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Biotechnology Society of Wayamba University of Sri Lanka (BitSoc)
Department of Biotechnology
Faculty of Agriculture and Plantation Management
Wayamba University of Sri Lanka



MESSAGE FROM THE NEW PRESIDENT

I'm really grateful to be appointed as the president of the year 2022/2023 of the Biotechnology Society (BitSoc) of Wayamba University of Sri Lanka. I wish to express my gratitude to all the members of BitSoc for their immense service and dedication to society's success. I admire them for keeping faith in us by nominating our names for the BitSoc executive committee. All the excellent work done by the previous committees will hopefully be continued by us. I invite and request all BitSoc members to work together and to be cooperative to achieve the objectives of the society in order to effectively complete the activities scheduled for the year 2022- 2023.



O. K. T. Nimesh Dananjana
President
BitSoc - Year 2022/ 2023

ANNUAL GENERAL MEETING OF BITSOC - 2022

The 13th Annual General Meeting was held on 01st October 2022 via Zoom with the participation of the academic staff members of the Department of Biotechnology and students representing all four batches. New office bearers were appointed for the year 2022/2023. The outgoing committee led by the former president Mr K.H. Madanayake was appreciated for their immense cooperation towards the continuation of BitSoc activities.



President
O.K.T.N. Dananjana



Secretary
L.P.M. Kumarasiri



Vice President
Y.G. S.S. Gunathunga



Vice Secretary
P.G.K. Rasangi



Junior Treasurer
R.M.G.R. Rathnayaka



Committee Member - 4th Year
K.H. Madanayake



Committee Member - 4th Year
R.M.D. Rathnayake



Committee Member - 3rd Year
R.P.P.S. Pathirana



Committee Member - 3rd Year
T.U.R.N.M. Darmathilake



Committee Member - 2nd Year
P.G.S.C. Ariyaratne



Committee Member - 1st Year
V.P. Theekshana

The Steering Committee Members for the Year 2022/2023

- President: Mr O.K.T.N. Dananjana
- Secretary: Ms L.P.M. Kumarasiri
- Vice President: Mr Y.G. S.S. Gunathunga
- Assistant Secretary: Ms P.G.K. Rasangi
- Senior Treasurer: Dr (Ms) B.L.W.K. Balasooriya
- Junior Treasurer: Ms R.M.G.R. Rathnayaka
- Editor: Dr (Ms) P.S. Warakagoda
- Advisor: Dr (Ms) D.R. Gimhani

Executive Committee Members:

- Prof. N.S. Kottarachchi
- Dr K.M. Mewan
- Mr K.H. Madanayake
- Ms R.M.D. Rathnayake
- Mr R.P.P.S. Pathirana
- Ms T.U.R.N.M. Darmathilake
- Mr P.G.S.C. Ariyaratne
- Mr V.P. Theekshana

NEWS ALERT

Latest research has shown how poliovirus behaves when it takes over an infected cell and deceives the cell into producing new virus particles. Polio was thought to be eradicated, but infection has now been rediscovered in London and New York.

DOI: 10.1038/s41467-022-33483-7



BITSOC ALUMNI WEBINAR SERIES 2

For the second consecutive year, BitSoc Alumni Webinar Series 2 was conducted on 8th May 2022 via Zoom under the theme of “Successful Career Planning” with over 200 participants. As resource persons, six postgraduate students graduated from the Department of Biotechnology, FAPM attained success in their career have participated. They shared their knowledge of job opportunities available in Sri Lanka as well as overseas for agriculture graduates. The webinar provided guidance and directives for undergraduates to find their future career pathways.



INTER-BATCH QUIZ COMPETITION

Biotechnology Society (BitSoc)
INTER - BATCH ONLINE QUIZ
COMPETITION 2022

STRUCTURE OF THE COMPETITION
 Quiz consists of 40 MCQs with 4 options
 Conduct only in English medium
 40 minutes time slot is allocated to complete
 Questions are based on IQ, Science & Agriculture and General knowledge

ELIGIBILITY
 All the undergraduates of Faculty of Agriculture & Plantation Management of Wayamba University of Sri Lanka

WHEN AND WHERE
 The quiz will be conducted online via google forms
 On 20th of (Wednesday) July 2022 from 8.00 p.m - 8.40 p.m

