Concentration Index (FICI). FICI value of ≤0.5 suggested a synergistic effect, while >0.5 - ≤1.0, >1.0 - ≤4.0, and >4.0 suggested additive, indifferent, and antagonist, respectively.

Results: From the phytochemical assay, alkaloids, flavonoids, phenols, tannins, and glycosides were identified as constituents of both cinnamon and clove oil. The MIC values were obtained as 128 µg/ml, 512 µg/ml, (64, 256) µg/ml (cinnamon, clove concentrations), and 0.8 µg/ml for cinnamon oil, clove oil, oil mixture, and vancomycin respectively. Checkerboard assays demonstrated reduction of MIC values for mixture and vancomycin to 16,64 µg/ml and 0.2 µg/ml, respectively. The FICI value was 0.5, indicating synergistic interaction between the mixture and vancomycin.

Conclusion: Cinnamon bark oil and clove oil extracts exhibited antibacterial activity against MRSA. Also, the findings indicate that the oil mixture acts synergistically with vancomycin *in vitro*.

PP 32

Impact of cooking and cooling on starch digestibility, gelatinization, rehydration properties, and granular morphology of selected starchy foods

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Background: The cooking and subsequent cooling of foods that contain starch can greatly influence the structural and digestibility characteristics of the starch.
Objectives: To determine the effect of refrigerated storage on the starch behavior of selected frequently consumed starchy foods.
Methods: The Glucose oxidase – peroxidase (GOPOD) enzymatic kit was utilized to measure total digestible starch (TDS) and evaluate changes in digestibility following cooling. Structural modifications were identified by examining the morphological changes of starch granules from light microscopy. The gelatinization index (GI) was assessed to test whether the free and disordered amylose content has changed after cooling and structural rearrangement. The rehydration ratio was evaluated to determine water absorption ability as it is a direct reflection of structural porosity and polymer freedom. All the tests were done in 2 replicates with 3 samples in each and samples were cooled at 4^0c for 8 hours.
Results: TDS analysis of red rice, roti, noodles, pasta, samba rice, and bread indicated reductions post-cooling: red rice (8.195%), roti (4.93%), noodles (9.37%), pasta (9.973%), samba rice (40.93%), and bread (9.145%). The gelatinization index decreased in rice (16.61% to 13.64%), in noodles (36.57% to 32.98%) and pasta (72.16% to 70.05%). Rehydration ratio findings indicated a decrease in white samba rice (0.569), while noodles (0.469), bread (0.476), roti (0.475), red rice (0.668) and pasta (0.444) experienced minor increases following cooling. Granular shapes of cooked starches were fully swollen and large while granular shape of cooled starches were fragmented, rigid and shape edges observed.
Conclusion: All the four tests of TDS% determination, gelatinization index determination, rehydration ratio determination and visual observation of granules by microscopy confirmed that cooling markedly changes the nutritional and structural characteristics of starchy foods. So cooling can be used as an effective, natural & clean label processing technique for improving the nutritional and structural characteristics of starchy foods.

PP 33

Investigation of antifungal activity of silver nanoparticles synthesized from *Moringa oleifera* and *Pongamia pinnata* plant extracts against *Candida albicans*

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Background: The increasing resistance of microorganisms such as *Candida albicans* to current antifungal agents has created a need for alternative therapeutic strategies.
Objectives: This study is focused on the green synthesis of silver nanoparticles (AgNPs) from aqueous extracts of *Moringa oleifera* (Murunga), *Pongamia pinnata* (Magul karanda) and to investigate their antifungal activity.
Methods: Aqueous leaves extracts of *Moringa oleifera* and *Pongamia pinnata* was prepared by grinding 50g of fresh leaves with 100ml of distilled water. AgNPs were synthesized using individual and combined plant extracts through a green synthesis approach. The extracts were added dropwise to 0.001 M $AgNO_3$ solution, followed by the addition of 0.1 M KOH until a colour change was observed. The characterization of AgNPs was done using UV–Visible spectrophotometry. It was repeated after 3 months. The antifungal activity of AgNPs was evaluated against *Candida albicans* (ATCC 27110) using the agar well diffusion method. Turbidity of the inoculum was adjusted to 0.5 McFarland standard. The volume of 200 µL of extracts and AgNPs solutions at pH = 7 was added into each well.
Results: Successful formation of AgNPs was confirmed by a colour change from pale yellow to reddish-brown. UV–vis spectra showed absorption peaks at 411, 428, and 410 (nm) for *Moringa oleifera*, *Pongamia pinnata* and combined extract AgNPs, respectively. Inhibition zones against *Candida albicans* was 10±1.0 mm for crude extracts of both plants individually and 11.33±0.58 mm for their combination. AgNPs synthesized from *Moringa oleifera*, *Pongamia pinnata* and combination exhibited inhibition zones of 15.67±0.58 mm, 15±1.0 mm, and 15.33±0.58 mm, respectively.
Conclusions: Green-synthesized AgNPs from *Moringa oleifera* and *Pongamia pinnata* demonstrated antifungal activity against *Candida albicans* compared with crude extracts. An enhancement in antifungal effect was observed when *Moringa oleifera* and *Pongamia pinnata* plant extracts were used in combination.

PP 34

Evaluation of *ex vivo* hepatoprotective activity of different fractions obtained from 70% iso propyl alcohol extracts of *Vernonia cinerea*

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Background: *Vernonia cinerea*, used in Sri Lanka's traditional medicine, is reported for treating liver diseases.
Objective: To assess *ex vivo* hepatoprotective activity of fractions obtained from a 70% iso propyl alcohol (IPA) extract of *Vernonia cinerea* against ethanol-induced Aspartate aminotransferase (AST) release in porcine liver sections.
Methods: Aerial parts of *V. cinerea* were collected from southern Sri Lanka and authenticated (Accession No: 3211). Dried material was extracted with 70% IPA and fractionated using n-hexane and ethyl acetate. Fresh porcine liver slices from a registered slaughterhouse in Ja-Ela were subjected to absolute ethanol to induce toxicity for *ex vivo* analysis. 70% IPA extract and hexane and ethyl acetate fractions (50, 100, 250, 500, 1000 µg/mL) were tested, with buffer and absolute ethanol as negative and positive controls. Hepatoprotective activity was evaluated via AST levels and expressed as percentage cytotoxicity. Data (mean±SD, n=3) were analyzed using two-way ANOVA and Post Hoc test (SPSS27), with $p<0.05$ considered significant.
Results: AST cytotoxicity in the positive control was 66±1%, significantly reduced by co-exposure with the crude extract and its fractions. The greatest reduction occurred with the n-hexane fraction at 1000 µg/mL (25±1%, $p<0.05$). All fractions, including the crude extract, exhibited significant dose-dependent hepatoprotective activity.
Conclusions: *V. cinerea* extracts, especially the n-hexane fraction, demonstrated notable hepatoprotective activity by reducing AST release in ethanol-induced liver damage, supporting their potential as a natural therapeutic agent.

PP 35

In vitro evaluation of anticandidal and antioxidant activities of Sri Lankan ginger (*Zingiber officinale* Roscoe) and garlic (*Allium sativum* L.*) Extracts: Individual and combined effects*

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Background: Sri Lankan ginger (*Zingiber officinale* Roscoe) and garlic (*Allium sativum* L.) contain bioactive compounds with reported antifungal and antioxidant properties. However, the combined efficacy and potency of these local cultivars require further validation.

Objective: To evaluate the *in vitro* anticandidal and antioxidant activities of methanolic extracts of Sri Lankan ginger and garlic, individually and in combination.

Method: Authenticated ginger rhizomes and garlic bulbs were air-dried, powdered, and extracted using 99.8% methanol. Anticandidal activity against *Candida albicans* (ATCC 10231) was assessed using Agar-Well Diffusion and Minimum Inhibitory Concentration (MIC) assays, with nystatin and methanol as controls. Antioxidant activity was evaluated using the 2, 2-diphenyl-1-picrylhydrazyl (DPPH) assay to determine Half Maximal Inhibitory Concentration (IC_{50}) values, using ascorbic acid as the standard control. Combined extracts were tested at a 1:1 ratio. All calculations are expressed as mean ± standard deviation.

Results: Ginger extract (25 mg/mL) showed the highest anticandidal activity with an inhibition zone of 16.00±1.00 mm, followed by garlic (12.67±2.08 mm) and the combined extract (13.33±0.58 mm) at 100 mg/mL. MIC for ginger was 25 mg/mL, while both garlic and the combined extract showed an MIC of 100 mg/mL. In the antioxidant assay, the combined extract showed the strongest activity (IC_{50} of 71.6 ± 1.90 ppm), followed by ginger (79.6 ± 2.30 ppm) and garlic exhibited lowest activity with an IC_{50} value greater than 1000 ppm.

Conclusion: Sri Lankan ginger demonstrated strong anticandidal and antioxidant activity, while its combination with garlic improved antioxidant activity without enhancing anticandidal efficacy. Further studies would be required to explain the reduced activity observed in the combination.

PP 36

Effect of commercial bark grade and geographical origin on trans-cinnamaldehyde yield in steam-distilled Ceylon cinnamon with valorization of processing residues

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Background: Ceylon cinnamon (*Cinnamomum zeylanicum* Blume) is a premium spice widely used in food and beverage formulations. Trans-cinnamaldehyde is the principal volatile compound contributing to cinnamon flavor. However, flavor variations pose challenges for product standardization, as mixed commercial grades from different geographical origins are often used in beverage formulations.
Objectives: This study aimed to investigate the influence of commercial bark grade and geographical origin on trans-cinnamaldehyde yield in steam-distilled Ceylon cinnamon and to explore the value-added utilization potential of the post-distillation residues.
Methods: Cinnamon quills representing three commercial grades (C5 Special, C4, and H2) from Galle and Matara were subjected to steam distillation. Trans-cinnamaldehyde concentrations in the distillates were quantified using ultraviolet-visible spectrophotometry. Analytical measurements were performed in triplicate, and results are presented as mean ± standard deviation. Exploratory comparisons between groups were evaluated using one-way ANOVA at $p<0.05$. Post–distillation residues were subjected to hot aqueous extraction and phytochemical screening tests.
Results: C4 grade exhibited the highest mean concentration in both regions (Galle: 11.05 g/L; Matara: 6.78 g/L), followed by H2 (Galle: 5.76 g/L; Matara: 4.24 g/L), and C5 Special (Galle: 3.89 g/L; Matara: 3.71 g/L). Exploratory statistical analysis indicated variation among commercial grades ($p<0.05$), whereas differences between geographical origins were less apparent. Phytochemical screening revealed the presence of flavonoids, terpenoids, saponins, alkaloids, phenols, and tannins.
Conclusion: The findings suggest that commercial bark grading may influence trans-cinnamaldehyde yield in steam-distilled cinnamon quills, while geographical origin showed less apparent effect under the current experimental conditions. These results highlight the importance of raw material standardization in cinnamon-based beverage production. Furthermore, the presence of phytochemicals in the cinnamon residue indicates potential for sustainable resource utilization. Further studies incorporating biological replicates are recommended to validate and extend these findings.

PP 37

An investigation of the synergistic antibacterial activity of Sri Lankan raw honey with *Allium sativum* (garlic)

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Background: Honey and garlic have been used for generations to treat infectious diseases. Although this combination is widely used as a traditional remedy, scientific evidence in Sri Lanka remains limited.
Objectives: This study investigated the antibacterial activity of Sri Lankan raw honey from *Apis cerana* and *Apis dorsata* from different climatic zones, the antibacterial activity of aqueous garlic extract and the synergistic activity of their combination against selected microorganisms.
Method: Sri Lankan honey from *Apis cerana* and *Apis dorsata*, collected from wet, dry, and intermediate climatic zones, was tested for antibacterial activity and Minimum Inhibitory Concentration (MIC) values using well diffusion method and agar dilution method, respectively. The same methods were followed for freshly prepared aqueous garlic extract. Fixed volumes (80 µL) of samples were introduced to the wells. Bacterial suspensions were standardized to a 0.5 McFarland standard (1.5×10^8 CFU/mL). Honey-garlic combinations prepared based on individual MICs were evaluated against *Staphylococcus aureus* (ATCC 25923), *Escherichia coli* (ATCC 25922), and *Pseudomonas aeruginosa* (ATCC 27853) to determine synergistic activity via the Fractional Inhibitory Concentration Index (FICI).
Results: Honey MICs ranged from 0.01- 0.64 g/mL against *S. aureus*, *E. coli*, and *P. aeruginosa*. Aqueous garlic extract demonstrated MICs of 0.00625 g/mL against *S. aureus* and *E. coli*, and 0.025 g/mL against *P. aeruginosa*. In combination, natural *A. cerana* honey from all climatic zones exhibited synergistic activity with garlic against all tested microorganisms (FICI≤0.5), Commercial *A. cerana* honey from wet and intermediate zones showed synergy against *S. aureus* (FICI=0.37; FICI=0.5, respectively) and *E. coli* (FICI=0.3; FICI=0.45, respectively). *A. dorsata* honey showed no synergistic effects (FICI>0.5) with garlic against all microorganisms.
Conclusion: Both honey and garlic showed antibacterial activity against tested microorganisms. Synergistic effects varied with honey type and climatic zones. Some combinations show synergistic activity as therapeutics against these standard reference strain.

PP 38

Comparative *in vitro* pediculicidal activities of *Azadirachta indica* (Neem), *Citrus aurantiifolia* (Lime), and *Elaeocarpus serratus* (Veralu) leaf extracts

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Background: Resistance of *Pediculus humanus capitis* to synthetic pediculicides is a growing concern. Traditional Sri Lankan plants are used for ectoparasite control, but comparative *in-vitro* evidence remains limited.

Objectives: To quantify and compare the *in-vitro* pediculicidal efficacy of ethanol leaf extracts of *Azadirachta indica* (Neem), *Citrus aurantiifolia* (Lime) and *Elaeocarpus serratus* (Veralu) against *P. humanus capitis*.

Methods: Ethanol extracts were reconstituted in acetone:coconut oil (9:1, v/v) to optimize bioactive phytochemical solubility. A filter paper contact bioassay tested 1%–40% (w/v) concentrations against negative (distilled water), vehicle, and positive (0.5% permethrin) controls. Mortality was recorded at intervals up to 24 hours across five trials. Median lethal time (LT_{50}) and median lethal concentration (LC_{50}) were estimated, and treatment differences were assessed using two-proportion tests ($p<0.05$). Lice were obtained with written and verbal parental consent; no children were examined.

Results: Lime and Neem demonstrated rapid, concentration-dependent lethality. At 30%, 5-minute mortality was 80.00% ± 10.00% for Lime and 88.00% ± 7.89% for Neem, versus 0.00% for Veralu. LT_{50} values (minutes) for Lime at 5%, 10%, 20% and 30% were 215.82, 118.22, 10.45 and 0.39, respectively; corresponding Neem values were 264.06, 102.87, 16.21 and 0.06. At concentrations >30%, complete mortality occurred within the earliest interval for both Lime and Neem. Veralu exhibited slower activity, with LT_{50} values (minutes) of 226.33, 87.60, 31.54 and 3.14 at 10%–40%, respectively. At 30 minutes, LC_{50} values were 15.91% (Lime), 16.29% (Neem) and 31.41% (Veralu). Neem and Lime were significantly more effective than Veralu at 5%–20% ($p<0.05$); no significant differences were detected among the three extracts at ≥30%.

Conclusions: Neem and Lime extracts showed significantly stronger pediculicidal activity than Veralu. Acknowledging the limitations of strictly *in vitro* findings, these outcomes support further toxicological evaluation and formulation development of these extracts as potential alternative pediculicides.

