Eighth Annual General Meeting and the Induction Ceremony of the 5th President of the Sri Lanka College of Veterinary Surgeons

The eighth Annual General Meeting (AGM) of the Sri Lanka College of Veterinary Surgeons (SLCVS) took place on June 24, 2023, at the Oak Ray Regency Hotel in Getambe, Peradeniya. The event, structured as a hybrid gathering, welcomed both physical attendees and online Fellows and Members. The proceedings encompassed key agenda items such as confirming the minutes of the seventh AGM, engaging in discussions on related matters, reviewing reports from the General Secretary and Treasurer, and conducting the election process for the fifth Executive Council. The AGM was followed by the induction ceremony for the 5th President of the SLCVS and the awarding of Fellowships and Memberships.

Sri Lanka College of Veterinary Surgeons 5thExecutive Council, 2023-2025

Seated L to R – Dr. N.D. Karunaratne (General Secretary), Dr. H. Kothalawala (DG - DAPH), Dr. D.D.N. De Silva (Immediate Past President), Prof. M. Gunatilake (President), Prof. N.P. Sunil Chandra (President-Elect), Prof. P.G.A. Pushpakumara (Dean - FVMAS), Dr. K.S.A. Kottawatta (Treasurer)

Standing L to R – Dr. J.M.K.J.K. Premarathne, Dr. S. Premachandra, Dr. G.D.R.K. Perera, Dr. L.G.S. Lokugalappatti (Vice President), Dr. L.N.A. De Silva, Dr. M.D.N. Jayaweera (President – SLVC), Prof. R.M.C. Deshapriya (Vice President), Dr. S.S.S. de S. Jagoda, Prof. R.S. Kalupahana

Absent – Dr. H.M.T.K. Karunarathna, Dr. S. Mallawaarachchi, Dr. S. Wasala

In this issue

Dr. D.D.N. de Silva, the current President, extended a warm welcome to all attendees, shedding light on the significant activities of the Sri Lanka College of Veterinary Surgeons (SLCVS) over the preceding two years. The induction ceremony's Chief Guest, Dr. Mahendra Arnold, President of the College of Community Physicians of Sri Lanka, emphasized the crucial role of veterinary surgeons in strengthening public health by addressing the audience. The Guest of Honor, Prof. Ayona Silva-Fletcher, Professor of Veterinary Education at the Royal Veterinary College, University of London, delivered the oration for SLCVS. Dr. D.D.N. de Silva then formally inducted Prof. Mangala Gunatilake as the 5th President of the SLCVS. In her address to the assembly, Prof.

Mangala Gunatilake outlined the activities she intends to undertake in the upcoming two years, expressing her commitment to continuing the initiatives set in motion by previous Councils. Following this, Prof. Mangala Gunatilake, as the President of the SLCVS, carried out the induction of new Members and Fellows, including those who had joined since the last induction ceremony, along with the Members who had achieved promotion to Fellows. The formal proceedings reached their conclusion with the Vote of Thanks delivered by General Secretary Dr. Kavindra Wijesundera, and it was followed by lunch and entertainment. The event attracted over 50 participants, comprising Members, Fellows, and distinguished guests.

Ceremonial procession

Dignitaries at the head table

Lighting of traditional oil lamp

Dance by the veterinary undergraduate students

Dr. Mahendra Arnold, the Chief Guest
addressing the audience

SLCVS oration by Prof. Ayona Silva Fletcher,
the Guest of Honour

4th and 5th Presidents of SLCVS exchanging cloaks and garland

Awarding SLCVS Fellowships and Memberships

The 5th President
addressing the gathering

The 4th President
addressing the gathering

| Members of the executive council at the induction ceremony | Participants at the 8th Annual General Meeting |

Message from the President

It is with great pleasure that I pen this brief message as the 5th President of the Sri Lanka College of Veterinary Surgeons (SLCVS). First and foremost, I wish to extend my heartfelt gratitude to former Presidents, Dr. Oswin Perera (Founder), Prof. H. Abeygunawardane (2nd), Dr. D.S. Kodikara (3rd) and Dr. Niranjala de Silva (4th) and their Councils for laying a strong foundation for the College where we all shall stand on for the advancement of veterinary profession in the country.

I am happy to mention that the College has already initiated several CPD programmes for the benefit of veterinarians, in collaboration with the Sri Lanka Association for Laboratory Animal Science, Medical Research Institute, Faculty of Veterinary Medicine & Animal Science and the Dept. of Biochemistry of Faculty of Medicine, University of Peradeniya. During this 2-year period, while concentrating on CPD programmes, our principal aim is to initiate establishment of veterinary specialties to promote the advancement of the veterinary profession and thereby to enhance the competence of our fellow veterinarians. I am sure that College can achieve this aim under the able leadership of Dr. Sampath Lokugalappatty of Academic Affairs sub-committee.

The aim of the Publication sub-committee led by Prof. Deshapriya is to work efficiently publishing the newsletters to enhance the visibility of SLCVS, and this could attract more members and fellows to the College. Evaluation of the new membership and fellowship applications is the task of the Membership sub-committee led by Prof. Sunil Chandra while encouraging renewal of previous memberships and fellowships. Dr. Hemali Kothalawela, the Director General of the Dept. of Animal Production and Health (DAPH) is very keen in collaborating with the College to enhance professional development and recognition of fellow veterinarians in the state sector.

