COLLEGE OF BIOCHEMISTS of Sri Lanka

Biochem Trends

"Biochemistry is the science of life. All our life processes – walking, talking, moving, feeding – are essentially chemical reactions. So biochemistry is actually the chemistry of life, and it's supremely interesting."

- Aaron Ciechanover, the 2004 Nobel Prize winner in Chemistry)

Newsletter ***2024***

Biochem Trends Newsletter 2024
Publisher : College of Biochemists of Sri Lanka
Editor : Professor Tharanga Thoradeniya
ISSN 2827-7449

In this Issue,

Editorial

Why Biochemistry Matters

Professor Tharanga Thoradeniya

Editor, CBSL

As we continue our exploration of this remarkable field, I want to reignite the spark of passion we all share: the understanding that biochemistry is not just a scientific discipline, but the very language of life itself.

The quote, "Biochemistry is the science of life. All our life processes – walking, talking, moving, feeding – are essentially chemical reactions. So biochemistry is actually the chemistry of life, and it's supremely interesting." captures the essence of what unites us. We explore into the world where the ordinary becomes extraordinary – the beating of our hearts, the firing of neurons in our brains, the breakdown of food to fuel our bodies – all become a captivating story of molecules interacting in a beautifully orchestrated ballet.

Biochemistry: The Bedrock of Our Knowledge

Our field forms the foundation upon which biological understanding rests. It equips us to translate the complexities of biology into the elegant language of chemistry. From the intricate composition of enzymes in digestion to the unmasking of the genetic code that defines us, biochemistry is the key to unlocking the secrets of life's mechanisms.

Biochemistry is dynamic discovery. We, the biochemists, constantly push the boundaries of knowledge. We unravel the mysteries of diseases, develop life-saving medications, and create cutting-edge technologies. Each discovery is a testament to the power of our collective pursuit.

Beyond the Lab: Biochemistry in Our Daily Lives

The impact of biochemistry extends far beyond the confines of the lab. Every breath we take, every piece of food that fuels us – it's all a magnificent display of biochemical processes. By understanding these processes, we make informed decisions about diet, exercise, and overall well-being. Biochemistry empowers us to appreciate the intricate work of molecules that creates our very existence.

Welcome to this issue of the CBSL Newsletter, Biochem Trends, to explore deeper, share our passion, and be inspired by the sheer wonder of life at the molecular level.

The journey of discovery awaits, filled with endless possibilities to push the boundaries of knowledge and improve the human condition.

Professor Tharanga Thoradeniya|

Editor, CBSL

Newsletter Editorial Committee 2024

Professor Tharanga Thoradeniya – Editor

Professor Sugandhika Suresh

Dr Kalpani Ratnayake

Dr Rajavarthani Sanjeev

President's message

Professor Usha Hettiaratchchi, *PhD*

President / CBSL

The College of Biochemists of Sri Lanka (CBSL) was established with the aim to explore the fascinating world of Biochemistry and share some remarkable developments in this field locally and globally. I am pleased to witness that our task is accomplished with the "Biochem Trends" newsletter, which features new knowledge, achievements of members and upcoming activities.

To further this aim and foster networking CBSL organises series of webinars, workshops and short courses. These activities will be fruitful with the participation of both members and non-members, allowing everyone to gain valuable knowledge and competencies and contribute to the development of the Science and Technology in Sri Lanka.

The CBSL newsletter is a key initiative undertaken by the council to disseminate research by members, college activities and achievements of Sri Lankan Biochemists. The editorial committee has worked tirelessly to bring out this publication and I appreciate their commitment and wish them all the success to continue their work.

I take this opportunity to warmly invite academics, researches and students in the field of Biochemistry and Molecular Biology to join hands with CBSL. Share your findings, insights, and aspirations with our vibrant community.

"Together, let us unravel the intricacies dance of life's molecules".

Prof. Usha Hettiaratchi

Opportunities for Early Career Scientists in Sri Lanka through FAOBMB Travel Fellowships

Professor Rasika Perera, *PhD*
Chair, Fellowships Committee
Federation of Asian and Oceanian Biochemists and Molecular Biologists (FAOBMB)

Early-career scientists in Sri Lanka have the opportunity of obtaining travel fellowships from the Federation of Asian and Oceanian Biochemists and Molecular Biologists (FAOBMB) through fellowship opportunities aimed at fostering scientific development and international collaboration. The Fellowship Committee of the FAOBMB is committed to motivating scientists, particularly younger ones, to achieve higher levels of accomplishment through various schemes and collaborative arrangements.