PP 39

Effects of heating with garlic, curry leaves, fenugreek seeds and mustard seeds on the *in vitro* antioxidant activity and *in vitro* cholesterol inhibitory activity of coconut oil

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Background: Coconut oil is used mainly in the South Asian diet. Spices are added to oil to enhance aroma and flavor. Migrating lipid-soluble molecules from spices into the oil during heating, might change the bioactivities of the oil.
Objectives: This study focused on, *in vitro* antioxidant and *in vitro* cholesterol inhibitory activities of coconut oil, heated with garlic, curry leaves, fenugreek seeds, and mustard seeds separately and in combinations.
Methods: Twelve coconut oil samples were prepared by heating oil (15ml) without spices, with spices (2g) separately, and as combinations (equal proportions, total 2g) at 160°C for 10 minutes. Combinations were determined using L_8 orthogonal array of the Taguchi method. *In vitro* antioxidant and *in vitro* cholesterol inhibitory activities were measured using the DPPH assay and Libermann-Burchard method, respectively. One-way ANOVA with LSD post-hoc test was used. All analyses were triplicated using independently prepared samples. Differences were statistically significant at $p<0.05$.
Results: All oil samples heated with spices exhibited higher radical scavenging activities (RSA) than oil heated without spices (29.8±0.3%). Curry leaves-infused oil showed the highest RSA (69.7±0.5%). The RSA of samples heated without spices, with curry leaves, and with combination of fenugreek and mustard seeds, differed significantly from other samples ($p<0.05$). The highest and the lowest cholesterol inhibitory activities were observed in garlic-infused oil (91.5±1.1%) and all four spices-infused oil (8.8±2.1%), respectively, with both significantly differing from all other samples ($p<0.05$). Lipophilic bioactive phytochemicals in spices may contribute to enhance these effects. However, the physiological relevance of *in vitro* findings is limited, because complex biological interactions are observed *in vivo.*
Conclusions: This study suggests that garlic, curry leaves, mustard seeds and fenugreek seeds can increase the *in vitro* antioxidant activity of oil, while oil heated with garlic showed significant *in vitro* cholesterol inhibitory activity.

PP 40

Determination of total alkaloid content, moisture and pH of selected smokeless tobacco and areca nut products in the Maharagama MOH Division

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Background: Smokeless tobacco (SLT) products have been identified as a major risk factor for oral squamous cell carcinoma. These products contain carcinogenic substances such as arecoline, tobacco specific nitrosoamines and areca nut specific alkaloids (Arecoline, Arecaidine, Guvacine, Guvacoline). Despite their widespread use, limited data exist on the chemical composition of these products both commercially and locally produced in Sri Lanka. This poses a challenge for public health regulation and intervention programs.
Objectives: This study aimed to determine the total alkaloid content, moisture content and pH in selected smokeless tobacco products available in the Maharagama Medical Officer of Health (MOH) division, Colombo.
Methods: A total of six samples were collected with the assistance of the Public Health Inspector (PHI) from the Maharagama, MOH division. Out of the samples, Sweet Supari and Nizam Betel were commercial modified areca nut sachet products (locally produced and imported from India, respectively), while Mawa (mix of areca nut and tobacco) and Sala (modified tobacco) were cottage products in plastic shopping bags; unmodified samples of areca nut and tobacco were obtained from local shops. Samples were oven-dried, ground, sieved and stored at 4 °C. Total alkaloids were determined using the bromocresol green method, pH by digital pH meter, and moisture by moisture analyser. Statistical analysis was performed using SPSS version 21.0. One-way ANOVA and Pearson's correlation were used, with significance level of p= 0.05.
Results: The total mean alkaloid content was highest in plain tobacco (7.72±0.28 mg/g) and lowest in Mawa (2.36±0.43 mg/g). Mean pH was highest in Mawa (7.54±0.08) and lowest in Nizam (4.68±0.17). Mean moisture content was highest in Sala (32.07±0.06%) and lowest in Nizam (2.37±0.10%). There was no significant correlations between pH and moisture (p=0.98).
Conclusions: Plain tobacco contained the highest total alkaloid content, Mawa had the highest pH, and Sala had the highest moisture content among the selected smokeless tobacco and areca nut products.

PP 41

Phytochemical screening, heavy metal determination and cytotoxicity evaluation of aqueous extract of rhizome of *Musa paradisiaca*

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Background: The rhizome of *Musa paradisiaca* is traditionally utilized in traditional medicine, yet limited scientific data are available regarding its phytochemical composition, cytotoxicity, and heavy metal content.
Objective: The present study aimed to screen phytochemicals, heavy metals content and assess the cytotoxicity of aqueous rhizome extract of *M. paradisiaca* (ARMP).
Method: Rhizomes of *M. paradisiaca* were collected from a home garden in Thavasikulam, Vavuniya, Sri Lanka, and a composite sample was prepared from the collected rhizomes and plant material was authenticated by Bandaranayake Memorial Ayurvedic Research Institute, Sri Lanka. The aqueous rhizome extract was prepared from cleaned and dried rhizomes using the reflux extraction method (1:15, w/v). Phytochemical screening of ARMP was carried out using standard qualitative methods. Heavy metals concentration; arsenic (As), lead (Pb), cadmium (Cd), zinc (Zn), and copper (Cu) were determined using inductively coupled plasma optical emission spectrometry (ICP-OES). Cytotoxicity of ARMP was evaluated using *Artemia salina* brine shrimp lethality assay across a concentration range of 10–5000 µg/mL. All the tests were performed in triplicate (n=3).
Results: Phytochemical screening revealed the presence of phenols, flavonoids, tannins, alkaloids, cardiac glycosides, saponins, sterols, quinones, and phlobatannins. Heavy metal analysis showed detectable concentrations of arsenic (1.61 mg/kg), zinc (0.24 mg/kg), and copper (0.55 mg/kg), while lead and cadmium were below detectable limits. Zinc and copper concentrations were within the permissible safety limits (upper limit for daily intake Zn=40 mg/day, Cu=0.60 mg/day), whereas arsenic concentration (upper limit for daily intake As=0.003 mg/day) exceeded the recommended limit established by FAO/WHO guidelines. Cytotoxicity evaluation using *Artemia salina* brine shrimp lethality assay indicated no significant lethality at tested concentrations, although a dose-dependent increase in mortality was observed (R^2=0.96), suggesting relatively low toxicity of the extract within the tested range.
Conclusion: These findings suggest that ARMP possesses diverse bioactive phytochemicals and demonstrates low cytotoxic potential, indicating its relative safety for traditional medicinal use.

PP 42

Antibacterial activity and phytochemical quantification of *Cocos nucifera* extracts

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Background: Immature coconut (one month after pollination), commonly known as baby coconut has traditionally been used in Sri Lanka for medicinal purposes. However, scientific evidence regarding its phytochemical composition and antibacterial activity remains limited.
Objective: To evaluate the antibacterial activity and quantitative phytochemical composition of different baby coconut extracts.
Method: Baby coconut samples were collected on the first day after falling, dried, powdered and extracted using hot water by refluxing for 3 hours and cold water and water-acetone (1:1) by maceration (24 hours x 3). Antibacterial activity was evaluated against *Staphylococcus aureus* (ATCC 25923) and *Escherichia coli* (ATCC 25922) using agar well diffusion and agar dilution methods. Ampicillin (10 µg) and dimethyl sulfoxide (DMSO) were used as positive and negative controls, respectively (n=3). Total phenolic content (TPC), total flavonoid content (TFC), and total alkaloid content (TAC) were determined using the Folin–Ciocalteu, aluminum chloride, and bromocresol green methods, respectively (n=3).
Results: Extraction yields were 8.5%, 8.4%, and 9.2% for the hot water, cold water, and water-acetone extracts, respectively. The hot water extract showed the strongest antibacterial activity, with the largest inhibition zones and lowest minimum inhibition concentration values against *S. aureus* (14.80±0.03 mm, 30.00±0.01 ppm; p=0.040) and *E. coli* (13.10±0.04 mm, 50.00±0.01 ppm; p=0.040). It also showed the highest phytochemical contents with TPC, TFC and TAC values of 205.46±2.21 (mg of quercetin equivalents/g of extract), 20.59±1.42 (mg of gallic acid equivalents/g of extract) and 11.42±0.73 (mg of quinine equivalents/g of extract), respectively. The cold-water extract exhibited moderate levels, whereas the water: acetone (1:1, v/v) extract showed comparatively lower values.
Conclusion: The hot water extract showed the highest antibacterial activity and phytochemical contents among the tested extracts, indicating its potential for further investigation.

PP 43

Evaluation of antioxidant properties of *elaeocarpus serratus l.* (Ceylon olive) root extracts using *in vitro* methods

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Background: *Elaeocarpus serratus L*. belonging to the family Elaeocarpaceae, also known as "ceylon olive" is mostly prevalent in Sri Lanka, South-East Asia, and Indo-China region. The negative effects of synthetic antioxidants have increased interest in plant-based medicinal alternatives with fewer side effects in recent years.
Objective: This study aimed to evaluate the antioxidant properties of *Elaeocarpus serratus L*. root extracts using total flavonoid content (TFC), total phenolic content (TPC) and the DPPH (2,2-diphenyl-1-picrylhydrazyl) assay.
Methods: Root samples were extracted with chloroform, methanol, and water using the cold maceration method. The extracts were prepared at a concentration of 1 mg/mL for phytochemical analyses. Quantitative phytochemical analyses were performed to determine TFC and TPC. Antioxidant activity was assessed using the DPPH radical scavenging assay. Statistical significance was evaluated using one-way analysis of variance (ANOVA) followed by post hoc testing, with $p<0.05$ considered statistically significant.
Results: The extraction yield of chloroform was 0.09%, methanol was 0.76% and water was 0.48%. The methanol extract exhibited the highest TFC (245.9±0.5 mg QE/g) and TPC (10.5±0.4 mg GAE/g) values, while other extracts showed comparatively lower levels. All extracts demonstrated concentration-dependent inhibition in the DPPH assay: chloroform (2.8±0.01% – 41.0±0.03%), methanol (11.8±0.01% – 55.1±0.03%), and water (11.6±0.01% – 52.3±0.03%). Among them, methanol extract showed the highest radical scavenging activity (55.1±0.03%, $p=0.01$). However, the standard (ascorbic acid) exhibited the greatest inhibition potential, with values ranging from 12.2±1.13% to 69.0±1.48%.
Conclusion: The methanol extract of roots contained the highest levels of flavonoid and phenolic compounds, which may contribute to its bioactivity. Additionally, it demonstrated the strongest free radical scavenging ability, suggesting that methanol is the most effective solvent for extracting antioxidant compounds from *Elaeocarpus serratus L.* roots.

PP 44

Anticandidal effect against *Candida albicans* and Antioxidant properties of Sri Lankan curry leaves (*Murraya koenigii*)

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Background: Anticandidal resistance in *Candida albicans* and the adverse effects of synthetic antifungal agents have increased interest in plant-based alternatives. *Murraya koenigii* (curry leaves), widely used in Sri Lankan culinary and traditional medicine, contains bioactive compounds with reported antioxidant and antimicrobial activities. However, limited evidence exists on the antifungal and antioxidant effects of Sri Lankan *M. koenigii*.
Objective: To evaluate the *in vitro* anticandidal activity against *C. albicans* and the antioxidant potential of the methanolic crude extract of Sri Lankan *M. koenigii* leaves.
Method: Authenticated fresh leaves were shade-dried, powdered and extracted using 99.8% methanol. Anticandidal activity against *C. albicans* ATCC 10231 was assessed by agar well diffusion using nystatin as the positive control and 70% Dimethyl sulfoxide (DMSO) and 70% ethanol as negative controls. Antioxidant activity was evaluated using the 2,2-diphenyl-1-picrylhydrazyl (DPPH) assay at 0.12 mg/mL. IC_{50} values were determined from concentration-response curves using linear regression analysis.
Results: The methanolic extract exhibited no anticandidal activity against *C. albicans* at concentrations of 200 and 300 mg/mL. However, antioxidant activity was observed, with an IC_{50} value of 24.88±0.21 ppm, compared with 1.90±0.01 ppm for ascorbic acid.
Conclusion: The methanolic extract of Sri Lankan *M. koenigii* demonstrated measurable antioxidant activity, although lower than that of ascorbic acid. No anticandidal activity was observed against *C. albicans* ATCC 10231 under the tested conditions. The absence of anticandidal activity may be related to the extraction method and the strain tested. Therefore, further studies using alternative solvents and different fungal strains are recommended.

PP 45

Ethnobotanical study of the medicinal plants used for rheumatological disorders among patients attending rheumatology clinic in Teaching Hospital Jaffna

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Background: Rheumatological disorders, are common chronic conditions that significantly affect quality of life**.** Reliance on phytotherapy to relieve the symptoms highlights the importance of documenting ethnobotanical knowledge on medicinal plants used for rheumatological conditions. Therefore, systematic ethnobotanical surveys are needed to record plants used for managing rheumatological disorders among specific populations.
Objective: to describe the ethnobotany of medicinal plants used for rheumatological disorders among patients attending rheumatology clinic in Teaching Hospital Jaffna.
Methodology: A cross-sectional descriptive study was conducted among patients attending the rheumatology clinic of the Teaching Hospital Jaffna. Total population sampling was employed, and the data were collected using a validated structured interviewer-administered questionnaire. The collected data were entered and analyzed using Microsoft Excel. Family Importance Value (FIV) and Relative Frequency of Citation (RFC) were calculated using COUNTIF function in Excel to identify significant medicinal plant families and species used by the informants.
Results: Among the 390 patients attending the clinic, 58 reported using medicinal plants for their ailment. A total of 22 species belonging to 18 families were documented, with a response rate of 100%. *Vitex negundo* L. (33 citations) was the most frequently reported species, followed by *Pavetta indica* Linn. (25 citations) and *Ricinus communis* L. (23 citations). The Relative Frequency of Citation (RFC) ranged from 0.02 to 0.65, with *Vitex negundo* L. showing the highest value of 0.65. Among the families, Lamiaceae had the highest Family Importance Value (FIV) of 76.47. Leaves were the most commonly used plant part (88.17%), and poultice was the most frequent preparation method (68.67%).
Conclusion: Medicinal plants were used by 14.87% of patients attending the clinic. Fourteen plant species used for rheumatological disorders were reported for the first time in Sri Lanka, contributing to the documentation of medicinal plants used for rheumatological disorders among patients at Teaching Hospital, Jaffna.

PP 46

Storage stability assessment and spectroscopic modeling for rapid determination of free fatty acids in desiccated coconut

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Background: Desiccated coconut is a major export product of Sri Lanka. Due to its high fat content, it is susceptible to lipid hydrolysis, limiting its shelf life. Direct shelf life studies and titrimetric determination of rancidity require significant time and chemical usage.
Objectives: This study aims to predict the shelf life of desiccated coconut using accelerated stability testing and develop a near-infrared (NIR) and Fourier-transform infrared (FT-IR) spectroscopic model for the rapid determination of free fatty acid (FFA) content.
Methods: Desiccated coconut samples were stored at 25 °C, 40 °C, and 50 °C for 16 weeks. FFA content was measured weekly for samples stored at 50 °C and bi-weekly for others. Its shelf life was predicted using the Arrhenius model. At each sample analysis, spectral data were acquired using NIR (10,000 – 4,000 cm^{-1}, 64 scans, 4 cm^{-1} resolution) & FT-IR (4000 to 400 cm^{-1}, 32 scans, 4 cm^{-1} resolution) spectrometers. Partial least squares (PLS) regression models were developed and validated.
Results: The formation of FFA followed zero-order kinetics, and the shelf life of desiccated coconut was estimated as three years and 3.5 months at 30 °C. Both NIR and FT-IR models yielded coefficient of determination (R^2) values greater than 0.90 (NIR = 0.961, FT-IR = 0.927). The models showed low root mean square error of calibration (RMSEC) and cross-validation (RMSECV) values of 0.0025 and 0.0037 for NIR, and 0.0020 and 0.0029 for FT-IR, respectively. External validation showed that models could determine FFA with a root mean square error of prediction (RMSEP) of 0.0041 for NIR and 0.0068 for the FT-IR model, demonstrating their strong predictive performance.
Conclusions: The developed spectroscopic models enable FFA determination, with the NIR outperforming FT-IR within the studied range. These models, combined with accelerated stability testing, enable rapid, non-destructive shelf life determination of desiccated coconut.