REGISTRATION
 Online registration - Fill the google form given below
 Registration deadline is : 19th of July (Tuesday) 2022

For further details contact :
 Kanchana - 072 315 0173
 Nimasha - 070 308 8042
 Madhavi - 071 350 1636

TOP 3 WINNERS WILL BE AWARDED WITH VALUABLE E-CERTIFICATE

Faculty of Agriculture and Plantation Management (FAPM) | Wayamba University of Sri Lanka

An Inter-batch Quiz Competition was held on 20th July 2022 among the four batches of the FAPM with the participation of 40 students. It was conducted via Google quiz forms in English medium and 40 MCQs based on IQ, science, agriculture, and general knowledge. E-certificates were awarded to the winners.



Wimansani Widushika
2nd Year



Ishani De Vass Gunawardena
2nd Year



R. Danuhaman
2nd Year

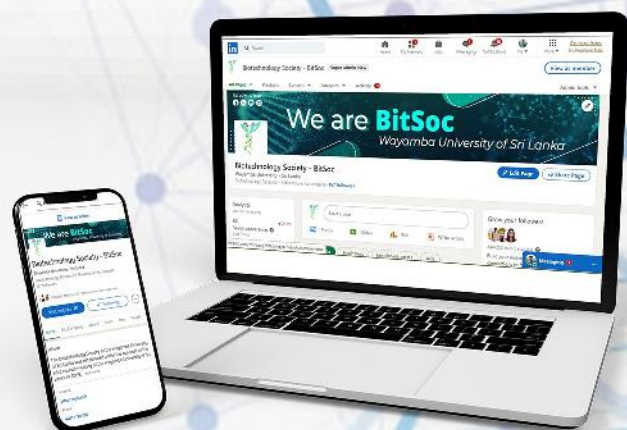
NEWS ALERT

A promising strategy for the development of broad-spectrum antiviral therapy has been identified recently that centers on promoting a strong immune response capable of stopping a number of infectious viruses.

DOI: 10.1073/pnas.2123338119



BitSoc "Padura" was held successfully on the 2nd of September 2022 from 3.00 p.m. onwards in the faculty auditorium with the presence of over 100 BitSoc members. The main purpose of the function was to welcome the new 3rd year students who started their specialization in Biotechnology to the Department of Biotechnology according to the tradition since 2009. The event was coloured by dancing and singing performances of 4th and 3rd year Biotechnology specializing students.



LINKEDIN PROFILE OF BITSOC

The LinkedIn profile of the Biotechnology Society (BitSoc) was launched by Prof. D.P.S.T.G. Attanayake, Chair Professor of the Department of Biotechnology on the 2nd of September 2022 during the BitSoc "Padura" function.



NEWS ALERT

Researchers have recently announced the discovery of multiple candidate genes that influence longevity only in female mice. The discovered genetic loci are clustered between 10 and 100 genes.

DOI: [10.1126/science.abo3191](https://doi.org/10.1126/science.abo3191)



ACHIEVEMENTS OF THE STAFF

Prof. D.P.S.T.G. Attanayake, Chair Professor, Department of Biotechnology, Prof. N.S. Kottearachchi, Professor, Department of Biotechnology, and Dr D.R. Gimhani, Senior Lecturer Department of Biotechnology were awarded a certificate of recognition for conducting high-quality research and publishing in indexed journals in the year 2020 and Prof. D.P.S.T.G. Attanayake and Dr B.L.W.K. Balasooriya, Senior Lecturer, Department of Biotechnology were awarded a certificate of recognition for conducting high-quality research and publishing in indexed journals in the year 2021 at the 20th Agricultural Research Symposium (AGRES), FAPM, WUSL held on 19th August 2022.



BOOK LAUNCH

A book authored by Prof. D.P.S.T.G. Attanayake, Chair Professor, Department of Biotechnology, and Dr B.L.W.K. Balasooriya, Senior Lecturer, Department of Biotechnology titled "Around the Topics of Biotechnology" was launched on 7th October 2022 at the auditorium of the National Library and Documentation Services Board, Colombo. Mr Nihal Ranasinghe, Secretary, Ministry of Education graced this occasion as the Chief Guest. Senior Professor Udith K. Jayasinghe, Vice Chancellor of the WUSL, Emeritus Professor Sumithra Jayasekera, Vice Chancellor of the Horizon Campus, and Emeritus professor Athula Perera served as the speakers at this event.