The FAOBMB Fellowship Committee plays a crucial role in nurturing the scientific talent within the Asian and Oceanian regions. Through its Travel, Young Scientist, Education Special, and Exchange Fellowships, the committee ensures that young scientists and educators have the resources and opportunities they need to advance their careers and contribute to the global scientific community.

By supporting the development of early-career scientists, the FAOBMB is not only promoting scientific excellence, but also fostering a collaborative and innovative environment that benefits the entire region. These fellowships are more than just financial assistance; they are investments in the future of science and education, helping to build a robust and dynamic community of researchers and educators who will steer scientific progress for years to come.

For further details on how to apply for these fellowships and to learn more about the eligibility criteria, prospective applicants are encouraged to visit the official FAOBMB website and review the comprehensive guidelines.

Given below are the different fellowship programs overseen by the FAOBMB Fellowships Committee that could benefit early-career scientists in Sri Lanka as well as those from the FAOBMB region

The FAOBMB Fellowships Committee oversees four main types of fellowships:

1. FAOBMB Travel Fellowships
2. Fellowships for Young Scientist Programs
3. FAOBMB Education Special Travel Fellowships
4. FAOBMB Exchange Fellowships

These fellowships support early-career biochemists, molecular biologists, and educationists by contributing to airfare and accommodation expenses, enabling them to travel to countries outside their

own for professional development opportunities. The fellowships aim to facilitate attendance primarily at FAOBMB-sponsored events, foster learning in host laboratories, and promote participation in international educational programs.

1. FAOBMB Travel Fellowships

The FAOBMB Travel Fellowships are designed for early-career scientists and educators to attend and present their research at FAOBMB-sponsored conferences, learn new techniques in host laboratories, or participate in educational workshops.

Details:

- Maximum Award: $1,000 per fellowship
- Eligibility: Registered PhD candidates or early-career scientists within 10 years of post-graduate experience
- Purpose: To present research findings at FAOBMB events, learn new technologies or techniques in host laboratories, or attend educational events.

These fellowships are specifically intended for those who reside or work outside the host country of the conference, offering a significant opportunity for international exposure and professional growth.

2. Fellowships for Young Scientist Program (YSP)

The Young Scientist Program (YSP) is an event held two to three days before an FAOBMB Congress or Conference. This program is designed to foster collaboration among young scientists and enhance their research skills through intensive sessions and interactions with peers and experts.

Criteria for YSP Travel Fellowship:

- Must be a member of a Constituent Society or Group within FAOBMB.
- Currently registered as a PhD student or within 10 years of completing a PhD.
- The applicant’s abstract must be accepted by the conference organizers.
- Prior recipients of an FAOBMB Travel Fellowship are ineligible.

Participating in the YSP allows young scientists to network, share their research, and develop collaborative projects that extend beyond their own institutions and countries, providing a rich environment for professional growth and innovation.

3. FAOBMB Education Special Travel Fellowships

These fellowships aim to enhance research skills and educational practices in biochemistry and molecular biology education. They provide funding for early-career educators to attend IUBMB or FAOBMB-sponsored events focused on education and to foster collaboration in biochemistry and molecular biology education.

Eligibility Criteria:

- Early-career researchers/educationists actively engaged in teaching biochemistry/molecular biology.
- Must hold a PhD or Master's degree, within 15 years of completion.
- Prior recipients of this fellowship are ineligible.

These fellowships help educators gain exposure to advanced international research and educational practices, which they can then implement in their home institutions, thereby improving the quality of education and research in their home countries.

4. FAOBMB Exchange Fellowships

The FAOBMB Exchange Fellowships are designed to improve research skills, technology transfer, and educational practices through collaborative research within the FAOBMB region.

Details:

- Funding: Up to $3,000 for round-trip travel and accommodation expenses.
- Duration: 1 to 6 months in a host laboratory or institution.
- Eligibility: PhD students or post-doctoral researchers/educationists within 10 years of PhD completion.