PP 47

Green synthesis and characterization of hydroxyapatite nanoparticles using fenugreek (*Trigonella foenum graecum*) seed extract for flucloxacillin delivery

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Background: Flucloxacillin is widely used for bone infections but exhibits poor bone penetration, necessitating prolonged high systemic doses that increase risks of resistance and hepatotoxicity. Hydroxyapatite nanoparticles (HAp NPs) are biocompatible materials suitable for localized drug delivery. Conventional synthesis methods involve high energy input and toxic reagents, whereas green synthesis offers a safer alternative. Fenugreek seed extract (FSE), rich in natural surfactants, can influence nanoparticle formation.

Objective: This study aimed to develop a critical micelle concentration (CMC)-guided green synthesis of HAp NPs using FSE and evaluate their morphology, stability, particle size, and flucloxacillin loading efficiency.

Method: HAp NPs, [$Ca_{10}(PO_4)_6(OH)_2$], were synthesized via wet chemical precipitation at 60 °C using FSE concentrations selected based on experimentally determined CMC (~15 % v/v). Experiments were performed in triplicate. Characterization was conducted using FTIR, XRD, particle size analysis, and UV-Visible spectrophotometry. Drug loading was quantified using a calibration curve. **(**$y = 0.0021x + 0.0203$; $R^2 = 0.9862$**).**

Results: FTIR confirmed the formation of HAp and removal of FSE residues after washing. XRD revealed well-crystalline HAp (JCPDS 09-0432) with crystallite sizes of 100–160 nm. Lattice parameters ($a \approx 8.75$ Å, $c \approx 6.85$ Å) and unit cell volume ($\sim 460 \times 10^6$ pm) indicated hexagonal elongated crystals with minimum variation, suggesting FSE-mediated morphological modulation without structural disruption. Particle size analysis showed increased hydrodynamic size (177–736 nm) and high polydispersity with increasing FSE concentration. Flucloxacillin loading efficiency varied significantly with maximum loading (71.7%) at 10% FSE (below CMC), and minimal loading (~8%) above 16% FSE.

Conclusion: CMC-guided green synthesis using FSE enables controlled morphological tuning of Hap NPs and enhances antibiotic loading efficiency. Lower FSE concentrations favour optimal drug loading, highlighting the importance of surfactant-mediated synthesis for effective localized drug delivery systems.

PP 48

Evaluating steric and electrostatic factors governing the self-assembly of 2-pyridylalkylamides

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Background: 2-Pyridylalkylamides self-assemble in the solid state into either chain or dimer formation via NH···O=C or N-H···$N_{(pyr)}$ hydrogen bonds, respectively. While previous investigations suggest that chain assemblies are a result of steric hindrances, recent evidence indicates electrostatic factors may also play a significant role.
Objective: To evaluate the influence of steric and electrostatic factors in the self-aggregation of selected 2-pyridylalkylamides molecules using computational methods.
Methods: Twenty-four 2-pyridylalkylamides categorized into H, CH_3, Cl, Br, I, and phenyl series (based on molecular structure) were studied. CrystalExplorer (CE), an emerging tool for computing hydrogen bond interaction energies in solid-state crystal structures, was used to perform quantum mechanical calculations with CE-B3LYP/6-31G(d,p) and TONTO-DGDZVP basis sets. Molecular dynamics (MD) simulations using NAMD with adaptive biasing force (ABF) were conducted to assess stability and intermolecular distances in vacuum, and solvent effects were not considered.
Results: The CrystalExplorer primary hydrogen bond interaction energies obtained from energy models CE-B3LYP/6-31G (d,p) and TONTO-DGDZVP were within 8.35 kJ/mol for each molecule. In CrystalExplorer calculations, the chain-forming molecules showed higher interaction energies than dimers for both energy models. In all the molecules of interest, the main contributing energy for the stability of the system is electrostatic energy. In chains, polarization energy enhances the stability compared to dimers. In molecular dynamic simulations, the chain distances between molecules are shorter (3.8-3.9 Å) than in dimers (4-4.5 Å).
Conclusion: According to the results of both CE and MD methods, it can be concluded that chains formation led to higher interaction energies and shorter intermolecular distances. These trends likely generalize to other 2-pyridylalkylamides with similar alkyl chain lengths, though molecules with bulky substituents would require separate validation.

PP 50

Identification of stigmasterol as a potential antiviral compound targeting African swine fever virus DNA polymerase X: A comprehensive *in silico* analysis

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Background: The lack of approved vaccines or antiviral treatments for African swine fever virus (ASFV) emphasizes the need for novel therapeutic options. Currently, no approved vaccines or antiviral drugs exist; control relies on quarantine and culling. This study focused on the viral DNA polymerase X (Pol X), an essential enzyme for the base excision repair pathway of ASFV. ASFV lacks redundant DNA repair mechanisms. Inhibition of Pol X is lethal for ASFV and is therefore a rational drug target.

Objectives: This research focuses on plant-based compounds in *Gymnema sylvestre* for their ability to block the activity of ASFV DNA Pol X.

Methods: Through a literature review targeting publications up to December 2025, 36 organic compounds from *Gymnema sylvestre* were identified, and 3D structures were retrieved from PubChem. Their pharmacokinetic profiles were analyzed via SwissADME. This analysis complied with Lipinski's rule of five to determine the safety and drug-likeness. The crystal structure of ASFV Pol X (PDB ID: 2M2U) was taken as a receptor.

Results: Following this assessment, 19 compounds were identified as potential leads. These were then screened through PyRx 0.8 to determine the docking score of each compound using their 3D SDF formats. Compounds revealing a docking score lower than -5 kcal/mol were subjected to blind docking using CB-Dock2. This result identified quercetin, citronellyl formate, conduritol a, gymnemanol, isophytol, longispinogenin, lupeol, nerolidol, n-hexanoic acid, paraban, stigmasterol, stiakisogenin, and squalene as possible inhibitors for ASFV Pol X.

Conclusion: Stigmasterol shows the highest potential docking score of -7.6 kcal/mol and interactions with essential amino acids, especially His 115, Arg 127, Val 120, and Leu 123, located within the active site of ASFV Pol X. These results imply that these compounds are potential inhibitors of ASFV and further *in vitro* and *in vivo* research is required to confirm their therapeutic performance.

PP 51

Identification of natural compounds from *Brucea javanica* with potential as inhibitors of the African Swine Fever Virus pE296R protein: a study based on computational docking and dynamics

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Background: African Swine Fever (ASF) is a highly contagious viral disease that causes severe hemorrhagic fever in domestic pigs, triggering devastating economic losses worldwide**.** The African swine fever virus depends greatly on its AP endonuclease protein, also known as pE296R, for survival and replication within the host cell. The pE296R enzyme facilitates the base excision repair pathway and is responsible for repairing lethal oxidative damage to DNA caused by the host cell's defense system, turning the focus toward *Brucea javanica*, a medicinal plant renowned for its rich bioactive profile.
Objective: This *in silico* study aimed to evaluate how effectively natural compounds from *Brucea javanica* can target and inhibit the ASFV pE296R protein.
Methodology: Through extensive literature review, 122 natural compounds were identified from *Brucea javanica*. Using SwissADME and Lipinski's rule of five, 20 drug-like compounds were selected for further studies. The target pE296R protein structure (PDB ID: 6KI3) was optimized by repairing missing loops, assigning proper protonation, and minimizing energy. Virtual screening via PyRx 0.8 showed all selected compounds exhibited energy properties more negative than −5 kcal/mol. Forward blind docking using CB-Dock2 highlighted the best candidates (X=5.934, Y=2.048, Z=24.465). Finally, complex stability was validated using a 100.102 ns explicit atomistic Molecular Dynamics simulation (310.0 K, NPT ensemble, CHARMM36 force field).
Results: Pityriacitrin, Bruceolline K, and Bruceolline M emerged as the top inhibitors, binding strongly with energies between −8.7 and −7.8 kcal/mol. MD trajectories confirmed that these complexes are exceptionally stable, showing low root-mean-square deviations (RMSD: 1.5–2.5 Å), minimal residue fluctuations (RMSF: 0.8–1.2 Å), and preserving over 44% of the enzyme's secondary structure (α-helices and β-sheets)
Conclusions: *Brucea javanica* compounds exhibit potent and stable inhibition of the ASFV pE296R catalytic site, indicating their potential as valuable candidates for further *in vitro* and *in vivo* antiviral research.

PP 52

In silico design and characterization of novel sirtuin 1 activator

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Background: Sirtuin 1 (SIRT1), a Nicotinamide adenine dinucleotide (NAD^+)-dependent deacetylase that catalyzes NAD^+ cleavage, regulates key metabolic and aging-related pathways and represents an important therapeutic target. Although computational strategies have identified potential allosteric modulators, the extent to which ligand binding influences catalytic-site electronic properties remains insufficiently understood.
Objectives: To identify novel SIRT1 allosteric activators and elucidate the electronic basis of their NAD^+ stabilization and catalytic modulation using multi-scale simulations and quantum mechanical analysis.
Methods: A hierarchical in silico pipeline was employed, beginning with pharmacophore-based virtual screening of the ZINC database, followed by multi-algorithm docking (PDB ID:4ZZJ). Top-ranked compounds were refined using MM-PBSA binding free energy calculations and all-atom molecular dynamics simulations. Structural stability and protein-ligand interactions were assessed from equilibrated trajectories. Representative conformations were selected for quantum mechanical cluster calculations at the B3LYP/def2-TZVP level, and electronic descriptors, including bond order, charge distribution, and frontier orbital features, were analyzed.
Results: Screening and docking prioritized 13 leads, with MM-PBSA identifying three candidates showing high binding affinity (-28.10 to -29.00 kcal/mol). MD simulations revealed stable interactions at a novel allosteric site involving residues Ser441, Ser442, and Ala262. While umbrella sampling showed increased NAD^+ dissociation barriers (23.8-33.7 kJ/mol), QM analysis suggested this reflects active-site stabilization that weakens the nicotinamide C-N bond (Mayer bond order reduction from 0.885 to 0.841). Furthermore, an increase in substrate oxygen charge and frontier orbital delocalization was observed, indicating a state more susceptible to nucleophilic attack.
Conclusions: This study identifies a potential allosteric site and suggests that ligand-induced electronic pre-organization may influence SIRT1 catalysis. These descriptors provide a basis for prioritizing candidates, though experimental validation is required to confirm activation and assess the impact of NAD^+ retention on product release.

PP 53

In silico identification of Docosane from *Cyclea Peltata* (Kahipiththan) root as a potential inhibitor of Monkeypox Virus E8L protein

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Background: Monkeypox virus (MPXV) remains an important global health concern, and its E8L envelope protein is involved in host cell attachment, making it a relevant target for early-stage antiviral screening. Because no experimentally resolved 3D structure of E8L is available, structure-based screening was used to explore phytochemicals from *Cyclea peltata*, a medicinal plant previously reported for antitoxin and bioactive compound content, including docosane.
Objectives: This study aimed to model the E8L protein and evaluate selected *C. peltata* phytochemicals as possible ligands for the protein using *in silico* methods.
Methods: The E8L sequence was modeled using SwissModel and assessed by Ramachandran analysis, which showed 92.4% of residues in favored regions, indicating acceptable structural quality. Eleven phytochemicals reported from *C. peltata* root extract were selected based on prior phytochemical evidence and documented biological activities. Molecular docking was performed using PyRx 0.8, and binding poses were further examined with CB-Dock2 to compare predicted interactions with the E8L active site. Docking outcomes were interpreted relative to the reference antiviral tecovirimat.
Results: Among the screened compounds, eicosane, absinthin, and docosane showed docking scores below the threshold of -6 kcal/mol. Docosane showed the strongest predicted affinity (-9.1 kcal/mol), followed by tecovirimat (-8.0 kcal/mol). The compound also formed favorable interactions within the predicted binding pocket, suggesting possible compatibility with the target site.
Conclusion: The docking results suggest that docosane is a promising hit for further investigation against MPXV E8L. However, these findings represent computational predictions only and do not establish inhibitory activity or antiviral efficacy. Additional validation through molecular dynamics simulations, ADMET analysis, and experimental assays is required before any therapeutic conclusion can be made.

PP 54

Exploratory computational investigation of Curcumin tautomers and their interactions with Histone Deacetylase 8 (HDAC8)

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Background: HDAC8 is an epigenetic enzyme involved in chromatin remodeling and its dysregulation has been linked to cancer progression. This makes HDAC8 a relevant target for computational ligand-based studies rather than confirmed inhibition studies.
Objectives: To compare the binding behavior and molecular interactions of Curcumin tautomers, including enol and diketone forms, with HDAC8 using computational approaches.
Methods: Ten Curcumin tautomers were optimized using Density Functional Theory (B3LYP/6-31+G(d)) in Gaussian 09 and treated as energetically favourable conformations representing plausible tautomeric states. These structures were docked using AutoDock4 against HDAC8 (PDB ID:1ZZ1) as a comparative analysis without redocking-based validation. Dimethyl sulfoxide (DMSO) was used as ligand preparation solvent. A structure-binding correlation analysis was performed using molecular descriptors and docking-derived pKi values. Statistical significance was assessed at $p<0.05$. Drug-likeness was calculated using ChemMaster while Adsorption Distribution Metabolism Excretion and Toxicity properties were predicted using SwissADME and pkCSM under physiological assumptions.
Results: Docking scores analyzed on a per-conformation basis ranged from -3.56 to -5.11 kcal/mol, indicating variation in binding behavior across tautomers. Known HDAC inhibitors (CG200745: -3.10 kcal/mol; ITF-2357: -4.40 kcal/mol) were included as contextual benchmarks within the same docking setup. Correlation analysis (R^2=0.80, Adjusted R^2=0.71, SE=0.16) indicated a significant correlation between HOMO energy (p=0.01) and docking-derived pKi values ranging from 2.61 to 3.75, whereas the dipole moment (p=0.11) and pKa (p=0.28) showed weaker contributions. The docking-derived pKi values reflected structure-dependent trends in computed binding affinities and were used for relative comparison within the dataset. The diketone form possessed higher drug-likeness (0.55; QED score:0.50-0.70) compared to enolic form (0.39). ADMET predictions indicated acceptable pharmacokinetic properties under *in silico* conditions.
Conclusions: Comparative docking-based trends suggest weak HDAC8 binding and limited inhibitory potential across tautomers. The findings highlight structure-dependent interaction differences and should be interpreted as preliminary and hypothesis-generating. Further validation and docking protocol refinement are required for definitive conclusions.

PP 55

In-silico druggability assessment of the leaf extract of *Sphagneticola trilobata* (Wedelia) against androgenetic alopecia

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Background: Androgenetic alopecia is a condition of hair loss leading to male or female pattern baldness. This is due to excessive sensitivity to androgens. A high amount of dihydrotestosterone (DHT) production leads to hair thinning and eventual hair loss. Topical minoxidil and finasteride are the two FDA-approved treatments for pattern baldness. These treatments require consistent application for several months and will go through an initial shedding stage, necessitating a stronger medication.
Objectives: *Sphagneticola trilobata* has been traditionally used as a remedy for hair loss for several years. Accordingly, this study aims to explore the anti-alopecia potential of phytocompounds from *Sphagneticola trilobata* through *in-silico* analysis.
Methods: Phytocompounds identified using GC–MS analysis of methanolic leaf extract of *Sphagneticola trilobata* were subjected to ADMET screening to evaluate drug-likeness properties. Protein preparation was carried out using AutoDock Tools 1.5.6, while molecular docking studies were performed against the androgen receptor (PDB ID: 4K7A) using CB-Dock2. Molecular dynamics simulations were also conducted to examine the stability of the ligand–protein complexes.
Results: From GC-MS of methanolic leaf extract, 126 compounds were obtained, of which 57 compounds were found to have drug-likeness properties after ADMET screening. Notably, 6-(Salicylideneamino)-1H-benzotriazole, which is a synthetic Schiff base, was found to have a binding affinity of -8.5 kcal/mol. Molecular dynamics simulations confirmed complex stability with minimal fluctuations in key residues (RMSF).
Conclusion: The study suggests that 6-(Salicylideneamino)-1H-benzotriazole shows stronger potential anti-alopecia activity, although molecular isolation and structural characterization are required to elucidate the exact natural derivative present. Further, *in vitro* and *in vivo* bioassays are warranted to verify the anti-alopecia efficacy of this lead compound experimentally.