I am confident that with the support of the General Secretary, former Presidents, Council members, sub-committee members, and the DG/DAPH we will move forward and work for the betterment of our profession.

Vidya Nidhi Professor Mangala Gunatilake, *BVSc, PhD, MLAS, SLCVS, FELASA*

First Oration of the Sri Lanka College of Veterinary Surgeons – Delivered on 24th June 2023 at the Induction Ceremony of the 5th President of SLCVS, at Oak- Ray Regency Getambe, Peradeniya, Sri Lanka

Orator:

Prof. Ayona Silva-Fletcher, BVSc, MSc, PhD, MA (Med Ed) PFHEA NTF
Professor of Veterinary Education, Department of Clinical Science and Services,
Royal Veterinary College, London

Ayona graduated with a BVSc from the Faculty of Veterinary Medicine and Animal Science, University of Peradeniya in Sri Lanka and followed this with an MSc in Animal Nutrition and a PhD from the University of Aberdeen, UK. She then did several postdoctoral, teaching and research appointments at the University of Peradeniya, Sri Lanka, the University of London (Royal Postgraduate Medical School), the University of Leiden, the Netherlands, and the Open University in Milton Keynes. In 2002, Dr. Ayona joined the Royal Veterinary College, London as the Director of Distance Learning and worked until 2008 in expanding the distance learning programme. She supported the development of a new MSc by distance learning, a short course programme and with DEFRA an accredited online training course for government veterinarians at the Border Inspection Posts. In 2008, Ayona joined the LIVE team to take a leading role in developing a new MSc in Veterinary Education. In 2010, Ayona completed an MA in Medical Education and this MA, provided not only an opportunity to reconnoiter a different discipline but also to experience andragogy at first hand.

Following are three achievements in recognition of Ayona's contribution to Veterinary education:

- National Teaching Fellowship in 2012 in the UK: https://www.heacademy.ac.uk/person/7422
- ASPIRE award for Faculty Development (team award) 2016
- PFHEA – Principal Fellow of the Higher Education Academy, UK 2017:
  http://www.live.ac.uk/news/principal-fellowship-for-professor-ayona-silva-fletcher

What is Masterly? Developing beyond Graduation

Do veterinary graduates typically have a clear career plan upon graduation, or do they face uncertainty as they transition into the professional world? Navigating the shift from being a veterinary graduate to a practicing veterinarian is a complex and demanding process. Fresh graduates are expected to secure employment and gain practical experience, with numerous career paths available to them. However, the ambiguity surrounding which career path to pursue can be quite high.

Recent data from a 2019 survey conducted by the Royal College of Veterinary Surgeons in the UK sheds light on the career choices of veterinary graduates. In the UK, approximately 80.5% of veterinary graduates are employed in clinical practice, which includes areas such as small animal, equine, production animals, zoo, and exotics. Another 5.2% are engaged in government and related sectors, involving roles in disease control and surveillance, meat hygiene, border controls, and international organizations. Additionally, 5.9% of graduates work in universities and research institutes, while 4.8% have found positions in commercial industries, charities, and trusts. The remaining 3.6% have ventured into the non-veterinary sector (Source: Survey of the Professions 2019, Royal College of Veterinary Surgeons - https://www.rcvs.org.uk/news-and-views/publications/the-2019-survey-of-the-veterinary-profession/).

While these statistics offer insights into the career landscape in the UK, it's important to note that career pathways for veterinary graduates in Sri Lanka may exhibit variations, with differing percentages across sectors. The journey of choosing the right career path and successfully transitioning into the veterinary profession is a unique and personal one for

each graduate, marked by uncertainties and opportunities for growth.

Do new veterinary graduates possess the requisite skills and competences to effectively fit into the various career pathways available to them? Graduates exit veterinary school equipped with foundational competences, including clinical knowledge and skills, surgical proficiency, diagnostic acumen, and a basic level of communication skills. However, essential workplace skills such as problem-solving, teamwork, leadership, and ethical decision-making are skills that are typically still in the process of development.

Much like numerous other professions, the veterinary field emphasizes that learning is an ongoing, lifelong endeavour. Continuous education and the refinement of skills are pivotal for career progression and success.

In contemporary veterinary practice, many countries, such as Australia, Canada, the USA, Great Britain, select European nations, South Africa, and New Zealand, mandate continuous professional development (CPD). Robust guidelines govern the recording of mandatory CPD points, and well-structured CPD frameworks offer training opportunities. These frameworks often grant clinical qualifications that enable specialization in a chosen field. Notably, one widely recognized entity in this regard is the European Board of Veterinary Specializations (EBVS-https://ebvs.eu/colleges). To attain recognition as a specialist within the veterinary profession, aspiring individuals must complete arduous postgraduate training, educational programs, and rigorous examinations. Presently, there are 27 specializations available under EBVS, allowing graduates to further develop and

refine their skills in specialized areas of veterinary practice.