Criteria for the Award of an FAOBMB Exchange Fellowship:

- The applicant must be currently registered as a PhD student or hold a position as a post-doctoral fellow, researcher, or educationist within 10 years of completing their PhD.
- Must be a member of a Constituent Society or Group within FAOBMB.

These fellowships offer significant opportunities for scientists to engage in meaningful research collaborations, learn new techniques, and bring back valuable knowledge to their home institutions, thereby enhancing the scientific capabilities of their home countries.

The FAOBMB Fellowship programs have a profound impact on the careers of young scientists and educators. By providing financial support for travel, these programs enable participants to

- Present their research on international platforms, gaining recognition and feedback from global experts.
- Acquire new skills and knowledge from leading laboratories and educational institutions.
- Build professional networks that facilitate future collaborations and career opportunities.
- Enhance their teaching methodologies and educational practices, thereby improving the quality of education in their home countries.

The application process for FAOBMB Fellowships is straightforward but competitive. Interested candidates must:

- Be members of a Constituent Society or Group within FAOBMB. Thus, in the case of applicants from Sri Lanka, should be a member of College of Biochemists of Sri Lanka (CBSL).
- Submit a detailed application including their CV, a research proposal or abstract, and letters of recommendation.
- Ensure their applications are submitted by the specified deadlines.

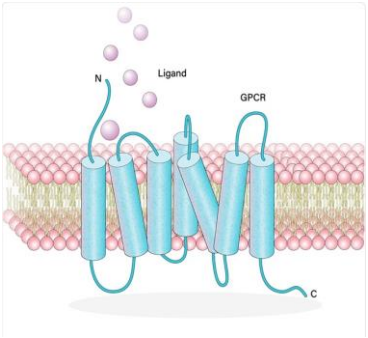
All those who wish to apply are encouraged to carefully review the eligibility criteria and guideline documents provided in the official FAOBMB website at

https://faobmb.com/wp-content/uploads/2024/01/GUIDELINES-FOR-FAOBMB-TRAVEL-FELLOWSHIPS-Jan-2024.pdf and

https://faobmb.com/wp-content/uploads/2024/03/GUIDELINES-FOR-FAOBMB-EXCHANGE-FELLOWSHIPS_2024.pdf.

G protein-coupled receptors as drug targets

Sachinthi S. Amarasiri, *PhD*
Senior Lecturer
Department of Medical Laboratory Science
Faculty of Allied Health Sciences
University of Ruhuna, Sri Lanka



Drug designing plays a central role in drug discovery, representing its most inventive stage. It is the process of creating molecules with complementary structural conformation and charges that can bind to specific molecular targets. Considering the biochemical processes in the human body, the most common biological targets for drug design are enzymes involved in regulating biochemical functions and the receptors that mediate the effects of endogenous factors and hormones.

Among the numerous receptors studied for drug designing, G protein-coupled receptors (GPCRs) represent the largest family of membrane proteins in the human genome, focusing on drug targets. Approximately, 800 GPCRs are encoded by the human genome, and respond to a diverse range of signals varying in sizes, such as carbohydrates, lipids, proteins, amines, and photons. They are activated by numerous endogenous ligands such as hormones, odors, chemokines, and neurotransmitters, and following activation by coupling to different G proteins, these receptors provoke numerous physiological functions including calcium mobilization, cyclic adenosine 3,5-monophosphate response, phosphorylation of extracellular regulated protein kinases, etc.

Human GPCRs have been classified into five subfamilies based on the amino acid sequence; rhodopsin (class A), adhesion (class B), secretin (class B), glutamate (class C), and frizzled (class F). The GPCR structure is highly conserved and shares a common barrel tertiary structure comprising seven *trans*-membrane a-helices. Two different binding domains have been identified with GPCRs as the orthosteric binding domain, which is involved in extracellular interactions being located underneath the extracellular loop 2 of the receptor, and the allosteric binding domain, which interacts with the G-protein heterotrimer complex at the intracellular level.