PP 56

In silico screening of *Gymnema sylvestre* compounds, Longispinogenin and Sitakisogenin, as potential inhibitors of African Swine Fever Virus DNA Ligase

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Background: The African Swine Fever Virus (ASFV) is a highly contagious, high-mortality viral pathogen affecting pigs which no commercial therapeutics available. ASFV DNA Ligase (ASFVLig) is a crucial enzyme that maintains viral genomic integrity during the infection cycle through the base excision repair pathway. While *Gymnema sylvestre* is known in traditional medicine, its natural compounds remain computationally unexplored against ASFVLig.

Objectives: In this study, an *in silico* analysis was conducted on natural compounds extracted from *G. sylvestre* against ASFVLig.

Method: Through a targeted search across eight databases including Scopus, PubMed, and Google Scholar for literature published up to December 2025 - 36 previously reported natural compounds were identified. These were evaluated for their absorption, distribution, metabolism, and excretion (ADME) properties using SwissADME. By following Lipinski's rule of five with zero or one violation, 19 compounds were identified as potential drug candidates. They were subjected to virtual screening using their 3D SDF form in PyRx 0.8 against a validated 3D modeled structure of ASFVLig, and those with a binding affinity lower than the standard screening cutoff of -5 kcal/mol were subjected to further blind docking using CB-Dock2.

Results: The results revealed quercetin, citronellyl formate, gymnemanol, isophytol, longispinogenin, lupeol, nerolidol, parabens, stigmasterol, sitakisogenin and squalene as promising inhibitors of ASFVLig. Of these, longispinogenin and sitakisogenin emerged as the strongest leads, both exhibiting an affinity of -7.4 kcal/mol. CB-Dock2's automated cavity-detection algorithm confirmed their successful docking into the ASFVLig active site, establishing key interactions with residues Asn 153, Leu 211, Leu 402, and Gln 403.

Conclusions: The cross-validated docking shows that longispinogenin and sitakisogenin exhibit high structural complementarity to the ASFVLig active site, with non-toxic and pharmacokinetic profiles. However, since *in silico* screening only predicts binding interactions, *in-vitro* and *in-vivo* laboratory assays are required to confirm the therapeutic potential.

PP 57

Development and validation of a UV-Visible spectrophotometric method for the assay of Budesonide in aqueous nasal spray for in-process analysis.

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Background: Budesonide is a synthetic glucocorticoid used to treat asthma and chronic obstructive pulmonary disease and is widely administered as a nasal spray for allergic rhinitis. During manufacturing, in-process analysis is essential to monitor budesonide concentration in the bulk mixture, ensuring correct dosage prior to filling. The pharmacopoeial assay method for budesonide typically employs high-performance liquid chromatography(HPLC), which is reliable but time-consuming and costly.
Objectives: To develop and validate a UV-Vis spectrophotometric method for the assay of budesonide in nasal spray formulation as an alternative to the HPLC method.
Methods: Methanol was selected based on budesonide solubility, and standard and sample solutions were prepared by methanolic extraction followed by sonication. The Budesonide solution was scanned using a double-beam UV-Vis spectrophotometer to determine λ_{max}. The developed method was validated according to International Council for Harmonisation(ICH) Q2(R2) guidelines by evaluating specificity, limit of detection(LOD), limit of quantification(LOQ), precision, accuracy, linearity, and robustness. Specificity was evaluated by placebo analysis, and robustness assessed under sonication variation. Comparison with HPLC was based on total batch processing time and cost per sample, including sample preparation, analysis, and data handling.
Results: Maximum absorbance was observed at 243.0 nm with linearity over 5.0–15.0 µg/mL (R^2 = 0.9999). No excipient interference was detected at 243 nm, confirming specificity. The method showed a LOD of 0.72 µg/mL and a LOQ of 2.19 µg/mL. Precision and accuracy were acceptable (%RSD < 2%, recoveries 97%–103%), and robustness remained within %RSD < 2% under sonication variation. The developed UV-Vis spectrophotometric method required 1 h 50 min for total analysis compared with 11 h 45 min for HPLC and achieved an approximate 73.21% reduction in cost per sample.
Conclusions: The UV-Vis spectrophotometric method demonstrated acceptable linearity, precision, accuracy, and robustness while being less costly and time-consuming than HPLC, indicating suitability for routine in-process monitoring of budesonide nasal spray manufacturing in low-resource settings.

PP 58

Post-marketing pharmaceutical quality surveillance of empagliflozin 10 mg tablets in Sri Lanka

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Background: Empagliflozin, a selective sodium–glucose co-transporter-2 (SGLT2) inhibitor, is widely used in the management of type 2 diabetes mellitus. The increasing availability of generic formulations necessitates robust quality surveillance to ensure continued compliance with pharmacopeial standards.
Objective: To evaluate the pharmaceutical quality of six commercially available brands of immediate-release empagliflozin tablets (10 mg strength).
Methods: This cross-sectional laboratory-based study, conducted at the Department of Pharmacy, Faculty of Allied Health Sciences, University of Ruhuna, evaluated the post-marketing quality of six commercial brands of empagliflozin tablets marketed in Sri Lanka. Samples were subjected to pharmacopeial quality control tests following British Pharmacopoeia (BP) and United States Pharmacopeia (USP) guidelines. Attributes assessed included weight variation, tablet hardness, disintegration time, dissolution testing (USP Apparatus II in phosphate buffer pH 6.8), and assay of the active pharmaceutical ingredient using a UV–visible spectrophotometric method (223 nm), validated for accuracy, precision, linearity, specificity, stability, limit of detection, and limit of quantification.
Results: All six brands complied with pharmacopeial specifications for weight variation (n = 20/brand). Mean hardness values ranged from 26.28 N to 76.91 N (n = 10/brand), indicating adequate mechanical strength. Disintegration times were well within the BP limit of 30 minutes, ranging from 0.58 to 3.60 minutes (n = 6/brand). Assay results demonstrated active ingredient content within the acceptable range, spanning 95.50% to 104.50% (n = 20/brand) of the labelled claim. Dissolution testing showed rapid and complete drug release, ranging from 98.11% to 100.78% (n = 6/brand) within 30 minutes for all brands.
Conclusion: All evaluated brands met established pharmacopeial requirements, suggesting consistent manufacturing quality and pharmaceutical equivalence. Nevertheless, further studies assessing both *in vitro* and *in vivo* bioequivalence are recommended to confirm their therapeutic interchangeability.

PP 59

Antibacterial activity of formulation containing methanolic extracts of *Moringa oleifera* and *Pongamia pinnata* against *Staphylococcus aureus*

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Background: Antibiotic resistance is a critical global health issue demanding immediate intervention from the researchers. Herbal preparations are gaining increasing attention as potential natural antibacterial agent.
Objective: To formulate a topical herbal cream containing methanolic extracts of *Moringa oleifera* leaves (MOL) and *Pongamia pinnata* stem bark (PPB), and evaluate its antibacterial activity against *Staphylococcus aureus*.
Methods: Methanolic extracts of MOL and PPB were prepared by maceration followed by rotary evaporation until a constant solid residue was obtained prior to freeze drying. Antibacterial activity of the individual extracts (100 mg/mL) and their combination (1:1) was evaluated against *Staphylococcus aureus* (ATCC 25923) using agar well diffusion and broth macro-dilution assays. Bacterial inoculums were standardized to 0.5 McFarland. Each agar well filled with 200 µL of plant extract, negative control (10% DMSO) and positive control (0.2% w/v Ciprofloxacin). A 10% w/w herbal cream was prepared according to the British Pharmacopoeia (2016). The physiochemical properties (pH, color, odor, texture, coalescence) were monitored to assess short term stability (one month).
Results: Methanolic extracts of MOL, PPB, and their combination exhibited zones of inhibition (ZOI) of 10.33 ± 0.58 mm, 13.33 ± 2.89 mm, and 16.00 ± 0.00 mm, respectively, against *Staphylococcus aureus*, compared with ciprofloxacin (35.00 ± 0.00 mm). The combined extract demonstrated additive antibacterial activity and was selected for cream formulation. The minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) of the combined extract were 90 mg/mL and 100 mg/mL, respectively. The formulated herbal cream exhibited reduced antibacterial activity than combined extract with a ZOI of 12.70 ± 0.23 mm and a pH of 5.47.
Conclusion: The methanolic extracts of *Moringa oleifera* leaves and *Pongamia pinnata* stem bark exhibited antibacterial activity, while combined extracts showed additive effects. Formulated herbal cream with combined extracts demonstrated antibacterial potential, supporting its use as a herbal topical formulation against *Staphylococcus aureus*.

PP 60

Combined antibacterial activity of *Psidium guajava* and *Cinnamomum verum* extracts and their application in an alcohol-free herbal sanitizer

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Background: The increasing prevalence of antimicrobial resistance and adverse effects associated with alcohol-based sanitizers have increased interest in safer alternatives. *Psidium guajava* and *Cinnamomum verum* are rich in phytochemicals such as tannins, flavonoids, and phenolic compounds known to exhibit antibacterial activity.

Objective: To evaluate the antibacterial activity of aqueous extracts of *P. guajava* and *C. verum*, and to assess their combined antibacterial potential for use in herbal antimicrobial formulations.

Methods: A laboratory-based *in vitro* study was conducted using aqueous extracts prepared from dried guava leaves and cinnamon bark. Antibacterial activity was assessed against ATCC reference strains of *Staphylococcus aureus* (ATCC 25923), *Pseudomonas aeruginosa* (ATCC 27853), and *Escherichia coli* (ATCC 25922) using the agar well diffusion method, gentamicin (positive control) and 5% DMSO (negative control), in triplicate. The minimum inhibitory concertation (MIC) was determined via serial dilutions (100%, 50%, 25%) of concentrated extracts. Extract combinations at ratios of 2:1, 1:1, and 1:2 (guava: cinnamon) at MIC were evaluated for combined antibacterial effects. The optimized combination was incorporated into a prototype herbal sanitizer with combining *Aloe vera*, *Citrus aurantifolia*, *Jasminum officinale* essential oil, potassium sorbate, citric acid, and distilled water, and its antibacterial efficacy was assessed using agar well diffusion method.

Results: Both extracts exhibited notable antibacterial activity against all test organisms. *P. guajava* demonstrated strong inhibition, while *C. verum* showed complementary effects. At MIC (100% concentrated extraction), *P. guajava* yielded zone diameters of 20 mm (*S. aureus*), 16 mm (*P. aeruginosa*), and 11 mm (*E. coli*); *C. verum* yielded 16 mm, 12 mm, and 10 mm. Enhanced antibacterial activity was observed at a 2:1 ratio of guava to cinnamon extracts, showing the highest inhibition against *S. aureus* (≥19 mm). Moderate activity was observed against Gram-negative bacteria. The prototype sanitizer demonstrated effective reduction of bacterial count.

Conclusions: *In vitro* findings demonstrate the antibacterial potential of *P. guajava* and *C. verum* and their enhanced combined activity in a prototype alcohol-free herbal sanitizer. Clinical validation and larger *in vitro* studies are warranted.

PP 61

Evaluation of in-process hold time on assay and microbial limits of salbutamol 400 µg inhalation powder (pre-metered)

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Background: The manufacturing process for inhalation powder products includes multiple stages, and after mixing and encapsulation, the product may be temporarily stored. This study aimed to evaluate product quality during the hold time of the in-process powder blend and filled capsules.
Objective: To determine the microbial quality and assay of salbutamol inhalation powder 400 µg during bulk hold-time across in-process stages over 12 days, ensuring compliance with established pharmacopeial quality standards.
Method: Samples representing the entire batch were collected from in-process stages of both the bulk powder and filled capsules. Samples were stored in stock containers under controlled conditions (20–25 °C, 40–60% RH, differential air pressure ≥5 Pa) and evaluated at 3-day intervals over 12 days. All samples underwent visual inspection, and microbial quality and assay were determined in accordance with the British Pharmacopoeia (2025, 11th edition). For microbiology analysis, samples were dissolved in tryptone soy broth and tested using the pour plate method with negative controls.
Results: The visual appearance of both stages remained unchanged throughout the period. Assay values ranged from 99–103% (powder) and 100–104% (capsules), remaining within the acceptable range as specified in the British Pharmacopoeia. Microbiological evaluation showed that the total aerobic microbial count and total yeast and mold counts remained 0 CFU/g throughout the study, complying with the specified limits. The tests for the absence of *Staphylococcus aureus*, *Pseudomonas aeruginosa,* and bile-tolerant gram-negative bacteria demonstrated absence in all samples, as specified in the British Pharmacopoeia. All negative controls showed no growth. Overall, all parameters complied with the British Pharmacopoeia for both powder and capsules.
Conclusion: In-process stages of salbutamol 400 µg bulk powder and capsules can be stored under controlled environmental conditions for up to 12 days without compromising assay, microbiological quality, and visual appearance.

PP 62

Evaluation of antioxidant and antimicrobial activities of selected medicinal plants for the development of a polyherbal plaster

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Background: Medicinal plant remedies have been utilized in traditional medicinal systems for wound management due to their antimicrobial and antioxidant properties. Plant-derived bioactive compounds can enhance the efficacy of wound healing treatments.
Objectives: To evaluate the *in vitro* antioxidant and antimicrobial activities of aqueous extracts of *Camellia sinensis* (leaves), *Acalypha indica* (whole plant), *Eclipta prostrata* (leaves) and *Aporosa lindleyana* (apical bud) and develop a polymer-based polyherbal plaster using the most effective extract combination.
Methods: Aqueous extracts were prepared using sonication-assisted maceration with dried plant materials and distilled water (1:10 w/v). Dragendroff's test, Mayer's test, lead acetate test, ferric chloride test, gelatin test, froth Keller-Killani test, and Salkowski's test were performed to identify major secondary metabolite classes. Total phenolic content (TPC) was determined using the Folin-Ciocalteu assay. Antioxidant capacity was assessed through the DPPH (2,2-diphenyl-1-picrylhydrazyl) radical scavenging assay. Antimicrobial activity was evaluated against *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Escherichia coli*, and *Candida albicans* by the agar well diffusion method. Combinations were tested based on individual activities and prototype plasters were developed using polyethylene glycol 400 and beeswax.
Results: *C. sinensis* showed the highest TPC (183.98±0.53 mg Gallic Acid Equivalents/g) and the strongest antioxidant activity (IC_{50} = 19.57±2.67 µg/mL). Antimicrobial activity was exhibited only by *C. sinensis*, especially against *S. aureus* (mean zone of inhibition 24.5±0.7 mm at 100 mg/mL). Among the different combinations, the 2:1 mixture of *C. sinensis* and *A. indica* showed a strong antioxidant activity (IC_{50} = 6.55±0.08 µg/mL). However, notable inhibitory zones were not observed for the final plaster formulations.
Conclusions: Potent antimicrobial and antioxidant properties were shown by *C. sinensis*, indicating its wound care potential. Although synergy was identified in combinations, further optimization studies are needed to address the formulation effects.

PP 63

Antibacterial activity of N-Acetylcysteine alone and in combination with selected antibiotics against bacterial species causing urinary tract infections in dogs

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Background: Canine urinary tract infections (UTI) caused by *Escherichia coli* and *Staphylococcus aureus* are increasingly difficult to treat due to antimicrobial resistance. N-acetylcysteine (NAC) is frequently utilized as an adjunctive treatment for UTIs because of its antioxidant, mucolytic, and antibiofilm properties.
Objectives: This study evaluated the effects of NAC alone and in combination with ciprofloxacin, clindamycin, cloxacillin, and flucloxacillin against Staphylococcus aureus and Escherichia coli that cause urinary infections in dogs.
Methods: Eight *S. aureus* and five *E. coli* clinical isolates were included, with *S. aureus* ATCC 25923 and *E. coli* ATCC 25922 as quality control strains. Minimum inhibitory concentrations (MICs) for the antibiotics and NAC were determined by microbroth dilution per EUCAST guidelines. Based on therapeutic concentrations used in adjunctive UTI therapy, NAC was introduced at 10 mM for *E. coli* and 30 mM for *S. aureus*. The combination effects were identified through fold-change calculations derived from half-maximal inhibitory concentrations (IC50), which were calculated using four-parameter dose-response models. Due to the exploratory nature of the study and the limited number of isolates, interaction classifications were based on observed changes in IC50 values rather than formal statistical significance.
Results: *S. aureus* showed variable NAC susceptibility, with MICs ranging from < 5 mg/mL to 50 mg/mL, while *E. coli* exhibited limited susceptibility, with one isolate inhibited at 50 mg/mL NAC. The combination of NAC with β-lactams (cloxacillin and flucloxacillin) demonstrated predominantly synergistic interactions across most clinical isolates. In contrast, combination with ciprofloxacin often resulted in antagonistic or neutral effects, particularly in *S. aureus*, where four isolates showed antagonism.
Conclusions: NAC-antibiotic combinations, particularly β-lactams, show potential for enhancing activity against Gram-positive and some Gram-negative uropathogens. However, the relatively small sample size and isolate diversity limit the generalizability of these findings. Further investigations with larger isolate collections and in vivo studies are required to determine clinical relevance.