CPD presents a formidable challenge for many South Asian countries, Sri Lanka included. This challenge stems from several key factors:

High Cost of CPD: One major hurdle is the prohibitive cost associated with high quality CPD courses and providers, which are often based outside of South Asia. This expense can make continuous professional development inaccessible to many practitioners.

Lack of a CPD Framework: South Asia lacks a comprehensive framework for delivering affordable CPD opportunities. The absence of such a framework exacerbates the difficulties faced by professionals seeking to enhance their skills and knowledge.

Expert Availability: A critical mass of experts is needed to facilitate assessments and certification processes. This requirement can be particularly challenging to meet, given the specialized nature of many fields.

In the Sri Lankan context, veterinarians often pursue non-clinical pathways, obtaining advanced degrees such as MSc, MPhil, or PhDs. In the government sector, promotion pathways frequently demand postgraduate qualifications. However, the absence of opportunities for obtaining postgraduate clinical qualifications prompts most veterinarians to opt for Master's-level programs due to their relative ease and affordability.

Beyond formal postgraduate qualifications, the importance of internships, mentorship, and externships in skill development cannot be overstated. New graduates can enrich their knowledge and abilities through hands-on experiences under the guidance of mentors. This approach not only adds valuable practical exposure but also provides crucial support for dealing with stress and ethical dilemmas. For the new graduate, managing difficult cases and having to perform euthanasia can be very stressful. This also has an impact on the mental health and well-being and should not be underestimated. In Sri Lanka, where Buddhist philosophy often underpins the ethical landscape of veterinary practice, adhering to these principles can be particularly challenging.

An effective CPD framework should cater to the diverse learning preferences and work-life balance of busy professionals. For instance, the UK's CPD framework encompasses a variety of avenues for earning CPD points, including postgraduate qualifications, participation in conferences, workshops, and continuing education programs, active involvement in veterinary professional organizations, and contributions to research and publications. Such flexibility ensures that professionals can access CPD opportunities that align with their individual needs and circumstances.

Progressing beyond graduation should not pose a formidable obstacle. With proper guidance and a well-defined pathway, recent graduates can more readily select the most suitable learning opportunities to advance both personally and professionally.

Polyphenol-Rich Sugarcane Extract: A Promising Frontier in Broiler Production

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The poultry industry, responding to the global demand for poultry products, faces the challenge of innovating and adopting sustainable practices to enhance broiler growth performance and meat quality. A recent study conducted at the University of Peradeniya explores the potential of plant-derived polyphenols, specifically those extracted from sugarcane, to bring about a paradigm shift in broiler production. This research seeks to meet consumer expectations for high-quality poultry products while reducing reliance on antibiotics and adhering to environmentally conscious and ethical production standards.

Polyphenols, a diverse class of secondary metabolites found in plants, have garnered attention for their multifaceted bioactivities, including antioxidant, anti-inflammatory, and antimicrobial properties. Sugarcane, a prevalent tropical crop, emerges as a promising source of polyphenols. The study reflects on polyphenol-rich sugarcane extract (PRSE) investigating its effects when administered through drinking water with a range of doses over the entire broiler production cycle —a practical and innovative approach in broiler production. The administration of PRSE through drinking water provided a practical and consistent method of supplementing broiler diets with PRSE and monitoring the key performance metrics, including feed intake, water consumption, body weight, mortality rates, and feed-to-gain ratio.

Our study revealed an increase in weight gain by 5.29% and a notable reduction in mortality by 34.38% with the 0.05% PRSE supplementation suggesting potential benefits to broiler health. The incorporation of PRSE in drinking water did not adversely impact feed intake, water intake, or the feed-to-gain ratio across the evaluated periods.

Oxidative stress, a significant concern in poultry production, was addressed through the administration of sugarcane-derived polyphenols. Both 0.05% and 0.25% PRSE administration demonstrated a reduction in meat thiobarbituric acid reactive substances (TBARS) levels, and this reduction signifies the antioxidative effect of PRSE, as it actively combats lipid peroxidation induced by oxidative stress. The ability of these concentrations to increase the water-holding capacity of meat further emphasizes their positive impact on meat quality. Meat quality assessments revealed that broilers receiving PRSE consistently exhibited enhanced meat quality parameters. The significant decrease in TBARS values indicates reduced lipid peroxidation, contributing to improved meat freshness. Additionally, the higher water-holding capacity of meat in broilers supplemented with PRSE suggests improved juiciness and tenderness.

To complement the physiological assessments, sensory evaluations were conducted by an untrained panel of individuals. Consumer preference for overall acceptability and meat color was higher in broilers given 0.05% PRSE and the transition dose. These results align with consumer expectations for high-quality poultry products, emphasizing the potential of sugarcane-derived polyphenols to enhance not only physiological aspects but also sensory attributes.

This pioneering research has far-reaching implications for the poultry industry, offering a glimpse into the potential of natural solutions

to address key challenges. The consistent provision of PRSE demonstrated notable improvements in broiler growth performance, meat quality, and sensory parameters. These findings align with the global shift towards sustainable and natural practices, providing producers with an alternative to traditional antibiotic-dependent strategies. The research at the University of Peradeniya showcases the potential of sugarcane-derived polyphenols, specifically PRSE, to transform broiler production. The study's comprehensive examination of growth performance, meat quality parameters, and sensory attributes provides valuable insights into the positive impact of natural bioactive compounds on broiler physiology.