GPCRs have attracted attention as ideal drug targets for many reasons. In orthosteric binding, GPCRs bind to the endogenous extracellular signaling molecules at their orthosteric binding site on the extracellular face, and the shape, size, and amino acid composition of the orthosteric binding site of GPCRs are well suited to the designing drug molecules in which act as antagonists or agonists of GPCR function. The position of the orthosteric binding site on the extracellular face allows unique

pharmacological access to these proteins since it excludes the requirement of engineering drug molecules to cross the plasma membrane. Moreover, their highly dynamic behavior and the substantial changes in the receptor shape following activation make it quite a good drug target. GPCRs can be activated not only by agonists, but also undergo activation to a stage capable of coupling to intracellular G proteins even in the absence of agonists. In addition to orthosteric binding, a wide variety of allosteric interactions could take place with GPCRs, particularly with related to GPCR oligomers. However, this particular side of GPCRs is almost unexplored therapeutically and, it is still a growing field of study.

The recent advances in the fields of structural biology, pharmacology, and biotechnology have paved novel avenues for GPCR drug discovery. One such example is the growing interest in determining three-dimensional structures of GPCRs at atomic resolution using X-ray crystallography techniques. The stabilization of the GPCRs in detergent solutions is achieved in this particular technique by site-directed mutagenesis through binding to very high-affinity ligands and/or via fusion proteins. Accordingly, merely 800 structures of 140 GPCRs have been elucidated forming complexes with orthosteric and allosteric modulators, G proteins, peptides, and antibodies. Moreover, structural biology related to GPCRs has been reformed with the introduction of the cryo-electron microscopy technique. This technique allows researchers to study the receptors and their active state conformation when GPCRs is coupled to G proteins. Apart from X-ray crystallography and cryo-electron microscopy, the development of several other innovative techniques such as single-molecule fluorescence, nuclear magnetic resonance, surface plasmon resonance, hydrogen–deuterium exchange, fluorescence resonance energy transfer, bioluminescence resonance energy transfer, CRISPR/Cas9, artificial intelligence, etc. has led to a remarkable advancement of this field.

Structure-based drug discovery has further facilitated molecular-level investigation of the interaction mode of drugs with in-silico methodologies. Modeling of the tridimensional structure of receptors in complex with the ligands via techniques such as molecular docking has not only accelerated the discovery of new hidden allosteric sites and detection of new GPCR binding sites but also has facilitated the selection of novel drug leads. The recent advances in oncology immunomodulation are also associated with the forward movement of GPCR biology. The advances in small molecular regulators targeting GPCRs have led to recent clinical advances in cancer immunity, via modulation of tumor stromal cell biology, and regulation of immune cell recruitment, in combination with immune checkpoint blockers such as PD-1/PDL-1 and CTLA4 inhibitors.

Over 30% of prescribed drugs marketed worldwide target GPCRs for the effective management of various diseases, including cardiovascular diseases (Carvedilol), cancers (Gilteritinib), neural disorders (Cannabidiol, Istradefylline), inflammatory disorders (Elagolix), endocrine diseases (Macimorelin, Semaglutide). According to the latest statistics, about 527 drugs approved by the Food and Drug Administration (FDA), including β-blockers, histamine receptor blockers, angiotensin receptor blockers, opioid agonists, etc. and approximately 60 new drug candidates in clinical trials have been designed targeting GPCRs. Nevertheless, there is a continuous growth in their usage as drug targets yearly, leading to billions of global sales. Yet, it is evident that merely half of the GPCRs encoded by the human genome have been utilized for the designing of therapeutic modalities, and these findings highlight the continued potential of GPCRs for further designing novel lead compounds.

References

Casadó, V., Casadó-Anguera, V., 2023. What are the current trends in G protein-coupled receptor-targeted drug discovery?. Expert Opinion on Drug Discovery, 18, 815-820.

Congreve, M., de Graaf, C., Swain, N.A. Tate, C.G., 2020. Impact of GPCR structures on drug discovery. Cell, 181, 81-91.

De Felice, A., Aureli, S., Limongelli, V., 2021. Drug repurposing on G Protein-coupled receptors using a computational profiling approach. Frontiers in Molecular Bioscience, 8, 673053.

Laeremans, T., Sands, Z.A., Claes, P., De Blieck, A., De Cesco, S., Triest, S., Busch, A., Felix, D., Kumar, A., Jaakola, V.P., Menet, C., 2022. Accelerating GPCR drug discovery with conformation-stabilizing VHHs. Frontiers in Molecular Bioscience, 9, 863099.