PP 64

Preliminary study on polyherbal gel formulation containing *Abelmoschus esculentus* (okra pods) and *Salvia hispanica L.* (chia seeds) for oral candidiasis

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Background: Oral candidiasis is an opportunistic fungal infection caused by *Candida albicans*. *Abelmoschus esculentus* (okra pods) and *Salvia hispanica L*. (chia seeds) have been reported with antifungal activity, and polyherbal formulations of these plants offer a promising alternative approach for the management of oral candidiasis
Objective: This study aimed to formulate, develop and evaluate an antifungal polyherbal gel containing methanolic extracts of okra pods (MEO) and chia seeds (MEC).
Methods: Dried okra pods and chia seeds were macerated in methanol for 3 days. Minimum inhibitory concentration (MIC) of MEO and MEC was evaluated. Two formulations containing 1.5% Carbopol and 1% sodium carboxymethylcellulose, 4% *Aloe vera* and 2% plant extract mixture F1(Okra:Chia=1:2) and F2 (Okra:Chia=2:1) were formulated. Antifungal activity of F1 and F2, blank gel and positive control (miconazole) were evaluated by agar well diffusion method against standard *C. albicans* (ATCC 10231) in triplicates. Stability studies were conducted for 21 days at room temperature and at 4°C, assessing organoleptic properties, pH, spreadability and viscosity. The statistical analysis was done using one-way ANOVA at 5% significant level.
Results: MIC of MEO, MEC and miconazole was 2.5 and 0.312 mg/mL and <0.5 µg/mL respectively. Olive green colour, transparent, smooth, semi solid formulations were obtained. F1, F2, miconazole and blank gel exhibited average zones of inhibition of 19.00±8.35 mm, 12.33±8.79 mm, 26.83±5.42 mm and 00.00±0.00 mm. F1 exhibited higher antifungal activity than F2, but both were significantly lower than the positive control. pH, spreadability and viscosity of F1 and F2 stored at both temperatures were within the acceptable range with acceptable organoleptic characters throughout the study period.
Conclusions: Findings of this preliminary study indicate that F1 exhibits better antifungal activity with considerable physical stability than F2, for 21 days. Further long-term stability studies and measures to enhance the antifungal activity F1 needs to be investigated.

PP 65

Knowledge and awareness of factors contributing to iron deficiency anaemia among married women in Sri Lanka

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Background: In Sri Lanka, Iron Deficiency Anaemia (IDA) affects approximately 34% of women of reproductive age (WRA, 15–49 years). Despite existing government nutrition programmes, prevalence remains persistently high, and WRA remain among the most vulnerable yet least targeted groups for nutrition awareness. This study examined IDA knowledge among married women aged 20–35 years and identified associated factors, including education, occupation, income, age, and community health programme participation.

Methods: From June to November 2025, 100 married women were recruited via Facebook, WhatsApp, and Instagram for this cross-sectional study. IDA knowledge—causes, symptoms, risk factors, and prevention—was measured using a 32-item online questionnaire in Sinhala and English; scores (0–25) were classified as poor (0–10), moderate (11–17), or good (18–25). Pilot testing on 20 women yielded a Cronbach's α of 0.79, indicating acceptable reliability. Chi-square and binary logistic regression were performed using IBM SPSS v26 ($p < 0.05$). Ethical clearance was granted by Cardiff Metropolitan University.

Results: A total of 100 married women (N = 100) participated, evenly distributed by age: 35% (n = 35) aged 20–24 years, 35% (n = 35) aged 25–29 years, and 30% (n = 30) aged 30–34 years. The majority had secondary (36%, n = 36) or tertiary education (31%, n = 31). Urban, rural, and semi-urban residents accounted for 38%, 39%, and 23%, respectively; 44% (n = 44) had attended an anaemia awareness programme. Mean knowledge score was 13.26 ± 4.94/25, with 50% moderate, 28% poor, and 22% good knowledge. Tertiary education (OR = 13.94, $p < 0.001$) and awareness programme attendance (OR = 10.57, $p < 0.001$) significantly predicted adequate knowledge, while income, age, and urban residence were not significant predictors.

Conclusions: The deficiency in IDA knowledge highlights the need for targeted interventions among rural women and those with lower education, alongside structured community-level awareness programmes. Larger, population-representative studies are warranted to validate these findings and inform national anaemia prevention policy.

PP 67

Assessment of patient radiation dose in paediatric skull radiography: A descriptive cross-sectional study at a major children's hospital in Sri Lanka.

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Background: Paediatric patients are more sensitive to radiation due to higher cellular proliferation rates and longer lifespan. Diagnostic reference levels (DRLs) are recognized as an effective patient radiation dose optimization tool. The absence of paediatric DRLs in Sri Lanka, and the high radiosensitivity of the head tissues, emphasizes the need for this study, which aimed to assess the dose-area product (DAP) values of paediatric skull radiography at a major children's hospital in Sri Lanka and compare with the national DRLs (NDRLs) reported in the European Commission guideline (EC, 2018).

Methods: This study has evaluated 51 children undergoing 31 anteroposterior/posteroanterior (AP/PA) and 40 lateral skull radiographic examinations using a digital radiographic (DR) system. Children under 15 years of age, who underwent skull radiographic examinations and whose parents gave consent, were included in this study. Patients were categorized into five age groups ($0 \leq x < 3$, $3 \leq x < 6$, $6 \leq x < 9$, $9 \leq x < 12$, $12 \leq x < 15$). DAP ($mGy.cm^2$) and exposure parameters (kVp and mAs) were recorded. Following the statistical methodology recommended by the International Commission on Radiological Protection (ICRP, 2017), the 75th percentile (Q3) of DAP was calculated to facilitate a direct comparison with NDRLs of different European countries.

Results: This is a comparison between the highest NDRLs reported in EC and Q3 of our DAP readings. All the values are listed against each age group. Obtained Q3 values for AP/PA projections were below the above NDRLs across all age groups. However, Q3 values for lateral projections exceeded the NDRLs in two age groups.

Conclusion: The overall assessment highlights that establishing a framework for routine dose audits and NDRLs in Sri Lanka, is essential for minimizing radiation risks in paediatric patients without affecting diagnostic value of radiographic images.

PP 68

Green synthesis of iron/bentonite nanocomposite and evaluation of its efficiency in the removal of antibiotic residues from aqueous solution

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Background: The increasing contamination of water bodies by pharmaceutical residues has become a major environmental concern due to their persistence and ecological impacts. Antibiotics such as tetracycline are frequently detected in aquatic environments because of their extensive use and incomplete removal during conventional wastewater treatment processes. Therefore, the development of efficient, cost-effective and environmentally friendly methods for removing antibiotic residues from water is essential.

Objectives: Green synthesis of an iron/bentonite nanocomposite using *Psidium guajava* leaf extract as an eco-friendly reducing and stabilizing agent and evaluation of its efficiency for the removal of tetracycline from aqueous solutions.

Methods: Iron nanoparticles were synthesized using aqueous *Psidium guajava* leaf extract as a reducing and stabilizing agent with an Fe^{2+}/Fe^{3+} ratio of 1:2 at pH 10 for 30 minutes**,** and combined with bentonite to form an iron/bentonite nanocomposite. The material was characterized using UV–Visible spectroscopy, Fourier Transform Infrared (FTIR) spectroscopy, scanning electron microscopy/energy-dispersive X-ray (SEM/EDX) and X-ray Diffraction (XRD) analysis. Batch experiments were conducted in triplicate to evaluate tetracyclin removal efficiency under varying concentrations, hydrogen peroxide (H_2O_2) dosages, and temperature. UV–Visible absorption at 357 nm was used for quantification

Results: FTIR confirmed characteristic functional groups and Fe-O vibrations, indicating successful nanocomposite formation. XRD confirmed formation of a low-crystalline iron phase within the bentonite matrix, while SEM/EDX verified heterogeneous surface morphology and iron distribution on bentonite. The material achieved >90% tetracycline removal under optimized conditions via combined adsorption and Fenton-like degradation. The high efficiency and synergistic mechanism highlight the novelty and effectiveness of the green synthesized nanocomposite. Removal efficiency increased with H_2O_2 concentration and temperature, while decreasing at higher tetracycline concentrations due to active site competition. Reusability tests confirmed stable catalytic performance over multiple cycles.

Conclusions: The iron/bentonite nanocomposite exhibited effective tetracycline removal and catalytic stability, indicating strong potential for sustainable wastewater treatment applications.

PP 69

Patients' satisfaction on medication counseling by registered pharmacists in the outpatient department of the state hospitals in Jaffna District

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Background: Medication counseling is a key component of Good Pharmacy Practice (GPP). Patient satisfaction on medication counselling is an important indicator of pharmacy service quality. Therefore, assessing patient satisfaction is essential to improve pharmacists' performance and the quality of pharmacy services.
Objective: To assess the satisfaction of patients regarding medication counseling by the registered pharmacist serving in the outpatient departments (OPDs) of state hospitals in the Jaffna district.
Methodology: A descriptive cross-sectional study was conducted in 7 state hospitals in the Jaffna district among patients aged above 18 years visiting OPDs to obtain medicines. Sample size of 354 was determined using Cochrane formula with 5% non-respondent rate and multistage cluster sampling method was used for participant selection. Data were collected using a face- and content-validated structured interviewer-administered questionnaire with 10 criteria to evaluate patient satisfaction. Patients rated their level of satisfaction with counseling as satisfied, moderately satisfied, or dissatisfied and the data was analyzed via SPSS version 25.0

Results: Out of 354 subjects, 307 responded to the questionnaire, yielding 87.1% response rate. Out of 10 criteria highest satisfaction (63%) was obtained for use of simple and understandable language by the pharmacist while lowest satisfaction (2.4%) was obtained for information provided on possible side effects. Patient satisfaction for the assessed criteria was as follows: medication instruction (40.8%), therapeutic effect (8.3%), voice clarity and audibility (60.1%), opportunity to ask question (39.1%), attentive to patients' concerns (38.2%), friendliness (55.6%), time spent (42,9%). Overall, 6% of patients were completely satisfied while 55% of respondents were moderately satisfied, and 39% of patients expressed dissatisfaction.
Conclusion: The study found moderate level of patient satisfaction in OPDs of state hospitals in the Jaffna district. Measures need to be taken to improve counselling services through workload reduction, and continuous professional development (CPD) programs to promote safe medication use.

PP 70

Treatment satisfaction among hemodialysis patients: A descriptive cross-sectional study in hemodialysis clinic, National Institute for Nephrology Dialysis and Transplantation

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Background: Haemodialysis is a permanent or temporary renal replacement therapy. Haemodialysis service is provided to patients free of charge in state hospitals in Sri Lanka. Treatment satisfaction is widely considered as an important subjective and patient-reported outcome measure. Patient satisfaction can be used as an indicator to assess the quality of health services provided.
Objective: To assess the treatment satisfaction among haemodialysis patients attending haemodialysis clinic, National Institute for Nephrology Dialysis and Transplantation, (NINDT).
Methodology: A descriptive cross-sectional study was conducted from August to October 2025 in out-patient clinics in NINDT. The population was 400 and the calculated sample size was 197. But only 155 participants recruited for the study where they were undergoing to maintenance hemodialysis. Simple random sampling method was used in recruiting (every other patient was selected in sitting order) participants. Demographics and patients' treatment satisfaction data were collected using an adapted treatment satisfaction questionnaire after the validation. The questionnaire was an interviewer administered. Questionnaire included 20 questions in total. Satisfaction level was categorized in five different levels by increasing every 20 scores. Minimum score is 20 (very dissatisfied) and maximum is 100 (very satisfied). The data were descriptively analyzed by using Statistical Package for the Social Sciences (SPSS). The study was obtained the approval from the Ethics Review Committee, National Hospital of Sri Lanka.
Results: A total of 155 participants were recruited for the study and their age ranged between 19-71 years. The mean age was 49.8 and standard deviation was 11.1. There were 61.3 % participants were males, and 80.7% were living in Western province. About 78.7% was educated up to O/L and above. Patient satisfaction questionnaire score was obtained as 92.4%.
Conclusion: The findings revealed that most of the participants were educated and have greater level of treatment satisfaction. This reflects the quality of healthcare services provided at the haemodialysis clinic of NINDT.

PP 71

Evaluation of the availability of Patient Information Leaflets (PILs) and the quality of information provided on the packaging and PILs of oral paediatric antibacterial suspensions available in Sri Lanka

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Background: Antibacterial suspensions are critical for children unable to swallow solid dosage forms. Reconstitution of dry powders introduces dosing error risks if instructions are unclear. Caregivers rely heavily on packaging labels and Patient Information Leaflets for safe administration; gaps in this information can cause incorrect dosing, improper storage, and adverse clinical outcomes.
Objectives: To evaluate the availability of PILs and the quality of information provided on packaging and PILs of oral paediatric antibacterial suspensions.
Methods: A descriptive study evaluated suspensions registered with the National Medicines Regulatory Authority (NMRA) of Sri Lanka. Evaluation criteria for packaging, PILs, and reconstitution steps were included in a scorecard. The scorecard was developed through literature review, and it was expert-validated. Product Information Leaflet criteria were based on NMRA statutory requirements. The information on the PILs and packaging was assessed using a combination of physically purchased sealed samples and visual documentation of unsealed samples. Data were evaluated through binary scoring and descriptive analysis.
Results: Of 73 NMRA-registered suspensions, 42 were available in the market. PIL availability was limited, 2.4% were in English and 4.8% in both Sinhala and Tamil. Only 9.8% of Product Information Leaflets included references, and 17.1% featured a last updated date. On labels attached to primary packaging, disposal warnings appeared in 4.8%, reconstituted suspension colour in 19.0%, and measuring device specifications in 23.8%. Secondary labels showed storage precautions in 19.0% and pictorial reconstitution instructions in 2.7%, and None featured adhesive braille labels. Local language reconstitution instructions were provided in fewer than 10% of products, and none instructed caregivers to verify that the powder was loosened before adding water.
Conclusions: Significant gaps exist in the availability and quality of PILs and packaging, highlighting an urgent need for targeted NMRA regulatory action to enforce stricter compliance.

PP 72

Development and validation of device-specific scorecards for the evaluation of patient information leaflets and pictograms of metered dose inhalers and dry powder inhalers

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Background: Patient information leaflets (PILs) and pictograms are essential for the safe and effective use of inhaler medicines.
Objective: To develop and then validate device-specific scorecards (DSSC), and to evaluate the content of PIL, pictograms, and translation accuracy of PILs for dry powder inhalers (DPI) and metered dose inhalers (MDI).
Methodology: Device-specific scorecards were developed from guidelines and validated by an expert panel. PILs and pictograms of all registered inhaler devices obtained from pharmacies were available only in the three languages: English, Sinhala, and Tamil. These were assessed using the validated scorecards, and a score of 100% was considered acceptable. Translation accuracy was evaluated by back-translation.
Results: Developed DSSCs for evaluation of MDI PILs contained 31 criteria for steroid preparations (SP) and 30 criteria for non-steroid preparations (NSP) (31/30-SP/NSP). Corresponding DSSCs for Rotahaler, Breezhaler, Diskus, Turbuhaler, and Handihaler PILs contained 38/37, 33/32, 34/33, 30/29, and 34/33 criteria, respectively.
Following expert validation, MDI PIL DSSCs were refined to 23/21 (SP/NSP), while those for Rotahaler, Breezhaler, Diskus, Turbuhaler, and Handihaler were refined to 24/22, 23/22, 19/18, 19/18, and 26/25, respectively. "Gargle and spit out after use" was retained only in SP PIL DSSCs. The developed DSSC for pictogram evaluation contained 12 criteria. Following expert validation, pictogram DSSCs for MDI, Rotahaler, Breezhaler, Diskus, Turbuhaler, and Handihaler were refined to 22/20, 25/23, 26/25, 20/19, 20/19, and 26/24 criteria (SP/NSP), respectively. All MDI PILs scored ≥50% in English, with one failing in Sinhala and Tamil. For DPI pictograms, Rotahaler had 3 PILs ≥50%, Breezhaler had none, while Diskus and Handihaler achieved ≥50% in all PILs. No MDI translation omissions were observed, although errors occurred in two Tamil and six Sinhala versions, with only one Tamil affecting meaning. In DPI PILs, four Sinhala Rotahaler PILs had missing inhaler part names, while Tamil errors did not affect meaning.
Conclusion: None of the evaluated MDI and DPI PILs/pictograms against DSSC was acceptable. Key instructional deficiencies and translation inaccuracies may negatively impact proper inhaler use and patient safety.