The adoption of sugarcane-derived polyphenols holds the potential to revolutionize broiler production, offering a sustainable and health-promoting solution for producers and meeting the evolving preferences of consumers. As the poultry industry continues to navigate challenges and seek alternatives to conventional practices, the integration of natural compounds derived from sources like sugarcane emerges as a promising avenue for future innovation. This research not only contributes to scientific understanding but also sets the stage for a paradigm shift towards more sustainable and nature-inspired practices in poultry production. The potential benefits of PRSE extend beyond physiological improvements to encompass sensory attributes, aligning with the broader goal of delivering high-quality and ethically produced poultry products to consumers.

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Silent Invader: *E. coli* ST131 Threatening Human and Animal Well-being of Sri Lanka

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Escherichia coli (*E. coli*) is a well-known pathogen affecting both humans and animals. This versatile organism can induce enteric infections, commonly recognized as diarrhea, while also causing infections in diverse organs and tissues. The subset of *E. coli* responsible for infections outside the gastrointestinal tract is referred to as extra-intestinal pathogenic *E. coli* (ExPEC). The most common infections caused by ExPEC include urinary tract infections, bloodstream infections, and endometritis. Traditionally, ExPEC infections were effectively treated with first-line antibiotics like cephalosporins and fluoroquinolones (FQs) until the year 2000. However, studies conducted worldwide indicate a widespread resistance to FQs in *E. coli*, with more than half of infections caused by this organism exhibiting FQ resistance. Furthermore, these FQ-resistant isolates often display co-resistance to third and fourth generation cephalosporins, amplifying the challenges in treatment.

The escalation of antibiotic-resistant bacteria, especially multidrug-resistant (MDR) strains, has emerged as a global concern. Among these, *E. coli* sequence type 131 (ST131) stands out as a major MDR clone responsible for extra-intestinal infections and the dissemination of resistance to extended-spectrum β-lactams, such as third and fourth generation cephalosporins. ST131, a single clone of *E. coli*, first identified in 2008 on three continents, has now become a global threat, causing millions of antimicrobial-resistant (AMR) infections annually.

E. coli ST131 strains, primarily belonging to serotype O25b:H4, with a smaller proportion falling under serotype O16:H5, exhibit resistance to extended cephalosporins mainly through the production of the CTX-M-15 enzyme. Recent identifications of strains producing a different CTX-M type, CTXM-27, raise concerns about an even faster spread than their CTXM-15 counterparts.

Beyond FQs and cephalosporins, *E. coli* ST131 has demonstrated co-resistance to aminoglycosides and trimethoprim-sulfamethoxazole. Recent reports also highlight the emergence of carbapenem-resistant ST131 strains, posing a severe threat as carbapenems represent the last resort antibiotic for this clone. Patients infected with *E. coli* ST131 often endure prolonged hospital stays, intensive care, and costly antibiotic treatments, straining both individual and healthcare resources.

Earlier it was believed that *E. coli* ST131 is exclusively a human pathogen. Recent studies conducted in several countries have identified this clone in companion animals as well. As the occurrence of this clone in humans and animals in Sri Lanka was not known, we studied *E. coli* isolated from urinary infections, endometritis/pyometra and blood stream infections of human presented to two teaching hospitals in Peradeniya and Batticaloa and dogs and cats presented to the veterinary teaching hospital in Peradeniya.

Our findings reveal an alarmingly high occurrence of *E. coli* ST131, responsible for over 60% of urinary infections caused by *E. coli* in humans and more than 40% infections caused by *E. coli* in dogs. As anticipated, these organisms exhibited high resistance to third and fourth generation cephalosporins and

quinolones. Furthermore, our study identified that the major subgroup of ST131 (ST131-clade C) in studied locations in Sri Lanka is additionally resistant to trimethoprim-sulfamethoxazole and gentamicin, with a small proportion (10%) exhibiting resistance to carbapenems. This high resistance profile raises concerns about the effectiveness of these antibiotics in treating infections caused by this specific *E. coli* clone.

This highlights a crucial consideration for medical and veterinary practitioners: caution should be exercised when empirically prescribing ciprofloxacin, third and fourth-generation cephalosporins for extra-intestinal infections, as a significant proportion of *E. coli* causing these infections are resistant to these antibiotics.

The detection of *E. coli* ST131 in dogs poses a serious concern. Given the close association between humans and dogs, there is an increased risk of transmission of this antibiotic resistant clone between the two populations, leading to severe extra-intestinal infections in vulnerable individuals. Urgent attention and coordinated efforts are essential to control the further spread of this clone, emphasizing the need for vigilance and strategic measures to mitigate its impact on both human and animal health.

Revolutionizing Veterinary Care: The Prowess of Machine Learning in Disease Prediction and Prevention

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The term artificial intelligence (AI) was first coined by an American computer scientist, John McCarthy in 1955. AI is a branch of computer science that focuses on creating systems capable of performing tasks that usually require human intelligence. These tasks include learning, reasoning, problem-solving, perception, speech recognition, and language understanding. The field encompasses a wide range of approaches, from rule-based systems to machine learning, where computers learn from data to make decisions and predictions. The ultimate goal of these approaches is to create systems that can perform complex tasks autonomously, displaying a level of intelligence and understanding comparable to or even surpassing human capabilities.