Obot, D.N., Udom, G.J., Udoh, A.E., Onyeukwu, N.J., Olusola, A.J., Udoh, I.M., Umana, I.K., Yemitan, O.K. and Okokon, J.E., 2021. Advances in the molecular understanding of G protein-coupled receptors and their future therapeutic opportunities. Future Journal of Pharmaceutical Sciences, 7, 194.

Yang, D., Zhou, Q., Labroska, V., Qin, S., Darbalaei, S., Wu, Y., Yuliantie, E., Xie, L., Tao, H., Cheng, J., Liu, Q., 2021. G protein-coupled receptors: structure-and function-based drug discovery. Signal Transduction and Targeted Therapy, 6, https://doi.org/10.1038/s41392-020-00435-w

Zhou, J. and Wild, C., 2019. GPCR drug discovery: Emerging targets, novel approaches and future trends. Current Topics in Medicinal Chemistry, 19, 1363–1364.

Empowering Hope: Innovations in Breast Cancer Treatment and Therapies

Dr Chamindri Witharana, BSc.(UOC), MPhil.(Wales), PhD.(Giessen)

Breast cancer is a prevalent malignancy affecting women worldwide, with significant mortality and morbidity, impacting not only the physical health but also the emotional well-being of those affected. With advancements in medical research and technology, the landscape of breast cancer treatment has evolved significantly over the years, offering patients new hope and improved outcomes.

Breast cancer is a malignant tumor that forms in the cells of the breast. It can occur in both men and women, although it is more prevalent in women. The exact causes of breast cancer are not fully understood, but certain risk factors, such as age, family history, hormonal factors, and lifestyle choices, can increase the likelihood of developing the disease.

Breast cancer is a heterogeneous disease, categorized based on molecular and histological features. The two most common types are hormone receptor-positive (HR+), human epidermal growth factor receptor 2-positive (HER2+), and triple-negative breast cancer (TNBC), lacking expression of estrogen, progesterone, and HER2 receptors.

Treatment for breast cancer typically involves a multimodal approach, including surgery, radiation therapy, chemotherapy, hormone therapy, and targeted therapy. The choice of treatment depends on various factors, including the cancer subtype, stage, and patient's overall health.

The primary treatment for early-stage breast cancer involves surgery to remove the tumor. Breast-conserving surgery (lumpectomy) and mastectomy are the two main surgical options. Recent advancements in surgical techniques, such as oncoplastic surgery and nipple-sparing mastectomy, aim to improve cosmetic outcomes and preserve breast function. Radiation therapy is often used after surgery to destroy any remaining cancer cells and reduce the risk of recurrence. Advances in radiation therapy, such as intensity-modulated radiation therapy (IMRT) and proton therapy, allow for more precise targeting of the tumor while minimizing damage to surrounding tissues. Chemotherapy is used to kill cancer cells or shrink tumors before surgery (neoadjuvant therapy) or after surgery (adjuvant therapy). Recent developments include the use of targeted chemotherapy drugs, such as liposomal doxorubicin and nab-paclitaxel, which can improve efficacy and reduce side effects compared to traditional chemotherapy regimens. Hormonal therapy, on the other hand, targets the hormone

receptors on cancer cells to prevent them from growing. It is used to treat HR+ breast cancers by blocking the effects of estrogen on cancer cells. Recent advancements in hormone therapy include the development of aromatase inhibitors (e.g., letrozole, anastrozole) and selective estrogen receptor modulators (e.g., tamoxifen), which have shown improved efficacy and safety profiles.

While these traditional methods have been effective in treating breast cancer, they can be associated with significant side effects and limitations. Surgery and radiation therapy can cause pain, swelling, and scarring, while chemotherapy and hormonal therapy can lead to nausea, fatigue, and menopausal symptoms. Additionally, these treatments may not always be effective in preventing cancer recurrence or metastasis.

Targeted therapy is a relatively new approach to treating breast cancer that focuses on targeting specific molecules or pathways involved in the growth and spread of cancer cells. Unlike traditional treatments, which affect both cancerous and healthy cells, targeted therapy is designed to be more precise, minimizing damage to healthy tissue and reducing side effects. For HER2+ breast cancers, drugs like trastuzumab, pertuzumab, and ado-trastuzumab emtansine (T-DM1) have significantly improved outcomes. PARP inhibitors, such as olaparib and talazoparib, are effective in treating BRCA-mutated breast cancers. Genomic testing involves analyzing the genetic makeup of a patient's cancer cells to identify specific mutations or alterations that may be driving the growth of the tumor. This information can help doctors select targeted therapies that are more likely to be effective.