PP 73

Assessment of knowledge on food and alcohol-drug interactions among hospital pharmacists in Kandy District: A cross-sectional study

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Background: Food–drug interactions (FDIs) occur when foods, beverages, or nutrients alter a medicine's pharmacokinetics or pharmacodynamics, leading to reduced therapeutic efficacy or increased toxicity. Hospital pharmacists play a vital role in detecting and preventing FDIs through effective patient counselling. However, their level of knowledge regarding FDIs in Sri Lanka is limited. Assessing knowledge among hospital pharmacists will help to enhance patient safety.
Objective: To assess hospital pharmacists' knowledge of FDIs and identify areas requiring improvement.
Methods: A descriptive cross-sectional study was conducted among government hospital pharmacists in five major hospitals in the Kandy District. Data were collected using a validated, self-administered questionnaire consisting of sociodemographic details and knowledge-based questions on specific FDI pairs, appropriate timing of drug administration relative to meals, and alcohol–drug interactions. The collected data were analyzed using Jamovi (version 2.6.44) and Microsoft Office Excel (version 2021).
Results: A total of 168 pharmacists were invited, and 121 responded (72.02%). Overall, pharmacists demonstrated the knowledge of FDIs with a mean score of 25.9 ± 4.50 (80.93%) out of 32. Knowledge levels were significantly associated with educational qualification ($p = 0.046$) and years of work experience ($p = 0.008$). Pharmacists holding a Bachelor's degree and those with 5-10 years of experience had higher knowledge scores. The current workplace also influenced knowledge ($p = 0.001$); pharmacists working in outpatient and clinic pharmacies had better knowledge compared to those in indoor or store settings. No significant association was found with age and gender. Despite the overall high scores, only 13.23% of respondents had received prior training on FDIs.
Conclusion: Hospital pharmacists in the Kandy District revealed relatively high knowledge of FDIs compared with similar international studies. However, significant differences were observed across education levels, experience, and practice areas, and this highlights a need to implement FDI training programs.

PP 74

Public perceptions of community pharmacists and community pharmacy services in Gampaha District, Sri Lanka

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Background: Community pharmacists play an important role in the healthcare system. The perspectives of the general public on community pharmacists and their services have not been previously explored in Sri Lanka.
Objective: To describe public perspectives on community pharmacists and to identify awareness of their services by the public.
Method: A descriptive cross-sectional study was conducted at the District Secretariat Administrative Complex in Gampaha using an in-house developed and validated interviewer-administered questionnaire. The sample size was 129. The participants were selected using a systematic sampling method. The data were analyzed using descriptive statistics, and the open-ended questions were analyzed using deductive thematic analysis.
Results: The mean age of participants was 45.7±13.5 (range:19.0–75.0) years, and 55.0% were female. Most participants were employed (61.2%). All participants visited community pharmacies to obtain prescribed medicines, while 72.9% purchased medicines without a prescription. Trust in the pharmacist (52.2%) was the strongest influence on pharmacy selection, followed by proximity to home (43.3%) and product availability (32.2%). Although 78.3% recognized pharmacists as medicine experts, 39.5% believed that a certificate-level qualification was sufficient for professional practice. A majority of participants (68.2%) felt that pharmacists could be identified within pharmacies. However, the qualitative study revealed inaccurate identification of a registered pharmacist. Awareness of basic pharmacy services was relatively high, whereas understanding of extended services, such as guidance on lifestyle modification and missed-dose advice, was limited.
Conclusion: This study revealed the public perspective regarding community pharmacists and community pharmacy services, including limited awareness of the roles of pharmacists and the identification of registered, qualified pharmacists. The findings highlight the need for public education and stronger regulatory enforcement to improve service delivery and strengthen community pharmacy services in Sri Lanka.

Oral Presentations

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SN	**OP ID**	**Title**
Track I - Nursing Management and Health Promotion		
1.	**OP 1**	**Knowledge, intended responses and perceived barriers related to experiencing myocardial infarction symptoms among patients attending a selected hospital in Colombo district, Sri Lanka** Perera P [1], Goonewardena S [2,3] *[1]Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka* *[2] Non-Communicable Diseases Research Centre, University of Sri Jayewardenepura, Nugegoda, Sri Lanka.* *[3] Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka.*
2.	**OP 2**	**Health-related quality of life and associated factors among government school teachers of selected schools in the Homagama Education Division, Sri Lanka** Sanjaya HWL, Damayanthi LC *Department of Nursing and Midwifery, University of Sri Jayewardenepura*
3.	**OP 3**	**Nursers'attitudes and associated factors towards patients' family involvement in nursing care among nurses working in the Neuro Trauma Unit at the National Hospital of Sri Lanka** Keshani WM [1], Amarasekara AATD *Department of Nursing and Midwifery, University of Sri Jayewardenepura, Nugegoda*
4.	**OP 4**	**Knowledge and associated factors on patient fall prevention among nursing officers in Sri Jayewardenepura General Hospital (SJGH), Sri Lanka** Malsha AS[1], Ranasinghe RDS[2] *[1]Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura.* *[2]Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura*
5.	**OP 5**	**Employability and career outcomes of nursing graduates: Findings from a tracer study at the University of Sri Jayewardenepura, Sri Lanka** Rathnayake BAMD, Amarasekara AATD *Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura.*

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SN	**OP ID**	**Title**
6.	**OP 6**	**Factors associated with post-stroke leisure time activities among patients attending follow-up clinics in the National Hospital, Galle** Randeniya KKL, Sulochana GPK, Vathsala BVV, Kariyawasam GPN, Dias MPHK *Department of Nursing, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka*
Track II - Nursing Education		
7.	**OP 7**	**Measuring healthcare educators' readiness for simulation-based learning: Development and validation of a new scale based on a preliminary study** Sihnas MAF[1], Sujendran S[2] & Sathaananthan T[1] *[1]Department of Medical Education and Research, Faculty of Health-Care Sciences, Eastern University, Sri Lanka, [2]Department of Supplementary Health Sciences, Faculty of Health-Care Sciences, Eastern University, Sri Lanka*
8.	**OP 8**	**Nurses' attitudes and perceived barriers regarding preceptorship at Sri Jayewardenepura General Hospital, Sri Lanka** Gunathilaka WALL , Amarasekara AATD *Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura*
9.	**OP 9**	**Respiratory functions of traffic control police officers in Colombo, Sri Lanka** Farniz AA[1], Bandara WMAK[1], Perera PGAM[1], Harishkanth V[1], Gunawardhana RGUN[1], Gunawardana KDSH[1], Jayaweera GU[2] *[1]Department of Nursing and Midwifery, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Sri Lanka* *[2]Deparment of Pre Clinical Science, Faculty of Medicine, General Sir John Kotelawala Defence University, Sri Lanka*
10.	**OP 10**	**Self-reported impact of violent video games and cartoons on education among school children in a selected school in Jaffna education division** Aathirai M, Lalitha Meegoda MKD *Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka.*
11.	**OP 11**	**Validity and reliability of the Sinhala version of the Global Inter-professional Therapeutic Communication Skills Scale among nurses** Senarathne HS[1], Warnakulasuriya SSP[1], Ponnamperuma G[2] *[1] Department of Clinical Nursing, Faculty of Nursing, University of Colombo, Sri Lanka* *[2] Faculty of Medicine, University of Colombo, Sri Lanka*

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SN	**OP ID**	**Title**
Track III - Laboratory diagnostics		
12.	**OP 12**	**Hidden metabolic burden among lean healthy Sri Lankan adults - vitamin D deficiency, insulin resistance, and dyslipidemia** Dissanayake DMPK[1], Wijayarathna L[3], Wijesinghe DDGM[1], Ravihari KP[1], Weerasekara JAAUR[1], Weerakoon HTW[1], Weerakoon KGAD[2], Senadheera SPAS[1] *[1]Department of Biochemistry, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka* *[2]Department of Parasitology, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka* *[3]Department of Physiology, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka*
13.	**OP 13**	**The relationship between dietary iron intake, hemoglobin levels, and the severity of cirrhosis in patients at the Colombo North Teaching Hospital, Ragama, Sri Lanka** Weerathunga UC[1], Adassooriya ALDC[1], Nishrin MRF[1], Dassanayake U[2], Samarasekara TG[3], Rajapaksha DIG[4] *[1]Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura* *[2]Department of Medicine, Faculty of Medical Sciences, University of Kelaniya,* *[3]Colombo North Teaching Hospital, Ragama,* *[4]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura*
14.	**OP 14**	**Factors affecting long-term glycemic control among type 2 diabetic patients in a tertiary care hospital clinic in Sri Lanka: a comprehensive institutional-level analysis** Mathangaweera HH[1], Withanaarachchi A[1], Ekanayake EMS[2] *[1]Faculty of Science, University of Kelaniya, Kelaniya, Sri Lanka* *[2]National Hospital, Kandy, Sri Lanka*
15.	**OP 15**	**The slope of the steepest part of the haemolysis curve: a novel osmotic fragility test-based parameter in assessing red blood cell storage stability** Jayalath STD, Halgahawaththa HWIN, Gurubevila GLCV and Darshana LGT *Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka*
16.	**OP 16**	**Salivary pH and blood leukocyte changes attributed to plaque accumulation in patients undergoing fixed orthodontic treatment** Viswanathan G[1], Weerasekera WBMCRD[2], Siriwardana BSMS[3] *[1]Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Peradeniya* *[2]Department of Community Dental Health, Faculty of Dental Sciences, University of Peradeniya* *[3]Department of Oral Pathology, Faculty of Dental Sciences, University of Peradeniya*

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SN	**OP ID**	**Title**
17.	**OP 17**	**Tissue response patterns of three common zoonotic parasitic infections in Sri Lanka: Leishmania donovani, Dirofilaria repens, and Rhinosporidium seeberi** Ratnayake RMSM[1], De Silva WAPP[1], Vithanage A[2] *[1]Department of Zoology, Faculty of Science, University of Peradeniya, Sri Lanka* *[2]Department of Pathology, National Hospital, Kandy, Sri Lanka*
Track IV - Health and Nutrition		
18.	**OP 18**	**Characterization of sugar-fermenting bacteria from Tecoma stans floral nectar and assess their fermentation potential in kithul treacle for food preservation** Perera EWBK, Jayasuriya TL, Silva UBK, Samarakkody AHA, Ravi K, Sewwandi PA, and Dharmasiri RBN *Faculty of Life and Medical Sciences, BMS Campus, Colombo 06, Sri Lanka*
19.	**OP 19**	**Characterization of epiphytic yeast from underutilized sapodilla (*Manilkara zapota*) and its potential on fermented beverage production** Serasinghe TC, Mummullage SA, Shafqat HM, Vincent LM, Arachchi GJB, Hettithanthrige OV, Fernando SN, Suriyaarachchi DT, Sewwandi PA,Dharmasiri RBN *Faculty of Life and Medical Sciences, BMS Campus, Colombo 06, Sri Lanka*
20.	**OP 20**	**Development of green tea extract-incorporated wheat bread with enhanced functional properties** Kularatne BUT, Jayasinghe MA *Department of Food Science and Technology, Faculty of Applied Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda, Sri Lanka*
21.	**OP 21**	**Cytogenetic evaluation of areca catechu (arecanut)–induced toxicity using the Allium cepa assay** Attanayake MASM[1], Suresh S[2], Chandrika UG[2], Dias G[3], Mahawithanage S[2], Jeewandara C[1], Karunarathna KAAU[4] *[1]Department of Immunology and Molecular Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka* *[2]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka* *[3]Department of Anatomy, University of Otago, New Zealand* *[4]Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka*

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22.	**OP 22**	**Body size orientation and related eating behaviors among adolescent schoolchildren in Galle district, Sri Lanka** Kulathunga PAR, De Silva PV, Wijesinghe CJ *Department of Community Medicine, Faculty of Medicine, University of Ruhuna, Sri Lanka*
23.	**OP 23**	**Fabrication of Halochromic Polysaccharide-Based Intelligent Packaging Films for Real-Time Food Freshness Detection** GHP Ganegoda[1], Danushika C Manatunga[1], KK Asanka Sanjeewa[1], KGLR Jayathunge[1], Renuka Nilmini[2], Rohan S Dassanayake[1] *[1]Department of Biosystems Technology, Faculty of Technology, University of Sri Jayewardenepura, Pitipana, Homagama, Sri Lanka,* *[2]Department of Materials and Mechanical Technology, Faculty of Technology, University of Sri Jayewardenepura, Pitipana, Homagama, Sri Lanka*
Track V - Pharmacy Practice		
24.	**OP 24**	**Antibiotic use in a selected paediatric ward in a teaching hospital in Colombo district, Sri Lanka** Gunasekara HMDPN[1], Perera R[2], Senadheera GPSG[1], *[1]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Science, University of Sri Jayewardenepura* *[2]Department of Paediatrics , Faculty of Medical Sciences, University of Sri Jayewardenepura*
25.	**OP 25**	**Awareness and disposal practices of medication waste among patients attending the teaching hospital in Jaffna, Sri Lanka** Sivakaran M, Nadeshkumar A, Herath HMDR, Senadheera GPSG *Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka*
26.	**OP 26**	**A retrospective audit of antipsychotic prescription patterns in a teaching hospital in Sri Lanka** Hasara UMC[1] , Waas MDIA[2],Wheeler AJ[3], Coombes I[4],Samaranayake NR[1] *[1]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura* *[2]Department of Psychiatry, Faculty of Medical Sciences, University of Sri Jayewardenepura* *[3]School of Pharmacy and Medical Sciences, Griffith University, Australia* *[4]School of Pharmacy and Pharmaceutical Sciences, Faculty of Health, Medicine and Behavioural Sciences, University of Queensland, Australia*

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27.	**OP 27**	**Inpatient antibiotic consumption and availability during 2020 - 2024 in selected hospital in Sri Lanka** Rajapaksha RMLK, Senadheera GPSG *Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura*
28.	**OP 28**	**Medication management issues and barriers to medication management among older patients (above 70 years) with hyper-polypharmacy attending the cardiology clinic in a selected teaching hospital in Sri Lanka** Nethmini KAM, Samaranayake NR *Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura*
29.	**OP 29**	**Assessment of redundant antibiotic coverage in selected medical and surgical wards of Colombo South Teaching Hospital of Sri Lanka** Imalkith SAMA[1] Perera N[2] *[1]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura* *[2] Department of Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura*
Session VI - Drug Discovery and Formulation		
30.	**OP 31**	**Formulation and evaluation of losartan and metoprolol single- layer combination tablet for treatment of hypertension** Dewmini USM[1], Wickramasooriya A[2], Jeewandarage SM[1] *[1]Department of Pharmacy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka* *[2] Department of Quality Assurance, Celogen Lanka (PVT) Ltd, Pallekele, Sri Lanka*
31.	**OP 32**	**Formulation of nanoemulgel using selected herbal oils available in Sri Lanka** Pushpawala GPAS[1], Jayasuriya BN[1], Herath HMDR[1], Dissanayake R[2], Nadeshkumar A[1] *[1]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura,* *[2] Linda Crnic Institute for Down Syndrome, University of Colorado, Anschutz Medical Campus*