The three broad categories that encompass AI are speech recognition, computer vision, and natural language processing. In speech recognition, a computer system listens to and interprets audible commands or instructions. A computer replaces the function of the human eye and brain, in the field of computer vision and common applications include optical character recognition, real-time imaging tasks for recognizing and detecting objects and object movement tracking. The third field of AI, Natural Language Processing attempts to extract information from a text.

In the context of veterinary medicine, AI holds the potential to revolutionize various aspects of animal healthcare. AI applications in veterinary medicine aim to enhance diagnostic capabilities, improve treatment planning, disease prediction and streamline overall patient care.

Machine learning (ML) is an important subfield of AI in which algorithms are trained to execute a specific task by learning from patterns in the data. Supervised, semi-supervised, or unsupervised ML algorithms could be used for a given task and its associated data. When all data are labeled, supervised ML algorithms are used, and the task is to classify new input data to known output responses such as classification of disease, stage of a disease, or a prediction of a number. Unsupervised learning algorithms are used when the data sets are not labeled, and the task is to determine whether there are patterns within the data. Some of the ML algorithms commonly used are support vector machines, random forest or decision trees, naïve Bayes, neural networks, and logistic regression. The more exposure the ML algorithm has to different and a large number of data, the more accurate the ML system becomes when exposed to new data. The data set is divided into training, validated and testing data sets when supervised ML process is applied. After a model is trained the final performance of the ML model is evaluated by testing the model with the remaining test data. Unsupervised ML algorithms are used primarily for data inference, to draw reasonable conclusions and clustering of large data sets. Common unsupervised ML algorithms include principal component analysis, independent component analysis, projection methods, and feature selection methods. Semi-supervised ML combines both supervised and unsupervised ML and is useful when there is a combination of labeled and unlabeled data sets.

In the realm of veterinary medicine, machine-learning applications are diverse and impactful. Machine learning algorithms can analyze diagnostic images such as X-rays, MRIs, and CT scans, assisting veterinarians in identifying abnormalities or anomalies. These systems can rapidly process and interpret images, aiding in the early detection of conditions and streamlining the diagnostic process. Machine learning models can also analyze vast datasets to identify patterns and trends, helping veterinarians predict and monitor disease outbreaks. By assessing factors like environmental conditions, animal demographics, and health records, these systems can contribute to proactive disease management and prevention. In the dairy sector ML algorithms have been used to predict the disease incidence such as lameness and mastitis. Machine learning enables the customization of treatment plans based on individual patient data. By considering factors such as species, breed, age, and medical history, algorithms can assist veterinarians in tailoring therapies to optimize outcomes and reduce adverse effects.

The management of electronic health records can be improved by ML algorithms by automating data entry, ensuring accuracy, and facilitating seamless information retrieval. This leads to more efficient workflows and better-informed decision-making.

In addition, ML applications have been used to analyze behavioral patterns in animals, aiding in the detection of changes that might indicate underlying health issues. This can be particularly valuable in monitoring chronic conditions or assessing the impact of treatment interventions. ML models have been developed to detect specific behaviors of animals using collar-based sensor data and accelerometer data. ML has contributed to drug discovery by analyzing biological data to identify potential therapeutic targets. This accelerates the development of new medications and treatment modalities for veterinary use. ML-powered chatbots and virtual assistants have improved client communication by providing instant responses to common queries and

offering educational resources. This enhances client engagement and supports pet owners in understanding and managing their animals' health.

In Sri Lanka, less attention has been paid to research on the application of AI in veterinary practice. Considering ML approach, we, a multidisciplinary research team comprising two members from the Faculty of Engineering (Dr. D. Herath and Dr. C. Walgampaya), a member of the Faculty of Agriculture (Prof. R.M.C. Deshapriya),and led by Dr. R.M.S.B.K. Ranasinghe from the Faculty of Veterinary Medicine and Animal Science have, conducted a study to develop a model to predict the incidence of sub-clinical mastitis in dairy cows based on individual cow data, milk production data, milk composition data and somatic cell count of milk. Using a dataset of 2420 cows, accuracies ranging from 70 to 76 percent were obtained for the machine learning algorithms random Forest, J48, bagging, adaBoost, simple logistic, SMO and Naive Bayes. The performance of the predictive models is being improved further by considering alternative data pre-processing techniques and appropriate feature selection to develop software to be used in dairy herds. To the best of our knowledge, this work is the first to develop a data-driven approach for the diagnosis of sub-clinical mastitis of dairy herds in Sri Lanka.

The main challenge encountered when applying ML is the lack of high-quality datasets, which directly affects the performance of the models. When the dairy sector is considered, only the large-scale farms maintain records of individual cows and very few farms have automated record keeping systems attached to milking parlors. Record keeping in small scale dairy herds is minimal, making it impossible to gather data for this type of study. The small animal sector mainly comprising of commercial clinics, may have proper record-keeping systems compared with the large animal sector, creating more opportunities for data-driven research. Having access to reliable and accurate data sets are crucial before attempting to apply AI tools in these sectors. Not only the reliability and accuracy of data, obtaining or getting access to available data is a concern in the Sri Lankan situation.

