



**Institute of Biochemistry, Molecular Biology
and Biotechnology
University of Colombo**



Annual Report

2020



***Institute of Biochemistry, Molecular Biology
and Biotechnology
University of Colombo***

Annual Report – 2020

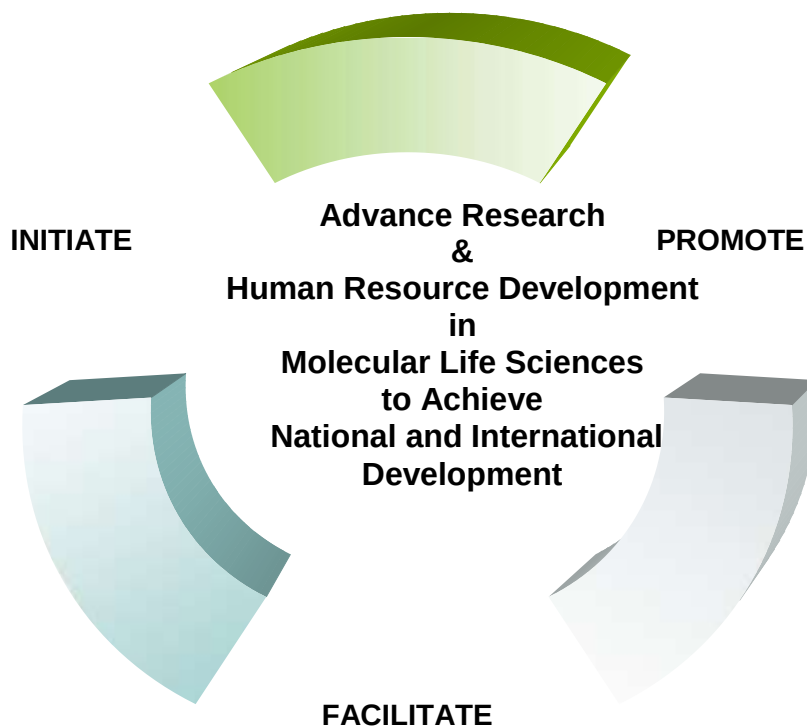


VISION



**“To be an
International Centre of Excellence
In
Molecular Life Sciences”**

MISSION





2020 ACHIEVEMENTS

NEW APPOINTMENTS

Ms. Sudeni Peiris
Deputy Bursar
2020.12.01



Dr. Dilusha Fernando
Scientific Assistant BDU
2020.07.31



Ms. Kaveesha Banadara
Scientific Assistant IT
2020.08.07



Ms. Uma Rajagopalan
Scientific Assistant Cell Biology
2020.10.19



Prof. O.V.D.S.J. Weerasena
Professor (Merit)
2019.01.31



Dr. Kanishka Senathilake
Post- Doctoral Research Fellow
2020.12.15



Dr. Harindra Sathkumara
Post- Doctoral Research Fellow
2020.12.15



Mr. James Thambyrajah
Assistant Lecturer (CMI)
2020.02.24



Ms. Joanne Kotelawala
Assistant Lecturer (MLS)
2020.12.01

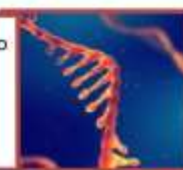
DISSEMINATION OF KNOWLEDGE

SHORT COURSES AND TRAINING PROGRAMMES

In-plant training of 3 months was completed by Ms. M.N. Fara Nifla (an undergraduate student from University of Wayamba).



Seminar on Simultaneous multiplexed (to 800-plex) detection of mRNA, Proteins and DNA using single-molecule optical barcodes was conducted.



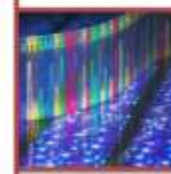
Practical Demonstration on Restriction Enzyme Digestion on 10th March 2020 for 09 undergraduate students was conducted by Dr Sumadee De Silva and Dr Tharmini Sundralingam.



Demonstration on Real Time PCR on 17th January 2020 for undergraduate students participated from Wayamba University of Sri Lanka conducted by Dr Nilupa Gunaratna



Demonstration on DNA Sequencing on 17th January 2020 for undergraduate students participated from Wayamba University of Sri Lanka conducted by Dr Ruwandi Ranasinghe, Ms Joanne Koelawala and Ms Anjana Welikala





AWARDS

Vice Chancellor's Award for Research Excellence 2019 was received by Prof Shiroma Handunnetti



President's Award for Scientific Publications in Year 2018 were received by Prof Shiroma Handunnetti and Dr Narmada Fernando.



Senate Award for Research Excellence 2019 was received by Prof Kamani Tennekoon, Dr Sumadee de Silva and Dr Sameera Samarakoon



Senate Award for Research Excellence 2018 was received by Prof OWDSJ Weerasera, Prof Kamani Tennekoon, and Dr Sameera Samarakoon



James Thambyrajah received the Third prize in the oral presentations in the 29th Annual Scientific Sessions, Sri Lanka Collage of Microbiologists



Yenuli Fernando (A/L Student) who completed her research project at IBMBB received SLMA Prize for the best poster received at the 133rd Anniversary International Medical Congress 2020 for the poster presentation titled "Risk Factors and School Absenteeism in Children with Asthma from an Urban Area of Sri Lanka".

PMLP Fernando and Yenuli Fernando, who have carried out their research at IBMBB, were selected to present their findings at the World Science Day organized by the National Science Foundation on 20th November 2020.



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ICGEB

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ICGEB

INTERNATIONAL RESEARCH FUNDING RECEIVED

Rs. 2,314,254.38

Source : ICGEB Grant



Source : Indo Sri Lanka Grant





Directors Review

The main thrust areas of activities of IBMBB are postgraduate programmes including PhDs, Masters, MSc, MPhil and PhD degree programmes which are aligned for SLQF levels 8 - 12 respectively. Although the IBMBB does not admit undergraduate students, the institute contributes to undergraduate teaching programmes of the University of Colombo and other higher educational institutes.

IBMBB conducts three Masters Degree Programmes as of 2019 onwards with revised curricular. These are in i) Molecular Life Sciences (MLS) ii) Cellular and Molecular Immunology (CMI) –and iii) Bioinformatics (BI). The curricular of all three Masters degree programmes (MLS, CMI & BI) were revised for student intake in year 2019. Thus the current Masters Programmes are designed to offer Masters degrees (SLQF level 9) with Post-graduate Diploma (SLQF level 8) as an exit point and Master of Sciences (MSc) Degrees (SLQF level 10). During year 2020 with the Covid-19 outbreak, all three programmes were converted to a blended learning mode. The main objectives of these masters degree programmes are to provide focused training in current areas of molecular life sciences, immunology, bioinformatics and the allied fields relevant to the development of Sri Lanka and also to encourage young graduates to proceed for further advanced studies leading to degrees in Doctor of Philosophy (PhD).

In addition to the post-graduate degree programmes, IBMBB is conducting several short training courses, workshops, guest lectures and internship & In-pant programmes for dissemination of knowledge. A plan for conducting a fourth Masters course in Medicinal Chemistry and Biotechnology is currently being developed.

Summary of Achievements in 2020

2020 New Registrations	Masters	Molecular Life Sciences	15
	Masters	Cellular and Molecular Immunology	07
	MSc	Molecular Life Sciences	04
	MSc	Cellular and Molecular Immunology	04
	Master of Philosophy/ Doctor of Philosophy (Phil/PhD)		03
2020 Output	Doctor of Philosophy		02
	MSc	Molecular Life Sciences	06
	MSc	Cellular and Molecular Immunology	06
	Masters of Molecular Life Sciences		01
	Post-graduate Diploma in Cellular & Mol. Immunology		01
Publications	Full papers	Indexed, international Journals	25
	Full papers	Non-indexed journal	01
	Research	Local	13
	Communications	International	02
Awards received			11

The details are described elsewhere in this report.

Prof. Shiroma Handunnetti
Director/ IBMBB



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Historical Review

The 21st century will be dominated by two disciplines, namely Information and Computer Technology and Molecular Life Sciences. Nations that invested in science and knowledge based development have progressed significantly compared to those that did not. Sri Lanka is yet to have a vibrant industry based on Biotechnology and allied fields whereas our neighbors are far ahead of us. A key factor for lack of industries based on Biotechnology and allied fields in Sri Lanka is the dearth of trained manpower.

The Institute of Biochemistry, Molecular Biology and Biotechnology (IBMBB) was established as an independent Institute of the University of Colombo with a view to provide for instruction, training, research and development and consultancy in such branches of Biochemistry, Molecular Biology and Biotechnology as may be approved by the Commission upon the recommendation of the Institute and the University. The establishment of the IBMBB was the culmination of a very successful research programme in Molecular Biology led by Prof. Eric H. Karunanayake and supported by Swedish International Development Agency/ Swedish Agency for Research Cooperation with Developing Countries (Sida/ SAREC). Construction and equipment of the building of the IBMBB was provided by the Investment Department of Sida (Sida/ INEC). Construction and equipment of the Institute of Biochemistry, Molecular Biology and Biotechnology (IBMBB) was funded by a soft loan of 15 million Swedish Kroners (SEK) provided by the Swedish International Development Agency (SIDA) to the Government of Sri Lanka.

The IBMBB was ceremonially declared open on 28th April, 2004 by Her Excellency Anne Marie Fallenius, the Head of Mission, Embassy of Sweden, Colombo, and Prof. Ulf Pettersson, Vice-Rector, University of Uppsala, Sweden. The Ordinance of the Institute was gazetted by Gazette Extra-ordinary No. 1282/25 of 3rd April, 2003. The IBMBB building is located in the main campus of the University of Colombo. The IBMBB is equipped with all modern instruments used in molecular life sciences such as fully automated DNA sequences, microarray scanner, FPLC, HPLC, Fluorescence and Phase contrast microscopes and laminar flow hoods and other facilities such as cell culture, insectary, cold rooms, local area networking, access to internet via dedicated optical fiber cable and is fully air-conditioned. IBMBB commenced its research activities in June 2004. Students whose Master of Philosophy and Doctor of Philosophy studies were in progress supervised by Prof Eric Karunanayake in 2004 continued their studies at IBMBB and new registration for research degrees commenced in 2004. Two taught Masters degree courses commenced in February 2005, one in “Molecular Life Sciences” and the other in “Cellular and Molecular Immunology”. The third Master of Science degree programme in Bioinformatics commenced in May 2012, as a joint programme with University of Colombo School of Computing.

The curriculum revision for these three Masters degree programmes were completed and aligned to SFQF levels 8-10 by end of 2019. All three degree programmes with the new curricular commenced in 2019 with the revised By-Laws and Regulations approved by the Council of the University of Colombo and continued in 2020.



Directors of the IBMBB

Present Director:

Prof. Shiroma M Handunnetti

Founder Director:

Prof. Eric H Karunanayake 2004 - 2007

Past Directors:

Prof. Kamani H Tennekoon	2007 - 2012
Prof. Kamani H Tennekoon	Jan-Mar 2013 (Acting Director)
Prof. M H Rezvi Sheriff	April 2013 - September 2014 (Acting Director)
Prof. Shiroma M Handunnetti	October 2014 - January 2015 (Acting Director)
Prof. Shiroma M Handunnetti	February 2015 - February 2019

Quick Reference

Registered Office: No: 90, Cumaratunga Munidasa Mawatha, Colombo 3, Sri Lanka

Telephone Numbers:

General:	+94-11-2552528
Director:	+94-11-2552534
Senior Assistant Registrar:	+94-11-2553672
Senior Assistant Bursar:	+94-11-2553683

Fax Numbers:

Director:	+94-11-2552529
General:	+94-11-2553683

E-mail:

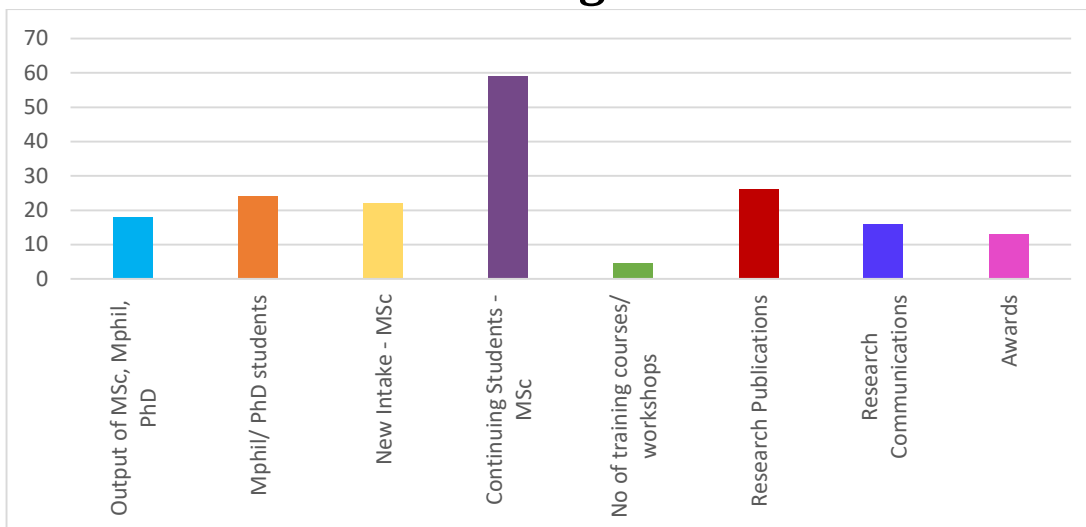
director@ibmbb.cmb.ac.lk
sar@ibmbb.cmb.ac.lk
sab@ibmbb.cmb.ac.lk/ db@ibmbb.cmb.ac.lk

Inquiries:

info@ibmbb.cmb.ac.lk



Performance in 2020 at a glance

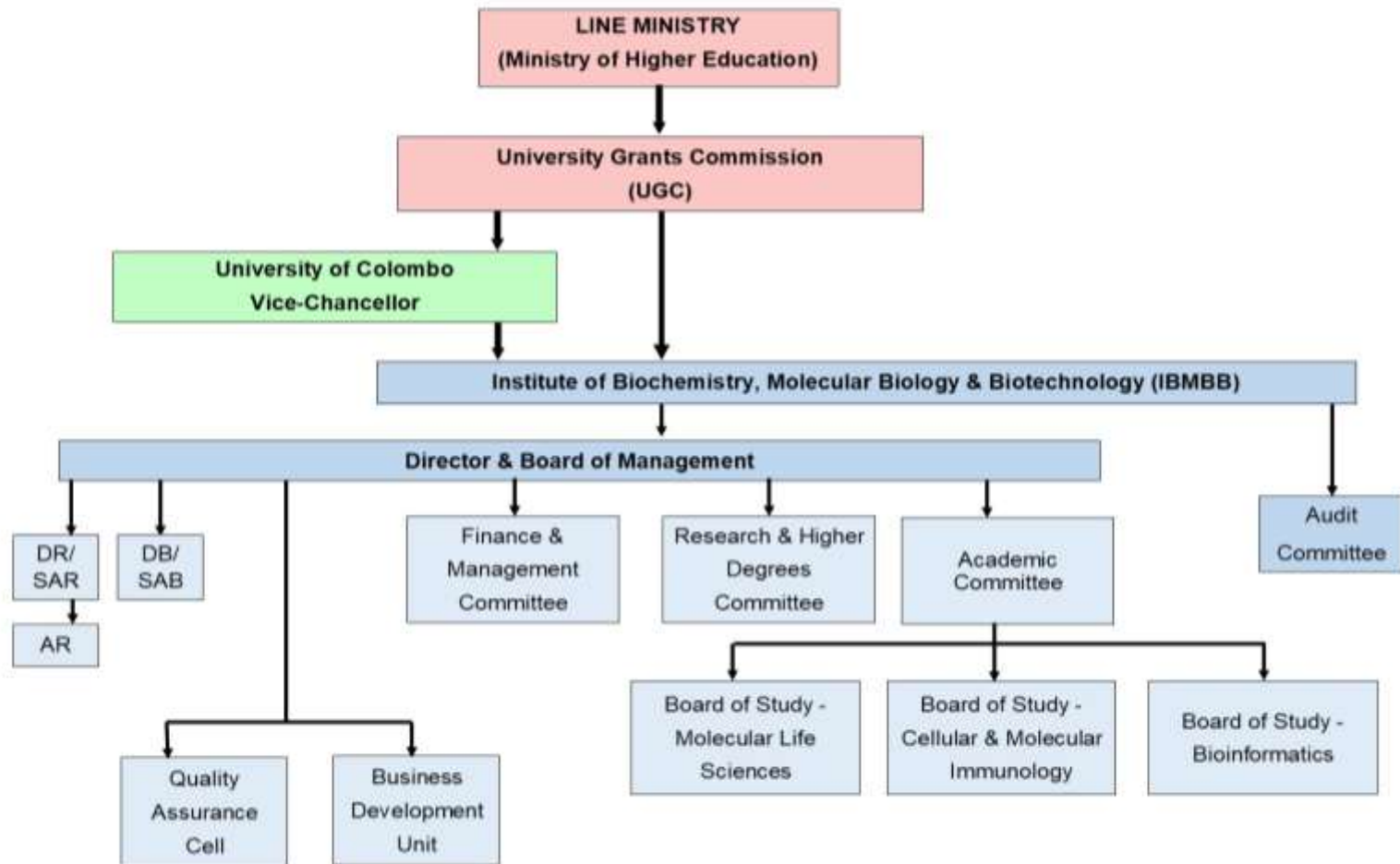


Registered Students & Graduates (2015 – 2020)				
Year	Course		No of Registered students	Number Graduated
2020	Masters (SLQF-9)	Molecular Life Sciences	15	01
		Cellular and Molecular Immunology	07	00
	MSc (SLQF-10)	Molecular Life Sciences	04	06
		Cellular and Molecular Immunology	04	06
	Post Graduate Diploma in Cellular & Mol. Immunology (SLQF-8)			01
	MPhil & PhD		02	02
2019	Masters (SLQF-9)	Molecular Life Sciences	10	5
		Cellular and Molecular Immunology	07	2
		Bioinformatics	19	0
	MPhil & PhD		2	9
2018	MSc (SLQF-10)	Molecular Life Sciences	12	9
		Cellular and Molecular Immunology	7	6
	MPhil & PhD		5	3
2017	MSc (SLQF-10)	Molecular Life Sciences	7	4
		Cellular and Molecular Immunology	4	7
	Post Graduate Diploma in Bioinformatics (SLQF-8)			1
	MPhil & PhD		5	4
2016	MSc (SLQF-10)	Molecular Life Sciences	11	17
		Cellular and Molecular Immunology	10	0
	MPhil & PhD		4	1
2015	MSc (SLQF-10)	Molecular Life Sciences	5	5
		Cellular and Molecular Immunology	8	6
		Bioinformatics	NA	5
	Post Graduate Diploma in Bioinformatics (SLQF-8)			2
	MPhil & PhD		6	0

NA - Not advertised



Organizational Chart





Director

Prof. Shiroma M Handunnetti

Members of Board of Management

Prof. Shiroma Handunnetti, Director-IBMBB, (Chairperson)

Ms. S S Evangeline, Secretary Nominee, Director (Development), Ministry of Higher Education

Prof. Eric H Karunanayake, UGC Nominee

Prof. Ira Thabrew, UGC Nominee

Prof. Ramanee Wijesekera, UGC Nominee

Prof. S.P. Deraniyagala, UGC nominee (from 16 January 2020)

Mr. Thilak Karunaratne, Council Nominee

Ms. Padmini Ranaweera, Council nominee (from 30th January 2020)

Prof. W Indira Nanayakkara, Senate Nominee

Prof. Senaka Rajapakse, Senate Nominee

Prof. Jennifer Perera, Dean/Medicine, University of Colombo, Ex-officio (up to March 2020)

Prof. Vajira Dissanayake, Dean/Medicine, University of Colombo, Ex-officio (from March 2020)

Prof. K RR Mahanama, Dean/Science, University of Colombo, Ex-officio (up to July 2020)

Prof. Upul Sonnadara, Dean/Science, University of Colombo, Ex-officio (from July 2020)

Prof. K P Hewagamage, Director, University of Colombo School of Computing (UCSC), Ex-officio

Prof. Kithmini Siridewa, Head/Biochemistry & Molecular Biology, Faculty of Medicine, Ex-officio



International Recognition

IBMBB continued as a Resource Centre for Molecular Life Sciences in Asia for the International Programme in Chemical Sciences (IPICS), University of Uppsala and as the National Node of the European Molecular Biology Network (EMBnet).

National Awards received in 2020

- a) President's Award for Scientific Publications in Year 2018 were received by
Prof Shiroma Handunnetti
Dr Narmada Fernando
- b) Vice Chancellor's Award for Research Excellence -2019
Prof Shiroma Handunnetti
- c) Senate Award for Research Excellence -2018
Prof OVDSJ Weerasena – Senate award (open category)
Prof Kamani Tennekoon – Senate award (open category)
Dr Sameera Samarakoon – Senate award (Early Carrier)
- d) Senate Award for Research Excellence -2019
Prof Kamani Tennekoon - Senate award (open category)
Dr Sumadee de Silva - Senate award (open category)
Dr Sameera Samarakoon - Senate award (Early Carrier)
- e) Awards received at 29th Annual Scientific Sessions, Sri Lanka College of Microbiologists
Thambyrajah JC, Jayamaha CJS, **Ratnayake AKDVY**, **Handunnetti S**, **Fernando N**,
Preliminary study to detect mutations in UL97 gene in suspected Ganciclovir resistant CMV infected patients presented to a diagnostic laboratory in Sri Lanka, OP6
Received the Third prize in the oral presentations
- f) SLMA Prize for the best poster – 133rd Anniversary International Medical Congress 2020
Poster presentation titled “Risk Factors and School Absenteeism in Children with Asthma from an Urban Area of Sri Lanka” by **Fernando YN**, Anuradha KWDA, De Silva U, Alahakoon M, **Handunnetti S**, Wickramasinghe P.



Contribution to Human Resource Development

Postgraduate degree Programmes

MPhil/PhD Programmes: Three new MPhil/PhD students registered during 2020 and there was a total of twenty seven registered MPhil/PhD students at the IBMBB. Research programmes based on MPhil/PhD work are described under research activities. One student registered at other Higher Educational Institutes for MPhil/PhD carried out a part of the studies at the IBMBB. Two PhD students submitted thesis for examination. Two PhD students completed their viva examinations in 2020. Two PhD students were awarded their degrees at the Convocation date scheduled held in December 2020.

(See Table 1 & 2 for the list of MPhil & PhD students and Table 3 for funding received for ongoing and new research programmes on which their studies were based). Table 5, 6, 7 & 8 includes the details on PhD and MSc students completing examination process in 2020.

MSc Programme: In March 2020, new student intakes were taken for the revised curricular of the three degree programmes in Molecular Life Sciences and Cellular and Molecular Immunology. The new intakes represented the sixteenth and fourteenth batches for the three degree programmes. With revised curricular, the second batch of students registered for the Masters (SLQF 9) degrees includes Master of Molecular Life Sciences (MLS) with fifteen students and Master of Cellular and Molecular Immunology (CMI) with seven students respectively.