Dr Wasanthi Wickramasinghe, Senior Research Fellow, Gamani Corea Foundation, and Ms Amali Ranasinghe, Chief Operating Officer, Sri Lanka Institute of Biotechnology spoke on the status of Global Bioeconomy and Sri Lankan Biotechnology respectively. Prof. Jagath C. Edirisinghe, Dean, FAPM, WUSL, academic and non-academic staff of FAPM, students from agriculture faculties, officials from crop research institutes and private sector organizations, and the general public were present at this occasion. The book is published by the Vidyalankara Printers and Publishers, Kelaniya.

NEWS ALERT

A team of scientists has engineered duckweed, one of nature's fastest-growing aquatic plants to synthesize and accumulate high yields of fatty acids (triacylglycerols). Such oil-rich duckweed could be easily harvested to produce biofuels.

DOI: 10.1111/pbi.13943



BEST PRESENTER AT BIOTECHNOLOGY SESSION OF 20TH AGRES



Mr Kavinda Perera received the Best Presenter Award at the Biotechnology Session of the 20th Agricultural Research Symposium (AGRES), FAPM, WUSL held on 22nd May 2022. The title of his research was “Protein Analysis and Characterization of Underutilized Legumes in Sri Lanka”.



BEST PRESENTER AT BIOTECHNOLOGY INDUSTRIAL TRAINING SESSION



Ms Ruwani Rathnayake received the Best Presenter Award at the Biotechnology Session of the 16th In-Plant Training Symposium, FAPM, WUSL which was held on 19th August 2022.



RELEASE OF BIOTECHNOLOGY INDUSTRIAL TRAINING ABSTRACT BOOK- VOLUME 2



Launching of the Biotechnology Industrial Training- 2022 Executive Summaries (BIT- 2022) of 17 students took place during the closing ceremony of the Biotechnology Session at the 16th In-Plant Training Symposium, FAPM, WUSL which was held on 19th August 2022. Dr D.R. Gimhani, Head/ Department of Biotechnology remarkably handed over the e-version of the booklet to Senior Prof. Udith K. Jayasinghe, Vice Chancellor, WUSL, and Prof. Jagath C. Edirisinghe, Dean/ FAPM, WUSL. Dr B.L.W.K. Balasooriya served as the Editor-In-Chief while Dr D.R. Gimhani, Dr K.M. Mewan, and Dr P.S. Warakoda served as the Co-Editors of this volume.



NEWS ALERT

Generating an iron deficiency by switching off the two proteins that ensure the take-up of iron by cells as a first-line defense against invading pathogens simultaneously curbs the defensive power of the innate immune system by decreasing the neutrophil content in mice.

DOI: 10.1126/sciadv.abq4469;

DOI: 10.1126/sciadv.abq5384

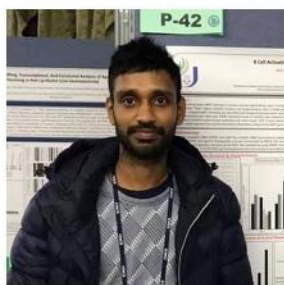


PHD SCHOLARSHIP AT THE UNIVERSITY OF PLYMOUTH, ENGLAND

Ms Kokila Wickramanayake, a graduate (2009/2010) of the Department of Biotechnology is following her PhD at the School of Biological and Marine Sciences, University of Plymouth, England which was funded by ARIES Doctoral Training Partnership. Her PhD title is “Role of plastid identity in plant immunity”. She also published a research article titled “Efficient shoot regeneration of medicinal plant *Haplophyllum tuberculatum* by direct and indirect organogenesis and genetic fidelity assessment using Inter Simple Sequence Repeats markers” in *Frontiers in Plant Science* recently.



