

**Strategic & Management Plan  
2019-2023**

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

**[www.ibmbb.lk](http://www.ibmbb.lk)**

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## **MESSAGE FROM THE DIRECTOR**

A Strategic and Management Plan (Corporate Plan) is vital for an organization. Institute of Biochemistry, Molecular Biology and Biotechnology (IBMBB) came up with a comprehensive Corporate Plan during the early years of its existence.

Initial Corporate Plan (2007-2011) was developed clearly stating the vision, mission and goals of the organization, enabling the IBMBB to use a well-focused, target oriented, time scheduled approach for enhancing its activities as well as for sustainability.

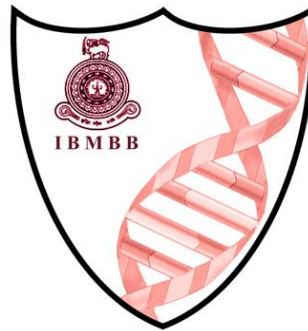
Preparation for the first Corporate Plan began with an initial brain storming session with the assistance of the Post Graduate Institute of Management. Subsequently, due to time and funding constraints, the Corporate Plan was prepared in house by a team comprising members of Board of Management and Prof. Kamani Tennekoon then Director of the Institute and guided by Prof. E. H. Karunanayake.

Strategic & Management Plan was further revised and reformatted to develop the in house Strategic Plans up to date. Lack of adequate staff, delays in recruitment procedures and space requirements continued to be a major constrain the development of a 5 year rolling plan. By end of 2018, the filling of academic cadre is almost complete. However, the recruitment of support staff is in progress and yet to be completed.

Foreign students with assistance from Government of Sri Lanka was a new concept in keeping with the current policy of creating a knowledge hub which the IBMBB partakes which was initiated in 2014. IBMBB is currently an accepted host Institution for Commonwealth scholarship programme since 2014. After 14 years since its inception, IBMBB has increased its research and training components amidst numerous constraints and aims to further expand its research activities and capacity development with the focus on post-graduate training and research and also initiated research innovations and possible commercialization.

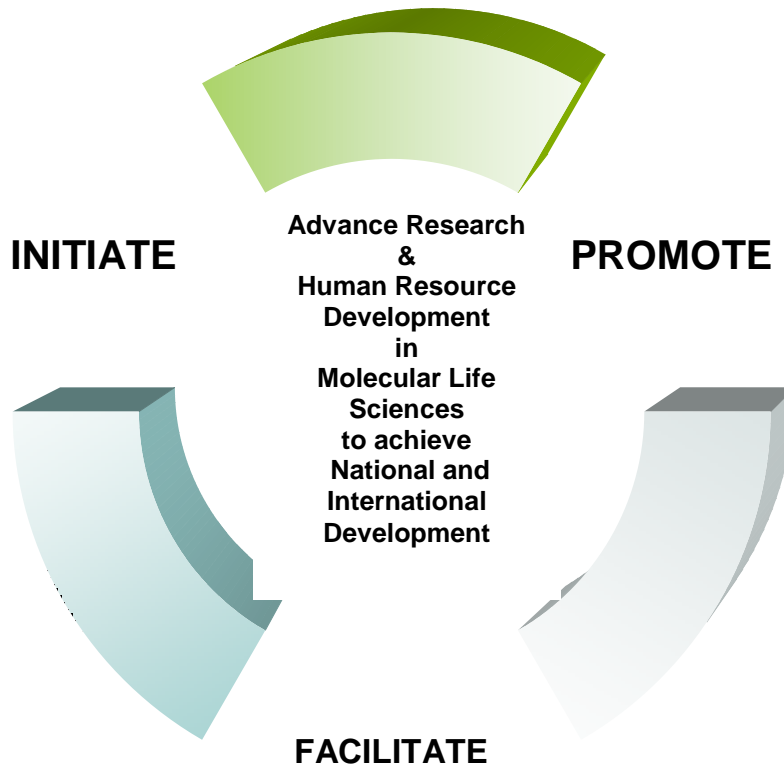
Professor Shiroma Handunnetti  
Director, IBMBB  
2018-12-12