Fourteen students of MSc in MLS and thirteen students of MSc in CMI continued their MSc research project work in 2020. Total of seven MLS and eight CMI MSc students submitted their dissertation for examination in 2020. Research project work of seven MLS and five CMI student research projects were delayed due to interruptions on academic activities occurred in April 2020 and again in September 2020 due to Covid-19 outbreaks (see Table 5 & 6 for details).

In 2020, Ms. Amalie Jayawickrama received the Professor Eric H Karunanayake Gold Medal for the Best Student in MSc in Molecular Life Sciences. Ms Janitha Iddagoda received the Glaxo SmithKline Gold Medal for the Best Student in MSc in Cellular and Molecular Immunology. A total 12 students successfully completed their Masters degree, 06 in Molecular Life Sciences and 06 in Cellular and Molecular Immunology. One student opted to leave the MLS programme receiving Master of Molecular Life Sciences and another student opted to leave the CMI programme receiving Post Graduate Diploma in Cellular and Molecular Immunology.

Following staff members continued as Programme Coordinators and Co/Assistant Coordinators:

Dr. OVDSJ Weerasena - Programme Coordinator, MSc in Molecular Life Sciences

Dr Sudeshini Hewage - Assistant Programme Coordinator, MSc Molecular Life Science

Dr. Sisira Pathirana - Programme Coordinator, MSc in Cellular & Molecular Immunology



Dr. Narmada Fernando - Assistant Programme Coordinator, MSc in CMI
Ms. Rupika Wijesinghe - Programme Co-Coordinator, MSc in Bioinformatics, UCSC
Dr. Ruwandi Ranasinghe- Programme Co-Coordinator, MSc in Bioinformatics, IBMBB

The following were newly appointed as Programme Coordinators in 2020.

Dr Sumadee de Silva - Programme Co-Coordinator, Masters in Bioinformatics (2021 Intake)

The following academics/visiting faculty gave lectures for the **MSc in Molecular Life Sciences**:

Prof. Eric H Karunanayake, Emeritus Professor of Biochemistry & Founder Director, IBMBB
Prof. Kamani H Tennekoon, Senior Professor of Molecular Life Sciences, IBMBB
Prof. Ira Thabrew, Visiting Professor, IBMBB
Prof. Vasanthy Arsaratnam, Senior Professor of Biochemistry, Faculty of Medicine, University of Jaffna
Prof. Nimal Punyasiri, Professor of Biochemistry, IBMBB
Prof. TLS Tirimanne, Professor in Plant Sciences, Dept of Plant Sciences, Faculty of Science, University of Colombo
Prof Nilanthi Dassanayake, Professor in Botany, University of Sri Jayawardenepura
Prof Kantha Lankathilake, Professor in Community Medicine, University of Colombo
Prof. Shalini Sri Ranganathan, Professor in Pharmacology, University of Colombo
Prof. OVDSJ Weerasena, Professor in Molecular Biology, IBMBB
Dr. Nalinda Silva, Senior Lecturer in Physiology, Faculty of Medical Sciences, University of Sri Jayawardenapura
Dr. Sumadee De Silva, Senior Lecturer, IBMBB
Dr. Nadeesha Lewke Bandara, Senior Lecturer, IBMBB
Dr. Sudeshini Hewage, Lecturer, IBMBB
Dr. Sameera Samarakoon, Lecturer, IBMBB
Dr. Ruwandi Ranasinghe, Scientific Assistant, IBMBB
Dr. Nilupa Gunaratna, Scientific Assistant, IBMBB
Ms. Nishara Batagoda, Scientific Assistant, IBMBB
Dr. T Sundralingam, Temporary Assistant Lecturer, IBMBB (up to 2020.10.18)
Ms. Anjana Welikela, Temporary Scientific/Teaching Assistant, IBMBB (up to 2020.12.31)
Ms Joanne Ketelawala, Temporary Assistant Lecturer, IBMBB (from 2020.12.01)

The following academics/visiting faculty contributed to teaching activities of

MSc in Cellular and Molecular Immunology:

Prof. Shiroma Handunnetti, Director & Professor of Immunology, IBMBB
Prof. Kamani H Tennekoon, Senior Professor of Molecular Life Sciences, IBMBB
Prof. Sunil Premawansa, Professor in Zoology, Dept of Zoology, Faculty of Science, University of Colombo
Prof. Shalini Sri Ranganathan, Professor in Pharmacology, Univ. of Colombo
Prof. TLS Tirimanne, Professor in Plant Sciences, Dept of Plant Sciences, Faculty of Science, University of Colombo



Prof Sharmini Gunawardena, Department of Parasitology, Faculty of Medicine, University of Colombo
Prof. OVDSJ Weerasena, Professor in Molecular Biology, IBMBB
Dr. Enoka Corea, Senior Lecturer, Dept Microbiology, Faculty of Medicine, University of Colombo
Dr. Dhanushka Dasanayake, Consultant Immunologist, Teaching Hospital, Kandy
Dr. Narmada Fernando, Senior Lecturer, IBMBB
Dr. Thusitha Gajanayake, Former Senior Lecturer, Horizon Campus, Malabe
Dr. Samitha Ginige, Assistant Epidemiologist, Epidemiology Unit, Ministry of Health, Col. 8
Dr. Baddhika Jayaratne, Consultant Haematologist, National Hospital Sri Lanka
Prof. Kantha Lankathilake, Professor in Community Medicine, Faculty of Medicine, University of Colombo
Dr. Nadeesha Lewke-Bandara, Senior Lecturer, IBMBB
Dr. Kanthi Nanayakara, Consultant Virologist & Vaccinologist, Medical Research Institute, Colombo 8
Dr. Sisira Pathirana, Senior Lecturer, IBMBB
Dr. Preethi Perera, Former Senior Lecturer, Post-graduate Institute of Medicine, Colombo 8
Dr. Rajiva de Silva, Consultant Immunologist, Medical Research Institute, Colombo 8
Dr. Dharshan de Silva, Senior Lecturer, Senior Lecturer, Kotelawala Defence University, Ratmalama
Dr. Sumadee de Silva, Senior Lecturer, IBMBB
Dr. Sujeewa Weerasinghe, Consultant Oncologist, National Cancer Institute, Maharagama
Dr Sanath Senanayake, Department of Parasitology, Faculty of Medicine, University of Colombo
Dr Wasundara Fernando, Post-doctoral Fellow, Faculty of Medicine, Dalhousie University, Canada
Dr Jude Jayamaha, Consultant Virologist, Medical Research Institute, Colombo 8
Mr. James Thambyrajah, Assistant Lecturer, IBMBB (from 2020.02.24)
Ms Jayani Kariyawasam, Teaching Assistant, IBMBB (up to 2020.12.26)

The following academics/visiting faculty gave lectures for the **MSc in Bioinformatics**:

Dr. Ruvan Weerasinghe - Senior Lecturer, UCSC
Prof. Kamani H Tennekoon - Senior Professor of Molecular Life Sciences, IBMBB
Prof. Eric H Karunanayake - Emeritus Professor of Biochemistry, Founder Director, IBMBB
Prof. Erik Bongcam Rudloff, Professor of Bioinformatics, Department of Animal Breeding and Genetics, Swedish University of Agricultural Sciences, Sweden
Prof. Emiliano Barreto-Hernandez - Associate Professor, National University of Colombia, Colombia
Dr. Jose R Valverde – Head, Scientific Computing Services, National center for Biotechnology, Spain
Prof. Nimal Punyasiri - Professor of Biochemistry, IBMBB
Prof. OVDSJ Weerasena – Prof in Molecular Biology, IBMBB
Dr. Nalin Ranasinghe - Senior Lecturer, UCSC



Ms. Rupika Wijesinghe - Senior Lecturer, UCSC
Dr. Hashendra Kathriarachchi - Senior Lecturer, Department of Plant Sciences, University of Colombo
Dr. Sameera Viswakula - Senior Lecturer, Department of Statistics, University of Colombo
Dr. Rasika Jayatillake - Senior Lecturer, Department of Statistics, University of Colombo
Dr. Sumadee De Silva - Senior Lecturer, IBMBB
Dr. Sudeshini Hewage - Lecturer, IBMBB
Dr. S.S.R. Samarakoon - Lecturer, IBMBB
Dr. Ruwandi Ranasinghe - Scientific Assistant, IBMBB
Dr. Meran Ediriweera - Postdoctoral Research Scientist, Jeju National University, Republic of Korea
Dr. Kanishka Senathilake - - Postdoctoral Research Scientist, IBMBB
Mr. Kanchana Senanayake - Assistant Network Manager, IBMBB
Ms. Nishara Batagoda - Scientific Assistant, IBMBB
Ms. Lakshika Jayasekera - Research Assistant, IBMBB
Ms. Amali Fernando - Scientific/ Teaching Assistant, IBMBB

Revision of MSc Curricular, By-Laws and Regulations

Revision of the three curricular ie, Molecular Life Sciences, Cellular and Molecular Immunology and Bioinformatics by the respective Boards of Studies were completed in 2017 and approved by the senate at its 430th meeting in 2018. The revised By-Laws and Regulations were submitted for Council approval in 2018. Council approval for the revised By-Laws and Regulations were received in October 2019.

The application for UGC approval for the three revised/restructured curricular were completed and approved by the Board of Management and submitted for senate approval in December 2020.

Academic Committee - 2020

Prof. Shiroma Handunnetti, (Director & Chairperson); Professor of Immunology; Chairperson, BOS-CMI
Prof. Eric H Karunanayake, Emeritus Professor of Biochemistry, IBMBB
Prof. Ira Thabrew, Visiting Professor, IBMBB (up to July 2020)
Prof. Kamani H Tennekoon, Senior Professor of Molecular Life Sciences; Chairperson, BOS-MLS, IBMBB
Prof. S Deraniyagala, Senior Professor in Organic Chemistry, Dept of Chemistry, Faculty of Science, UoC
Prof. OVDSJ Weerasena, Programme Coordinator, BOS-MLS; Professor in Molecular Biology, IBMBB
Prof. Nimal Punyasiri, Professor of Biochemistry, IBMBB
Prof. Sulochana Wijesundera, Professor in Biochemistry, Dept of Molecular Biology & Biotechnology, Faculty of Medicine, UoC



Prof. Kithmini Sirideva, Head/ Dept of Biochemistry & Molecular Biology, Faculty of Medicine, UoC
Prof. Sunil Premawansa, Professor Emeritus, UoC
Dr. Enoka Corea, Senior Lecturer, Dept of Microbiology, Faculty of Medicine, UoC
Dr. Ruvan Weerasinghe, Chairperson, BOS-BI; Senior Lecturer, UCSC, UoC
Dr. Sisira Pathirana, Programme Coordinator, CMI; Senior Lecturer, IBMBB
Dr. Ruwandi Ranasinghe, Co- Coordinator, BOS-BI; Scientific Assistant, IBMBB
Ms. Rupika Wijesinghe, Co- Coordinator, BOS-BI; Senior Lecturer, UCSC, UoC
Dr. Sumadee De Silva, Senior Lecturer, IBMBB (Secretary)
Dr. Narmada Fernando, Assistant Programme Coordinator, CMI; Senior Lecturer, IBMBB
Dr. Sudeshini Hewage, Assistant Programme Coordinator, MLS; Lecturer, IBMBB
Dr. Rajiva De Silva, Consultant Immunologist, Dept. of Immunology, Medical Research Institute
Dr. Nalinda Silva, Senior Lecturer, Dept. of Physiology, Faculty of Medical Sciences, USJ (from 29th September 2020)
Dr. Nadeesha Lewke Bandara, Assistant Programme Coordinator, MLS; Senior Lecturer, IBMBB (from 05th March 2020)

Board of Study - Molecular Life Sciences:

Prof. Kamani Tennekoon - Senior Professor of Molecular Life Sciences (Chairperson)
Prof. Eric H Karunanayake - Emeritus Professor of Biochemistry, IBMBB
Prof. Nimal Punyasiri - Professor of Biochemistry, IBMBB
Prof. Ira Thabrew - Visiting Professor, IBMBB
Prof. Jagathpriya Weerasena – Professor in Molecular Biology, IBMBB (Coordinator)
Prof. Nilanthi Dassanayake - Professor in Botany, USJP
Dr. Sumadee De Silva – Senior Lecturer, IBMBB
Dr. Nadeesha Lewke Bandara- Senior Lecturer, IBMBB
Dr. Sudeshini Hewage - Lecturer, IBMBB (Assistant Coordinator)
Dr. Sameera Samarakoon - Lecturer, IBMBB
Dr. Ruwandi Ranasinghe - Scientific Assistant, IBMBB

Board of Study - Cellular and Molecular Immunology:

Prof. Shiroma Handunnetti, Professor of Immunology (Chairperson)
Prof. Sunil Premawansa - Professor Emeritus, University of Colombo
Dr. Sisira Lal Pathirana - Senior Lecturer, IBMBB (Coordinator)
Dr. Narmada Fernando - Senior Lecturer, IBMBB (Assistant Coordinator)
Dr. Enoka Corea - Senior Lecturer, Department of Microbiology, UOC
Dr. Rajiva de Silva - Consultant Immunologist, Department of Immunology, MRI
Prof. O V D S J Weerasena – Professor in Molecular Biology, IBMBB
Dr. Dhanushka Dassanayake - Consultant Immunologist, National Hospital, Kandy
Dr. Dharshan de Silva - Senior Lecturer, Sir John Kotelawla Defense University
Mr. James Thambyrajah - Assistant Lecturer, IBMBB
Ms. Jayani Kariyawasam- Teaching Assistant, IBMBB (on invitation)
Ms. Dhakshika Gangani - Scientific Assistant, IBMBB (on invitation)



Board of Study - Bioinformatics:

Dr. Ruwan Weerasinghe - Senior Lecturer, UCSC (Chairperson)
Prof. Kamani Tennekoon - Senior Professor of Molecular Life Sciences (Deputy Chairperson)
Prof. Shiroma Handunnetti - Director-IBMBB (Ex-officio Member)
Prof. K P Hewagamage - Director-UCSC (Ex-officio Member)
Prof. Eric H Karunanayake - Emeritus Professor of Biochemistry, IBMBB
Prof. O V D S J Weerasena – Professor in Molecular Biology, IBMBB
Dr. Nalin Ranasinghe - Senior Lecturer, UCSC
Dr. M D T Attygalle - Senior Lecturer, Department of Statistics, UOC
Dr. H S Kathriarachchi - Senior Lecturer, Department of Plant Science, UOC
Dr. Sameera Viswakula - Senior Lecturer, Department of Statistics, UOC
Ms. Rupika Wijesinghe - Senior Lecturer (Co-Coordinator-UCSC)
Dr. Ruwandi Ranasinghe - Scientific Assistant (Co-Coordinator-IBMBB)
Mr. Kanchana S Senanayake - Former IBMBB Co-Coordinator (On invitation)

Short Courses and Training Programmes:

Two short training courses that were scheduled to be held in year 2020, namely the courses on Molecular Biological Techniques and Cell Culture Techniques were rescheduled for year 2021 due to the disruption of activities.

The Advanced Certificate in Immunology which was also scheduled to be initiated by December 2020 was re-scheduled for March 2021.

i) Practical Demonstration: University College London (UCL) on 10th March 2020

Dr. Sumadee De Silva and Dr. Tharmini Sundralingam conducted one day Practical Demonstration on Restriction Enzyme Digestion on 10th March 2020 for 09 undergraduate students.

ii) Demonstration on DNA Sequencing

Dr Ruwandi Ransinghe, Ms Joanne Kotelawala and Ms Anjana Welikala conducted one-day Practical demonstration on DNA Sequencing on 17th January 2020 for 3rd year Biotechnology specializing students (Batch of 16 students) at Wayamba University of Sri Lanka.

iii) Demonstration on Real Time PCR

Dr Nilupa Gunaratna conducted detailed introduction and practical Demonstration on Real Time PCR on 17th January 2020 for undergraduate students participated from Wayamba University of Sri Lanka.



iv) Industrial Training Placement

In-plant training of 3 months was completed by Ms. M.N. Fara Nifla (an undergraduate student from University of Wayamba), under supervision of Prof. O.V.D.S.J. Weerasena.

v) Seminar on Simultaneous multiplexed (to 800-plex) detection of mRNA, Proteins and DNA using single –molecule optical barcodes

Seminar on Simultaneous multiplexed (to 800-plex) detection of mRNA, Proteins and DNA using single –molecule optical barcodes was conducted on 27th January 2020 at the Institute of Biochemistry, Molecular Biology & Biotechnology.



Postgraduate Convocation 2020

Post-graduate degrees were conferred on the 31st December 2020. The ceremonial convocation was not held due to health restrictions pertaining social events because of the Covid-19 outbreak in the last quarter of 2020. The ceremonial event is scheduled to be held in February 2021.

Virtual Open Day: 9th October 2020

A virtual Open Day programme was planned since most of the on site activities were not possible to be conducted due to health restrictions pertaining to Covid-19 outbreak. Hence a virtual Open day was conducted on 9th October 2020. This was a successful event organized by the IBMBB. A total of 60 participants, including undergraduate and postgraduate students of science stream, both from Government Universities and private institutes as well as school leavers were able to obtain information about MSc, Phil/PhD programmes and other short training courses at IBMBB.

This programme included providing course details, virtual lab tours, pre-registration, consultations/discussions with staff and senior students on courses conducted/ available at IBMBB. A total of 39 applicants obtained the MSc applications at 50% discount rate (application fee) offered at the open day.

Student loan scheme on concessionary terms has been introduced by the Bank of Ceylon and Sampath Bank for the students who registered for the Masters courses at the IBMBB on the Open Day.



Research Activities

A number of research programmes were in progress at the IBMBB in the fields of Tropical - Parasitic and Infectious Diseases (Filariasis, Leptospirosis, Dengue, Malaria, Melioidosis, Nematode Infections & SARS Cov 2), Molecular Medicine (Cancer and Cancer Stem Cells, human DNA variation and ancient DNA studies, Molecular studies on short stature, Molecular studies on Metabolic disease, Genetics of Cytomegalovirus and Molecular studies on allergen identification and characterization and Plant Molecular Biology, Metabolomics, Biochemistry and Molecular Biology of Microbes, Medicinal Plants (anti-inflammatory, immunomodulatory and anti allergic effects, Anti-cancer effect of Medicinal plants, Anti-filaricidal activity of selected endemic and medicinal plant), and Industrial Applications, Molecular identification of animal species. Each research programme has several projects which provide research training for MPhil/PhD and MSc students under the supervision of the Director, Academic and Academic Support staff of the Institute and Collaborating Scientists. Students, research projects and supervisors are listed in Table 1 and Table 2.

There were a total of 26 full papers in peer-reviewed, indexed, International Journals. There were 15 research communications presented at scientific meetings including international abstracts.

Details of funds obtained by Academic Staff & Research Collaborators are given in Table 3.

1) Research Programmes on Parasitic and Infectious Diseases

Parasitic and infectious diseases still contribute significantly to the disease burden of Sri Lankan population. A long standing disease, lymphatic filariasis, though is not fatal by itself has considerable morbidity and treatment options are limited. Leptospirosis (rat fever) and Dengue fever prevalence has recently increased alarmingly and both diseases are associated with significant morbidity and mortality. Delayed diagnosis and lack of understanding of the mechanisms underlying disease process are responsible for higher number of deaths seen with these two diseases. Several research programmes are in place to address these issues. Malaria transmission has been brought under control, however sensitive molecular methods require to be established in this phase where re-introduction is being prevented by the National Anti-Malaria Campaign.

A) Filariasis

A project was in progress in 2020

i) Studies on *Setaria digitata* genome using new generation sequencing (NGS) technologies for identification of potential drug targets

Aimed at identifying potential drug targets using sequence data of *Setaria digitata*.



Investigators: Prof. Erik Bougcam-Rudloff (University of Uppsala, Sweden), Prof. Eric Karunanayake (IBMBB) and Prof. Kamani H. Tennekoon (IBMBB)
MPhil/PhD Student/IBMBB: Mr. Kanchana S. Senanayake

Funding: Swedish Links Grant.
MPhil/PhD project was in progress in 2020.
One full paper was published in 2020.

B) Leptospirosis (rat fever)

One MPhil/PhD project was in progress and two MSc projects were completed in 2020. Two MPhil students discontinued their studies. One research programme is continued by a Post-Doctoral Research fellow.

i) Sero-epidemiology of human leptospirosis (rat fever) in the District of Colombo, Sri Lanka

Aimed at characterizing the immune status of residents of Colombo district, so that it will provide cut-off immune titers used in MAT for diagnosis and other epidemiological parameters.

Investigators: PI: Prof. Senaka Rajapakse (UOC), Prof. Deepika Fernando and Prof. Shiroma Handunnetti (IBMBB); Collaborator: Dr. Lilani Karunanayake (Medical Research Institute).
MPhil student/IBMBB: Mr. Krishan Balaji (discontinued MPhil studies in 2020).

Funding: University of Colombo to Prof. Senaka Rajapakse (UOC Grant: AP/3/2/2014/RG/14)
Research programme was completed with one paper was published in 2020 in PLOS neglected diseases and two other manuscripts in preparation for publication.

ii) Detection of genotypes and serotypes of *Leptospira* isolated from leptospirosis patients of different severities

Aimed to detect genotypes and serotypes of *Leptospira* isolated from leptospirosis patients and to study the probable associations with disease severity.

Investigators: PI: Prof. Shiroma Handunnetti (IBMBB), Dr. Jagathpriya Weerasena, Prof. Sunil Premawansa (UOC) and Prof. Senaka Rajapakse (UOC); Dr. Lilani Karunanayake (Medical Research Institute).
MPhil/PhD student/IBMBB: Ms. Nadeema S Chandrapathma (discontinued studies in May 2020).

Funding: National Research Council to Prof. Shiroma Handunnetti, IBMBB (NRC -17-098)
Research programme was in progress upto March 2020, discontinued due to COVID-19 outbreak.
The research programme is conducted by Dr Harindra Sathkumara, a Post-doctoral Research fellow appointed to the IBMBB in December 2020.



iii) Production of Monoclonal antibodies for diagnosis of *Leptospira* antigens of selected, most prevalent serovars/serogroups of *Leptospira* in Sri Lanka

Aimed to characterize the *Leptospira* antigens and rat immune responses against *Leptospira* antigens and also to produce rat monoclonal antibodies against *Leptospira* antigens with a final goal of developing a *Leptospira* (antigen) detection test.

Investigators: PI: Prof. Shiroma Handunnetti (IBMBB), Prof. Senaka Rajapakse (UOC), Prof. Sunil Premawansa (UOC), Dr. Narmada Fernando (IBMBB).

Collaborator: Dr. Lilani Karunanayake (Medical Research Institute).
MPhil/PhD student/IBMBB: Ms. Dakshika Gangani

Funding: International Centre for Genetic Engineering and Biotechnology to Prof Shiroma Handunnetti, IBMBB (ICGEB-LKA-17-1)
One MPhil/PhD project was in progress in 2020. One abstract was submitted for Biennial Scientific sessions of AISSL.

iv) A preliminary study on changes in peritoneal lymphocyte subpopulations and antibody response in rats following immunization with *Leptospira* antigens

Aimed to investigate the lymphocyte subpopulations that elicit the immune responses following rat intraperitoneal immunization with *Leptospira* antigens.