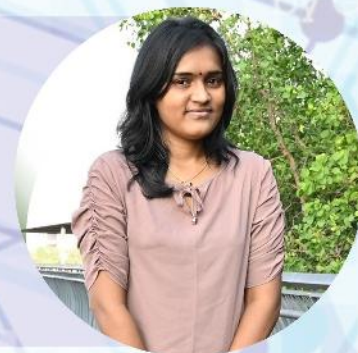
PHD SCHOLARSHIP AT PUKYONG NATIONAL UNIVERSITY, SOUTH KOREA



Mr Srinith Prabhatha Madhuranga, a graduate (2012/2013) of the Department of Biotechnology received a scholarship for a doctoral degree in the Department of Biomaterials and Aquaculture, Pukyong National University, South Korea. During his PhD program, he aims to specialize in Marine Biotechnology.

MSC. SCHOLARSHIP AT SWINBURNE UNIVERSITY OF TECHNOLOGY, AUSTRALIA

Mrs Suthira Pushparajah, a graduate (2013/2014) of the Department of Biotechnology received a scholarship for a Master of Science (Research) in the Department of Chemistry and Biotechnology, Swinburne University of Technology, Melbourne, Australia. Her topic is “Nanomaterials-based electrochemical aptasensor for carbendazim detection” and she aims to analyze the recent advancements of nanomaterials-based electrochemical aptasensor toward food and environmental safeguarding.



MSC. SCHOLARSHIP AT JEJU NATIONAL UNIVERSITY, SOUTH KOREA



Ms Umesha Edirisinghe Arachchi, a graduate (2013/2014) of the Department of Biotechnology received a scholarship under the BK21 scholarship program to pursue MSc. in Marine Molecular Genetics at Jeju National University, South Korea.

NEWS ALERT

3D bioprinting has been identified as a reproducible approach to study cellular communication and the viability of plant cells in a controlled environment.
DOI: 10.1126/sciadv.abp9906



RESEARCH PRESENTATIONS AND PUBLICATIONS



Ms M.N.U. Fernando, who recently completed her specialization at the Department of Biotechnology presented her research findings under the theme of “Morphological and molecular screening of fifteen finger millet (*Eleusine coracana*) genotypes in Sri Lanka for salt tolerance at seedling stage” at the 6th international research conference (IRCUCW 2022) of the Uwa Wellassa University held on 28th and 29th July 2022. This research has been conducted under the supervision of Dr D.R. Gimhani and Ms G.P.G.I. Thakshila and Mr D.C.M.S.I. Wijewardana. She also presented her research findings under the theme of “Investigation of common soil-borne pathogenic fungi and bacteria associated with locally produced compost” at the 1st Annual Research Session 2022, Faculty of Technology, Eastern University of Sri Lanka, under the supervision of Ms. M.H.A.D. Subhashini.



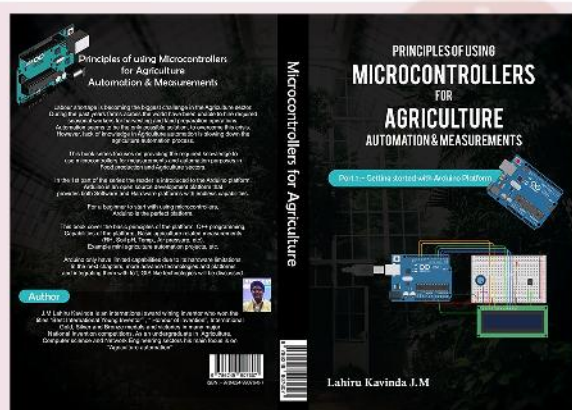
Ms I.G.S.S. Ekanayaka, temporary demonstrator of the Department of Biotechnology presented research work on “Effect of Cryoprotectants on Cell Viability and Biomass Growth of *Chlorella sp.* and *Oscillatoria sp.* Cells under Ultra Low Temperature” at the 42nd Annual Sessions of the Institute of Biology, Sri Lanka on 30th September 2022 at the Marino Beach Hotel, Colombo 03, under the theme “Towards a Paradigm Shift in Biology”. Mr S.A.V. Viduranga, temporary demonstrator, and Mr N.G.C.A. Bandara, Technical Officer of the Department of Biotechnology are the co-authors of the research work supervised by Dr B.L.W.K. Balasooriya.