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SN	**OP ID**	**Title**
32.	**OP 33**	**Synthesis and evaluation of curcumin-modified silver nanoparticle coatings for antimicrobial and antibiofilm activity on Foley catheters** Nissanka NMC[1], Dilhari KAA[2], Priyadarshana G[3], Munasinghe JA[4], Dilshani M[5], Weerasekera MM[1] *[1]Department of Microbiology, Faculty of Medical Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka.* *[2]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka.* *[3]Department of Materials and Mechanical Technology, Faculty of Technology, University of Sri Jayewardenepura, Homagama, Sri Lanka* *[4]Boffin Institute of Data Science, Makola, Western, Sri Lanka* *[5] Department of Mathematics, University of Ruhuna, Matara*
33.	**OP 34**	***In Vitro* Anti-inflammatory potential and *In Vivo* zebrafish embryo acute toxicity of 3-(4-Hydroxy-3-methoxybenzylidene)indolin-2-one** A. Miralini[1], H. P. S. K. Wijekoon[1], K. A. A. U. Karunarathna[2], K. G. U. R. Kumarasinghe[3] *[1]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura Nugegoda 10250, Sri Lanka.* *[2]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Nugegoda 10250, Sri Lanka.* *[3]Department of Chemistry, University of Sri Jayewardenepura, Nugegoda 10250, Sri Lanka*
34.	**OP 35**	**Utilization of *Artocarpus heterophyllus* seed starch, *Artocarpus heterophyllus* fruit mucilage, and *Cucumis sativus* peel pectin as film forming agent in tablet coating** Imeshika NK[1], Madushani JS[1], Herath HMDR[2] *[1]Department of Pharmacy, Faculty of Allied Health Sciences, University of Peradeniya* *[2]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura*

Poster Presentations

International Research Conference in Health Sciences 2026 (IRCHS 2026)		
Serial Number	**PP ID**	**Title**
Track I - Nursing Management and Health Promotion		
1.	**PP 01**	**Awareness and knowledge on breast cancer and practices on breast self-examination among healthcare students from selected higher education institutes in Colombo District** Jeyaseelan K[1*], Silva SDD[1], Fernando SM[1], Karunarathna HMDI [2], Anuruddhika MEU[2] [1]*School of Physiotherapy, International Institute of Health Sciences, Welisara, Sri Lanka* [2]*School of Nursing, International Institute of Health Sciences, Welisara, Sri Lanka*
2.	**PP 02**	**A predictive analytics framework for estimating recovery time in pneumonia patients** Wickramarathne UC[1]*, Jayawickrama JPMG[1], Perera GND[2], Tissera PSS[1] [1]*Department of Computer Science, Faculty of Applied Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka* [2]*Department of Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka*
3.	**PP 03**	**Factors influencing job satisfaction and retention among nursing officers at Base Hospital Homagama, Sri Lanka** Liyanage RS1[1]*,Amarasekara AATD[1] [1]*Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura*
4.	**PP 05**	**Maternal attitudes and socio-demographic influences on feeding practices of children aged 6–23 months in Rideegama region, Sri Lanka** Gunasena PGCI[1], Nissanka N.M.C[2], Dilhari KAA[3*] [1]*Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Colombo, Sri Lanka* [2]*Department of Microbiology, Faculty of Medical Sciences, University of Sri Jayewardenepura, Colombo, Sri Lanka* [3]*Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Colombo, Sri Lanka*
5.	**PP 06**	**Mental health, well-being and associated factors among farmers in selected Grama Niladhari divisions in Kurunegala District, Sri Lanka** Rathnayake RMPN[1]*, Damayanthi LC[1] [1]*Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka*

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Serial Number	**PP ID**	**Title**
6.	**PP 07**	**Strengthening primary eye care through Optometry: Opportunities in Sri Lanka** Dias SI*[1], Piyasena MP [2], Suraweera T[3], Bunce C [5], Mtuy T [4,5], Buchan J [5], Morjaria P[5] *[1]Department of Optometry, Faculty of Allied Health Sciences- University of Sri Jayewardenepura- Nugegoda- Sri Lanka* *[2]Vision and Eye Research Institute, School of Medicine, Anglia Ruskin University – Cambridge- UK;* *[3]Sri Lanka Institute of Information Technology, Malabe- Sri Lanka* *[4]Kilimanjaro Christian Medical Centre University, Kilimanjaro, Tanzania* *[5]International Centre for Eye Health, London School of Hygiene and Tropical Medicine, London, UK*
7.	**PP 08**	**Knowledge on epilepsy, seizure first aid and associated factors among primary teachers in selected school in Akuressa educational zone, Matara district, Sri Lanka** Nilakshi M [1]*, Athiththan LV [2] *[1]Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka* *[2]Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka*
8.	**PP 09**	**Prevalence and association between homesickness and well-being among hostel dwelling undergraduates in Faculty of Allied Health Sciences, University of Sri Jayewardenepura** Sewwandi ME*[1], Meegoda MKDL[1] *[1]Department of Nursing & Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura*
9.	**PP 10**	**Knowledge, attitudes, and practices among parents and guardians regarding early childhood vaccination in the Kandy Municipal area, Sri Lanka** Gamage GDD[1*], Bagywantha NMYK[1], Jaysinghe PP[2], Sonnadara T[1] *[1]Department of Pharmacy, Faculty of Allied Health Sciences, University of Peradeniya* *[2]Municipal Council, Kandy*
10.	**PP 11**	**Barriers and facilitators in the implementation of evidence-based fall prevention practices among physiotherapists in Sri Lanka** Chellapillai FMD [1,2*], Dissanayaka TD [3], Tiedemann A[4], Hill KD[e], Kariyawasam A[2] *[1]Department of Physiotherapy, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Werahera, Colombo, Sri Lanka* *[2] Department of Physiology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*

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Serial Number	**PP ID**	**Title**
		[3]Department of Physiotherapy, Faculty of Medicine, Nursing and Allied Health Sciences, Monash University,Melbourne, Australia *[4]The University of Sydney, Faculty of Medicine and Health, School of Public Health Gadigal Country, Sydney, Australia* *[5]Rehabilitation, Ageing and Independent Living (RAIL) Research Centre, School of Primary and Allied Health Care, Peninsula Campus, Monash University, Melbourne, Australia*
11.	**PP 13**	**Quality of nursing work life among Intensive Care Unit nurses at the National Hospital of Sri Lanka** Amarathunga AAKA[1], Amarasekara AATD[1] *[1]Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura*
Track II – Laboratory Diagnostics		
12.	**PP 14**	**Evaluation of partially purified lectins from selected Sri Lankan plants as alternative reagents for ABO blood grouping** Abdul MAA[1], Naseem PN[1], Ahamed FH[1], Kajenthirasenan L[1], Jeyasingam M[1], Rasaratnam K[1*] *[1]Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Jaffna, Sri Lanka*
13.	**PP 17**	**Association between *Helicobacter pylori* infection and endoscopic findings among dyspeptic patients attending the Gastroenterology clinic at Teaching Hospital, Jaffna** Vithushan V[1], Kolinsan K[1], Kisnujan S[1], Saseevan S[1*], Gnanakarunyan TJ [1], Mark Mithulan FJ[2], Kajendran A[3] *[1]Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Jaffna* *[2]Department of Clinical Virology and Molecular Biology, Teaching Hospital, Jaffna* *[3]Gastroenterology Unit, Teaching Hospital, Jaffna*
14.	**PP 18**	**Assessment of hematological parameters and neutrophil-to-lymphocyte ratio as indicators of glycemic control in a selected type 2 diabetes mellitus patients attending a tertiary care hospital, Sri Lanka** Sankalpana LS[1], Thennakoon TASH[1], Sanjeewani LGNH[1], Shehara LWD[1], Shahmy S[2], Silva FHDS[3] and Withanage ND[1*] *[1]Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka* *[2]National Science and Technology Commission, Sri Lanka* *[3]Department of Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka*

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Serial Number	**PP ID**	**Title**
15.	**PP 19**	**Photocatalytic removal of antibiotic residues from aquaculture systems using bare and modified TiO_2** Yapabandara YBMPMP[1], Jayaweera PM[2], Uluwaduge DI[3], Dilhari KAA[3], Walpita JK[4]* *[1]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka* *[2]Department of Chemistry, Faculty of Applied Sciences, University of Sri Jayewardenepura, Sri Lanka* *[3]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka* *[4]Department of Multidisciplinary Studies, Faculty of Urban and Aquatic Bioresources, University of Sri Jayewardenepura, Sri Lanka*
16.	**PP 20**	**Total white blood cell count and platelet count as accessible predictors of cardiovascular disease risk among patients attending to medical clinic at a tertiary care hospital in Sri Lanka** Mendis HRH[1], Senaratne GKM[1], Ahmad ARA[1], Wijesekara GUS[1]*, Matthias AT[2] *[1]Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka* *[2]Department of Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka*
17.	**PP 21**	**Impact of regular blood donation on lipid profile among male blood donors registered at National Blood Center, Sri Lanka** Shashiprabha GD[1], Kaushalya WKC[1], Raleena MRF[1], Tharuka SHD[1], Galhenage JV[2], Senanayake SD[2], Shakoor JS[2], Shahmy S[3], Withanage ND[1], Senarathne TKRR[1*] *[1]Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka* *[2]National Blood Centre, Colombo, Sri Lanka* *[3]National Science and Technology Commission, Sri Lanka*
18.	**PP 22**	**The prevalence and association of asymptomatic microalbuminuria and serum creatinine among female undergraduates residing in hostels of the University of Sri Jayewardenepura** Dilmini WT[1], Fernando BHSD[1], Wimalarathna WPHA[1*] and Perera PPR[2] *[1]Department of Medical Laboratory Science, Faculty of Allied Health Sciences, University of Sri Jayewardenepura Sri Lanka,* *[2]Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka*
19.	**PP 23**	**Prevalence of asymptomatic microalbuminuria and kidney function parameters among young adults in Maharagama, Sri Lanka** Gamage HMGMP[1], Pahalagedara MN[2], Wijesekara GUS[3], Perera PPR[1*] *[1]Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka* *[2]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka* *[3]Department of Medical Laboratory Science, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka*

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Serial Number	**PP ID**	**Title**
20.	**PP 24**	**Serum protein analysis of *Haemonchus contortus* infected goats using Sodium Dodecyl Sulphate - Polyacrylamide Gel Electrophoresis (SDS-PAGE) technique** K Jishakaran[1], NMT Anupama[2*] *[1]Department of Medical Laboratory Science, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka* *[2]Department of Veterinary Pathobiology, Faculty of Veterinary Medicine & Animal Science,University of Peradeniya, Sri Lanka*
21.	**PP 25**	**Demographic drivers of bloodstream infections in northern Sri Lanka: insights from a dual-framework statistical approach** Satkunarajah D[1], Jiffriya M[1], Lakshitha DAA[2], Munasinghe A[3], Dilhari KAA[2*] *[1]Department of Medical Laboratory Sciences, Faculty of Health Sciences, Open University of Sri Lanka, Nawala, Nugegoda, Sri Lanka* *[2]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda, Sri Lanka* *[3]Boffin Institute of Data Science, Makola, Western, Sri Lanka*
22.	**PP 26**	**Salivary heavy metal content in patients with periodontal disease** Akaliya T[1], Leuke Bandara D[2*], Jayasinghe RD[2], Abeysundara Sachith P[3] *[1]Department of Medical Laboratory Science, Faculty of Allied Health Sciences,University of Peradeniya, Sri Lanka* *[2]Department of Oral Medicine and Periodontology, Faculty of Dental Sciences,University of Peradeniya, Sri Lanka* *[3]Department of Statistics and Computer Science, University of Peradeniya, Sri Lanka*
23.	**PP 27**	**Correlation between age, osmotic fragility, and mean corpuscular volume among the adults in the community of University of Sri Jayewardenepura** Gurubevila GLCV*, Halgahawaththa HWIN, Jayalath STD and Darshana LGT *Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka*
24.	**PP 28**	**Assessment of haematological parameters in Sri Lankan patients with periodontal diseases- A pilot study** Godigamuwa GRGM[1*], Leuke Bandara D[2], Jayasinghe RD[2] *[1]Department of Medical Laboratory Science, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka* *[2]Department of Oral Medicine and Periodontology, Faculty of Dental Sciences, University of Peradeniya, Sri Lanka*

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Serial Number	**PP ID**	**Title**
25.	**PP 29**	**Overrepresentation of lower respiratory tract pathogens in comorbid-respiratory patients: A retrospective study at the National Institute of Infectious Diseases, Sri Lanka** Kulathunga EPE[1], Ruchirani DMM[2], Munasinghe JAA[3], Karunarathne M[4], Dilhari KAA[5]* *[1]Department of Medical Laboratory Sciences, Faculty of Health Sciences, Open University of Sri Lanka* *[2]Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura* *[3]Boffin Institute of Data Science, 73, Makola North, Colombo, Sri Lanka* *[4]National Institute of Infectious Diseases, Angoda, Sri Lanka* *[5]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura*
26.	**PP 30**	**Impact of reusable sample cups and delayed analysis on serum phosphate levels** Gunathilaka NRYR*[1], Weerasinghe KDIA[1], Kalpani KPA[1], Jasinge E[2], Seneviwickrama KLMD[3], Vidanapathirana DM[4] *[1]Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura* *[2]Lady Ridgeway Hospital for Children, Colombo 08,* *[3]Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura* *[4]Department of Pathology, Faculty of Medical Sciences, University of Sri Jayewardenepura*
Track III- Research in Natural Products		
27.	**PP 31**	***In vitro* evaluation of the synergistic effects of *Cinnamomum verum* and *Syzygium aromaticum* extracts combined with vancomycin against methicillin-resistant *staphylococcus aureus*** Deemantha AGT[1*], Piyathilaka PTSN[1], Kaluarachchi WR[1], Nadeshkumar A[2] *[1]Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Gangodawila, Sri Soratha Mawatha, Nugegoda, Sri Lanka* *[2]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Gangodawila, Sri Soratha Mawatha, Nugegoda, Sri Lanka*
28.	**PP 32**	**Impact of cooking and cooling on starch digestibility, gelatinization, rehydration properties, and granular morphology of selected starchy foods** Kavindi GGG*, Jayasinghe KWMA *Department of Food Science & Technology, Faculty of Applied Sciences, University of Sri Jayewardenapura, Sri Lanka*

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Serial Number	**PP ID**	**Title**
29.	**PP 33**	**Investigation of antifungal activity of silver nanoparticles synthesized from *Moringa oleifera* and *Pongamia pinnata* plant extracts against *Candida albicans*** Senadheera SAAD[1], Wijekoon HPSK*[1], Uluwaduge DI[2] *[1]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka* *[2]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka*
30.	**PP 34**	**Evaluation of *ex vivo* hepatoprotective activity of different fractions obtained from 70% iso propyl alcohol extracts of *Vernonia cinerea*** Jayasinghe HJ[1], Rukaiya MR[1]*, Shaima MRFH[1], Karunarathna KAAU[2], Suresh TS[3], Hemalika DVD[4] *[1]Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura* *[2]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura* *[3]Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura* *[4]Department of Chemistry, Faculty of Natural Sciences, Open University of Sri Lanka*
31.	**PP 35**	***In vitro* evaluation of anticandidal and antioxidant activities of Sri Lankan ginger (*Zingiber officinale* Roscoe) and garlic (*Allium sativum* L.) Extracts: Individual and combined effects** Kaveesha BY[1*], Leuke Bandara D[2], Senanayake MRDM[2], Weerasekara SHK[2], Jayatilake JAMS[2], Jayasinghe L[3], Jayasinghe RD[2] *[1]Cardiff School of Sport and Health Sciences, Cardiff Metropolitan University, UK (Affiliated with ICBT Campus, Colombo, Sri Lanka)* *[2]Department of Oral Medicine & Periodontology, Faculty of Dental Sciences, University of Peradeniya, Sri Lanka* *[3]National Institute of Fundamental Studies (NIFS), Kandy, Sri Lanka*
32.	**PP 36**	**Effect of commercial bark grade and geographical origin on trans-cinnamaldehyde yield in steam-distilled Ceylon cinnamon with valorization of processing residues** Janakan T[1], Gamagedara TP[2*] *[1]Department of Medical Laboratory Science, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka* *[2]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka*
33.	**PP 37**	**An investigation of the synergistic antibacterial activity of Sri Lankan raw honey with *Allium sativum* (garlic)** Kavindya GDG, Tennakoon TMIUK* *Department of Pharmacy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka*