Investigators: PI: Prof. Shiroma Handunnetti (IBMBB), Prof. Sunil Premawansa (UOC), Dr. Rajiva de Silva (MRI)
MSc student/IBMBB: Ms. DD Wathsala K Dissanayake

Funding: IBMBB (MSc studies)
MSc project was completed and Dissertation was submitted in 2020.
One abstract was submitted for Biennial Scientific sessions of AISSL.

v) Comparison of antigen profiles of most prevalent serovars of *Leptospira* spp in Sri Lanka

Aimed to investigate the antigen profile of the serovars which are most prevalent in Sri Lanka for identification of immunogenic *Leptospira* proteins.

Investigators: PI: Prof. Shiroma Handunnetti (IBMBB), Dr. Narmada Fernando (IBMBB)
MSc student/IBMBB: Mr. WG Kaushalya Anuradha

Funding: IBMBB (MSc studies)
MSc project was completed and Dissertation was submitted in 2020.
One abstract was submitted for Biennial Scientific sessions of AISSL.



C) Dengue

Two MPhil/PhD projects and one MSc project was in progress in 2020. One MSc project was completed during year 2020.

i) Determining the role of dengue NS1 in the pathogenesis of dengue infection

Aimed at understanding mechanisms underlying NS1 mediated pathogenesis of dengue.

Investigators: PI: Prof. Neelika Malavige (USJP)-PI, Dr. Sameera Samarakoon (IBMBB), and Prof. Kamani Tennekoon (IBMBB)

MPhil/PhD Student (USJP): Ms. Deshini Chaturanga Jayathilaka

Funding: National Research Council to Prof. Neelika Malavige
PhD programme was completed in 2020.

ii) Development of a colourimetric reverse transcription Loop-mediated isothermal amplification (RT-LAMP) assay as a cost-effective, novel surveillance tool for differential detection of Dengue serotypes in Aedes mosquitoes

Aimed at developing a molecular tool to detect dengue virus in mosquitoes and to study bionomics of the vector to be used to develop control strategies.

Investigators: PI: Dr. Hasitha Thissera, Director of the National Dengue Control Unit (NDCU) (Currently at the Epidemiology Unit of the Ministry of Health), Prof. Shiroma Handunnetti (IBMBB), Dr. Narmada Fernando (IBMBB), Dr. OVDS Weerasena (IBMBB), Dr. Sisira Pathirana (IBMBB), Dr. Subashini Aryaprema (University of Liverpool, UK), Dr. Rushika Perera (Colorado State University, USA)
MPhil/PhD Student (IBMBB): Ms. Sakunthala Janaki (Entomologist, NDCU)

Funding: National Research Council to Dr. H Thissera (NRC-19-065)
MPhil/PhD programme was in progress during the year 2020.

iii) Effect of activated NK cells on dengue virus -induced changes in endothelial cells

Investigators: Prof. Shiroma Handunnetti (IBMBB), Dr. Narmada Fernando (IBMBB), Ms Loshini Ranaweera (IBMBB)
MSc Student: Mr M P Celestin (Queen Elizabeth Commonwealth Scholar)

Funding: IBMBB (MSc studies)
MSc project work was in progress in 2020.



D) Malaria

One PhD project was in progress in 2020.

i) Studies in the phase of prevention of reintroduction of malaria in Sri Lanka: Comparison of parasitological and molecular diagnostic methods and molecular characterization infections

Aimed at characterization of imported malaria cases in the phase of prevention of reintroduction of malaria in Sri Lanka and to identify the optimum diagnostic method suitable for such malaria infections.

Investigators: Prof. Deepika Fernando (UOC), Prof. Sunil Premawansa (UOC), Prof. Shiroma Handunnetti (IBMBB), Dr. OVDSJ Weerasena (IBMBB), Dr. Risintha Premaratne (Anti-Malaria Campaign)

PhD student/IBMBB: Ms. WM Kumudu T de Alwis-W Gunasekara

Funding: National Science Foundation to Prof. Deepika Fernando (NSF/RG/2014/HS/03)

PhD programme was in progress in 2020.

One presentation was made at SLAAS.

E) Melioidosis

One MSc project was in progress in 2020.

i) Establishment of an immunodiagnostic assay for detection of acute melioidosis

Investigators: Dr. Enoka Corea (UOC), Dr. Narmada Fernando (IBMBB), Prof. Shiroma Handunnetti (IBMBB), Mr James Thambyrajah

MSc student/IBMBB: Mr. Lahiru Perera

Funding: IBMBB (MSc studies)

MSc project work was in progress in 2020.

F) Nematode infections

One MSc project was completed during 2020.

i) Characterization of antigens in eggs of *Enterobius vermicularis*

Investigators: Prof. Shamini Gunawardena (UOC), Dr. Sisira Pathirana (IBMBB)

MSc student/IBMBB: Ms. YBN Sanduni de Costha

Funding: IBMBB (MSc studies)

MSc project work was completed in 2020.



G) SARS CoV 2

Two research projects were granted and are in progress currently

i). Proof of principle for development of an antigen detection rapid diagnostic test for the diagnosis of SARS-COV-2 infections

Investigators : Dr PPSL Pathirana (IBMBB) Prof Shiroma Handunnetti (IBMBB), Dr Narmada Fernando (IBMBB), Dr Peshala Gunasekera (IBMBB), Prof OVDS Weerasena (IBMBB), Dr Rajiva de Silva (MRI), Dr Dhanushka Dassanayake (MRI), Dr Nadeeka Janage (MRI)

Funding: National Research Council Rapid Response Grant Scheme
The research project was initiated and was in progress in progress in 2020.

ii). Association of SARS CoV-2 viral genotype with disease severity and antibody response assessed using in-house IgM and IgG ELISAs in Sri Lankan patients

Investigators: Dr PPSL Pathirana (IBMBB) Prof Shiroma Handunnetti (IBMBB), Dr Narmada Fernando (IBMBB), Mr James Thambyrajah (IBMBB), Ms Dakshika Gangani (IBMBB), Prof Sunil Premawansa (UOC), Dr Inoka Perera (UOC), Prof Senaka Rajapaksha (UOC), Ms Thejane Perera (UOC), Mr Sahan Siriwardena (UOC), Dr Rajiva de Silva (MRI), Dr Dhanushka Dasanayake (MRI), Dr Suranga Manilgama (MoH), Dr Rohitha Muthugala (MoH), Dr Dhananjan Namalie (MoH), Dr Gayani Premawansa (MoH), Dr Saranga Sumathipala (MoH), Prof Andreas Nistche (Robert Koch Institute, Germany)
Post-Doctoral Research Fellow: Dr Peshala Gunasekera (IBMBB)

Funding: IDEA Project funded by Robert Koch Institute, Germany
The research project was initiated and was in progress in progress in 2020.

H) Viral Encephalitis

One MPhil/PhD project was in progress in 2020.

i) Studies on Immunological and molecular identification of medically important bat pathogens and viral encephalitis cases in Sri Lanka

Investigators: PI: Prof. Wipula Yapa, Emeritus Professor Sunil Premawansa, Prof. Dr. Andreas Nistche, Dr. Claudia Kohl, Dr. Gayani Premawansa, Prof. O.V.D.S.J. Weerasena, Prof. Shiroma Handunnetti,
MPhil/PhD Student: Ms. Thejane Perera

Funding: IDEA Project funded by Robert Koch Institute, Germany
MPhil/PhD programme was in progress 2020. One publication was in preparation.



2) Research Programmes in Molecular Medicine

Several projects in biomedical sciences were carried out requiring either human or animal experimentation. These include studies on cancer, human DNA variation, molecular genetics of growth hormone deficiency, genetics of Cytomegalo virus and molecular studies on hymenopteran venom etc.

A) Cancer and Cancer stem cells

Cancer prevalence in Sri Lanka has increased recently and breast cancer affects approximately 1: 25 women. Some breast cancers are hereditary (cancer causing genes pass from mother to daughters) whereas others are sporadic (women with no family history of cancer developing the disease). Obesity is a factor predisposing to sporadic breast cancer, but how obesity causes cancer is not clear.

Four MPhil/PhD projects were in progress and one project was completed in 2020.

i) Analysis of somatic mutations (hot spots) of TP53 gene in cancer from paraffin embedded or fresh cancer tissue of cancer patients in Sri Lanka and mutation analysis at RNA and Protein levels

Aimed to screen somatic mutations of TP53 gene in several cancer types using paraffin edded or fresh cancer tissue of cancer patients in Sri Lanka then analyse muataions at RNA and Protein levels

Investigators: Prof. Kamani H Tennekoon (IBMBB), Prof. Eric H Karunanayake (IBMBB), Dr. Sumadee De Silva (IBMBB), Prof. Preethika Angunawela (Medical Faculty, Colombo) and Dr. Kanishka De Silva (National Cancer Institute, Maharagama)
PhD student/IBMBB: Ms. Vahinipriya Manoharan

Funding: University Grants Commission grant (UGC/VC/DRIC/SRSP/2014/CMB-01) and National Research Council grant (NRC 15-33) to Dr. Sumadee De Silva
PhD dissertation was submitted for examination in 2020
One publication was made during the year 2020

ii) Characterization of Mitochondrial DNA mutations in the D-loop and mtDNA haplogroups in Sporadic Breast Cancer.

This project aims to identify potential biomarkers for sporadic cancer based on mitochondrial D loop polymorphisms.

Investigators: Ms. J T Kotelawala (PhD student), Prof. Kamani H Tennekoon (Principal supervisor), Dr. Ruwandi Ranasinghe (Co-supervisor), Dr. Kanishka De Silva (Co-supervisor, National Cancer Institute)



Funding: PhD scholarship obtained by Ms Kotelawala
PhD project was in progress in 2020.
One abstract was presented at the Colombo Medical Congress 12-15 February 2020.
One manuscript was published on 2020.

iii) Mutations and polymorphisms of mitochondrial genes as risk factors for sporadic breast cancer in Sri Lankan patients of Sinhalese ethnicity

This project aims to identify potential biomarkers for sporadic cancer based on mitochondrial coding region polymorphisms.

Investigators: Prof. Kamani H Tennekoon (Principal supervisor), Dr. Ruwandi Ranasinghe (Co-supervisor), Dr. Kanishka De Silva (Co-supervisor, National Cancer Institute)

MPhil/PhD student: Ms. L Jayasekara

Funding: NRC Grant awarded to Prof Kamani Tennekoon (NRC-17-020)

MPhil/PhD project was in progress in 2020.

One abstract was presented at the Colombo Medical Congress 12-15 February 2020.

iv) Cancer stem cells targeted drug-leads from Sri Lankan endemic plants for breast cancer

Aimed at isolation, structural and functional characterization of natural compounds from endemic medicinal plants, which can target breast cancer stem cells.

Investigators: Dr. Sameera Samarakoon (PI-IBMBB), Prof. Kamani H Tennekoon (IBMBB), Prof. Neelika Malavige (USJP), Dr. Kanishka De Silva (National Cancer Institute, Maharagama), Prof. Dilip E De Silva (UOC)

MPhil/PhD student/IBMBB: Ms. Uma Rajagopalan

Funding: National Research Council grant (NRC 14-067) to Dr. Sameera Samarakoon

PhD project was completed in 2020.

v) Genetic analysis for predictive markers for hepatocellular carcinoma (HCC) in non-alcoholic steatohepatitis (NASH) related cirrhosis

This project aimed to Analysis of genetic background for NASH related HCC in a Sri Lankan population

Investigators: Dr. Sudeshini Hewage (Principal supervisor), Prof. Rohan Siriwardena (Co-supervisor- University of Kelaniya), Prof. Kamani Tennekoon (Co-supervisor- IBMBB), Prof. Madunil Niriella (Co-supervisor- University of Kelaniya), Dr. Sumadee de silva (Co-supervisor- IBMBB)

Funding: NRC Grant awarded to Dr. Sudeshini Hewage (NRC-19-030)

MPhil/PhD project was started in 2020.



B) Human DNA variations and ancient DNA studies

One MPhil/PhD project was in progress in 2020.

i) Insight for molecular Anthropology of early people in Sri Lanka: Ancient human mtDNA and Molecular sex analysis of archeological skeletal remains at Udupiyangalge and Alugalge caves.

This project designed to analysis of mitochondrial DNA variations and molecular sex determination of several ancient human skeletal samples.

Investigators: Dr. Ruwandi Ranasinghe (Principal supervisor), Prof. Kamani H Tennekoon (Co-supervisor), Prof. Raj Somadeva (Co-supervisor, Postgraduate Institute of Archaeology, University of Kelaniya), Dr Niraj Rai (Co-supervisor, BSIP, Lucknow, India)
MPhil/PhD student: Ms AS Fernando

Funding: NRC Grant awarded to Dr. Ruwandi Ranasinghe NRC-17-042)

One MPhil project was in progress in 2020.

One manuscript in preparation for publication

C) Molecular studies on short stature

Two MSc projects were Completed in 2020.

i) Confirmation and characterization of a suspected deletion at the *LHX4* gene locus in a child with growth hormone deficiency

Investigators: Dr. Sudeshini Hewage, Dr. Tharmini Sundralingam, Prof. Shamy de silva
MSc student: Saumya Samarasinghe
Funding: IBMBB (MSc studies)
One MSc project was completed in 2020.

ii) Identification of exact breakpoints of complete *GH1* gene deletions discerned in two children with isolated growth hormone deficiency

Investigators: Dr. Sudeshini Hewage, Dr. Tharmini Sundralingam, Prof. Shamy de silva
MSc student: Fathima Nuzha Nuha
Funding: IBMBB (MSc studies)
One MSc project was completed in 2020.



D) Molecular studies on Metabolic disease

Two MSc projects were Completed in 2020.

- i) Study of cohort of children with Homocystinuria in Sri Lanka for selected variants in Methylenetetrahydrofolate reductase (MTHFR) gene

Investigators: Dr. Sumadee De Silva (IBMBB), Prof. Nimal Punyasiri (IBMBB), Dr. Eresha Jasinge, Consultant Chemical Pathologist, Lady Ridgeway

MSc student/IBMBB: Ms. D.T. Mahaliyanage

Funding: IBMBB (MSc studies)

Final Dissertation was submitted successfully in 2020.

- ii) Study of a cohort of children with Homocystinuria in Sri Lanka for selected variants in Cystathionine beta-synthase (CBS) gene

Investigators: Dr. Sumadee De Silva (IBMBB), Prof. Nimal Punyasiri (IBMBB), Dr. Eresha Jasinge, Consultant Chemical Pathologist, Lady Ridgeway

MSc student/IBMBB: Ms. N Samarasinghe

Funding: IBMBB (MSc studies)

Final Dissertation was submitted successfully in 2020.

E) Genetics of Cytomegalovirus

One MSc project was Completed in 2020.

- i) Preliminary study to detect the ganciclovir resistance gene UL97 in cytomegalovirus strains from immunocompromised patients

Investigators: Dr. Jude Jayamaha, (MRI), Ms. Varuni Rathnayake, Dr. Narmada Fernando

MSc. student/IBMBB: Mr. James Thambyrajah

Funding: IBMBB (MSc studies)

MSc project work was completed and dissertation was submitted in 2020.

One abstracts was presented at the 29th Annual Scientific Sessions of the Collage of Microbiologists, Sri Lanka, 2020



F) Molecular studies on allergen identification and characterization

One PhD study was completed and three MSc studies were in progress in 2020, and two MSc studies were commenced in 2020.

i) Immunochemical characterization of venom of *Apis dorsata* and *Vespa affinis*

Aimed at molecular and immunological characterization of immunogens in venom of *Apis dorsata* (Giant Asian honey bee) and immune cross reactivity with venom immunogens in *A. cerana* for establishment of a de-sensitization protocol.

Investigators: Dr. Rajiva de Silva (MRI), Prof. Sunil Premawansa (UOC), Prof. Shiroma Handunnetti (IBMBB), Prof. Sriyani Dias (University of Kelaniya) and Dr. EWRA Witharana (Consultant Physician, Deniyaya Base Hospital)
PhD student: Mr. Peshala Gunasekera

Funding: National Science Foundation Grant (NSF/RG/2014/HS/02) to Dr. Rajiva de Silva (PI) & Prof. Shiroma Handunnetti (collaborator) & Medical Research Institute to Dr. Rajiva de Silva (Project ID:/46-2013)

One PhD was completed in 2020. One full paper was submitted to a peer-reviewed indexed journal in 2020 and currently is in under review.

ii) Study on cross-reactive antibodies to venom components of *Apis dorsata* and *Vespa affinis* in patients allergic to ant venom in Sri Lanka

Investigators: Dr. Rajiva de Silva (MRI), Dr. Dhanushka Dassanayake (MRI), Mr. Peshala Gunasekera (IBMBB), Prof Shiroma Handunnetti (IBMBB)

MSc student: Ms. Rashenka Pieris

Funding: IBMBB (MSc studies)

One MSc project was completed in 2020. One abstract was submitted for Biennial Scientific sessions of AISSL.

iii) Stabilization effect of pharmacological compounds and plant extracts on dengue virus infected rat basophils

Investigators: Dr. Narmada Fernando (IBMBB), Prof. Sunil Premawansa (UOC), Prof. Shiroma Handunnetti (IBMBB),

MSc student: Dr. Chathurika Wijegunrathne

Funding: IBMBB (MSc studies)

One MSc project was completed in 2020. One abstract was submitted for Biennial Scientific sessions of AISSL.



iv) Identification of allergens in *Cocos nucifera*, *Artocarpus heterophyllus*, *Boerhavia diffusa* and *Moringa oleifera* which cause allergies

Investigators: Dr Dhanushka Dassanayake (MRI), Dr Rajiva de Silva (MRI), Dr Neelika Malavige (USJP), Dr. Peshala Gunasekera (IBMBB)

MSc student: Ms Janitha Iddagoda

Funding: IBMBB (MSc studies)

One MSc project was completed in 2020. One abstract was submitted for Biennial Scientific sessions of AISSL.

v) Inhibition of histamine release by RBL cells in the presence of selected medicinal plant extract

Investigators: Dr. Sisira Pathirana (IBMBB), Ms Rukshala Buthgama (IBMBB), Prof Sunil Premawansa (UOC)

MSc student: Mr Sumedha Kulathunga

Funding: IBMBB (MSc studies)

MSc project work was in progress in 2020.

vi) In vitro study on anti-inflammatory effect of selected plant derived components on phagocytes of psoriatic arthritis patients

Investigators: Dr Narmada Fernando (IBMBB), Prof Senaka Rajapakse (UoC), Dr Chalukya Gunasekera (MoH)

MSc student: Ms Fatema Shabbir

Funding: IBMBB (MSc studies)

MSc project work was in progress in 2020.

3) Research Programmes on Plant Molecular Biology

Two MSc studies and another research project was in progress in 2020.

i) Profiling of Anthocyanins in Red Tea Accessions

Profiling of Anthocyanins of red tea accessions developed by Tea Research Institute of Sri Lanka. This project is in progress.

Investigators: Dr.M.A.B Ranatunga (TRI), Mr.J.D.Kottawarachchi (TRI), Prof.Nimal Punyasiri.

Funding: Tea Research Institute



ii) Development of Species-specific molecular markers for Agarwood producing plant species in Sri Lanka.

Investigator: Dr. Nadeesha Lewke Bandara
MSc student: Sellachamy Priyankan

Funding: IBMBB (MSc studies)
MSc project work was in progress in 2020.

iii) DNA barcoding and molecular taxonomy of threatened endemic orchids in Sri Lanka

Investigator: Dr. Nadeesha Lewke Bandara
MSc student: Sara Ashroof

Funding: IBMBB (MSc studies)
MSc project work was in progress in 2020.

3) Metabolomics

Two projects were in progress in 2020.

i) Amino Acid Analysis in Rice

Methods were developed for the quantification of amino acids in rice using High Performance Liquid Chromatography and LC-MSMS. These methods are being used to quantify the level of amino acids in rice including traditional rice varieties in Sri Lanka. This project is in progress. Six peer-reviewed articles were published from the project

Investigators: Vimarshi Liyanarachchi (ITI), Prof.K.R Mahanama (UOC), Dr.H.P.P.S Somasiri (ITI), Prof. Nimal Punyasiri
Funding: Industrial Technology Institute.

ii) Drug Metabolism

Therapeutic drug monitoring (TDM) of Clozapine using HPLC in Sri Lankan Patients with Schizophrenia

Investigators: Dr.Thusitha Wickramasinghe and his team, Department of Clinical Biochemistry, Faculty of Medicine, University of Kelaniya & Prof. Nimal Punyasiri, IBMBB

Funding: University of Kelaniya



4) Research Programme on Biochemistry and Molecular Biology of Microbes

One PhD project was completed in 2020.

i) Identifying *Bacillus thuringiensis* isolates with insecticidal activity

Aimed at isolating and characterizing of *Bacillus thuringiensis* strains with enhanced insecticidal activity that can be used to control rice and vegetable pests

Investigators: Prof. OVDSJ Weerasena (IBMBB), Dr. Radhika Samarasekera (Industrial Technology Institute)

PhD student/IBMBB: Ms. Rashini Baragama-Arachchi

Funding: National Science Foundation and National Research Council to Dr. Radhika Samarasekera (NSF/RG/2011/BT/05)

One PhD was completed in 2020.

5) Research Programme on Medicinal plants

A) Research on medicinal plants with anti-inflammatory, immunomodulatory and anti-allergic effects

Two PhD projects were being completed in 2020. One MSc project in progress in 2020.

The focus of these studies was on medicinal plants used in the treatment of diseases either associated with or caused by inflammatory responses or those used as immunomodulators.

i) Drug leads from medicinal plants in Sri Lanka: Investigations on immune-modulatory / anti-allergic activity

Aimed at evaluating possible immunomodulatory / anti-allergic activities of selected endemic and medicinal plants

Investigators: Prof. Shiroma Handunnetti (IBMBB), Prof. Dilip De Silva (UOC)

PhD student/IBMBB: Ms BA Dilani Rukshala

Funding: Ministry of Higher Education: Drug Leads from Medicinal Plants

PhD studies were in progress. One manuscript was re-submitted for publication. Two other manuscripts were in preparation for publication.



ii) Activity studied isolation of anti-inflammatory compounds from *Alpinia carcarata* rhizome and leaf

Aimed at isolation of anti-inflammatory compounds and value added products for inflammatory disease/conditions.

Investigators: Dr. Selvaluxmy Chelvendran (ITI), Prof. Shiroma Handunnetti (IBMBB), Dr. GAS Premakumara
PhD Student: Maduwanthi Chandrakanthan

Funding: National Research Council to Dr Selvaluxmy Chelvendran (NRC-12-081)
PhD thesis writing was being completed in 2020. One paper was published in 2020.

iii) Study of immunomodulatory activity of *Erythroxylum moonii* and *Erythroxylum monogynum*

Investigators: Ms Jayani Kariyawasam (IBMBB), Ms Dilani Rukshala (IBMBB), Prof S Handunnetti (IBMBB)
MSc student: Mr Sajiv De Silva

Funding: IBMBB (MSc studies)
MSc project work was in progress in 2020.