Mr S.A.V. Viduranga and Ms H.N. Withana, Temporary Demonstrators of the Department of Biotechnology have presented their research findings under the topic of “Determination of Essential Oil Composition of Lime Peel Extracted Using Hydro-Distillation and Microwave-Assisted Hydro-Distillation Techniques” at the 6th International Conference on Medicinal Plants, Herbal Products & Hydroponics - 2022 (6th ICMPHP) which was held at Institute of Indigenous Medicine, University of Colombo on October 7th - 9th 2022. The research has been conducted under the supervision of Prof. J.K.R.R. Samarasekara, Dr G.D. Liyanaarachchi, Dr H.D. Weeratunge and Mrs D. Jagoda.

Mr S.A.V.
Viduranga



Ms H. N.
Withana



Mr Lahiru Kavinda, a 3rd year biotechnology specialization student published a book under the topic of “Principles of Using Microcontrollers for Agriculture Automation and Measurements-Getting Started with Arduino Platform” (ISBN Number-978-624-99076-0-7).

This is the first of a series of books that covers information on how to use modern computers to automate or improve agriculture-related tasks.



NEWS ALERT

A “smart plastic” material that can change from soft and stretchy to hard and rigid after exposure to a catalyst and visible light have been developed recently by researchers at the University of Texas, USA.

DOI: 10.1126/science.add6975



Ms Dharani Rathnayaka, a 4th year biotechnology specialization student published an article under the topic of “Improvements in Animal Production and Aquaculture due to Gene Technology” in Biosafety Newsletter Volume 4 Issue I which was a collaborative publication of Food and Agriculture Organization, United Nations and Ministry of Environment, Sri Lanka.



OTHER ACHIEVEMENTS

Ms Dinithi Rajapaksha, a 4th year biotechnology specialization student was selected as the winner of the best category under age 11-30 after very crucial and competitive rounds at the Folk Song Singing Competition held on 8th May 2022 which was conducted as one event of the “Surya Mangallaya” organized by the WAYOSCOPE Media Association of WUSL.



Ms Dharani Rathnayaka, a 4th-year biotechnology specialization student won 2nd place in the “SAHASWIDA” Inter-university Nature Based QUIZ Competition 2022, organized by FAPM Nature Team of WUSL which was held on 23rd April 2022 with the participation of a large number of students from different universities. Winners were announced on 7th May 2022. She also won 3rd place in the Article Writing Competition 2022, which was a project of “3R” organized by the Zero Plastic Society of the University of Peradeniya on 5th September 2022.

Ms Nethmini Wijendrasinghe, a 3rd year biotechnology specialization student was awarded 1st Runner-up at the grand finale of the “Spellbinder-22”, the Intra-faculty Speech Competition organized by Gavel Club of FAPM held on 20th September 2022 with the participation of Prof. Jagath C. Edirisinghe, Dean/ FAPM.



The Inter-faculty Championship was successfully held at Kuliypitiya premises of WUSL from 3rd-18th October 2022. By considering the best overall performances, students were nominated for the sports teams by the Sports Council of the university. The 3rd year Biotechnology specialization students who were selected for the teams are as follows.

- Mr Y.G.S.S. Gunathunga- University Cricket Team, University Athletic Team, and the Vice President of the Sports Club for the year 2022/ 2023
- Ms Mekala Karunarathna- Wayamba University Volleyball Team
- Mr Nimesh Dananjana - Wayamba University Chess Team



Mr. Charindu Perera a 4th year biotechnology specialization student got 1st Runner-up in weight lifting under 81 kg weight class at the Inter-faculty Championship held at Kuliypitiya premises of WUSL from 3rd-18th October 2022.



Y. G. S. S.
Gunathunga



Mekala
Karunarathna



Nimesh
Dananjana

NEWS ALERT

Growing highly nutritious, fast-growing microalgae in seawater-fed aquaculture systems, particularly along the coasts of the Global South could help increase food production by more than 50% and feed a projected 10 billion people by 2050.

[DOI: 10.5670/oceanog.2022.213](https://doi.org/10.5670/oceanog.2022.213)

Editor: Dr P.S. Warakagoda, Senior Lecturer, Department of Biotechnology, FAPM, WUSL.

Editorial Assistance: Ms H.N. Withana, Temporary Demonstrator, Department of Biotechnology, FAPM, WUSL.

Design and Paper Setting: Mr O.K.T.N. Dananjana, 3rd Year Biotechnology Specialization Student, FAPM, WUSL.