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Serial Number	**PP ID**	**Title**
34.	**PP 38**	**Comparative in vitro pediculicidal activities of *Azadirachta indica* (Neem), *Citrus aurantiifolia* (Lime), and *Elaeocarpus serratus* (Veralu) leaf extracts** Razna NMF[1], Boyagoda SH[1]* *[1]Department of Zoology, Faculty of Science, University of Peradeniya, Sri Lanka*
35.	**PP 39**	**Effects of heating with garlic, curry leaves, fenugreek seeds and mustard seeds on the *in vitro* antioxidant activity and *in vitro* cholesterol inhibitory activity of coconut oil** Abeywickrama WHY[1], Karunarathna KAAU[2*], Wickramasinghe I[3] *[1]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka* *[2]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka* *[3]Department of Food Science and Technology, Faculty of Applied Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka*
36.	**PP 40**	**Determination of total alkaloid content, moisture and pH of selected smokeless tobacco and areca nut products in the Maharagama MOH Division** Farook Z[1], Edirisinghe S*[2], Yasawardene SG[2], Amarasinghe HK[3], Weerasekera MM[4], Jayaweera PM[5] *[1]Department of Pharmacy & Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura* *[2]Department of Anatomy, Faculty of Medical Sciences, University of Sri Jayewardenepura* *[3]Department of Community Dental Health, Faculty of Dental Sciences, University of Sri Jayewardenepura, [4]Department of Microbiology, Faculty of Medical Sciences, University of Sri Jayewardenepura* *[5]Faculty of Urban and Aquatic Bioresources, University of Sri Jayewardenepura*
37.	**PP 41**	**Phytochemical screening, heavy metal determination and cytotoxicity evaluation of aqueous extract of rhizome of *Musa paradisiaca*** I. Piriyavani[1], K.A.A.U. Karunarathna[2*], M.A. Jagath Wansapala[3] *[1]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura* *[2]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura* *[3]Department of Food Science and Technology, Faculty of Applied Sciences, University of Sri Jayewardenepura*

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Serial Number	**PP ID**	**Title**
38.	**PP 42**	**Antibacterial activity and phytochemical quantification of *Cocos nucifera* extracts** Bandara RRSWHSM.[1], Jayasinghe JMS.[2]*, Athukorala ADSNP.[3], Costa AMKCJ.[1] *[1]Postgraduate Institute of Science, University of Peradeniya, Peradeniya, Sri Lanka* *[2]Department of Chemistry, University of Peradeniya, Peradeniya, Sri Lanka* *[3]Department of Botany, University of Peradeniya, Peradeniya, Sri Lanka*
39.	**PP 43**	**Evaluation of antioxidant properties of *elaeocarpus serratus l.* (ceylon olive) root extracts using *in vitro* methods** Anthony CRH, Lorensu-Hewage VC*, George GDN, Weerasinghe W *Faculty of Life and Medical Sciences, BMS Campus, Sri Lanka*
40.	**PP 44**	**Anticandidal effect against *Candida albicans* and antioxidant properties of Sri Lankan curry leaves (*Murraya koenigii*)** Chamodani AGV[1]*, Leuke Bandara D[2], Senanayake MRDM[2], Weerasekera SHK[2], Jayatilake JAMS[2], Jayasinghe L[3], Jayasinghe RD[2] *[1]Cardiff School of Sport and Health Sciences, Cardiff Metropolitan University, UK (affiliated with ICBT Campus, Colombo, Sri Lanka)* *[2]Department of Oral Medicine & Periodontology, Faculty of Dental Sciences, University of Peradeniya, Sri Lanka,* *[3]National Institute of Fundamental Studies, Kandy, Sri Lanka*
41.	**PP 45**	**Ethnobotanical study of the medicinal plants used for rheumatological disorders among patients attending rheumatology clinic in Teaching Hospital Jaffna** Christina T[1], Sathya S*[1], Sivasinthujah S[1], Sivarangini S[2] *[1]Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna* *[2]Department of Sirorogam and Aruvai Maruththuvum., Faculty of Siddha Medicine, University of Jaffna*
42.	**PP 46**	**Storage stability assessment and spectroscopic modeling for rapid determination of free fatty acids in desiccated coconut** Rathnayake RMNC*[1,2], Somasiri HPPS[2], Dassanayake MRP[2], Jayasinghe KWMA[1] *[1]Department of Food Science and Technology, Faculty of Applied Sciences, University of Sri Jayewardenepura, Sri Lanka* *[2]Industrial Technology Institute, 363, Bauddhaloka Mawatha, Colombo 07, Sri Lanka*

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Serial Number	**PP ID**	**Title**
43.	**PP 47**	**Green synthesis and characterization of hydroxyapatite nanoparticles using fenugreek (*Trigonella foenum graecum*) seed extract for flucloxacillin delivery** Anjula HGS [1], Gamagedara TP [2]* [1]*Department of Pharmacy, Faculty of Allied Health Sciences, University of Peradeniya* [2]*Department of Basic Sciences, Faculty of Allied Health Sciences, University of Peradeniya*
Track IV – Drug discovery and Formulation		
44.	**PP 48**	**Evaluating steric and electrostatic factors governing the self-assembly of 2-pyridylalkylamides** Fernando PSR[1], Abeysekera AM*[2], Nelumdeniya RM[2] [1]*University of Sri Jayewardenepura* [2]*General Sir John Kotelawala Defence University*
45.	**PP 50**	**Identification of stigmasterol as a potential antiviral compound targeting African swine fever virus DNA polymerase X: A comprehensive *in silico* analysis** Hameem GS[1], Somarathna MSSP[3], Kavindi PHMA[1], Jeyakrishnan HP[2], Ariyasinghe AHTDK[3], Manathunga MJB[1], Adhikari AAHR[1], Ranathunga LN[3]* [1]*Department of Agricultural Biology, Faculty of Agriculture, University of Peradeniya, Peradeniya 20400, Sri Lanka* [2]*Department of Botany, Faculty of Science, University of Peradeniya, Peradeniya 20400, Sri Lanka* [3]*Department of Animal Science, Faculty of Agriculture, University of Peradeniya, Peradeniya 20400, Sri Lanka*
46.	**PP 51**	**Identification of natural compounds from *Brucea javanica* with potential as inhibitors of the African Swine Fever Virus pE296R protein: a study based on computational docking and dynamics** Ariyasinghe AHTDK[1], Somarathne MSSP[1], Jeyakrishnan HP[2], Kavindi PHMA[3], Hameem GS[3] and Ranathunga LN[1]* [1]*Department of Animal Science, Faculty of Agriculture, University of Peradeniya, Peradeniya, 20400, Sri Lanka* [2]*Department of Botany, Faculty of Science, University of Peradeniya, Peradeniya, 20400, Sri Lanka* [3]*Department of Agricultural Biology, Faculty of Agriculture, University of Peradeniya, Peradeniya 20400, Sri Lanka*

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Serial Number	**PP ID**	**Title**
47.	**PP 52**	***In silico* design and characterization of novel sirtuin 1 activator** Kumara BVMS*, Perera TGBR, Halahakoon HMAJ, Nelumdeniya NRM *Department of Pharmacy, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University*
48.	**PP 53**	***In silico* identification of docosane from *Cyclea Peltata* (Kahipiththan) root as a potential inhibitor of Monkeypox Virus E8L protein** Wijekoon WMHNTK [1], Gunathilake PKHD [2], Jayampathi JANP [2], Adhikari AAHR [1], Manathunga MJB [1], Aberathna WAKL [2], Somarathne MSSP [2], Ariyasinghe AHTDK [2], Ranathunga LN [2*] *[1]Department of Agricultural Biology, Faculty of Agriculture, University of Peradeniya, Sri Lanka* *[2]Department of Animal Science, Faculty of Agriculture, University of Peradeniya, Sri Lanka*
49.	**PP 54**	**Exploratory computational investigation of Curcumin tautomers and their interactions with Histone Deacetylase 8 (HDAC8)** Perera OADB, Parthiban G* *Department of Chemistry, Faculty of Science, Eastern University Sri Lanka, Chenkalady, Sri Lanka*
50.	**PP 55**	***In-silico* druggability assessment of the leaf extract of *Sphagneticola trilobata* (Wedelia) against androgenetic alopecia** Jeyakrishnan HP[1], Fernando AS[2], Ariyasinghe AHTDK[2], Hameem GS[3], Kavindi PHMA[3], Karunarathne SI[4], Ranathunga LN[2]* *[1]Department of Botany, Faculty of Science, University of Peradeniya, Peradeniya, 20400, Sri Lanka* *[2]Department of Animal Science, Faculty of Agriculture, University of Peradeniya, Peradeniya, 20400, Sri Lanka* *[3]Department of Agricultural Biology, Faculty of Agriculture, University of Peradeniya, Peradeniya, 20400, Sri Lanka* *[4]Department of Molecular Biology and Biotechnology, Faculty of Science, University of Peradeniya, Peradeniya, 20400, Sri Lanka*
51.	**PP 56**	***In Silico* screening of *Gymnema sylvestre* compounds, Longispinogenin and Sitakisogenin, as potential inhibitors of African Swine Fever Virus DNA Ligase** Kavindi PHMA[1], Somarathna MSSP[2], Hameem GS[1], Ariyasinghe AHTDK[2] ,Jeyakrishnan HP[3], Adhikari AAHR[1], Manathunga MJB[1], Ranathunga LN[2*] *[1]Department of Agricultural Biology, Faculty of Agriculture, University of Peradeniya, Peradeniya, 20400, Sri Lanka* *[2]Department of Animal Science, Faculty of Agriculture, University of Peradeniya, Peradeniya, 20400, Sri Lanka* *[3]Department of Botany, Faculty of science, University of Peradeniya, Peradeniya, 20400, Sri Lanka*

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Serial Number	**PP ID**	**Title**
52.	**PP 57**	**Development and validation of a UV-Visible spectrophotometric method for the assay of Budesonide in aqueous nasal spray for in-process analysis** Rajapakshe KSH[1]*, Abeysirigunawardena NY[2], Wickramasooriya MI[2], Kannangara N[2], Kaluthanthiri D[1] *[1]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka* *[2]Emergen Life Sciences (Pvt) Ltd, Sri Lanka*
53.	**PP 58**	**Post-marketing pharmaceutical quality surveillance of empagliflozin 10 mg tablets in Sri Lanka** Malwatta MALD[1]*, Wasana PWD[2], Gunawardena S[1] *[1]Department of Physiology, Faculty of Medicine, University of Ruhuna, Sri Lanka* *[2]Department of Pharmacy, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka*
54.	**PP 59**	**Antibacterial activity of formulation containing methanolic extracts of *Moringa oleifera* and *Pongamia pinnata* against *Staphylococcus aureus*** Weerathunga ANS[1], Wijekoon HPSK[1*], Uluwaduge DI[2], Peiris KPP[3] *[1]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka* *[2]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka* *[3]Department of Shalya-Shalakya, Faculty of Indigenous Medicine, Gampaha Wickramarachchi University of Indigenous Medicine, Sri Lanka*
55.	**PP 60**	**Combined antibacterial activity of *Psidium guajava* and *Cinnamomum verum* extracts and their application in an alcohol-free herbal sanitizer** Senevirathne DRNL[1*], Chandrasiri KGN[1], Niroshan S[1], Uluwaduge I[2] *[1]Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka* *[2]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka*
56.	**PP 61**	**Evaluation of in-process hold time on assay and microbial limits of salbutamol 400 µg inhalation powder (pre-metered)** Hiripitiya HTD[1*], Wickramasooriya M[2], Abeysirigunawardena N[2], Kaluthanthiri D[1], Kannangara N[2] *[1]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda, Sri Lanka* *[2]Emergen Life Sciences (PVT) Ltd, Biyagama Road, Pethiyagoda, Kelaniya, Sri Lanka*

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57.	**PP 62**	**Evaluation of antioxidant and antimicrobial activities of selected medicinal plants for the development of a polyherbal plaster** Ambalangodage HCI[1]*, Napagoda MT[2], Wickramasinghe S[3], De Silva KIM[4] *[1]Department of Pharmacy, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka* *[2]Department of Biochemistry, Faculty of Medicine, University of Ruhuna, Sri Lanka* *[3]Department of Microbiology, Faculty of Medicine, University of Ruhuna, Sri Lank* *[4]Department of Pharmacy, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka*
58.	**PP 63**	**Antibacterial activity of N-Acetylcysteine alone and in combination with selected antibiotics against bacterial species causing urinary tract infections in dogs** Medaduwage DS[1], Dissanayake DRA*[2], Neelawala NGDAK[3] *[1]Department of Pharmacy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka* *[2]Department of Clinical Sciences, Faculty of Veterinary Medicine and Animal Sciences, University of Peradeniya, Sri Lanka* *[3]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka*
59.	**PP 64**	**Preliminary study on polyherbal gel formulation containing *Abelmoschus esculentus* (okra pods) and *Salvia hispanica L.* (chia seeds) for oral candidiasis** Faseeha MFF[1], Mafrina MIF[1], Mufees KRM[1], Thevaki JG[2], Dilakshana K[1], Sathya S*[1] *[1]Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna* *[2]Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Jaffna*
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60.	**PP 65**	**Knowledge and awareness of factors contributing to iron deficiency anaemia among married women in Sri Lanka** Ukwatta MDDC[1]*, Ranathunge RMTB[2] *[1]Cardiff School of Sport and Health Science, Cardiff Metropolitan University, Cardiff, United Kingdom* *[2]Department of Zoology, Faculty of Science, Eastern University, Sri Lanka*

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62.	**PP 68**	**Green synthesis of iron/bentonite nanocomposite and evaluation of its efficiency in the removal of antibiotic residues from aqueous solution** Dhananjaya KB[1], Pahalagedara MN[2]* *[1]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka* *[2]Department of Basic Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka*
63.	**PP 69**	**Patients' satisfaction on medication counseling by registered pharmacists in the outpatient department of the state hospitals in Jaffna District** Kumara KBLC [1], Udayakumari TA [1], Thuvaragan T[1], Sathya S*[1] *[1]Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna*
64.	**PP 70**	**Treatment satisfaction among hemodialysis patients: A descriptive cross-sectional study in hemodialysis clinic, National Institute for Nephrology Dialysis and Transplantation** Clarin L[1,2*] , Wickramasinghe [1] ND *[1]Department of Pharmacy, Faculty of Health Sciences, The Open University of Sri Lanka, Nugegoda, Sri Lanka* *[2] National Institute for Nephrology Dialysis and Transplantation, Colombo 10*
65.	**PP 71**	**Evaluation of the availability of Patient Information Leaflets (PILs) and the quality of information provided on the packaging and PILs of oral paediatric antibacterial suspensions available in Sri Lanka** Manogaran J*, Senadheera G P S G , Nadeshkumar A *Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Nugegoda 10250, Sri Lanka*

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67.	**PP 73**	**Assessment of knowledge on food and alcohol-drug interactions among hospital pharmacists in Kandy District: A cross-sectional study** Kishalini V[1]*, Thamalu Sonnadara[1], Damayanthi Dassanayake HDWT[2] *[1]Department of Pharmacy, Faculty of Allied Health Sciences, University of Peradeniya* *[2]Department of Nursing, Faculty of Allied Health Sciences, University of Peradeniya*
68.	**PP 74**	**Public perceptions of community pharmacists and community pharmacy services in Gampaha District, Sri Lanka** Rajapaksha RPRT[1], Senadheera GPSG[1*], Samaranayake NR[1], Mannapperuma U[2] *[1]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka* *[2]Department of Pharmacology, Faculty of Medicine, University of Colombo, Sri Lanka*

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