B) Anti-cancer effects of medicinal plants

Three projects were in progress in 2020.

i) Anti-cancer effects of *Camponosperma zeylanica*- an endemic plant

Investigators: Prof. Kamani H Tennekoon (IBMBB), Dr. Meran Keshawa Ediriweera (Post-doctoral Scientist), Dr. S Sameera R Samarakoon (IBMBB), Prof. Ira Thabrew (Visiting Professor, IBMBB),

Funding: National Science Foundation Grant (NSF/2016/BT-02) awarded to Prof. Tennekoon.
One paper was published.

ii) In vitro and in vivo epigenetic investigations on anti-cancer and radio priming effects of different parts of *Mangifera indica* (India) and *Mangifera zeylanica* (Sri Lanka) and impact of green silver nanocomposites

Investigatoors: Prof. Kamani H Tennekoon, Dr. Sameera Samarakoon, Dr. Meran Ediriweera (IBMBB), Dr. N. Devipriya & Dr. V Vadivel (India)
MPhil student/IBMBB: Mr. A.A.D.N. Perera



Funding: Ministry of Science, Technology and Research under Indo-Sri Lanka bilateral agreement

One MPhil student project was in progress in 2020. Sri Lankan scientists and Indian counterparts had exchange visits.

iii) Anti-cancer drug development

Investigators: Prof. Kamani Tennekoon, Dr. Sameera Samarakoon, Prof. Ira Thabrew, Prof. E Dilip De Silva, Prof. Nedra Karunaratne (UoP), Dr. A Adhikari (Nepal), Prof. Iqbal Chaudhry (Pakistan), Dr. Poorna Piyathilake (Wayamba University), Dr. Gomika Udugamasooriya, USA

Research Scientists: Kanishka Senathilake, Dr. Meran Ediriweera

MPhil/ students: Ms. Nimesha Wickramasinghe, Mr. J Thushyanthan, Mr. Kelum Rathnayake
Volunteers and MSc students

Funding: National Science Foundation Grant - RPHS/2016-C07, PI Prof. Kamani Tennekoon and Dr Sameera Samarakoon (Co-I)

Three MPhil/PhDs were in progress in 2020.

6) Research Programmes on Industrial Applications

One PhD study was in progress in 2020.

i) Immunomodulatory activity of a herbal formulation in Sri Lankan Market

This study was aimed at investigating the immunomodulatory activity and the immune mechanisms of *Link Samahan*, a herbal formulation comprising 14 medicinal plant parts

Investigators: Prof. Shiroma Handunnetti (IBMBB), Dr. OVDSJ Weerasena (IBMBB), Prof. A Abeysekera, Link Natural Products Pvt Ltd.

PhD Student: Ms. Loshini Ranaweera

Funding: Research collaborative study initiated following an MOU with Link Natural Products Pvt Ltd. and the IBMBB, University of Colombo for funding this MPhil/PhD study.

PhD research was in progress in 2020. One manuscript was submitted for publication. A second manuscript was in preparation for publication.



7) Research Program on Molecular Identification of Animal Species in Sri Lanka

One MPhil/PhD study was in progress in 2020.

This study was aimed at identification of animal species found in Sri Lanka using molecular biological techniques.

i) Molecular identification new animal species

Investigators: Mr. Mendis Wickaramasinghe (Sri Lanka Herpetological Society), Prof. Kamani Tennekoon (IBMBB) & Dr. Sameera R Samarakoon (IBMBB)

Research Student: Ms. Nethu Wickramasinghe (Sri Lanka Herpetological Society)

Funding: Sri Lanka Herpetological Society

8) Research Programme on Meditation and Health

One MPhil/PhD study was in progress in 2020.

i) Study on immunological, hormonal and biochemical parameters of the stress response in meditators.

Investigators: Prof. Shiroma Handunnetti (IBMBB), Dr. D.H. Warawitage, Prof. Dilshani Dissanayake (Faculty of Medicine, Colombo).

MPhil/PhD student: Mr. J.C. Thambyrajah

Funding: AHEAD project funded by the World Bank Grant No 6026 – LK/ 8743 – LK awarded to Prof. Dilshani Dissanayake.

One manuscript was in preparation for publication.



Services – IBMBB

1. Provide services including
 - i) DNA sequencing
 - ii) Cell culture facility *
 - iii) Genetic analysis for several human diseases such as cancer, developmental disorders and immunodeficiency diseases.
 - iv) HPLC facility to the public and private sector[*Available for non ATCC Cell lines]
2. Deliver professional consultancy in Research and Higher Education
3. Development of projects to facilitate the expansion of the knowledge of Molecular Biology and Biochemistry among Advanced Level students in rural, non-urban schools through conducting guest lectures, road shows and various other programmes.

Activities carried out under BDU in 2020

a) Training on Intellectual Property Rights (IPR) & Awareness

BDU was involved in conducting training in IPR & Awareness on 29th July 2020.

b) Patentable outcomes of IBMBB research projects

BDU was involved in completion of the prior art search for two patent applications for patentable outcomes of IBMBB research projects and communicating the details of the inventions with University Business Linkage, preparation and submission of the non-disclosure agreement (between UBL and IBMBB) for the inventions of said patent applications, drafting PCT and local patent applications for the same inventions.

c) Commercializable inventions of IBMBB and communication with UBL

A list of details on commercializable inventions of Dr. Sameera Samarakoon, Dr. Sisira Pathirana and Dr. Narmada Fernando was submitted to UBL for requesting funds from AHEAD and the Ministry of Higher Education, Technology and Innovation to commercialize the inventions of IBMBB.

d) Virtual Open Day- 2020

BDU coordinated and organized the 8th Annual virtual open day of IBMBB held on 9th October 2020. All IBMBB academics were available to speak with guest students and researchers about ongoing research activities and post-graduate courses at IBMBB. Online visitors, who were interested in pursuing postgraduate courses and short courses, obtained information relevant to each course.

e) MSc courses and short courses offered by IBMBB for 2021

BDU was involved in coordinating the preparation of advertisements/posters for MSc courses for 2021 intake and short courses offered by IBMBB in cell culture techniques and Advanced Immunology.



Quality Assurance Cell-IBMBB

Summary of QA Cell Activities of IBMBB – 2020

- Dr Narmada Fernando continued to be the IBMBB Coordinator for QA activities.
- Ms. Janitha Iddagoda was appointed and served as the Scientific Assistant, QA Cell from February 2020 to July 2020.
Ms Dilani Rukshala was appointed as Scientific Assistant, QA Cell in November 2020.
- Digitizing of the information gathered for the Institutional Review 2015 was completed by June 2020.
- The agreement between BOC and IBMBB was signed in June 2020. New system was being developed to complete the new payment gateway.
- The Domain Coordinators were reappointed and plans are being made to properly record the documents and procedures. Adding the new information & processes were initiated.
- Obtaining Student feedbacks are being implemented.
- Additional webpages including a secondary site for QA Cell were developed in IBMBB website.
- Profiles of academic and academic supportive staff were updated.
- A Guest Lecture/ Seminar on “Intellectual Property Rights and Prior Art Search” was conducted by Dr. Sampath Punchihewa and Mr. Thilina Weerakoon, University Business Linkage on 29th of July 2020 to focus on submission of a patent application. Dr Punchihewa delivered the Guest Lecture and Mr Weerakoon conducted a hands on session prior art search for staff and students of IBMBB.



Academic Visitors to the Institute

A guest lecture was conducted by Prof. Federico Zurita Martinez, Department of Genetics, faculty of Science, University of Granada, Spain. This was regarding “Genetically modified animals (Cell interactions between germ and somatic cells in *Drosophila* ovary)” was held on 07th February 2020 in the Conference room of IBMBB.

Staff Development and Training -2020

Five staff members received training and attended training courses in various aspects as described in the Table given below.

Name	Designation	Workshop / Training Course	Duration
Dr PPSL Pathirana	Senior Lecturer	CTHE Course	10 months
Ms. Anoma Jayasoma	Technical Officer, Grade I	Store Management	06 months
Ms. B.C.M. Perera	Management Assistant, Gr.III	Leave provisions for Government officers	10 th & 11 th February 2020
Ms. S.A.I.U. Samarasinghe	Management Assistant (Book Keeper) Gr.III	Improving Accounting Activities	07 th September 2020
Ms. H.T.D.T. Hettiarachchi	Management Assistant, Gr.III	Microsofi Office EXCEL Advanced Workshop	17 th & 18 th September 2020



Constraints

Financial Resources were the major constraint in 2020 for implementing the activities stipulated in the Action Plan 2020 and the Corporate/ Strategic & Management Plan 2020-2024. The institute had estimated a capital expenditure of Rs 92 million whereas the actual expenditure had to be limited to the government allocation of Rs. 3.53 million. Further, IBMBB has not received funding for research from the UGC which is made available to the other faculties within the university system.

The Covid-19 first outbreak in March 2020 and the second outbreak in October 2020 has completely disrupted the on site academic, research and other activities. Although the teaching activities were converted to on line mode, this was a constraint for conducting practical components. This has resulted in revising the academic calendar for year 2020. Further, the covid restrictions has been a major setback for achieving various activities and targets within the year 2020. The work arrangements on roster basis to ease out the on site activities has resulted in various delays and constraints. COVID 19 situation affected profoundly on all activities of IBMBB during the year 2020.

Lack of Human resources also played a constraining role in functioning the Institute in 2020. Filling some of the cadre positions has been frozen and has created difficulty for the smooth running of institutional functions. Deputy Bursar was on sabbatical leave and to cover these duties, a Senior Assistant Bursar had to be recruited on assignment basis. However, by 1st November, Deputy Bursar resigned from her post and by 1st December a new Deputy Bursar has been appointed (a staff member from another University who is on her sabbatical leave).

By September 2020, the institute was able to finally obtain approval from UGC and Council for the scheme of recruitment for the post of Post- Doctoral Research Fellow (PDRF). The PDRF posts were advertised in October and by December three PDRFs were selected and appointed. The vacant Lecturer post was also advertised and the selection was in progress by end of December 2020. The vacant non-academic staff positions (five cadre posts) which were frozen could not be filled since necessary approvals/lists were pending. Lack of financial resources indirectly affected staff training and development considering the fact that five non-academic position holders were new to the University system.



Staff Development and Welfare Activities

Health Insurance Scheme

A Health Insurance policy was purchased from Sri Lanka Insurance Corporation for the employees at the IBMTB in 2020. The Board of Management of the Institute approved the policy be purchased on welfare basis that a 50% at the total sum insured be borne by the Institute. Eleven employees at the IBMTB and 22 number of their family members were included in the Health Insurance Policy. A total of Rs. 109,298.84 was borne by the Generated funds of the Institute for this purpose in 2020.

Blood Donation Programme - 2020

Due to Covid-19 situation and Colombo district being a high risk area, none of the social events were not conducted in 2020.

Medicinal Plants Development and Conservation Programme – 2020

Medicinal herbs planting programme was held at the IBMTB on 17th September 2020. This programme was conducted in parallel with “Suwa Darani” medicinal plants development and conservation project of the State Ministry of Indigenous Medicine promotion, Rural and Ayurvedic Hospital Development and Community Health.



Director and staff planting “Thippili”



Prof. Weerasena planting turmeric



Human Resources

Employee Classification as at 31st December 2020

Service Category	Salary Code	Approved Cadre	Actual Cadre		Vacancies	Remarks
			Permanent	Temporary		
Primary Level						
Primary Grade- Unskilled	U- PL 1	01	00	01	01	Works Aide was appointed on Assignment Basis.
Primary Grade- Semi skilled	U- PL 2	03	03			
Primary Grade- Skilled	U- PL 3	01	01			
Secondary Level						
Management Assistant – non- Technical	U- MN 1	11	08	04	03	Four Management Assistants were appointed on Assignment Basis
Management Assistant - Technical	U- MT 1	04	02	02	02	
Associate Officers- Segment 2	U- MN 2	00	00			
Associate Officers- Segment 1	U- MN 3	00	00			Two Technical Officers were appointed on Assignment Basis.
Staff Assistant/Supra & Senior Staff Assistant	U- MN 4	00	00			
Tertiary Level						
Academic Support – Segment 2	U- AS 1	06	04	05	-	DMS has approved four (04) posts of permanent Scientific Assistants, suppressing four (04) out of granted six (06) no. of Temporary Scientific Assistant (contract) with fixed salaries. 3 Scientific Assistants were appointed temporary.
Junior Executive/ Managers	U- EX 1	01	01			
Academic Support – Segment 1	U- AS 2	01	01			



Senior Level						
Medical Officer	U- MO 1	00	00			*Permanent employee has resigned from the post of Deputy Bursar w.e.f. 01st November 2020. Deputy Internal Auditor of University of Moratuwa has agreed and assumed duties in the post of Deputy Bursar at IBMBB for a period of one year w.e.f. 01.12.2020 in her sabbatical leave period.
Chief Medical Officer	U- MO 2	00	00			
Middle Level Executives	U- EX 2	01	01			
Middle Level Executives*	U- EX 2 (a)	01	00	01	01*	
Senior Executives	U- EX 3	00	00			
Lecturer	U- AC 3	11	06		01	^Director/ IBMBB also indicated in professor/ Senior Professor category as the Director in year 2020 was one of the Chair Professors of the Institute.
Associate Professors	U- AC 4		00			
Professors/ Senior Professors ^	U- AC 5		04^			
Post- Doctoral Research Fellow	Fixed	03	00	02	01	
Temporary Assistant Lecturer	Fixed	02	00	02		
	**					**02 post of Temporary Assistant Lecturer and 02 post of Post-Doctoral Research Fellows has been approved by DMS. All 5 posts are to be on contract basis.



Research Publications

In the Authors names, staff/students /research assistants of IBMBB are indicated in bold font. Students registered at other HEIs and carrying out work at the IBMBB are given in bold italic.

Research Publications in Peer-reviewed Journals - 2020

1. **Chandrakanthan M, Handunnetti SM**, Premakumara GSA, and Kathirgamanathar S. Topical Anti-Inflammatory Activity of Essential Oils of *Alpinia calcarata* Rosc., Its Main Constituents, and Possible Mechanism of Action. **Evidence-Based Complementary and Alternative Medicine**, 2020, Article ID 2035671, 19 pages <https://doi.org/10.1155/2020/2035671>.
2. Colamba Pathiranage V, Lowe JN, **Rajagopalan U, Ediriweera MK, Senathilake K, Piyathilaka P, Tennekoon KH, Samarakoon SR**. Hexane Extract of *Garcinia quaesita* Fruits Induces Apoptosis in Breast Cancer Stem Cells Isolated from Triple Negative Breast Cancer Cell Line MDA-MB-231. **Nutrition and Cancer**. 2020 Jun 1:1-11.
3. Darshani T, Fronczek FR, Priyadarshani VV, **Samarakoon SR**, Perera IC, Perera T. Synthesis and characterization of novel naphthalene-derivatized tridentate ligands and their net neutral rhenium tricarbonyl complexes and cytotoxic effects on non-small cell lung cancer cells of interest. **Polyhedron**. 2020. 114652. <https://doi.org/10.1016/j.poly.2020.114652>.
4. **De Silva S, Manoharan V, Karunanayake EH, Tennekoon KH**, Imthikab AIA, De Silva K, Angunawela P, Vishwakula S, Lunec J. Pattern of nucleotide variants of TP53 and their correlation with the expression of p53 and its downstream proteins in a Sri Lankan cohort of breast and colorectal cancer patients. **BMC Cancer**. 2020 Jan 30;20(1):72.
5. **Fernando Y**, Wickremeshinghe P, De Silva U, Alahakoon M, Anuradha KWDA and **Handunnetti S**. Differences in serum markers of oxidative stress in well controlled and poorly controlled asthma in Sri Lankan children: a pilot study. **Allergy Asthma & Clinical Immunology**, 2020 16:66 <https://doi.org/10.1186/s13223-020-00463-9>.
6. **Jayasuriya WJABN, Handunnetti SM**, Wanigatunge CA, Fernando GH, Abeytunga DTU, Suresh TS. Anti-Inflammatory Activity of *Pleurotus ostreatus*, a Culinary Medicinal Mushroom, in Wistar Rats. **Evidence-Based Complementary and Alternative Medicine** Volume 2020, Article ID 6845383, 9 pages <https://doi.org/10.1155/2020/6845383>.
7. **Kariyawasam KWJC, Sirisena PDNN, Nanayakkara HLC**, Ratnasooriya WD, **Handunnetti SM**. *Vitex negundo* L. leaf extract inhibits IL-6 and TNF- α secretion and



phagocytosis in human leukocytes, **Journal of Herbal Medicine** 2020,doi:<https://doi.org/10.1016/j.hermed.2020.100341>.

8. **Karunarathna KHT, Mewan KM, Weerasena OVDSJ**, Perera SACN, Edirisinghe ENU. A functional molecular marker for detecting blister blight disease resistance in tea (*Camellia sinensis* L.) **Plant Cell Reports**, 2020, DOI: <https://doi.org/10.1007/s00299-020-02637-6>.
9. **Karunarathna KHT**, Senathilake NHKS, Mewan KM, **Weerasena OVDSJ**, Perera SACN. *In silico* structural homology modelling of EST073 motif coding protein of tea *Camellia sinensis* (L). **Journal of Genetic Engineering and Biotechnology**, 2020, 18(1) 1-10.
10. **Kotelawala JT, Ranasinghe R**, Rodrigo C, **Tennekoon KH**, Silva K. Evaluation of non-coding region sequence variants and mitochondrial haplogroups as potential biomarkers of sporadic breast cancer in individuals of Sri Lankan Sinhalese ethnicity. **Biomedical Reports**, 2020 Jun;12(6):339-347. doi: 10.3892/br.2020.1292. Epub 2020 Mar 17.
11. **Kothalawala SD, Edward D, Harasgama JC, Ranaweera L, Weerasena OVDSJ, Niloofa R**, Ratnasooriya WD, Premakumara GAS, **Handunnetti SM**. Immunomodulatory activity of traditional Sri Lankan concoction of *Coriandrum sativum* L. and *Coscinium fenestratum* G. **Evidence-Based Complementary and Alternative Medicine**, 2020 Article ID 9715060, 10 pages <https://doi.org/10.1155/2020/9715060>.
12. Liyanaarachchi GVV., Mahanama KRR., Somasiri HPPS., **Punyasiri, PAN.**, & Kottawa-Arachchi J.D. Analysis of Total Amino Acids in Rice Using a Validated Reversed-Phase High Performance Liquid Chromatographic Method with Diode Array Detection (RP-HPLC-DAD). **International Journal of Analytical and Bioanalytical Methods**, 2020, 2, 1-8. DOI: 10.35840/ijabm/2408.
13. Liyanaarachchi GVV, Mahanama KRR, Somasiri HPPS, **Punyasiri PAN**, Kottawa-Arachchi JD. Total and free amino acid contents of popular rice varieties (*Oryza sativa* L.) consumed in the capital city of Sri Lanka, 2020, **Journal of National Science Foundation, Sri Lanka** (in press).
14. Mahendran R, **Pathirana S**, Piyatilake ITS, Perera SSN, Weerasinghe MC (2020) Assessment of environmental variability on malaria transmission in a malaria-endemic rural dry zone locality of Sri Lanka: The wavelet approach. **PLoS ONE** 15(2): e0228540. <https://doi.org/10.1371/journal.pone.0228540>.
15. **Manoharan V, Karunanayake EH, Tennekoon KH, De Silva S**, Imthikab AIA, De Silva K, Angunawela P, Vishwakula S, Lunec J. Pattern of nucleotide variants of TP53 and their correlation with the expression of p53 and its downstream proteins in a Sri Lankan cohort of breast and colorectal cancer patients. **BMC Cancer**. 2020 20:72.



16. **Mapalagamage M, Handunnetti SM, Wickremasinghe AR, Premawansa G, Thillainathan S, Fernando T, Kanapathippillai K, De Silva AD, Premawansa S.** High levels of serum Angiopoietin 2 and Angiopoietin 2/1 ratio at critical stage of dengue hemorrhagic fever patients and their association with clinical and biochemical parameters. **Journal of Clinical Microbiology**, 2020, 58:e00436-19. <https://doi.org/10.1128/JCM.00436-19>.
17. **Melshandi HDS, Samarasekera JKRR, Handunnetti SM, Weerasena OVDSJ, Maharjan R, Choudhary MI.** Investigation of β -Lactamase enzyme inhibitory, anti-bacterial and anti-fungal bio-activities of *Dillenia retusa* Thumb: An endemic medicinal plant to Sri Lanka. **South Asian Research Journal of Natural Products**, 2020; 3(4), 1-12. (<https://www.Journalsarjnp.com/index.php/SARJNP/article/view/30112>).
18. **Mitini-Nkhoma SC, Fernando N, Ishaka GKD, Handunnetti SM, Pathirana SL.** Ion Transport Modulators as Antimycobacterial Agents. **Tuberculosis Research and Treatment**, vol. 2020, Article ID 3767915, 7 pages, 2020. <https://doi.org/10.1155/2020/3767915>.
19. Pathiranage VC, **Thabrew I, Samarakoon SR, Tennekoon KH, Rajagopalan U, Ediriweera MK.** Evaluation of anticancer effects of a pharmaceutically viable extract of a traditional polyherbal mixture against non-small-cell lung cancer cells. **Journal of Integrative Medicine**. 2020 May;18(3):242-252.
20. Rajapakse S, Weeratunga PN, **Balaji K, Ramchandani KC, de Silva US, Ranasinghe SA, Gunarathne D, Wijerathne PPB, Fernando N, Handunnetti SM, Fernando SD.** Seroprevalence of leptospirosis in an endemic mixed urban and semi-urban setting - A community-based study in the district of Colombo, Sri Lanka. **PLoS Neglected Tropical Diseases**, 2020, 14(5): e0008309. <https://doi.org/10.1371/journal.pntd.0008309>.
21. **Ranasinghe HN, Fernando N, Handunnetti SM, Weeratunga PN, Katulanda P, Rajapakse S, Galappaththy P, Constantine GR.** The impact of propranolol on nitric oxide and total antioxidant capacity in patients with resistant hypertension evidence from the appropriate trial. **BMC Research Notes**, 2020, 13:228 <https://doi.org/10.1186/s13104-020-05067-5>.
22. Samanthi KAU, Welideniya DT, Acharige AD, **Samarakoon SR, Rathnayaka RK, de Silva M, Perera SS, Pieris C, Wanninayake UK, Jayathilaka A, Karunaratne V, Amaratunga GAJ, Gunasekera DS.** An efficient and high-yielding method for extraction and purification of linamarin from Cassava; *in vitro* biological evaluation. **Natural Product Research**. 2020.1-4. <https://doi.org/10.1080/14786419.2020.1744136>.
23. Santhirasegaram S, Wickramarachchi SR, Attanayake RN, Weerakoon G, **Samarakoon S, Wijeratne K, Paranagama PA.** A Novel Cytotoxic Compound From the Endolichenic Fungus, *Xylaria psidii* Inhabiting the Lichen, *Amandinea medusulina*. **Natural Product Communications**. 2020. 15.7. <https://doi.org/10.1177/1934578X20933017>.