As AI continues to advance, its applications in veterinary practice are likely to expand, contributing to more accurate diagnoses, disease prediction, personalized treatment plans, and improved overall healthcare for animals.

For further information

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Training Programme on Fish Diseases: Diagnosis, Treatment and Management

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Coordinator/Centre for Aquatic Animal Disease Diagnosis and Research (CAADDR)
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This two-credit training programme was organized by the Sri Lanka College of Veterinary Surgeons (SLCVS) in collaboration with the Centre for Aquatic Animal Disease Diagnosis and Research (CAADDR) of the Department of Veterinary Pathobiology, Faculty of Veterinary Medicine and Animal Science, University of Peradeniya. The programme was held from June 06 to August 12 and included 22 hours of lectures delivered online *via* Zoom and 16 hours of hands-on training conducted at the CAADDR. A total of 22 participants, comprising practicing veterinarians in the state (VIOs and VSs of the Department of Animal Production and Health, including the staff of the Animal Quarantine Station) and private sectors successfully completed the training. This CPD programme was coordinated by Dr. S.S.S.de S. Jagoda, who together with Dr. M.N.M. Fouzi, Dr. D.M.S. Munasinghe, Dr. N.M.T. Anupama and Dr. T.A. Gunawardena served as resource personnel. Financial support for the programme was extended by the Association of Live Tropical Fish Exporters of Sri Lanka and Super Feed (Pvt) Limited.

Inculcating Basics in Laboratory Animal Science (LAS) through the Certificate Course

Prof Mangala Gunatilake and Dr Hasanthi Ratnadiwakara

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The certificate course in Laboratory Animal Science is an annual event in the calendar of the Sri Lanka Association for Laboratory Animal Science (SLALAS). In the year 2023, this course was conducted successfully in collaboration with the Animal Centre, Medical Research Institute (MRI), Colombo, and the Sri Lanka College of Veterinary Surgeons (SLCVS).

The principal objective of this course is to provide basic knowledge, facts, principles, and training for the humane use and care of laboratory animals in research. This year a total of 34 participants got registered and completed the coursework successfully. Among those 14 were Veterinary graduates. Other registrants included undergraduate and postgraduate students, and researchers from different institutes in the country. The course was divided into two sessions: a theory session and a practical session. The theory session was conducted online every Saturday from 5th August to 2nd September 2023. This session covered basic theoretical knowledge, that a researcher should have to begin and continue when engaged in animal-based research.

Practical sessions were conducted at the Animal Centre, MRI. The registrants participated in the practical session in groups of 10-12 on three different days, and they were trained for laboratory animal handling, sample collection, and different methods of drug administration such as oral, intramuscular, subcutaneous, and intravenous. Registrants also had the opportunity to learn standard procedures and maintenance of a laboratory animal facility as well as laboratory animal feed production during the practical sessions (Figure 1).

Figures 1A - 1C: Practical sessions at the Animal Centre, MRI

Towards the end of the course, registrants also had an opportunity to practice handling and blood drawing using the simulating animal models and suturing using models for suturing practice at the Department. of Physiology, Faculty of Medicine, Colombo (Figure 2).

For the first time this year the knowledge of the participants was assessed by a written examination using a 3-hour Structured Essay Question paper. Out of all, 28 registrants sat the exam and 21 were

able to score the pass mark. Two levels of certificates will be issued; 'Certificate of Completion' for those who had scored pass marks and for others 'Certificate of Participation'.

Figure 2A & 2B: Training using simulating animal models

On the last day of the course, all the registrants had the opportunity to do group presentations on identified topics. These topics included the preparation of a research protocol on an allocated subject area and the critical evaluation of a published paper based on the ARRIVE guidelines (Figure 3).
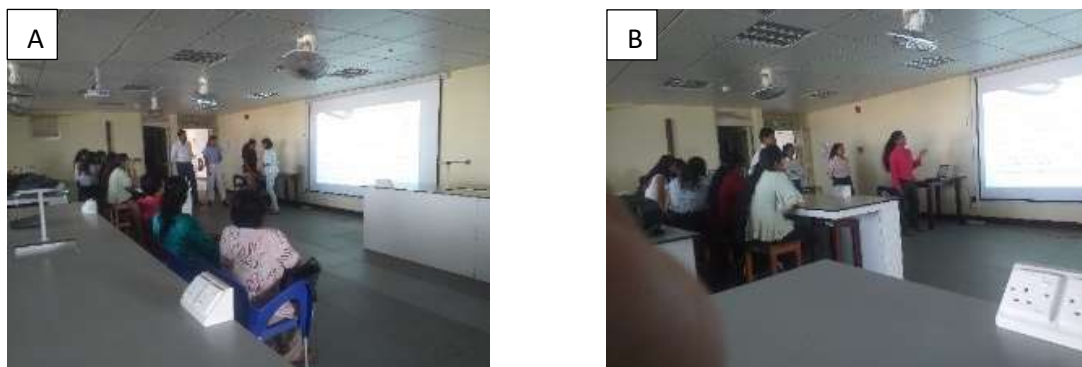

Figure 3A & 3B: Students doing Group presentations

Sri Lanka College of Veterinary Surgeons identified this certificate course for 2 Continuing Professional Development (CPD) credit points to veterinarians upon successful completion of the course.