Targeted therapy for breast cancer offers several advantages, including a more precise and targeted approach to treatment, which can lead to better outcomes and fewer side effects compared to traditional chemotherapy. These therapies are designed to specifically target cancer cells while sparing healthy tissue, minimizing damage to the body. Additionally, targeted therapies often work in conjunction with other treatments, such as surgery or chemotherapy, to improve overall effectiveness. The high cost of targeted therapies can limit accessible for some patients. They can also lead to the development of resistance over time, requiring the need for alternative treatments. Despite these challenges, targeted therapy has revolutionized breast cancer treatment and continues to be an important tool in fighting the disease. There are several benefits of targeted therapy for breast cancer. Firstly, targeted therapies are often more effective than traditional treatments in shrinking tumors and slowing the progression of the disease. This can lead to improved survival rates and a better quality of life for patients. Additionally, targeted therapies tend to have fewer side effects than chemotherapy and hormonal therapy, making them more tolerable for patients. However, targeted therapy also has some limitations and drawbacks. One of the main challenges is the development of resistance to targeted therapies over time. Cancer cells can adapt and find ways to evade targeted treatments, leading to treatment failure. Additionally, targeted therapies can be expensive and may not be accessible to all patients, especially in low-income countries.

Immunotherapy aims to harness the body's immune system to fight cancer. While still investigational, immunotherapy drugs like pembrolizumab and atezolizumab have shown promise in treating certain types of breast cancer, particularly TNBC. Immunotherapy is a promising approach in breast cancer treatment, offering several benefits. It harnesses the body's immune system to target and destroy cancer cells, potentially leading to long-lasting responses and improved outcomes, particularly in triple-negative breast cancer (TNBC). Immunotherapy is generally well-tolerated and has a different side effect profile compared to traditional treatments like chemotherapy. However, not all breast cancer

patients respond to immunotherapy, and it is currently most effective in certain subtypes of the disease. Additionally, immunotherapy can lead to immune-related side effects, such as fatigue, rash, and inflammation, which can be severe in some cases. The cost of immunotherapy can also be prohibitive for some patients, and more research is needed to understand how to best integrate it into breast cancer treatment strategies. Despite these challenges, immunotherapy represents a significant advancement in breast cancer treatment and holds promise for improving outcomes for many patients.

In conclusion, Breast cancer treatment has undergone a profound transformation in recent years, marked by a shift towards personalized medicine and targeted therapies. This approach recognizes that each patient's cancer is unique, driven by specific genetic mutations and molecular characteristics. By understanding these individual differences, healthcare providers can tailor treatments to target the specific vulnerabilities of a patient's cancer cells, leading to more effective and less toxic therapies. Targeted therapies, such as those that block the HER2 protein or target hormone receptors, have significantly improved outcomes for patients with these specific subtypes of breast cancer. Additionally, advances in genomic testing have enabled healthcare providers to identify patients who are most likely to benefit from these targeted therapies, sparing others from unnecessary treatments. Overall, the move towards personalized medicine and targeted therapies represents a major paradigm shift in breast cancer treatment, offering new hope and improved outcomes for patients. These advancements have led to improved survival rates and quality of life for patients. However, continued research and clinical trials are essential to further refine treatment approaches and ultimately find a cure for breast cancer.

References

American Cancer Society. (2022). Breast Cancer Facts & Figures 2021-2022. https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/breast-cancer-facts-and-figures/breast-cancer-facts-and-figures-2021-2022.pdf

National Comprehensive Cancer Network. (2022). NCCN Clinical Practice Guidelines in Oncology: Breast Cancer. https://www.nccn.org/professionals/physician_gls/default.aspx#breast

National Cancer Institute. (2022). Breast Cancer Treatment (PDQ®)–Patient Version. https://www.cancer.gov/types/breast/patient/breast-treatment-pdq

ASCO. (2022). Breast Cancer: Types of Treatment. https://www.cancer.net/cancer-types/breast-cancer/types-treatment

A GOODBYE TOO SOON….