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24. **Senanayake KS**, Söderberg J, Pölajev A, Malmberg M, **Karunanayake EH**, **Tennekoon KH**, **Samarakoon SR**, The Genome of *Setaria digitata*: A Cattle Nematode Closely Related to Human Filarial Parasites. **Genome Biology and Evolution**. 2020 Feb 1;12(2):3971-3976.
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Preprints

1. **Senathilake K**, **Sameera Samarakoon S**, **Tennekoon KH**. Virtual screening of inhibitors against spike glycoprotein of 2019 novel corona virus: A drug repurposing approach. Preprints. 2020. 10.20944/preprints202003.0042.v2.



Papers Published in Conference Proceedings -2020

Research Communications – 2020

(Abstracts published in Conference Proceedings)

1. **De Kostha YBNS, Pathirana SL, Handunnetti SM, Gunawardena S.** Characterization of antigens of *Enterobius vermicularis* (pinworm) eggs. **Annual Research Symposium - 2020, Faculty of Medicine, University of Colombo**, 14th December 2020, pp 34.
2. **Gunasekera WMKT.de AW, Weerasena OVDSJ, Premaratne RG, Handunnetti SM, Premawansa S, Fernando SD (2020).** Applicability of malaria rapid diagnostic tests in diagnosis of non-falciparum malaria infections in Sri Lanka under zero indigenous malaria setting. **76th Annual Sessions of the Sri Lanka Association for the Advancement of Science**, 76 (1), pp 3.
3. **Jayasekera BMLP, Tennekoon KH, Ranasinghe R, De Silva GKS.** Human mitochondrial DNA variant analysis through next generation sequencing: Identification of potential circulating biomarkers for sporadic breast cancer among Sinhalese women. **Colombo Medical Congress** 12-15 February 2020.
4. **Kotelawala JT, Tennekoon KH, Ranasinghe R, Rodrigo HACIK, De Silva GKS, Perera WAHA, Yoganathan N, Manatunga MRS, Dissanayake DMAS, Joseph N, Rajasooriyar C, Indranath K.** Association of T16189C polymorphism of mitochondrial DNA hypervariable region with sporadic breast cancer in women of Sri Lankan Tamil ethnicity. **Colombo Medical Congress** February 2020, pp 106-107.
5. **Liyanaarachchi GVV., Mahanama, KRR., Somasiri HPPS., Punyasiri PAN. & Ranatunga MAB (2020).** Variation of amino acid composition rice (*Oryza sativa* L) as affected by the cooking technique. **Proceedings of the Annual Research Symposium, University of Colombo, Faculty of Science**, 2020.
6. **Perera AADN , Samarakoon SR, Ediriweera MK, Tennekoon KH.** Evaluation of anti-cancer activities of *Mangifera zeylanica* bark and leaf extracts in NCI-H292 non-small cell lung cancer cells. **Colombo Medical Congress** 12-15 February 2020.
7. **Perera HIT, Yapa WB, Schwarz F, Weerasena OVDSJ, T. Muzeniek, Siriwardana S, Premawansa G, Targosz A, B. Becker-Ziaja, N. Kromarek, M. Grossegasse, Handunnetti SM, Premawansa S, Kohl C, Nitsche A.** Molecular identification of rufous horseshoe bat, *Rhinolophus rouxii* from the Wellawaya Wavulgalge cave in Sri Lanka. **Annual Research Symposium 2020, Faculty of Science, University of Colombo**, Sri Lanka on 17th December 2020, pp 46.



8. **Rathnayaka RMRK, Samarakoon SR, Tennekoon KH**, Adhikari A, R Shreshtha RL. *In-vitro* cytotoxicity screening of govaniadine on human cancers. **Colombo Medical Congress** February 2020.
9. **Rathnayaka RMRK, Samarakoon SR, Tennekoon KH, Ediriweera MK**, Adhikari A, Gunasekara DS. Cytotoxic effect of a resorcinolic lipid isolated from *Mangifera zeylanica* in a human cancer cell panel (2020). 1st International Conference on Frontiers in Chemical Technology (FCT, 20 – 22 July, 2020) .
10. **Samarasinghe SASM, Hewage AS, Sundralingam T**, KSH de Silva KSH, **Tennekoon KH**. Conformation and characterization of a suspected deletion at the LHX4 locus in a child with growth hormone deficiency in Sri Lanka. **Colombo Medical Congress** 2020. Colombo, Sri Lanka. pp 021.
11. **Terensan S**, Fernando HNS., Silva JN, Kottearachchi N.S and **Weerasena OVDSJ**. 2020. Molecular differentiation of blast and brown spot diseases in rice, **The 7th International Conference on Agriculture (AGRICO 2020)**, November 26-27, 2020 pp 11.
12. **Thambyrajah JC, Handunnetti SM**, Warawitage DH, Dissanayaka WDN. High serum antioxidant capacity among long term meditators: A pilot study. **Annual Research Symposium - 2020, Faculty of Medicine, University of Colombo**, 14th December 2020, pp 38.
13. **Thambyrajah JC, Handunnetti SM**, Warawitage DH, Dissanayaka WDN. Serum nitrate and nitrite levels among long term meditators: A pilot study. **Annual Research Symposium - 2020, Faculty of Medicine, University of Colombo**, 14th December 2020, pp 65.
14. **Thambyrajah JC**, Jayamaha CJS, Rathnayake AKDY, **Handunnetti SM, Fernando N**. Preliminary study to detect mutations in UL97 gene in suspected ganciclovir resistant CMV patients' samples, presented to a diagnostic laboratory in Sri Lanka. **The Bulletin of the Sri Lanka College of Microbiologists**. 18(1) August 2020.
15. **Wickramaratne NS, J. Thusyanthan J, Samarakoon SR**, D. N. Karunaratne and **K. H. Tennekoon** (2019); Selective cytotoxicity of *Angiopteris evecta* (Forst.) Hoffm leaves on ER positive breast cancer (MCF-7) cells. **Colombo Medical Congress** 12-15 February 2020.



The Future Projection Report on activities to safeguard the environment and mitigate the negative impact on the environment based on Sustainable Development

Institute of Biochemistry, Molecular Biology and Biotechnology (IBMBB), University of Colombo is a research institute which was established with the view to provide instruction, training, research, development and consultancy in Biochemistry, Molecular Biology, Biotechnology, Immunology, Bioinformatics and other allied fields. IBMBB directly contributes to the Goal 04 of Sustainable Development Goals; Quality Education. While the Institute contributes to the Quality of Education, Institute has given concern of safeguarding the environment and to mitigate the negative impact on the environment.

I. Reduce paper work

IBMBB is in the process of digitization of paper based document to reduce paper usage. Document Management System for the IBMBB is planned to introduce in 2022. Further, emails are used for the internal and external communications to reduce paper works and toner usage within the Institute.

II. Polythene Free Zone

Institute of Biochemistry, Molecular Biology and Biotechnology is located at a Polythene free zone and the Institute has taken action to maintain it.

III. Tree planting campaign

Institute organizes a tree planting project annually to celebrate the Anniversary of the Institute and a tree planting campaign has been planned to celebrate the 17th Anniversary of the Institute in June 2021.

IV. Wastage Management System

IBMBB, University of Colombo has state of the art laboratories for postgraduate teaching and training purposes that are well equipped with safety precautions required for handling human donor blood samples and cell lines which are used in laboratories. Standard safety procedures are practiced and are being continued in handling and disposal of biohazard material. All necessary laboratory procedures are taken and are being continued to minimize environmental risk of handling and disposal of hazardous chemicals and reagents.



V. Move to environmental friendly power generation

A feasibility study has been done to cover 40% of power consumption of the Institute by utilizing solar panels by 2023. Due to the lack of space on the roof of the IBMBB building, full power consumption cannot be covered by the solar power. Therefore, Institute is trying to cover the 40% of annual power consumption by the solar power.

VI. Move to environmental friendly lighting accessories

It has been planned to move to the LED lighting accessories which are energy efficient and environmental friendly than traditional lighting systems such as fluorescent by 2024. LED lights are not cause for the environmental pollution when disposed of in landfill waste since its contain no toxic elements.



Table 1: MPhil/PhD Degrees in Progress and New Registrations – Year 2020

	Index Number	Name of the student	Date of registration	Source(s) of funds	Tentative Title	Supervisors
01	IBMBB/ MPhil/13/ 001	Ms. BA Dilani Rukshala	2013.05.01	Ministry of Higher Education	Drugs leads from medicinal plants in Sri Lanka- Investigation on immunomodulatory / anti –allergic activity	Prof. Shiroma Handunnetti Prof. E Dilip de Silva
02	IBMBB/ MPhil/13/ 008	Ms. M Chandhra- kathan	2013.10.25	NRC Grant	Activity guided separation of anti- inflammatory compounds from <i>Alpinia calcarata</i> rhizome and leaf	Dr. Selvaluxmy Chelvendran Prof. Shiroma Handunnetti Dr. GA Sirimal Premakumara
03	IBMBB/ MPhil/15/ 001	Mr. Kanchana S Senanayake	2015.02.01	Swedish Research Links International collaborative research grant – The Swedish Research Council	Analysis of <i>Setaria digitata</i> Genome using NGS Technologies: Identification of potential drug targets in <i>Setaria digitata</i>	Dr. Erik Bongcam Rudloff Prof. EH Karunanayake Prof. KH Tennekoon
04	IBMBB/ MPhil/15/ 002	Ms. WM Kumudu T de AW Gunasekara	2015.02.01	National Science Foundation	Comparison of parasitological and molecular diagnostic methods used for malaria diagnosis in the phase of prevention of reintroduction of malaria in Sri Lanka	Prof. Deepika Fernando Prof. Sunil Premawansa Prof. Shiroma Handunnetti Dr. Jagathpriya Weerasena Dr. Risintha Premaratne



	Index Number	Name of the Student	Date of registration	Source(s) of funds	Tentative Title	Supervisors
05	IBMBB/ MPhil/15 /003	Ms. Vahinipriya Manoharan	2015.02.01	University Grants Commission	Analysis of somatic mutations of TP53 in selected cancers in a cohort of Sri Lankan patients	Prof. EH Karunanayake Dr. Sumadee de Silva Prof. Kamani Tennekoon
06	IBMBB/ MPhil/15 /004	Mr. Krishan R Balaji	2015.02.02	University of Colombo Research Grant	Sero –epidemiology of human leptospirosis in the District of Colombo, Sri Lanka	Prof. Senaka Rajapakse Prof. Shiroma Handunnetti Prof. Deepika Fernando
07	IBMBB/ MPhil/15 /005	Ms. Umapriya-tharshini Rajagopalan	2015.03.01	National Research Council	Screening of Sri Lankan endemic plants for anti-cancer stem cell activity and evaluation of anti-cancer stem cell properties of isolated compounds from active plants for breast cancer	Dr. Sameera R Samarakoon Prof. Kamani H Tennekoon Prof. E Dilip de Silva
08	IBMBB/ MPhil/15 /006	Mr. DL Peshala Eranga Gunasekara	2015.08.01	Medical Research Institute & NSF	Characterization of allergenic components of venom of <i>Apis dorsata</i> and <i>Vespa affinis</i> (Order-hymenoptera) and their cross reactivity with venom of the respective Western species	Dr. Rajiva de Silva Prof. Shiroma Handunnetti Prof. Sunil Premawansa Prof. Sriyani Dias Dr. Sirimal Premakumara
09	IBMBB/ MPhil/16 /001	Mr. Saman B Kotigala	2016.06.01	NSF/Self funding	Screening of Sri Lankan endemic plants for anticancer activity in Lung cancer cells, isolation structure elucidation of active anti-cancer compounds and evaluation of their molecular mechanisms of action	Prof. Ira Thabrew Dr. Sameera R Samarakoon



	Index Number	Name of the Student	Date of registration	Source(s) of funds	Tentative Title	Supervisors
10	IBMBB/ MPhil/16 /002	Ms. Joanne T Kotelawala	2016.06.01	NSF Research Scholarship	Characterization of Mitochondrial DNA mutations in the D-loop and mtDNA haplogroups in Sporadic Breast Cancer.	Prof. Kamani H Tennekoon Dr. Kanishka De Silva
11	IBMBB/ MPhil/16 /003	Ms. BV Loshini R Ranaweera	2016.08.01	Link Natural Products (Pvt) Ltd – Sri Lanka	Study on immunostimulatory activity and underlying immune mechanisms of a herbal formulation in the Sri Lankan market	Prof. Shiroma Handunnetti Dr. OVDSJ Weerasena Prof Ajith Abeysekera
12	IBMBB/ MPhil/16 /004	Mr. Poorna W Balasooriya	2016.11.01	National Science Foundation	Application of indigenous soil micro flora as biological control measures for white root disease of rubber growing lands in Sri Lanka	Dr. THPS Fernando Dr. OVDSJ Weerasena
13	IBMBB/ MPhil/17 /001	Ms. Suvanthini Terensan	2017.06.01	Self funded	Genomic diversity of rice blast pathogen <i>Magnaporthe oryzae</i> in Sri Lanka and mapping of host resistance in rice germplasm	Dr. OVDSJ Weerasena. Prof. Nisha S Kottearachchi
14	IBMBB/ MPhil/17 /002	Ms. M Nimesha S Wickramaratne	2017.06.01	National Science Foundation	Isolation structural and functional characterization of active antibreast cancer metabolites from endophytic fungi of plants and selected endemic/ medicinal plants of Sri Lanka	Prof. Kamani H Tennekoon Dr. Samera R Samarakoon Prof. Nedra Karunaratne



	Index Number	Name of the Student	Date of registration	Source(s) of funds	Tentative Title	Supervisors
15	IBMBB/ MPhil/17 /003	Mr. Jeyaraj Thusyanthan	2017.06.01	National Science foundation	Screening of selected endophytic fungi and endemic plants for anticancer activity using hepatocellular carcinoma (HepG2) cell line and isolation of active compounds	Prof. Kamani H Tennekoon Dr. Sameera R Samarakoon Prof. Ira Thabrew
16	IBMBB/ MPhil/17 /004	Ms. BM Lakshika P Jayasekara	2017.09.01	National Research Council	Mutations and polymorphisms of mitochondrial genes as risk factors for sporadic breast cancer in Sri Lankan patients of Sinhalese ethnicity	Prof. Kamani H Tennekoon Dr. Ruwandi Ranasinghe Dr. Kanishka De Silva
17	IBMBB/ MPhil/17 /005	Mr. RMR Kalum Rathnayake	2017.10.01	National Science foundation	Screening of compound libraries on a cancer cell panel and development of a synthetic anti- cancer compound and isolation of active compounds	Prof. KH Tennekoon Dr. Sameera R Samarakoon Dr Dinara Gunasekara
18	IBMBB/ MPhil/18 /002	Ms. HI Thejane Perera	2018.02.01	Research Funds from Robert Koch Institute, Germany	Immunological and molecular identification of medically important bat viral and bacterial pathogens and viral encephalitis cases in Sri Lanka	Prof. Wipula Yapa Dr. Andreas Dr. Claudia Kohl Prof. Sunil Premawansa Prof. Shiroma Handunnetti Dr. O.V.D.S.J. Weerasena
19	IBMBB/ MPhil/18 /003	Ms. P Dakshika Gangani	2018.04.01	International Center for Genetic Engineering and Biotechnology	Production of Monoclonal antibodies for diagnosis of Leptospira antigens of selected most prevalent Serovars/ Serogroups of <i>Leptospira</i> in Sri Lanka	Prof. Shiroma Handunnetti Prof. Senaka Rajapakse Prof. Sunil Premawansa



	Index Number	Name of the Student	Date of registration	Source(s) of funds	Tentative Title	Supervisors
20	IBMBB/ MPhil/18 /004	Ms. Amali S Fernando	2018.04.01	National Research Council	Insight for molecular anthropology of peopling in Sri Lanka. Ancient human mtDNA and molecular sex analysis of archeological skeletal remains at Udupiyangalage and Alugalge caves	Prof. Kamani Tennekoon Dr. Ruwandi Ranasinghe
21	IBMBB/ MPhil/18 /005	Ms. Nimesha Wickramasinghe	2018.07.01	Self-financed	Molecular Systematics of the blind snakes (serpentes: Scolophoridae) of Sri Lanka	Dr. David Gower Prof. Kamani H. Tennekoon Dr. Sameera R Samarakoon
22	IBMBB/ MPhil/18 /006	Mr. AAD Nirmal Perera	2018.10.01	Indo-Sri Lanka Grant	Evaluation of anti-cancer effects of <i>Mangifera zeylanica</i> plant extracts on non-small lung cancer cell lines	Prof. Kamani Tennekoon Dr. Sameera R Samarakoon Dr. Meran K Ediriweera
23	IBMBB/ MPhil/19 /001	Ms. MD Sakunthala Janaki	2019.01.01	National Research Council	Development of a colourimetric reverse transcription loop mediated isothermal amplification (RT-LAMP) assay as a cost effective, novel surveillance tool for differential detection of dengue serotypes in <i>Aedes</i> mosquitoes	Dr. O.V.D.S.J. Weerasena Prof. S.M. Handunnetti Dr. P.P.S.L. Pathirana Dr. Hasitha Tissera Dr. P.H.K.V.S. Aryaprema



	Index Number	Name of the Student	Date of registration	Source(s) of funds	Tentative Title	Supervisors
24	IBMBB/ MPhil/19 /002	Ms. Sivagini Kumarasamy	2019.02.01	National Science Foundation	Molecular Phylogeny of marine macro algae (sea weeds) present in Sri Lankan coasts and isolation of anti-cancer compounds to target oral cancers from marine macro algae	Dr. M.A. Poorna C. Piyathilaka Prof. Kamani H Tennekoon Dr. Ruwandi Ranasinghe Dr. Sameera R Samarakoon
25	IBMBB/ MPhil/20 20/001	Ms. SA Saumya M Samarasinghe	2020.09.01	National Research Council	Genetic analysis for predictive markers for hepatocellular Carcinoma (HCC) in non- alcoholic Steatohepatitis (NASH)	Dr. Asanka Sudeshini Hewage Prof. Rohan Siriwardena Prof. Kamani H. Tennekoon Prof. Madunil Anuk Niriella
26	IBMBB/ MPhil/20 20/002	Ms. Anjana HJ Welikala	2020.10.01	Already available to the supervisors (Dr. Ruwandi Ranasinghe, Prof. Kamani Tennekoon)	Comparative analysis of the whole mitochondrial genome in Sinhalese, Sri Lankan Tamil and vedda population in Sri Lanka	Dr. Ruwandi Ranasinghe Prof. Kamani H. Tennekoon
27	IBMBB/ MPhil/20 20/003	Mr. James C Thambyrajah	2020.07.01	AHEAD Grant (6026-LK/8743-LK)	A cross sectional comparative study on selected immunological, hormonal and biochemical parameters of the stress response in experienced buddhist meditators and non-meditators	Prof. Shiroma Handunnetti Dr. Dilanthi Warawitage Prof. Dishani Dissanayake



Table 2 : Student Registered in other Higher Educational Institutions & carrying a part of study in the IBMBB Laboratories – 2020

No.	Name of student	Degree registered	Affiliation	Source of funds	Tentative title of thesis	Names of Supervisors
1	Dr. D Padmasiri A Dissanayake	PhD	Indigenous Medicine, Uni. of Colombo	HETC-Institute of Indigenous Medicine	Anti-inflammatory potential of decoctions of <i>Cyathulla prostrata</i> , <i>Acyranthus aspera</i> and <i>Asparagus racemosus</i>	Prof HMA Thisera Prof Shiroma Handunnetti* Dr S Sivaganesh
2	Ms. Keshani Silva	PhD	Rubber Research Institute Agalawatte	Rubber Research Institute of Sri Lanka	Genetic Diffrentiation of Sri Lankan rubber isolates of <i>Phellinus noxius</i> and characterization of the enzymes produced	Prof. Jagath Weerasena Prof. Chandrika Nanayakkara Dr. Sarojini Fernando

*Supervisors for research component conducted at IBMBB, University of Colombo.



Table 3: Research Funding -2020

[Names of IBMBB researchers are given in bold font.]