Figure 4: Registrants with resource persons/organizers at the end of the examination

Resource Panel of the Certificate Course:

Prof. Mangala Gunatilake – Faculty of Medicine, University of Colombo

Dr. Dulani Samaranayake – Faculty of Medicine, University of Colombo

Prof. Tharanga Thoradeniya – Faculty of Medicine, University of Colombo

Dr. Sachini Amarasekara – Faculty of Science, University of Colombo

Prof. Preethi Udagama - Faculty of Science, University of Colombo

Dr. Prasadi de Silva – Faculty of Science, University of Colombo

Dr. Mayuri Thammitiyagodage – Animal Centre, Medical Research Institute, Colombo

Dr. Ramani Karunakaran – Animal Centre, Medical Research Institute, Colombo

Dr. Kavindra Wijesundara – Faculty of Veterinary Medicine and Animal Science, University of Peradeniya

Prof. Sugandhika Suresh – Faculty of Medical Sciences, University of Sri Jayewardenepura

Dr. Ureshani Karunarathna - Faculty of Allied Health Sciences, University of Sri Jayewardenepura

Dr. Kalpani Ratnayake – Faculty of Health Sciences, CINEC Campus

Dr. Krishanthi Premarathne - Faculty of Livestock, Fisheries & Nutrition, Wayamba University of Sri Lanka

Dr. Gihani Jayaweera - Faculty of Allied Health Sciences, General Sir John Kotelawala Defense University

Workshop on Applications of "Cell Cultures" and "MIQE" Compliance Real -Time PCR (qPCR) Assay

Dr Hasanthi Ratnadiwakara[1, 2] and Dr Tharindi Prasidini[2,3]

[1]Dept. of Physiology, Faculty of Medicine, University of Colombo, [2]Sri Lanka Association for Laboratory Animal Science,[3]Dept. Of Veterinary Clinical Sciences, Faculty of Veterinary Medicine and Animal Science, University of Peradeniya

Sri Lanka Association for Laboratory Animal Science (SLALAS) has organized the workshop in collaboration with the Department of Biochemistry, Faculty of Medicine, University of Peradeniya, Department of Basic Veterinary Sciences, Faculty of Veterinary Medicine and Animal Science, University of Peradeniya, and Sri Lanka College of Veterinary Surgeons (SLCVS). The workshop was conducted for four consecutive days starting from 7th to 10th November 2023. Eleven participants registered and completed the workshop, of which 8 were Veterinary Surgeons.

The two main collaborators and resource persons for the workshop were Prof. C.N.R.A. Alles, Head of the Department, Department of Biochemistry, Faculty of Medicine, and Prof. D. A. Satharasinghe, Department of Basic Veterinary Sciences, Faculty of Veterinary Medicine and Animal Science from the University of Peradeniya. Apart from them, there were a few more resource persons from the Faculty of Medicine and Faculty of Veterinary Medicine and Animal Science, which enormously supported the organizing and successful completion of the workshop.

The 'Cell Cultures' section was conducted in the Department of Biochemistry, Faculty of Medicine, University of Peradeniya. This section included lectures on safe laboratory practices, basics in 'Biosafety Levels' and 'Biosafety Cabinets', methods of establishing a cell/ tissue culture laboratory, cell signaling, effects of drugs on cells, isolation of primary/ authentic cells, hematopoietic and progenitor cell lineages, and regulation of cell formation and differentiation. The lectures were followed by hands-on practical sessions on establishing a cell/ tissue culture lab, basic equipment and expanded equipment found in a culture lab, isolation and purification of precursor cells, cell counting, cryopreservation, storage and recovery of cryopreserved cells, preparation and maintenance of primary/ authenticated cell cultures and cell seeding, and a demonstration of atomic absorption spectrophotometry.

The second main component of the workshop was the 'MIQE' compliance real-time PCR (qPCR) assay. Under this, there were lectures on the overview of PCR and real-time PCR (qPCR), qPCR Assay optimization and validation with MIQE compliance, quantitative PCR, absolute and relative qualification, and gene expression analysis. Following the lectures, students had the opportunity to participate in hands-on practical sessions on PCR, gel electrophoresis and gene expression analysis. These practical sessions were conducted in the Molecular and Nutritional Biochemistry Laboratory (MNBL), Biochemistry Division, Department of Basic Veterinary Sciences, Faculty of Veterinary Medicine and Animal Science, University of Peradeniya.

During the session, participants were provided with all the study materials including lecture notes and practical handouts. The lectures were very interactive sessions and participants were happy about the friendly study environment. All the participants had a chance to attend the practical sessions and have individual first-hand experience, which was highly appreciated. At the end of the four-day workshop, all the participants were awarded a certificate appreciating their active participation in the workshop.