A Tribute to Professor Ira Thabrew

by Professor Sugandhika Suresh

Myrtles and irises and orchids and roses

Carrot cakes and mixed pies and souffles and courses

Prettiest of sarees and matching bags and shoes

Precious memories galore with thoughts to ponder and muse

Specialized in Zoology and self-taught doctoral Biochemist

Pioneered Sri Lankan cancer research and
became a Molecular Biologist

Adored by all her students and yet at times the toughest

Always had a good joke to share and proved to be the funniest

A perfectionist by natures and expected others also to be

Strived to instill ethical values and made us all clearly see

That straightforwardness is a must and being impartial is the key

For academics and researchers main concern shouldn't be the fee

Madam Thabrew was my first academic boss and mentor
and friend as well

Paved the way for my professional journey and made me
break the shell

A beacon of light to many generations and accolades too
numerous to tell

Forever grateful to you we shall be and in our hearts,
you'd eternally dwell

SUGANDHI…

19/05/2024

Webinar on ‘Global Opportunities: Mastering Work and Study beyond Borders from Sri Lanka’

A two-part webinar series titled ‘Global Opportunities: Mastering Work and Study Beyond Borders from Sri Lanka was held on the 4th of May 2024 and 1st of June 2024 with Prof. Nadeeja Wijayatunga and Dr Chamindri Witharana as speakers on the respective days.

This exclusive event was tailor-made for ambitious science graduates and postgraduates, who aspire to make their mark in the international scientific arena.

In this rapidly advancing world of science, we can always learn from each other, from other faculties, and other countries. At a time when the world is getting closer, and working and studying abroad is becoming the norm, it is crucial to gain insights on how to navigate the international landscape successfully.

To empower the next generation, CBSL proudly presented an enlightening webinar series featuring esteemed experts, Prof. Nadeeja Wijayatunga and Dr Chamindri Witharana, who have experience working and studying beyond Sri Lanka.

Webinar Highlights:

1. **Finding the Perfect Fit:** Discovering the best Ph.D. programs, job opportunities that align with the individual's interests and aspirations, and effective strategies to identify and evaluate potential options, ensuring that one makes informed decisions for one's scientific career.

2. **Mastering the Application Process:** Gained insider tips and tricks on crafting outstanding applications that stand out from the competition. Uncovered the dos and don'ts of the application process, and understood how to effectively showcase one's skills, achievements, and potential.

3. **Benefits of Working and Studying Abroad:** Explored numerous benefits of working and studying abroad, from exposure to diverse scientific perspectives to expanding professional networks. Understood how international experiences can enhance knowledge, skills, and overall career trajectory.

4. **Keys to Success:** obtained invaluable advice from seasoned professionals who have thrived in international scientific environments. Discovered the essential skills, attitudes, and strategies that will set one up for success, enabling excellence in their chosen field.

22 participants registered for the two sessions, with 13 of them being undergraduate students.

Dr Roshan Hewapathirana provided technical assistance

Dr Kalpani Ratnayake designed the registration form and flyer

Dr Maduka de Lanerolle Dias organized and moderated the sessions

Professor Usha Hettiaratchi introduced the speakers

I am thankful for the support given by these individuals and to the council members who joined the sessions.

Dr Maduka de Lanerolle Dias

Joint-Secretary, CBSL

Upcoming Events

&

5th CBSL Conference
27th June 2025

Abstract submission
10th February 2025

Abstract Notification
10th May 2025

Connect with us

We welcome contributions to the Newsletter from CBSL members for the following

- Original photographs for the cover page
- Articles
- Letters to the editor
- Research highlights

Please submit to newsletter.cbsl@gmail.com

Cover page photograph Vertical A4 size, 210 x 297mm / 4961 x 7016 pixels

Articles:

Articles should have a descriptive title, should not exceed 1500 words, including not more than 10 references, and include authors name (s), academic degree (s) and institutions(s), along with a photograph.

Letters to the editor:

Letters should have a descriptive title, and should not exceed 500 words, including not more than 10 references. Begin with the salutation “to the Editor” and close with the author’s name (s), academic degree (s) and institution (s).

Research Highlights

Short description on Research highlight, with a photograph.