Grantee	Name of the Project	Funding Agency	Grant No	Funds available (Rs)
Prof Kamani Tennekoon (PI) Dr Sameera Samarakoon (CoI)	<i>In vitro and in vivo</i> epigenetic investigation on anticancer and radiopriming effects of different parts of <i>Mangifera indica</i> (India) and <i>Mangifera zeylanica</i> (Sri Lanka) and impact of green silver nanocomposites.	Ministry of Science Technology and Research	MSTR/TRD/A GR/3/2/08	825,276.00
Prof Kamani Tennekoon (PI) Dr. Ruwandi Ranasinghe (Co-I) Dr. Kanishka De Silva (Co-I)	Mutations and polymorphisms of mitochondrial genes as risk factors for sporadic breast cancer in Sri Lankan patients of Sinhalese ethnicity	National Research Council	NRC 17-020	(Funds are handled by NRC)
Prof Kamani Tennekoon (PI) Dr Sameera Samarakoon (Chief Co-Investigator)	Development of anticancer compound libraries	National Science Foundation	RPHS/2016/C-07	3,234,348.00
Ms Joanne Kotelawala - (PhD student) Prof Kamani Tennekoon - Principal Supervisor Dr Ruwandi Ranasinghe (Co-S) Dr Kanishka De Silva (Co-S)	Characterization of mitochondrial DNA mutations in the D-loop and mtDNA haplogroups in sporadic Breast cancer	National Science Foundation	NSF/SCH/2016 /04	737,529.00
Prof Shiroma Handunnetti (PI) Dr. OVDSJ Weerasena (Co-I) Prof Senaka Rajapakse (Co-I) Dr. Lilani Karunanayake (Co-I) Prof. Sunil Premawansa (Co-I)	Detection of genotypes and serotypes of <i>Leptospira</i> isolated from leptospirosis patients of different severities	National Research Council	NRC-17-098	(Funds are handled by NRC)
Prof Shiroma Handunnetti (PI) Dr OVDSJ Weerasena (Co-PI)	Study on immunostimulatory activity and underlying immune mechanisms of a herbal formulation in the Sri Lanka market	University-Industry collaborative study: IBMBB, UOC and Link Natural Products Pvt Ltd		(Funds are handled by Link Natural Products Pvt Ltd)
Prof Shiroma Handunnetti (PI) Prof. Sunil Premawansa (Co-I) Prof Senaka Rajapakse (Co-I)	Development of an antigen-based immunodiagnostic test for leptospirosis.	International Centre For Genetic Engineering and	CRP/LKA17-01 – Contract No. CRP/18/008	3,053,151.00



		Biotechnology		
Dr Ruwandi Ranasinghe (PI) Prof Raj Somadeva (Co-I) Prof KH Tennekoon (Co-I) Prof EH Karunanayake (Co-I)	Insight for molecular anthropology of early people in Sri Lanka: Ancient human mtDNA and Molecular sex analysis of archeological skeletal remains at Udupiyangalge and Alugalge caves	National Research Council	NRC-17-042	Funds are handled by NRC
Dr MAPC Piyathilaka (PI) Prof KH Tennekoon (Co-I) Dr Sameera R Samarakoon (Co-I) Dr Ruwandi Ranasinghe (Co-I)	Molecular phylogeny of marine macro algae (sea weeds) present in Sri Lankan coasts and isolation of anti-cancer compounds to target oral cancers from marine macro algae	National Research Council (NRC)	NRC Grant No 17-074	Funds are handled by PI's Institution
Dr. Neelika Malavige (PI) Dr Sameera Samarakon (Co-I) Prof. K H Tennekoon (Co-I)	Determining the role of dengue NS1 in the pathogenesis of dengue infections- from National Research Council Sri Lanka	National Research Council	NRC-15-014	Funds are handled by PI's Institution
Dr Hasitha Thissera (PI) Prof Shiroma Handunnetti (Co-PI) Dr OVDSJ Weerasena (Co-PI) Dr Sisira Pathirana (Co-PI) Dr Narmada Fernando –Co-PI Ms Sakuntala Janaki – Investigator & PhD Trainee	Development of a colourimetric reverse transcription Loop-mediated isothermal amplification assay as a cost-effective, novel surveillance tool for differential detection of Dengue serotypes in <i>Aedes</i> mosquitoes	National Research Council	NRC-19-065	Funds are handled by NRC
Dr Sudeshini Hewage (PI) Prof Rohan Siriwardan (Co-PI) Prof Kamani Tennekoon (Co- PI) Prof. Madunil Niriella (Co- PI) Dr Sumadee de Silva (Co- PI)	Genetic analysis for predictive markers for hepatocellular carcinoma (HCC) in non-alcoholic steatohepatitis (NASH) related cirrhosis	National Research Council	NRC-19-030	Funds are handled by NRC
Total funds received and available from Research Grants in year 2020				7,850,304.00



Table 4: PhD Thesis submitted for Examination in year 2020

Name of the Student	Gender	Year of entry	Thesis submitted for examination	Degree Programme	Title of the Dissertation/Thesis	Year of Award of Degree
Ms. RY Baragama-arachchi	F	2014	2019.10.28	PhD/ IBMBB	Molecular characterization of <i>Bacillus thuringiensis</i> isolates from Sri Lanka with insecticidal activity against <i>Plutella xylostella</i> and <i>Cnaphlocrosis medinalis</i>	2020
Mr. D.L Peshala Eranga Gunasekera	M	2015	2020.07.01	PhD/ IBMBB	Characterisation of allergenic components of venom of <i>Apis dorsata</i> and <i>Vespa affinis</i> (Order-Hymenoptera) and their cross-reactivity with venom of the respective Western species	2020
Ms. Vahinipriya Manoharan	F	2015	2020.11.24	PhD/ IBMBB	Analysis of somatic mutations and protein expression of <i>TP53</i> gene in selected cancers in a cohort of Sri Lankan patients	Dissertation under examination



Table 5: MSc Dissertations: Molecular Life Sciences – Submitted for examination in year 2020 and Degrees awarded in the Convocation 2020

Index No	Name of the Student	Title of the Dissertation	Supervisors / Co-supervisors	Year of Award of Degree
MLS/18/001	Mr. Dennis K. Muthoni	<i>In vitro</i> effects of compound X on breast cancer stem cells grown in hypoxic condition	Dr. Sameera R Samarakoon, Dr. Poorna Piyathilake	2020
MLS/18/003	Ms. A.A. Jayawickrama	Development of a reporter gene assay for screening of anti cancer drug leads which can target cancer stem cell	Dr. Sameera R Samarakoon, Dr. Kanishka Senathilake	2020
MLS/18/005	Ms. D.T. Mahaliyanage	Study of cohort of children with Homocystinuria in Sri Lanka for selected variants in Methylenetetrahydrofolate reductase (MTHFR) gene	Prof. Nimal Punyasiri, Dr. Sumadee De Silva, Dr.Eresha Jasinge	2020
MLS/18/006	Ms. F.N. Nuha	Identification of exact breakpoints of complete <i>GH1</i> gene deletions discerned in two children with isolated growth hormone deficiency	Dr. Sudeshini Hewage, Prof. Shamy de Silva, Dr. Tharmini Sundralingam	2020
MLS/18/009	Ms. M.H.N.J. Samarasinghe	Study of a cohort of children with Homocystinuria in Sri Lanka for selected variants in Cytathionine beta-synthase (<i>CBS</i>) gene	Dr. Sumadee De Silva, Prof. Nimal Punyasiri, Dr. Eresha Jasinge	2020
MLS/18/010	Ms. S.A.S.M. Samarasinghe	Confirmation and characterization of a suspected deletion at the <i>LHX4</i> gene locus in a child with growth hormone deficiency	Prof. K.S.H. de Silva, Dr. Sudeshini Hewage, Dr. Tharmini Sundralingam	2020
MLS/18/011	Ms. K.P.T.V. Silva	<i>In silico</i> and <i>in vitro</i> screening of small compound libraries for the identification of novel drug leads against breast cancer stem cells	Dr. Kanishka Senathilake Dr. Sameera Samarakoon	Dissertation under examination



Table 6: MSc Dissertations: Cellular & Molecular Immunology- Submitted for examination in year 2020 and Degrees awarded in the Convocation 2020

Index no.	Name of Student	Research Topic	Supervisors	Year of Award of Degree
CMI-16-005	Mr. Najumudeen Mohamed Kiyas	Study on identification of lipopolysaccharide types in <i>Burkholderia pseudomallei</i> strains isolated from patients in Sri Lanka	Dr. Enoka Corea Dr. Narmada Fernando Prof. Shiroma Handunnetti	2020
CMI-17-004	Ms. Wathsala Dissanayake	Rat antibody response following intraperitoneal immunization with <i>Leptospira</i> antigens and changes in peritoneal leukocyte subpopulations	Prof. Sunil Premawansa Dr. Rajiva de Silva Prof. Shiroma Handunnetti	2020
CMI-18-001	Mr. W.G.K. Anuradha	Comparison of antigen profiles of most prevalent serovars of <i>Leptospira</i> spp in Sri Lanka	Prof. Shiroma Handunnetti Dr. Narmada Fernando	Completed. Degree not yet awarded.
CMI-18-002	Ms. Y.B.N.S. De Kostha	Characterization of antigens in eggs of <i>Enterobius vermicularis</i>	Prof. Sharmini Gunawardena Dr. S.L. Pathirana	2020
CMI-18-004	Ms. I.D.J.H. Iddagoda	Identification of allergens in <i>Cocos nucifera</i> , <i>Artocarpus heterophyllus</i> , <i>Boerhavia diffusa</i> and <i>Moringa oleifera</i> which cause allergies	Dr. Dhanushka Dassanayake Dr. Rajiva de Silva Dr. Neelika Malavige Mr. Peshala Gunasekera	2020
CMI-18-005	Ms. T.M. Rashenka Peiris	Study on cross-reactive antibodies to venom components of <i>Apis dorsata</i> and <i>Vespa affinis</i> in patients allergic to ant venom in Sri Lanka	Dr. Rajiva de Silva Dr. Dhanushka Dassanayake Prof. Shiroma Handunnetti Dr. Peshala Gunasekera	Completed. Degree not yet awarded.
CMI-18-006	Mr. J.C. Thambyrajah	Preliminary study to detect the ganciclovir resistance gene UL97 in cytomegalovirus strains from immunocompromised patients in Sri Lanka	Dr. Jude Jayamaha Ms. Varuni Ratnayake Dr. Narmada Fernando	2020
CMI-18-007	Ms. K.V.C. Wijegunarthne	Effects of four dengue serotypes on mature human basophils (KU812) and stabilization functions of pharmacological compounds and plant extracts on dengue infected mature basophils	Dr. Narmada Fernando Prof. Sunil Premawansa Prof. Shiroma Handunnetti	2020



Table 7: PhD Degrees awarded in the Convocation 2020

Name of the Student	Gender	Year of entry	Degree Programme	Title of the Dissertation/Thesis	Effective Date of the Degree
Ms. RY Baragama-arachchi	Female	2014	PhD/ IBMBB	Molecular characterization of <i>Bacillus thuringiensis</i> isolates from Sri Lanka with insecticidal activity against <i>Plutella xylostella</i> and <i>Cnaphlocrosis medinalis</i>	2019.10.28
Mr. D.L. Peshala Eranga Gunasekera	Male	2015	PhD/ IBMBB	Characterisation of allergenic components of venom of <i>Apis dorsata</i> and <i>Vespa affinis</i> (Order-Hymenoptera) and their cross-reactivity with venom of the respective Western species	2020.07.01

Table 8 (a): Master Degrees/ PG Diploma awarded in the Convocation 2020

Name of the Student	Gender	Year of entry	Degree Awarded	SLQF Level	Effective Date of the Degree
Ms. Nadia Mariam Amjad	Female	2019	Master of Molecular Life Sciences	9	2020.03.01

Table 8 (b): Postgraduate Diploma awarded in the Convocation 2020

Name of the Student	Gender	Year of entry	Degree/ Diploma Awarded	SLQF Level	Effective Date of the Degree
Ms. F.N. Mohamed Nizar	Female	2019	Postgraduate Diploma in Cellular and Molecular Immunology	8	2020.03.01



Table 9: Research Collaborators

Prof. Marie Allen	Professor, Genetics and Pathology, University of Uppsala, Sweden
Prof. Goran Andersson	Professor, Swedish Agricultural University, Sweden
Prof. Preethika Angunawela	Former Professor in Pathology, Faculty of Medicine, UoC
Prof. Erik Rudloff-Bongcam	Professor, Swedish Agricultural University, Sweden
Prof. Iqbal Chaudhury	Director, HEJ Research Institute, University of Karachi, Pakistan
Prof. Ranil Dassanayake	Professor in Chemistry, Faculty of Science, UoC
Prof. E. Dilip De Silva	Former Professor of Organic Chemistry, Faculty of Science, UoC
Prof. Janaka De Silva	Professor of Medicine, Faculty of Medicine, UoK
Prof. Shamy De Silva	Professor in Paediatrics, Department of Paediatrics, UoC
Prof. Tuly De Silva	Emeritus Professor, Link Natural Products Pvt Ltd
Prof. Deepika Fernando	Professor in Parasitology, Faculty of Medicine, UoC
Prof. Shamini Gunawardena	Professor in Parasitology, Faculty of Medicine, UoC
Prof. Saroj Jayasinghe	Professor of Clinical Medicine, Faculty of Medicine, UOC
Prof. Nisha Kottearachchi	Professor in Biotechnology, Wayamba University
Prof. Needra Karunaratne	Professor in Biochemistry, University of Peradeniya
Prof. Veranja Karunaratne	Professor of Chemistry, UoP
Prof. Neelika Malavige	Director, Dengue Research Center, USJP
Prof. Keethesan Nathkunam	Professor in Immunology, University of New England, Australia
Prof. Andreas Nitsche	Professor in Virology, Robert Koch Institute, Germany
Prof. Andrew Nguyen	Professor in Molecular Biology, City University of New York, USA
Prof. Madunil Anuk Niriella	Professor in Gastroenterology, Faculty of Medicine, UOK
Prof. Sunil Premawansa	Professor Emeritus, University of Colombo
Prof. Alessio Papini	Director, Tropical Herbarium, University of Florence, Italy
Prof. Senaka Rajapakse	Director PGIM, Professor in Clinical Medicine, Faculty of Medicine, UoC
Prof. Sree Rajeev	Professor in Veterinary Science, University of St Kitts, West Indies
Prof. Maanasa Raghavan	Neubauer Family Assistant Professor, Department of Human Genetics, University of Chicago, USA
Prof. W D Ratnasooriya	Professor Emeritus, University of Colombo
Prof. Suranjith Seneviratne	Professor in Immunology, Royal Free Hospital & University College London Centre for Immunodeficiency, UK
Prof. Alessandro Sette	Professor in Immunology, La Jolla Institute for Allergy and Immunology, USA
Prof. Rohan Siriwardana	Professor in Gastroenterology and Hepatobiliary Surgery, Faculty of Medicine, UOK
Prof. Raj Somadeva	Senior Professor of Archeology, Postgraduate Institute of Archeology, University of Kelaniya



Dr. K Thangaraj	Director, Centre for DNA Fingerprinting and Diagnostics (CDFD), Hyderabad. Senior Principle Scientist, Center for Cellular & Molecular Biology (CCMB), Hyderabad, India
Prof. Shyama Weerakoon	Profesor of Botany, Open University of Sri Lanka
Prof. Rajitha Wickremesinghe	Professor in Community Medicine, Faculty of Medicine, UoK
Dr. Achyut Adhikari	Associate Professor, HEJ Institute of Chemistry, Pakistan
Dr. Navodha Atapattu	Consultant Paediatric Endocrinologist, LRH
Dr. Enoka Corea	Senior Lecturer, Faculty of Medicine, UoC
Prof. Dilshani Dissanayake	Faculty of Medicine, UoC
Dr. Dilanthi Warawitage	Faculty of Medicine, UoC
Dr. Selvaluxmy Chelvendran	Industrial Technology Institute
Dr. Dhanushka Dassanayake	Consultant Immunologist, Teaching Hospital, Kandy
Dr. Dharshan De Silva	Senior Lecturer, Kotelawala Defence University, Ratmalama
Dr. Kanishka De Silva	Consultant Oncological Surgeon, National Cancer Institute
Dr. Rajiva De Silva	Consultant Immunologist, Medical Research Institute
Dr. N. Devipriya	SASTRA University, India
Dr. Kumudu Fernando	Former Director, Agri Biotechnology Centre, UoP
Dr. Geethani Galagoda	Consulatant Virologist, Lanka Hospital
Dr. Dinara Gunasekera	Senior Scientists, Sri Lanka Institute of Nanotechnology
Dr. Peshala Gunasekera	Research Scientist, KDU
Dr. Nadeeka Janage	Consultant Virologist, Medical Research Institute, Colombo 8
Dr. Eresha Jasinge	Consultant Chemical Pathologist,LRH
Dr. Jude Jayamaha	Consultant Virologist, Medical Research Institute
Dr. Lilani Karunanayake	Consulatnt Microbiologist, Medical Research Institute
Dr. Suranga Manilgama	MO, Ministry of Health
Dr. Rohitha Muthugala	Consultant Virologist, Ministry of Health
Dr. Dhananja Namalie	Ministry of Health
Dr. Inoka Perera	Senior Lecturer, Department of Zoology, UoC
Dr. GA Sirimal Premakumara	Director General, Industrial Technology Institute
Dr. Gayani Premawansa	Consultant Physician, North Colombo Teaching Hospital
Dr. Risintha Premaratne	Scientist, WHO-SEARO, WHO
Dr. Niraj Rai	Scientist "C", The Birbal Sahni Institute of Palaeosciences, India
Dr. Radhika Samarasekera	Director General, Industrial Technology Institute
Dr. Asitha Siriwardena	Scientist, Sri Lanka Institute of Nanotechnology
Dr. Saranga Sumathipala	MO, Ministry of Health
Dr. Hasitha Thisera	Ministry of Health
Dr. V Vadivel	SASTRA University, India
Mr. D Kottawa-Arachchi	Research Officer, Tea Research Institute, Talawakele
Mr. U.I.K. Galappatti	Senior Lecturer, University of Ruhuna
Mr. Mendis Wickremasinghe	Chairman, Sri Lanka Herpatological Society



**INSTITUTE OF BIOCHEMISTRY, MOLECULAR BIOLOGY & BIOTECHNOLOGY
UNIVERSITY OF COLOMBO**

STATEMENT OF FINANCIAL POSITION AS AT 31ST DECEMBER 2020

(Figures adjusted to the Nearest Rupee)

	Note	2020 Rs.	2019 Revised Rs.	% change
ASSETS				
CURRENT ASSETS				
Bank Balances	Note - 02	18,028,530	18,888,707	(5)
Other Receivables	Note - 03	4,857,466	3,865,110	26
Advances	Note - 04	13,425	929,981	(99)
Staff Loans	Note - 05	1,247,337	760,890	64
Investments	Note - 06	18,842,393	20,193,759	(7)
Chemicals & Glassware		3,690,480	6,797,539	(46)
		46,679,631	51,435,986	(9)
NON CURRENT ASSETS				
Property Plant & Equipment	Note - 07			
Building		35,067,394	40,922,625	(14)
Motor Vehicles		3,093,002	3,608,502	(14)
Library Books and Periodicals		1,133,572	1,888,393	(40)
Lab and Teaching Equipments		27,057,471	38,062,771	(29)
Computers		6,245,773	7,856,195	(20)
Office Furniture & Equipments		13,329,847	14,936,558	(11)
Staff Loans	Note - 05	2,101,498	2,613,079	(20)
Investments	Note - 06	34,173,243	31,382,498	9
		122,201,800	141,270,623	(13)
TOTAL ASSETS		168,881,430	192,706,609	(12)
LIABILITIES				
CURRENT LIABILITIES				
Provision for Gratuity	Note - 09.01	634,799	-	-
Refundable Tender Deposit		66,412	66,412	-
Refundable Laboratory Deposits		4,474,573	4,024,573	11
Accrued Expenditure And Other Payables	Note - 08	6,822,089	2,626,019	160
		11,997,873	6,717,004	171
NON CURRENT LIABILITIES				
Provision for Gratuity	Note - 09	30,222,309	20,469,854	48
Provision for Audit Fees		1,288,517	1,176,517	10
Research Grants	Note - 10	7,710,013	9,661,438	(20)
Deferred Income	Note - 11	1,031,227	6,815,051	(85)
		40,252,066	38,122,860	6
TOTAL LIABILITIES		52,249,939	44,839,864	17
NET ASSETS		116,631,492	147,866,744	(21)



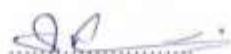
**INSTITUTE OF BIOCHEMISTRY, MOLECULAR BIOLOGY & BIOTECHNOLOGY
UNIVERSITY OF COLOMBO**

STATEMENT OF FINANCIAL POSITION AS AT 31ST DECEMBER 2020 (Contd..)

(Figures adjusted to the Nearest Rupee)

	Note	2020 Rs.	2019 Revised Rs.	% change
<u>EQUITY / NET ASSETS</u>				
<u>CAPITAL</u>				
Capital Grant Spent	Note - 20	(8,906,970)	10,357,788	(186)
Capital Grant Committed		6,958,503	11,668,759	(40)
Gifts & Donations		122,247,858	46,271,334	164
		<u>120,299,391</u>	<u>68,297,881</u>	<u>76</u>
<u>ACCUMULATED FUND</u>				
Retained Earnings A/C		(66,662,886)	16,484,059	(504)
Revaluation Surplus/(Deficit)		38,564,539	38,564,539	-
		<u>(28,098,347)</u>	<u>55,048,597</u>	<u>(151)</u>
<u>RESTRICTED FUNDS</u>				
Institute Development Fund		8,323,415	8,392,714	(1)
Endowment Fund		3,221,903	3,221,903	-
Asset Replacement Fund		12,885,130	12,905,649	(0)
		<u>24,430,448</u>	<u>24,520,266</u>	<u>(0)</u>
TOTAL EQUITY / NET ASSETS		<u>116,631,492</u>	<u>147,866,744</u>	<u>(21)</u>

Prepared & Certified by



Deputy Bursar



Senior Asst. Registrar

The Accounting policies on pages 6 to 10 and other Notes on pages 11 to 15 form an integral part of these Financial Statements. The Board of Management is responsible for the preparation and presentation of these Financial Statements.


Board Member


Director / Board Member



INSTITUTE OF BIOCHEMISTRY, MOLECULAR BIOLOGY & BIOTECHNOLOGY
UNIVERSITY OF COLOMBO
STATEMENT OF FINANCIAL PERFORMANCES
FOR THE YEAR ENDED 31ST DECEMBER 2020

(Figures adjusted to the Nearest Rupee)

		2020	2019	% change
		Rs.	Rs.	
INCOME				
Govt. Grant for Recurrent Expenditure		95,100,000	77,500,000	23
Govt. Grant for Rehabilitation of Capital Assets		2,824,714	4,027,952	(30)
Amortization of Fixed Assets		24,789,600	17,929,943	38
Research Grants	Note - 12	4,861,593	14,612,233	(67)
Generated Income	Note - 13	15,962,443	11,984,811	33
Interest Income		5,556,852	7,195,588	(23)
Other Income	Note - 14	262,592	360,808	(27)
		149,357,793	133,611,335	12
Less : EXPENDITURE				
Personnel Emoluments	Note - 15	84,463,850	78,108,109	8
Travelling		64,892	144,406	(55)
Supplies	Note - 16	13,030,002	9,543,309	37
Maintenance Expenditure	Note - 17	4,298,646	5,864,027	(27)
Contractual Services	Note - 18	14,693,792	18,226,387	(19)
Other Recurrent Expenses	Note - 19	2,969,905	5,703,855	(48)
Gratuity		10,387,254	13,188,782	(21)
Depreciation		26,630,815	18,978,785	40
		156,539,156	149,757,660	5
Surplus/Deficit of Income over Expenditure		(7,181,363)	(16,146,325)	(56)



INSTITUTE OF BIOCHEMISTRY, MOLECULAR BIOLOGY & BIOTECHNOLOGY
UNIVERSITY OF COLOMBO
CASH FLOW STATEMENT
FOR THE YEAR ENDED 31ST DECEMBER 2020

	Rs.	Rs.
<i>Deficit for the year</i>		(7,181,363)
Add : Adjustments for items not involving movement of Funds		
Provision for Gratuity	10,387,254	
Provision for Audit Fees	400,000	
Govt. Grant for Rehabilitation of Capital Assets	(2,824,714)	
Amortization of Fixed Assets	(24,789,600)	
Depreciation	26,630,815	
Loss from Disposal of Assets	144,575	
Interest Income	(5,556,852)	
Chemicals and Glassware	12,261,979	
Liquidated Damages	(153,140)	
Less: Audit Fees paid	(288,000)	
Chemicals and Glassware purchases	(9,154,919)	
Operating Deficit before working capital changes	7,057,397	
Increase in Receivables	(933,620)	
Increase in Payables	5,280,869	11,404,646
NET CASH FLOW FROM OPERATING ACTIVITIES		4,223,283
CASH FLOWS FROM INVESTING ACTIVITIES		
Interest Income	1,873,109	
Money Market Interest	1,106,268	
Acquisition of Fixed Assets	(5,423,002)	
Decrease in Investments	1,515,934	
Proceeds from selling of disposals	30,000	(897,691)
CASH FLOWS FROM FINANCING ACTIVITIES		
Institute Development Fund	40,000	
Deferred Income	(5,783,824)	
Asset Replacement Fund	(20,520)	
Research Grants	(1,951,425)	
Government Grant for Capital Expenditure	3,530,000	(4,185,769)
Net Increase in Cash & Cash Equivalents		(860,177)
Cash & cash equivalents at the beginning of the period		18,888,707
Cash & cash equivalents at the end of the period		18,028,530



STATEMENT OF CHANGES IN EQUITY/NET ASSETS FOR THE YEAR ENDED 31/12/2020

Description	Accumulated Fund	Asset Replacement Reserve	Institute Development Fund	Endowment Fund	Capital Grant Spent	Capital Grant Committed	Gift & Donations	Revaluation Reserve	Total
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.		Rs.
Balance as at 31st December 2019	16,484,059	12,905,649	8,392,714	3,221,903	10,357,788	11,668,759	46,271,334	38,564,539	147,866,745
Surplus / Deficit for the period	(7,181,363)								(7,181,363)
Capital Grant Received						3,530,000			3,530,000
Purchase During the Year		(20,520)			5,415,542	(5,415,542)			(20,520)
Transfer to Restricted Funds			40,000						40,000
Transfer to Welfare Fund									-
Interest for Restricted Funds									-
Transfer to Research Fund	(48,558)								(48,558)
Accrued Interest Income									-
Capital Grant Spent /Committed During the Year									-
Transfer to Rehabilitation						(2,824,714)			(2,824,714)
Transfer to Income									-
Increase in Specific Internal Funds									-
Transfers	25,000						75,976,524		76,001,524
Amortization Adjustments	(75,942,024)		(109,299)		(24,680,300)				(100,731,622)
Balance as at 31st December 2020	(66,662,886)	12,885,129	8,323,415	3,221,903	(8,906,970)	6,958,503	122,247,858	38,564,539	116,631,492
% Change	(504)	(0)	(1)	-	(186)	(40)	164	-	(21)



**Institute of Biochemistry, Molecular Biology & Biotechnology
University of Colombo**

Notes to the Financial Statement

Note - 01

1. Significant Accounting Policies

1. Reporting Entity

IBMBB has been incorporated under the Ordinance No.1285/25 and gazetted on 23rd April 2003. The main administration is at No 90, Cumaratunga Munidasa Mawatha, Colombo 03. The Financial Statements of the IBMBB are prepared for the year ending 31/12/2020.