Course on Zebrafish as an Alternative Model

Prof. Mangala Gunatilake and Dr. Hasanthi Rathnadiwakara

Dept. of Physiology, Faculty of Medicine, University of Colombo

Sri Lanka Association for Laboratory Animal Science (SLALAS) conducted the first zebrafish course in collaboration with the Medical Research Institute (MRI), Sri Lanka College of Veterinary Surgeons (SLCVS), 3Rs Centre in Laboratory Animal Science in Sri Lanka and the Society for Alternatives to Animal Testing in Sri Lanka (SAAT-SL) on 16th and 17th December 2023.

Online lectures were conducted by Prof. Mangala Gunatilake, Dr. Mayuri Thammitiyagodage, Dr. Prasadi de Silva and Dr. Samanthika Jagoda on 16th December and the hands-on practical session was held at the MRI on 17th December. Resource persons for the practical session included Dr. Mayuri Thammitiyagodage, Dr. Ramani Karunakaran and Mr. Gayan Deshapriya.

Altogether 25 participants were registered and completed the course. Among the participants there were 11 undergraduates (from USJP, UWU, UOJ, Ocean University, KIU, NSBM and Lincoln University College), 7 postgraduates (from USJP and IBMBB), 2 veterinarians, 3 academics (from EUSL and Open University) and 2 others with no specified affiliation. Participants were very satisfied on the knowledge and skills they gained and appreciated our efforts in organizing this course.

SLCVS awarded 2 Continuous Professional Development credit points to veterinarians who attended the course. A certificate was awarded to all the participants at the end of the practical session.

Dr. Hasanthi Rathnadiwakara (Hon. Secretary/SLALAS), Dr. Sachini Amarasekera (President-elect/SLALAS, Dr. Kalpani Rathnayake (President/SAAT-SL), Dr. Varuni Gunathilake (Treasurer/SLALAS), Dr. Anusha Senevirathne and Ms. Piyumika Yapa (Committee members of SLALAS) have contributed in organizing the course.

Group photo with several resource persons/organizers

During practical sessions at MRI

Awarding certificates to participants

Achievements/Awards

Prof. Mangala Gunatilake has been selected in February 2023 to the Education Commission of the International Union of Physiological Societies (IUPS) considering her continuous contribution to the physiology education field. Furthermore, she is a member elected in November 2023 to the Council of the Federation of Asian and Oceanian Physiological Societies (FAOPS) for a 4-year period. This is the first time a Sri Lankan academic has been selected for both these posts.

Dr Nalinika Obeyesekere is in the WASAVA Executive Board

Sri Lankan veterinarian Dr Nalinika Obeyesekere, in a vote by WSAVA's global member associations was elected to the WSAVA Executive Board for a period of 3 years.

Dr Obeyesekere co-founded the first multi-doctor companion animal veterinary practice in Sri Lanka – Pet Vet Clinic - and is co-founder of the Society of Companion Animal Practitioners (SCAP) and College of Veterinary Surgeons in Sri Lanka. She is CEO of the Blue Paw Trust, an animal welfare charity, and in 2015 received the WSAVA Global One Health award. In 2018, Dr Obeyesekere received the inaugural WSAVA Award for Companion Animal Welfare in recognition of her work to raise standards of veterinary care in the country. She represents the Asia-Oceania region.

Dr Nimal Jayaweera, Additional Director General-Animal Health assumed duties as the Additional Secretary/Livestock Development at the Ministry of Agriculture on 17/07/2023. He was appointed as the president of the Sri Lanka Veterinary Council on 12/01/2023.

Prof. R. Sivakanesan, was appointed as a Research Fellow at the INTI INTERNATIONAL UNIVERSITY, Malaysia from June 2023 to December 2025. He was appointed as an external member to the faculty board of the newly established Faculty of Siddha Medicine Trincomalee Campus, Eastern University Sri Lanka from 18th August for 3 years.

Members of the Publication Sub-committee-SLCVS

Prof. R.M.C. Deshapriya- Chair
Dr. Oswin Perera - Editor
Dr. Samanthika Jagoda- Secretary
Prof. M. Pagthyanadan -Member
Dr. R.M.S.B.K. Ransinghe- Member
Dr. Mayuri Thammitiyagoda-Member
Dr. Susantha Mallawaarchchi-Member

Admissions to the College and Promotions to Fellowships

Memberships
Dr. N.D. Karunaratne
Dr. S.N.S. de Silva
Dr. Sathya Nadeeshani
Fellowships
Prof. I.N. Pathirana
Dr. B.E. Pathirana
Promotions to Fellowships
Prof. R.R.M.K.K. Wijesundera
Dr. R.A.C. Rabel
Dr. H.M.S. Wijekoon
Dr. S.S.S. de S. Jagoda
Dr. H.M.T.K. Karunarathna

NOTICE

The time has come to renew your SLCVS Membership or Fellowship If you are below 60 years of age!

It is a requirement for members and fellows to renew their membership or fellowship every 3 years as per the By-Laws of the SLCVS until they reach 60 years of age. It was decided to implement this clause of the By-Laws commencing from 2023.

Please visit the SLCVS website for the application and details.

Hurry Up! Don't delay your renewal.

Information for new applicants and the Application Form can be downloaded from the College website: www.slvetcollege.org