2. Significant Accounting Policies

2.1. Basis of Preparation

The Financial Statements are prepared on the historical basis of accounting, in conformity with Sri Lanka Public Sector Accounting Standards (SLPSAS). All accounting policies adopted are applied consistently with those of previous year, where necessary comparative figures have been adjusted to confirm the changes, in presentation of current year figures.

The financial statements are prepared in Sri Lanka Rupees, which is the functional and presentation Currency.

2.2. Conversion of Foreign Currencies

All foreign currency transactions are accounted for at the exchange rates prevailing at the date of the transactions; gains and losses resulting from the settlement of such translation and from the translation of monetary assets and liabilities denominated in foreign currencies are recognized in the income statement. Monetary assets and liabilities denominated in foreign currencies are translated at exchange rates prevailing on the balance sheet date.

2.3. Assets and the bases of their valuation

2.3.1. Property Plant and Equipment (PPE)

According to the information given by University of Colombo the acquisition date of the building is 01.01.2007 and this was presented in the financial statements w.e.f. 01st January 2020. The value of the land has not been included in the PPE since legal ownership of land has not been transferred to IBMBB by University of Colombo.

Property, Lab and Teaching Equipments include the items purchased out of government grant, research grants internally generated funds and donations.





**Institute of Biochemistry, Molecular Biology & Biotechnology
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Property and Equipment are recorded at cost of purchase together with any incidental expenses thereon. The assets are shown at cost less accumulated depreciation. Assets received as grants have been valued at their fair value.

2.3.2. Impairment

An asset's carrying amount is written down immediately to its recoverable amount, such reduction is recognized as an expense immediately.

2.3.3. Amortization

Amortization is recognized in income statement on a straight-line basis over the estimate useful life of the assets.

2.3.4. Gain or loss on disposal

Gains and losses on disposals are determined by comparing proceeds with carrying amount. These are included in the income statement.

2.3.5. Subsequent cost

Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the items will flow to the institute and the cost of items can be measured reliably. All other repairs and maintenance are charged to income statement during the financial period in which they are incurred.

2.3.6. Depreciation

Assets, for which dates of purchase are known, depreciation is provided in proportion to the number of months completed or such assets were used from the date of purchase. Assets of which exact date of purchase is not known depreciation is provided for the whole year in which they were purchased. Depreciation will be provided on the year of the sale/ disposal in proportion to the number of months the assets over the estimated useful life of assets.

Depreciation has been charged to income statement on all property and equipment on the straight-line basis at the following rates per annum in order to write off the cost of such assets over their estimated useful lives.





**Institute of Biochemistry, Molecular Biology & Biotechnology
University of Colombo**

Rates of Depreciation

• Building	-	5% per annum
• Vehicles	-	10% per annum
• Fixtures & Fittings	-	10% per annum
• Office Furniture & Equipment	-	10% per annum
• Computers	-	20% per annum
• Laboratory & Teaching Equipment	-	20% per annum
• Library Books and Periodicals	-	20% per annum

2.3.7. Inventories

Inventories are valued at the lower of cost or estimated net realizable value. Net realizable value is the price at which inventories can be sold in the ordinary course of business after allowing for cost of realization and/or cost of invention from their existing state to saleable.

Stocks in stores have been valued at cost using First In First Out (FIFO) basis.

2.3.8. Receivables

Receivables are stated at the amounts that they are estimated to realize.

2.3.9. Cash & cash equivalents

Cash & cash equivalents comprise cash & bank balances and short-term investments.

2.3.10. Current Assets

Current Assets classified in the balance sheet are those which will be recovered within one year after the Balance Sheet date.

2.3.11. Current Liabilities

Liabilities classified as current Liabilities in the balance sheet are those that fall due for payment within one year from the Balance sheet date. All known liabilities have been accounted for in preparing the final statements.





**Institute of Biochemistry, Molecular Biology & Biotechnology
University of Colombo**

2.3.12. Employee Benefits

(a) Defined benefit plans

Provision is made in the accounts for retirement gratuities at rates applicable under the payment of Gratuity Act No.12 of 1983. Although employees should complete a minimum period five years of continued employment to qualify for gratuity payments under the Act, provision is made after completing one year of employment on the assumption that all employees intend to continue in employment to at least five years.

The provision for the obligations under the Act is determined based on the present value method in accordance with LKAS 19 using the discount rate equal to the government bond rate.

Year	Bond Rate
2020	8%
2019	10.5%

According to the instructions given by UGC – Commission Circular No: 05/2019, Academic allowance and Monthly Compensatory Allowance had been taken into calculation of Gratuity for Academic staff members and Non-academic staff members w.e.f. 01.06.2019.

(b) Defined Contribution Plans - UPF & ETF

Employees are members of the University Provident Fund and Employees Trust Fund. Contribution to defined contribution plans, UPF, EPF & ETF are recognized as an expense in the income statement as incurred.

2.4. Income and Expenditure

2.4.1. Government Grant

Grants received from the General Treasury of the Government of Sri Lanka and Tuition Fees received are recognized as income in the period in which the related costs are recognized.

Government grants utilized to acquire assets less liabilities are recognized as deferred income.





**Institute of Biochemistry, Molecular Biology & Biotechnology
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2.4.2. Revenue Recognition

(a) Government Grants (Recurrent)

The Government Recurrent grants are recognized in the period in which they are received.

(b) Government Grant (Capital)

Grant relating to purchase of property and equipment are included in non-current liabilities as deferred income and are credited to the income statement on a straight-line basis over the expected life of the related assets.

(c) Student Registration

Student Registration fees are recognized as revenue only on the receipt of fees.

(d) Course Fees

Course fees are recognized over the period of instruction. Based on the availability of data, course fees are recognized on accrual basis and income received for future period is recognized as deferred income.

(e) Investment Income

Interest income on Investments is accounted on accrual basis.

2.5. Cash flow statement

The cash flow statements have been prepared using the "Indirect Method" for the purpose of the statement of cash flow. Cash & cash equivalents are comprised cash & bank balances, short term deposits.

3. Disclosures

3.1. General

3.1.1. The IBMBB has occupied in a land where the ownership of the land belongs to University of Colombo.

3.2. Income and Expenditure

3.2.1. The increase in the depreciation charges for the year 2020 is due to including the annual depreciation charges of the IBMBB building amounting to Rs.5,855,230.81 in the year 2020.

3.2.2. The increase in the personnel emoluments is mainly due to payment of salary arrears of Rs. 2,776,451 to two Academic staff members, within the year 2020.





Institute of Biochemistry, Molecular Biology & Biotechnology - University of Colombo

Notes to the Financial Statements - 2020 (Contd..)

Note - 02			
Bank Balances	2020	2019	% change
People's Bank - Thimbirigasyaya	Rs.	Rs.	
Account No.			
86100121189723	3,778,883	5,111,028	(26)
86100151192314	1,376,765	3,780,344	(64)
86100211189723	6,252,873	8,001,522	(22)
86100301189723	579,923	882	65,651
86100491189723	2,974,407	124,404	2,291
86200101189723	2,505,482	1,436,213	74
86100131189671	434,338	434,313	0
Bank of Ceylon - Thimbirigasyaya			
84885727	125,860	-	-
	18,028,530	18,888,707	(5)
Note - 03			
Other Receivables	2020	2019	% change
	Rs.	Rs.	
Receivable Course Income	1,073,333	-	-
Pre Payment	1,857,180	1,511,767	23
Refundable Deposit for Fuel	50,000	50,000	-
Refundable Deposit for Dongle	1,000	1,000	-
Refundable Deposit for CO2 Cylinders	83,500	83,500	-
Interest Receivable	1,792,453	2,170,291	(17)
Other	-	48,552	(100)
	4,857,466	3,865,110	26
Note - 04			
Advances	2020	2019	% change
	Rs.	Rs.	
Miscellaneous Advances	13,425	929,981	(99)
	13,425	929,981	(99)
Note - 05			
Staff Loans - Current	2020	2019	% change
	Rs.	Rs.	
Distress Loans	1,155,577	685,760	69
Computer Loans	75,000	45,000	67
Vehicle Loan	8,350	25,030	(67)
Staff Loans	5,610	5,100	10
Special Advance	2,800	-	-
	1,247,337	760,890	64
Staff Loans - Non current			
Distress Loans	1,987,873	2,471,370	(20)
Computer Loans	92,500	114,500	(19)
Vehicle Loan	10,755	19,899	-
Staff Loans	10,370	7,310	42
Special Advance	-	-	-
	2,101,498	2,613,079	(20)
	3,348,835	3,373,969	(1)
Note - 06			
Investments - Current Fixed Deposits	2020	2019	% change
	Rs.	Rs.	
Institute Development Fund	-	2,618,771	276
Generated Funds	18,842,393	17,574,988	(70)
	18,842,393	20,193,759	18
Investments - Non Current Fixed Deposits			
Endowment Fund	4,975,870	5,011,640	(1)
Institute Development Fund	5,286,959	4,787,060	10
Generated Funds	23,910,413	21,583,798	11
	34,173,243	31,382,498	9
	53,015,636	51,576,257	3





Institute of Biochemistry, Molecular Biology & Biotechnology - University of Colombo
Notes to the Financial Statements - 2020 (Contd.)

Note - 07

Property Plant & Equipment

Description	Building Rs.	Vehicle Rs.	Furniture & Office Equipment Rs.	Computers Rs.	Lab and Teaching Equipment Rs.	Library books and Periodicals Rs.	Total Rs.
Balance as at 01 01 2020	116,864,648.71	5,155,002.00	19,656,533.27	13,928,964.75	71,544,748.25	3,766,842.91	230,916,739.89
Additions	-	-	416,416.27	1,387,285.00	3,653,801.20	-	5,457,502.47
Disposals	-	-	64,250.00	375,600.00	274,800.00	-	714,650.00
Balance as at 31 12 2020	116,864,648.71	5,155,002.00	20,008,699.54	14,940,649.75	74,923,749.45	3,766,842.91	235,659,592.36
Change %	-	-	1.79	7.26	4.72	-	
Rate of Depreciation	5%	10%	10%	20%	20%	20%	
Accumulated Depreciation as at 01 01 2020	75,942,023.64	1,546,500.00	4,719,975.30	6,072,769.34	33,479,178.91	1,878,449.54	123,638,896.73
Adjustments to Opening balance due to duplication of Assets	-	-	100.05	-	2,797.00	-	2,897.05
Disposals	-	-	25,417.00	297,204.69	217,453.51	-	540,075.20
Depreciation for 2020	5,855,230.81	515,500.00	1,984,194.47	2,919,312.27	14,601,755.85	754,821.39	26,630,814.79
Accumulated Depreciation as at 31.12.2020	81,797,254.45	2,062,000.00	6,678,852.82	8,694,876.92	47,866,278.25	2,633,270.93	149,732,533.37
WDV 31. 12. 2020	35,067,394.26	3,093,002.00	13,329,846.72	6,245,772.83	27,057,471.20	1,133,571.98	85,927,058.99





Institute of Biochemistry, Molecular Biology & Biotechnology - University of Colombo
Notes to the Financial Statements - 2020 Contd.)

Note - 08	2020	2019	% change
Accrued Expenditure And Other Payable	Rs.	Rs.	
Accrued	6,796,684	2,607,556	161
Payable for Tax	21,531	17,664	22
Payable for Stamp duty	3,874	800	384
	6,822,089	2,626,020	160

Note - 09	2020	2019	% change
Provision for Gratuity	Rs.	Rs.	
Opening Balance 01.01.2019	20,469,854	7,281,071	181
Provision During the year	10,387,254	13,188,782	(21)
Closing Balance 31.12.2019	30,857,108	20,469,854	51

Note - 09.01

Provision for Gratuity - To be paid during the year 2021

Ms. S.D. Premadasa	49,607	-	-
Ms. M.K. Kahawita	585,192	-	-
	634,799	-	-
Provision for Gratuity - Non Current	30,222,309	20,469,854	48

Note - 10	2020	2019	% change
Research Grants - 2021	Rs.	Rs.	
RPC - 2021	6,912	49,828	(86)
IPICS - 2021	352,602	352,602	-
NSF Grant III-2021	48,458	-	-
Dept of Ayurvedic Grant-2021	2,543	2,543	-
Swedish Research Grant -2021	1,383,001	1,394,147	(1)
Individual Research Voted -2021	313,550	256,728	22
Start-up Research Grant (UGC)2021	56,244	72,848	(23)
C/R Grant- Ms D.V.D. Hemalika-2021	66,466	66,466	-
Research Collaboration Grant- Dr Andrew 2021	89,653	89,653	-
NSF/SCH/2016/04 -2021	430,419	737,529	(42)
NSF/RPHS/2016/C 07-2021	312,750	3,234,348	(90)
CRP/LKA 17- 01 -2021	2,871,381	738,897	289
MSTR/TRD/AGR/3/02/08 (INDO) 2021	62,220	825,276	(92)
Subsidies for Reagents	1,183,596	1,183,596	-
ICGEB Course (W/SRI/2019-01) - 2021	227,923	356,978	(36)
Immunodiagnosics 2021 - Prof. S.M. Handunnetti	125,000	200,000	(38)
Collaborative Research 2021 - Dr. S.S.R. Samarakoon	177,296	100,000	77
	7,710,013	9,661,438	(20)

Note - 11	2020	2019	% change
Deferred Income	Rs.	Rs.	
MSc in MLS 2017	-	87,123	(100)
MSc in MLS 2018	-	697,674	(100)
MSc in CMI 2018	-	930,233	(100)
MSc in MLS 2019	150,000	1,345,930	(89)
MSc in CMI 2019	83,333	1,492,463	(94)
MSc in Bioinformatics 2019	-	2,261,628	(100)
MSc in MLS 2020	525,000	-	-
MSc in CMI 2020	272,894	-	-
	1,031,227	6,815,051	(85)

Note -12	2020	2019	% change
Research Grants	Rs.	Rs.	
RPC - 2020	42,916	-	-
NSF Grant III-2020	-	48,458	(100)
Swedish Research Grant -2020	11,146	-	-
Start-up Research Grant (UGC) 2020	16,604	-	-
NSF/SCH/2016/04 -2020	307,110	1,192,965	(74)
NSF/RPHS/2016/C 07-2020	2,921,598	6,936,431	(58)
CRP/LKA 17- 01 -2020	181,770	3,260,004	(94)
MSTR/TRD/AGR/3/02/08 (INDO) 2020	763,056	1,026,362	(26)
ICGEB Course (W/SRI/19-01) - 2020	369,688	2,147,993	(83)
Immunodiagnosics 2020 - Prof. S.M. Handunnetti	75,000	-	-
Collaborative Research 2020 - Dr. S.S.R. Samarakoon	172,704.00	-	-
	4,861,593	14,612,233	(67)





Institute of Biochemistry, Molecular Biology & Biotechnology - University of Colombo
Notes to the Financial Statements - 2020 (Contd..)

Note - 13	2020	2019	% change
Generated Income	Rs.	Rs.	
Annual Session Sponsorships	-	98,400	(100)
Examination fees	486,561	364,500	33
MSc Course Fee	13,142,021	9,326,324	41
Certificate Course	-	438,162	(100)
Application Fee	1,354,746	974,425	39
Internship Income	60,000	-	-
Sample collection Charges	765,975	657,000	17
Library Fee	-	66,000	(100)
Liquidated Damages	153,140	-	-
	15,962,443	11,984,811	33

Note - 14	2020	2019	% change
Other Income	Rs.	Rs.	
Computer loan interest	5,903	7,543	(22)
Staff Loan interest	759	981	(23)
Transcript fee	35,131	45,500	(23)
Distress Loan Interest	127,248	143,095	(11)
Vehicle Loan Interest	1,560	5,366	(71)
Special Advance Interest	573	1,116	(49)
Other Sundry Income	91,418	157,207	(42)
	262,592	360,808	(27)

Note - 15	2020	2019	% change
Personnel Emoluments	Rs.	Rs.	
Salaries & Wages	28,263,205	24,572,590	15
U.P.F	4,781,095	4,115,885	16
Pension	3,373,011	2,821,900	20
E.T.F.	1,829,405	1,539,722	19
E.P.F	803,935	609,672	32
Academic Allowance	20,707,141	16,809,679	23
Cost of Living Allowances	3,172,188	3,103,813	2
Over Time and Holiday Payment	167,192	282,699	(41)
Other Allowances	10,115,221	9,107,101	11
Acting Pay	733,029	192,500	281
Research Allowances	5,275,237	4,300,763	23
Allowances	4,233,581	9,523,353	(56)
Visiting Lecturer Fee	935,500	1,035,750	(10)
Property Loan Interest	74,113	92,682	(20)
	84,463,850	78,108,109	8

Note - 16	2020	2019	% change
Supplies	Rs.	Rs.	
Stationery & Office Requisites	455,485	963,378	(53)
Fuel and Lubricant	259,948	324,216	(20)
Uniforms	22,015	6,484	240
Chemicals & Glassware	12,261,979	8,238,817	49
Other	30,576	10,414	194
	13,030,002	9,543,309	37

Note - 16.1			
Chemicals & Glassware			
Opening Balance	6,797,539	6,033,341	13
Purchase During the Year	9,154,919	9,003,015	2
	15,952,458	15,036,356	6
Closing Balance	(3,690,480)	(6,797,539)	(46)
	12,261,979	8,238,817	49





Institute of Biochemistry, Molecular Biology & Biotechnology - University of Colombo

Notes to the Financial Statements - 2020 (Contd.)

Note - 17	2020	2019	% change
Maintenance Expenditure	Rs.	Rs.	
Rehabilitation & Maint. Of Capital Assets	2,942,776	4,027,952	(27)
Plant, Machinery Equipment	228,859	26,025	779
Buildings & Structures	374,422	1,389,856	(73)
Office Equip. Maintenance	410,825	146,602	180
Other	341,763	273,592	25
	4,298,646	5,864,027	(27)

Note - 18	2020	2019	% change
Contractual Services	Rs.	Rs.	
Transport	105,082	183,435	(43)
Telecommunication	1,783,400	2,049,576	(13)
Postage	52,760	126,356	(58)
Security Service	1,752,144	1,886,535	(7)
Electricity	7,149,350	8,390,857	(15)
Water	200,775	267,706	(25)
Cleaning Service	2,295,214	3,162,467	(27)
Rates, Taxes & Local Authorities	199,584	199,584	-
Printing, Advertising etc.	692,843	1,096,286	(37)
Other	462,641	863,585	(46)
	14,693,792	18,226,387	(19)

Note - 19	2020	2019	% change
Other Recurrent Expenditure	Rs.	Rs.	
Special Services - Board Meeting & Committees	391,562	510,797	(23)
Workshops, Seminars	-	52,629	(100)
Academic Research	188,903	199,438	(5)
Staff Development	163,575	213,504	(23)
Entertainment Expenses	26,745	252,222	(89)
Contribution & Membership Fee	633,636	1,028,375	(38)
Bank Charges	30,003	45,618	(34)
Holiday Warrants & Season Tickets	59,100	69,900	(15)
Convocation	68,000	-	-
Examination Expenses	791,731	1,016,287	(22)
Audit Fee	400,000	500,000	(20)
Certificate Course Expenses	-	567,675	(100)
Disposal Loss	144,575	-	-
Annual Scientific Session	-	264,138	(100)
Payment Gateway	-	60,000	(100)
Awards And Indemnities	-	600,000	(100)
Medical Insurance	49,199	243,448	(80)
Other	22,875	79,825	(71)
	2,969,905	5,703,855	(48)

Note - 20	2020	2019	% change
Capital Grant Committed	Rs.	Rs.	
Treasury	(9,395,615)	9,869,143	(195)
Blended	278,951	278,951	-
Generated	110,394	110,394	-
SIDA SAREC	99,302	99,302	(0)
Research Grants	-	-	-
	(8,906,968)	10,357,790	(186)





Review on Internal Audit Functions in the Year – 2020

Internal Audit activities of IBMBB were carried out by the Senior Assistant Internal Auditor of University of Colombo as usual with the concurrence of the Audit Committee of IBMBB.

Even though there were four Audit Committee meetings scheduled for the year concerned, due to the pandemic situation prevailed throughout the year, only three meetings were held within the year concerned.

Internal Audit activities have uplifted the quality of management activities, both in administration and financial aspects considering the constructive criticisms and decisions taken at the Audit Committee meetings of IBMBB.

A handwritten signature in blue ink, reading 'K.P. Hewagamage', with a horizontal line drawn underneath it.

Prof. K.P. Hewagamage
Chairman
Audit Committee of the IBMBB



Limitations - 2020

The academic and research programmes were disrupted significantly due to the two main outbursts of Covid-19 and closure of University in March 2020 and in October 2020. The overall loss of time was even more since procurement of reagents and chemicals were much delayed due to these two disruptive periods with the same year, hence some of the deadlines for MSc student project completions and dissertation submission had to be extended. Therefore as expected, the course completions could not be achieved by December 2020. In addition, this caused delays in research work for those funded by external funding agencies such as the National Science Foundation, National Research Council and International Center for Genetic Engineering and Biotechnology (ICGEB), Italy. Other programmes such as the Short training course on Molecular Biology and Cell Culture Techniques and Advanced Certificate in Immunology were postponed. Further, the ACU (Commonwealth) Scholars also faced certain difficulties due to visa issues caused by Covid-19 pandemic situation.

During the year 2020, the available laboratory spaces were not sufficient to any further increase in student intake, in addition the other constraints such as lack of adequate human and financial resources to implement some of the activities in the strategic plan 2020 – 2024. Approval for expanding the building space had been requested from University of Colombo as IBMBB is situated in the premises of University of Colombo. University has requested for collaborative programmes and an appropriate justification for the extension building to the IBMBB. The extension building to the IBMBB is incorporated in to the Master Plan for the development of the University of Colombo.

Although new cadre positions for support staff was received in the 3rd quarter of 2017, eight cadre positions were vacant in 2020, either because the appropriate lists of candidates were not received or not receiving approval for the scheme of recruitment (SOR). In September 2020, the SOR for Post-Doctoral Research Fellow (PDRF) positions were received from UGC and after obtaining Council approval the recruitment procedure was initiated to fill the three PDRF posts by December 2020.

IBMBB has four technical officer posts and during 2020 only three Technical officers were available. There is only one competent, Technical officer with appropriate qualifications and the other two are trainee Technical officers who are still undergoing training and on probation. The service of one trainee Technical Officer was decided to be discontinued due to inadequate performance. In 2020, there were two vacant technical officer posts which could not be filled until the fourth quarter of 2020 due to inadequate lists being received only towards the end of year 2020. The list received had only two names which was not adequate to initiate the selection procedure includes written and practical tests for recruitment.



Plan of work for 2021

Teaching:

- Increase student intake to existing MSc programmes
- Intake of MSc (MLS, CMI & BI) students under new curricula
- Continue/strengthen existing MSc and PhD programmes
- Establishment and maintenance of a comprehensive resource pool of Faculty
- Establish new teaching programmes through Blended learning
- Strengthening modern teaching / learning methods
- Improving English Language, Scientific Writing, Presentation, Communication and IT skills of students

Research:

- Expand the scope of the PhD Programmes
- New admissions to MPhil/PhD programmes, Training of professionals/ technocrats in the applications of Molecular Life Sciences
- Generating new knowledge through research programmes
- Identify priority areas requiring solutions based on tools of Molecular Life Sciences, Immunology, Bioinformatics and other Allied fields
- Implementation of research programmes directed towards identification of novel drug targets from medicinal plants & marine resources
- Establish new research programmes for R&D work aimed at personalized medicine and human DNA variation
- Continue existing programmes in biomedical sciences and plant molecular biology and develop new research programmes based on findings when warranted
- Encourage and assist in obtaining National/ International competitive research grants by faculty members/ collaborators
- Enact memoranda of understanding with Research Institutes/ Private sector Institutes
- Complete Patent Applications and Non-Disclosure agreements
- Strengthen collaborative research programmes with health sector
- Strengthen cooperation with other Faculties/ Universities and private sector Educational Institutes
- Dissemination of Knowledge/ Research Findings



Service:

- Develop collaboration with Industry/Private sector
- Maintain and update mirrors of Biological databases
- Provide on-line tools for Bioinformatics based/ learning /research
- Establish a repository of Archives giving the land mark developments in the field of Molecular Life Sciences
- Complete archives of historical developments resulting in the establishment of IBMBB
- Generating funds through Business Development plan
- Diagnostic services for cancer, other diseases and for plantation sector
- Consultancies
- Fee-levying Postgraduate and other training programmes
- Training of professionals and technocrats in the application of Molecular Life Sciences, Immunology, Bioinformatics and Allied fields

Maintaining International Standards:

- Enhance existing/ develop new collaborations with Universities and Research Institutes overseas
- Provide training in Molecular Life Sciences, Immunology, Bioinformatics and allied fields, nationally and regionally
- Develop content for E- learning for students/ teachers in Bioinformatics, Molecular Life Sciences, Immunology and allied fields
- Establish links with international centres of excellence for E- teachers and E- resources in Bioinformatics
- Establishment of an external review system
- Ethical practices in scientific and biomedical research
- Ethical, societal and legal implications of genetic research and genetic information
- Provide opportunities for short-term overseas training of faculty members
- Encourage and assist in participation at International conferences by faculty members/collaborators/ students to present research carried out at the IBMBB

Governance:

- Development of a Training Policy and Guidelines
- Code of Ethics for staff and students
- Compliance with accepted norms of Accounting standards



Auditor General Report

My No.} HED/B/IBMBB/2020/FA/01

Your No.} Date} 08th April 2021

Director,
Institute of Biochemistry, Molecular Biology and Biotechnology.

Report on the Auditor General on the Financial Statements and other legal and monitoring requirements of Institute of Biochemistry, Molecular Biology and Biotechnology for the year ended 31st December 2020 in terms of section 12 of the National Audit Act, No. 19 of 2018.

1. Financial Statements

1.1 Opinion

The audit of the Financial Statements of the Institute of Biochemistry, Molecular Biology and Biotechnology affiliated to the University of Colombo for the year ended 31st December 2020 comprising the Statement of Financial Position as at 31st December 2020 and the Statement of Financial Performance and Statement of Changes in Equity and Cash Flow Statement for the year then ended and a summary of significant accounting policies and other explanatory notes were carried out under my direction in pursuance of provisions laid down by section 17 of the Ordinance of Institute of Biochemistry, Molecular Biology and Biotechnology No. 1 of 2003 vested upon by section 18 and subsection 107 (5) and Article 108 (1) of the Universities Act No. 16 of 1978 which should be read in conjugation with Article 154 (1) of the Constitution of the Democratic Socialist Republic of Sri Lanka and section 12 of the of the National Audit Act, No. 19 of 2018. My report will be tabled in the parliament in due course in terms of Article 154 (6) of the Constitution.

In my opinion, the Financial Statements of the institute give a true and fair view of the financial position of the University of Colombo as at 31 December 2020 and its Financial Performance and Cash Flows for the year then ended in accordance with Sri Lanka Public Sector Accounting Standards.



1.2 Basis for the Opinion

The audit was carried out in accordance with the Sri Lanka Audit Standards. My responsibility as per these accounting standards has been further elaborated under the section on Responsibility of the Auditor in the audit of Financial Statements. In my opinion, enough and appropriate audit proof has been obtained by me to provide a basis for my opinion.

1.3 Other Information included in the Annual Report - 2020

Information obtained by me prior to the date of this audit report that is included in the Annual Report- 2020 of the institute, yet no reference is made in Financial Statements and my audit report is referred to as other information. This other information is the responsibility of the Management.

My opinion on Financial Statements does not cover the other information. Hence, I am neither assuring nor expressing any opinion on them whatsoever.

As per my audit on the Financial Statements, my responsibility is to go through the other information identified above and to whether this other information is not in compliance in quantity as per my knowledge obtained through Financial Statements or auditing or any other means. I have nothing to report on this matter.

1.4 Responsibility of Management and Controlling Parties for the Financial Statements

Management is responsible for the preparation and fair presentation of these Financial Statements in accordance with Sri Lanka Public Sector Accounting Standards and for determining the internal controls which are necessary to enable the preparation of Financial Statements that are free from material misstatements whether due to fraud or error.

It is the responsibility of the management to decide on the going concern ability of the university in preparation of Financial Statements. It is also a responsibility of the management to keep accounts on a going concern basis and disclosure of the facts in relation to the going concern of the university except in case the management intends to liquidate the university or it is intended to cease operation in the absence of any other option.

The controlling parties of the university are responsible for checking the financial reporting system.

According to the subsection 16 (1) of the National Audit Act, No. 19 of 2018, university shall maintain proper books and records of all its income, expenditure, assets and liabilities, to enable annual and periodic Financial Statements to be prepared in respect of the university.



1.5 Responsibility of the Auditor in the audit of Financial Statements

My objective is to provide a fair assurance on the Financial Statements that they are free from material misstatements as a whole whether due to fraud or error and to issue the auditor's report comprising my opinion. Although fair assurance is a high quality assurance, it does not confirm that it would always expose quantitative misstatements when the audit is done in accordance with Sri Lanka Auditing Standards. It is expected that individual or collective impact of fraud or error may result in quantitative misstatements and it may have an effect on the decisions taken by the users based on these Financial Statements.

This audit has been carried out in accordance with the Sri Lanka Audit Standards by me with professional judgement and professional scepticism. Also,

- Obtaining sufficient and appropriate audit evidence to avoid risks caused by fraud or error by designing appropriate audit procedures that are appropriate in the circumstances in recognizing and evaluating possible misstatements that may occur in Financial Statements due to fraud or error is the basis of my opinion. Fraud will have a higher impact than that of material misstatements and collusion, preparation of fake documents, intentional avoidance and avoidance of internal controls may result in fraud.
- Although without a purpose of expressing an opinion on the effectiveness of the internal controls of the institution, the auditor considered internal controls relevant to the institute in order to design audit procedures that are appropriate in the circumstances.
- The audit included evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management as well as the suitability of the related disclosures made by the management.
- The relevance of using the going concern basis for accounting purpose was determined based on the audit evidence obtained on whether there is a sufficient contingency on the going concern of the institute due to events or circumstances. In case I conclude that there is a sufficient contingency, my audit report should attend to the related disclosures in the Financial Statements and my opinion must be modified in case the disclosures are not sufficient enough. However, going concern may end due to future events or circumstances.
- Presentation, structure and content of the Financial Statements with disclosures was assessed and underlying transactions and events were evaluated for whether they were included in the Financial Statements in an appropriate and reasonable manner.

The controlling parties are made aware of the important audit findings, major internal control weaknesses and other facts recognized in the audit.



2. Report on other Legal and Monitoring Requirements

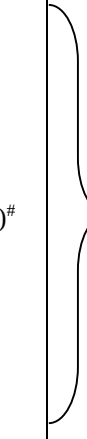
- 2.1 Special provisions are included regarding the following requirements in the National Audit Act, No. 19 of 2018.
- 2.1.1 I have obtained all the information and explanations required for the audit according to the requirements of section 12 (a) of National Audit Act, No. 19 of 2018. As seen in my investigation, proper financial reports had been maintained.
- 2.1.2 According to the requirements of section 6 (I) (d) (iii) of National Audit Act, No. 19 of 2018, the Financial Statements presented by the institute are in consistent with the preceding year.
- 2.1.3 According to the requirements of section 6 (I) (d) (iv) of National Audit Act, No. 19 of 2018, the recommendations made by me in previous year have been included in the presented Financial Statements.
- 2.2 According to of the procedures followed, evidence obtained and within the restriction of the quantitative matters, nothing caught my attention that was sufficient to make the following statements.
- 2.2.1 According to the requirements of section 12 (d) of National Audit Act, No. 19 of 2018, any member of the Board of Management of the institute has any direct or indirect interest in any contract entered into by the institute that is outside the normal business arrangement.
- 2.2.2 According to the requirements of section 12 (f) of National Audit Act, No. 19 of 2018, the auditee entity has not complied with any applicable written law or other general or special directions issued by the governing body of the auditee entity.
- 2.2.3 According to the requirements of section 12 (g) of National Audit Act, No. 19 of 2018, the university has not performed according to its powers, functions and duties.
- 2.2.4 According to the requirements of section 12 (h) of National Audit Act, No. 19 of 2018, the resources of the auditee entity had not been procured and utilized economically, efficiently and effectively within the time frames and in compliance with the applicable laws.

WPC Wickramaratne
Auditor General



Summary of Annual Report and Accounts – 2020

1. Details of Resources & Students:

Faculty	Course	Total Students	Total Academic Staff	Total Non Academic Staff
IBMBB, UOC	Master of MLS/ MSc in MLS	28	 9(+1) [#]	 21*(+1 [^])
	Master of CMI/MSc in CMI	12		
	Master of BI/ MSc in BI	19		
	MPhil	25		
	PhD			
	Registered for MPhil/PhD in other Institutions and carried out a comporment research work	01		
	Exposure on Molecular Biology & Immunology to undergraduate students from other HEIs	40		
	Industrial training placements	01		
Total		126	9(+1)	22

[#] Professor of Immunology is appointed as the Director

* Include 05 Academic Support Staff members (01 - Assistant Network Manager & 04 Scientific Assistants)

[^] Deputy Bursar (On Contract)

2. Details of Academic Staff:

Faculty	Subject	Medium	Senior Prof	Professor	Senior Lecturer	Lecturer	Asst. Lecturer (contract)	Post - Doctoral Research Fellow
	Molecular Life Sciences	English	1	-	-	-	-	-
	Cellular & Molecular Immunology	English	-	1*	2	-	1	1
	Molecular Biology	English	-	1	-	-	1	1
	Biochemistry and Molecular Biology	English	-	1	1	-	-	-
	DNA Diagnostics	English	-	-	1	-	-	-
	Cell Biology	English	-	-	1	-	-	-
	Plant Molecular Biology	English	-	-	1	-	-	-
Total			1	2+1*	6	-	2	2

* Professor of Immunology is appointed as the Director



3. Details of Administrative & Non-Academic Staff:

Faculty/ Branch	Most Senior	Senior Staff	Junior Staff	Minor Employees
IBMBB			1- Assistant Network Manager 4- Scientific Assistants	
	1- Deputy Bursar (on Contract) 1- Senior Assistant Registrar 1- Assistant Registrar		1- Technical Officer, Gr.I 1- Technical Officer, Gr.II seg. B	3- Laboratory Attendants
			6- Management Assistants 1- Management Assistant (Book Keeping)	1- Driver
			1- Telephone Operator cum Receptionist	
Total	3		15	04

4. Details of Research, Innovation and Publications:

Subject	Published	Commercialized	Presented
a. No of Researches			
MSc Dissertations	14		
PhD Thesis	2		
MPhil	-		
b. No of Innovations			
c. No of Journals			
d. No of Books			
e. No of News paper articles			
e. No of Articles –Full Papers in Journals	26		
f. Other (Research , Communications)			15
Total	42		15

5. Details of Programme, Seminars & Workshops:

Subject	Offered	Completed	Offered	Completed
	2019		2020	
a. No of Postgraduate Degree Programme	2	2	2	2
b. No of Postgraduate Diploma Programme	3	-	2	1
c. No of Degree Programme	-	-	-	-
d. No of Diploma Programme	-	-	-	-
f. Training Short Courses/workshops/ demonstrations etc.	4	4	-	-
g. Annual sessions	1	1	-	-
h. International Conference (with 4 Symposia)	-	-	-	-
Demonstration on Molecular Biology and Immunology practical demonstrations				
• Demonstration on DNA Sequencing (Biotechnology specialized students, Wayamba University)	1	1	1	1
• One day practical demonstration on Restriction Enzyme digestion (University College London students)	1	1	1	1
• Practical demonstration on Real Time PCR (Wayamba University students)	-	-	1	1
Total	12	09	07	06

*duration of one degree programme is 18/36 months



6. Details of Awards Received:

Subject	No of Awards	No of Academics	No of Students	No of Awards	No of Academics	No of Students
	2019			2020		
a. Local awards	4	-	4	1	2	2
b. National Awards	15	13	2	9	9	-
c. International Awards	-	-	-	1	1	1
d. Travel Awards	-	-	-	-	-	-
Total	19	13	6	11	12	3

7. Details of Recurrent Expenditure: 2020

	Subject	2019 (Rs.)	2020 (Rs.)
a.	Personal emoluments	91,296,891	94,851,104
b.	Travelling	144,406	64,892
c.	Supplies	9,543,309	13,030,002
d.	Maintenance	5,864,027	4,298,646
e.	Contractual Services	18,226,387	14,693,792
f.	Other (including depreciation)	24,682,640	29,600,720
	Total	149,757,660	156,539,156

8. Details of Capital Expenditure:

	Subject	2019 (Rs.)	2020 (Rs.)
a.	Acquisition of furniture & Office Equipments	2,940,545	416,416
b.	Acquisition of Machineries(Computers & Lab Equip.)	15,416,172	5,041,086
c.	Acquisition of Building & Structures	0	0
d.	Other (Library Books)	650,449	0
e.	Vehicle	0	0
	Total	19,007,166	5,457,502

9. Details of Project Expenditure (Local/ Foreign Funded):

Name	Exp in 2019 (Rs.)	Exp in 2020 (Rs.)	Cumulative Exp as at 31.12.2020	% of Physical Progress
Grants	14,612,233	4,833,843	19,446,076	work planned for 2020 completed
IFS	0	0	0	
IPIC	0	0	0	
Swedish Research Grant	0	11,146	11,146	
Start-up Research Grant (UGC)	0	16,604	16,604	
Total	14,612,233	4,861,593	19,473,826	



10. Details of Financial Progress (Expenditure):

	Subject	Provision in 2020 Rs.	Exp in 2020 Rs.	Savings/Excess Rs.
a.	Recurrent (Except Project)		151,677,563	
b.	Capital (Except Project)		5,457,502	
c.	Project-Local funded –NSF Grant		4,861,593	
Total			161,996,658	

*Depreciation not Considered * Included Expenditures from Generated Income

**Funds in the Capital Grant Unspent Account has been used.

11. Details of Financial Progress (Generated Income) :

	Source of Revenue	Provision in 2020 (Rs.)	Collection in 2020 (Rs.)	Deficit/ Surplus (Rs.)
a.	Undergraduate Studies	not relevant	not relevant	
b.	Postgraduate Studies		15,962,443	-
c.	Consultancies		0	
d.	Other		5,819,444	
Total			21,781,887	



12. Financial Performance Analysis-2020:

Rs'000

	Actual 2013	Budgeted 2014	Estimate 2015	Estimate 2016	Estimate 2017	Estimate 2018	Estimate 2019	Estimate 2020
No. of Students	MSc 34	MSc 41	MSc 60	MSc 60	MSc 33	MSc 34	MSc 52	MSc 78
	MLS 16	MLS 23	MLS 30	MLS 30	MLS 19	MLS 21	MLS 19	MLS 37
	CMI 07	CMI 07	CMI 15	CMI 15	CMI 14	CMI 13	CMI 14	CMI 22
	BI 11	BI 11	BI 15	BI 15	BI -	BI -	BI 19	BI 19
	MPhil/PhD 25	MPhil/PhD 21	MPhil/PhD 25	MPhil/PhD 33	MPhil/PhD 29	MPhil/PhD 32	MPhil/PhD 27	MPhil/PhD 26
Recurrent Cost per Student	MSc Rs. 463,720/=	MSc Rs. 306,490/=	MSc Rs. 361,553 /=	MSc Rs. 458,716 /=	MSc Rs. 488,266/=	MSc Rs. 617,445 /=	MSc Rs. 578,748 /=	MSc Rs. 431,177 /=
	MPhil/PhD Rs.1,319,107/=	MPhil/PhD Rs.897,580/=	MPhil/PhD Rs.1,301,592/=	MPhil/PhD Rs.1,063,388/=	MPhil/PhD Rs.1,287,607/=	MPhil/PhD Rs.1,078,930 /=	MPhil/PhD Rs.1,779,107 /=	MPhil/PhD Rs.2,010,954 /=
Capital Cost per Student	MSc Rs. 117,266/=	MSc Rs. 117,073/=	MSc Rs. 91,000/=	MSc Rs.108,831/=	MSc Rs.159,493/=	MSc Rs. 184,402/=	MSc Rs. 145,990/=	MSc Rs. 136,568/=
	MPhil/PhD Rs.239,224/=	MPhil/PhD Rs.342,857	MPhil/PhD Rs.327,600/=	MPhil/PhD Rs.252,291/=	MPhil/PhD Rs.272,237/=	MPhil/PhD Rs. 294,173/=	MPhil/PhD Rs. 421,750/=	MPhil/PhD Rs. 614,557/=

* Included only Academic, Academic Support, Technical Officers, Lab Attendants salaries.

** Not included Security, Electricity, Water.

*** Amount of Research Grants can be calculated at the end of the year.

**** MPhil/ PhD per student cost will be varied based on Research Grant.



Cumulative Summary of Students by Year MSc & MPhil/PhD Programmes from 2019

Degree			2019	2020
Master of Molecular Life Science	Intake	New Intake	10	15
		Continuing	-	03
		Total	10	18
	Output	PG Dip	-	-
		Master	-	02
		Total	-	02
Master of Cellular and Molecular Immunology	Intake	New Intake	07	07
		Continuing	-	02
		Total	07	09
	Output	PG Dip	-	01
		Master	-	-
		Total	-	01
Master of Bioinformatics	Intake	New Intake	19	-
		Continuing	-	19
		Total	19	19
	Output	PG Dip	-	-
		Master	-	-
		Total	-	-
Master of Science in Molecular Life Science	Intake	New Intake	-	04
		Continuing	15*	15*
		Total	15	19
	Output	MSc	05	06
Master of Science in Cellular and Molecular Immunology	Intake	New Intake	-	04
		Continuing	09*	09*
		Total	09	13
	Output	MSc	02	06
Master of Science in Bioinformatics	Intake	New Intake	-	-
		Continuing	-	-
		Total	-	-
	Output	MSc	-	-
MPhil/PhD	Intake	New Intake	02	03
		Continuing	24	23
		Total	26	26
	Output	Graduates	09	02

*student registered in 2017/2018 (refer the cumulative summary 2005-2018)



Cumulative Summary of Students by Year - MSc & MPhil/PhD Programmes From 2005 to 2018

		2004 June to Dec	2005*	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
MSc *(commenced in 2005)	Total	-	8	18	25	24	24	33	34	34	34	42	33	34	34	31	
	New intake	-	8	10	11	13	12	19	10	22	11	18	12	21	11	19	197
	Continuing	-	-	8	14	11	12	14	24	12	23	24	21	13	23	12	
	Output	-	-	-	3	11	10	8	8	17	11	8	18	17	12	15	138
MPhil/PhD	Total	3	0	8	8	13	13	12	13	18	17	24	27	28	28	32	
	New intake	3	0	5	1	5	1	1	1	11	7	6	3	4	6	5	59
	continuing	-	-	3	7	8	12	11	12	6	10	18	24	23	22	27	
	Output	-	-	-	1	0	0	1	1	1	3	1	0	1	6	3	18
MSc (indirect)	Total	2	6	3	1	-	-	-	1	-	-	-	-	-	-	-	
	New intake	2	4	1	-	-	-	-	1	-	-	-	-	-	-	-	8
	Continuing	-	2	2	1	-	-	-	-	-	-	-	-	-	-	-	
	Output	1	-	4	-	1	-	-	-	1	-	-	-	-	-	-	7
MPhil/PhD (indirect)	Total	7*	6	4	6	5	8	6	3	1	6	4	5	4	4	7	
	New intake	-	1	0	3	-	4	0	1	0	0	1	-	-	1	0	11
	Continuing	7	5	4	3	5	4	6	2	1	6	3	5	-	3	4	
	Output	-	1	2	-	1	-	-	3	1	-	3	1	1	-	-	13
Postgraduate students	Total	12	23	33	40	42	45	51	51	52	57	70	65	63	66	70	
	New intake	5	13	16	15	18	17	20	13	33	18	25	15	25	18	24	275
	Continuing	7	10	17	25	24	28	31	38	19	39	45	50	-	48	43	
	Output	1	1	6	4	13	10	9	12	20	14	12	19	19	18	18	176
Staff: Student ratio		1:12	1:08	1:08	1:10	1:14	1:15	1:17	1:17	1:17	1:14	1:14	1:13	1:13	1:11	1:08	

Includes * students registered at other Faculties / Universities under the SAREC Grant before relocation to IBMBB

Summary 2004-2018	MSc	MPhil/PhD	Total	
Direct Output	138	18	156	176
Indirect Output	7	13	20	
Direct Intake	197	59	256	275
Indirect Intake	8	11	19	