**1. VISION**



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

**2. MISSION**



### 3. OUR VALUES

- **Academic freedom** – Subject to the norms and standards of the Institute, there is freedom to conduct research, to teach, speak and publish without interference or penalizing wherever the search for truth and understanding may lead.
- **Lifelong Learning and Critical thinking** – The Institute inculcates lifelong learning and critical thinking of staff and students.
- **Innovativeness & Exploration** – The Institute is always ready to find new ventures for development.
- **Integrity** - Achievements of the Institute are based on the transparency of its actions and the integrity of its performance.
- **Responsibility & accountability** – The Institute operates with a sense of responsibility and accountability.
- **Diversity and inclusiveness** – The Institute continues to operate across a broad spectrum and inclusiveness.
- **Commitment & competency** – Institute staff is highly committed to develop and deliver knowledge and working with the highest level of enthusiasm.
- **Team Spirit** – The Institute has a reputation of working as a team and, therefore, developed a team spirit in all its work.
- **Equal Opportunity** – The Institute recognizes that its strength and unity comes from providing equal opportunities to everyone, built on the foundations of social justice and equality.
- **Professionalism** – The Institute expects all students and staff to demonstrate honesty, integrity, attention to detail and conformity.

## 4. INTRODUCTION & HISTORICAL INFORMATION

The 21<sup>st</sup> 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).

Civil 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 initial design of the IBMBB was funded by the Asian Development Bank's Science and Technology Personnel development project. The IBMBB was ceremonially declared open on 28<sup>th</sup> 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 established by Gazette Extra-ordinary No. 1282/25 of 3<sup>rd</sup> 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 curricular for these three Masters courses have been revised and the course with the new curricular will commence in 2019.

**Present Director**

Prof. Shiroma M Handunnetti

September 2018 – to date

**Past Directors of the Institute**

Prof. Eric H Karunanayake

2004 – 2007

Prof. Kamani H Tennekoon

2007 – 2012

Prof. Kamani H Tennekoon

January-March 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 2018

Prof. Tara D Silva

February-August 2018 (Acting Director)

**5. CORPORATE PROFILE & ORGANIZATIONAL CHART**

**5.1. CORPORATE PROFILE**

**5.1.1. Registered Office:**

No: 90, Cumaratunga Munidasa Mawatha, Colombo 3, Sri Lanka  
www.ibmbb.lk

**5.1.2. Legal Frame work:**

The IBMBB project received the approval of the Department of National planning on 26<sup>th</sup> June 2000 by letter No. NP/HRD/Ch/43. The Cabinet of Ministers approved the project on 12<sup>th</sup> February, 2001 (Cabinet Paper 01/0349/03/024). The name and style of “The Institute of Biochemistry, Molecular Biology and Biotechnology” was assigned by Ministerial Order published in Gazette Extraordinary No. 1253/31 of 13<sup>th</sup> September, 2002. The Ordinance of the Institute, approved by the Senate, Legal Committee, Council and the Legal Committee of UGC, was gazetted by Gazette Extra-ordinary No. 1282/25 of 3<sup>rd</sup> April, 2003.

### **5.1.3. Board of Management - 2018**

Prof. Shiroma Handunnetti, Director-IBMBB, (Chairperson) (Jan-Feb 2018 & from Sep 2018)  
 Prof Tara D Silva, Acting Director-IBMBB, (Chairperson) (March-August 2018)  
 Ms.S S Evangeline, Secretary Nominee, Director (Development), Ministry of Higher Education  
 Prof. Eric H Karunanayake, UGC Nominee  
 Mr. C Maliyadde, UGC Nominee  
 Prof. Ira Thabrew, UGC Nominee  
 Prof. Ramanee Wijesekera, UGC Nominee  
 Prof. A N I Ekanayake, Council Nominee  
 Mr. Thilak Karunaratne, Council Nominee  
 Ms. W Indira Nanayakkara, Senate Nominee  
 Prof. Senaka Rajapakse, Senate Nominee  
 Prof. Jennifer Perera, Dean/Medicine, University of Colombo, Ex-officio  
 Prof. KRR Mahanama, Dean/Science, University of Colombo, Ex-officio  
 Prof. K P Hewagamage, Director, University of Colombo School of Computing (UCSC), Ex-officio  
 Dr. Kithmini Siridewa, Head/Biochemistry & Molecular Biology, Faculty of Medicine, Ex-officio

### **5.1.4. Academic Committee - 2018**

Prof. Shiroma Handunnetti, (Director & Chairperson); Professor in Immunology; Chairperson, BOS-CMI  
 Prof. Eric H Karunanayake, Emeritus Professor of Biochemistry, IBMBB  
 Prof. Ira Thabrew, Visiting Professor, IBMBB  
 Prof. Kamani H Tennekoon, Senior Professor of Molecular Life Sciences; Chairperson, BOS-MLS, IBMBB  
 Prof. Nimal Punyasiri, Professor of Biochemistry, IBMBB  
 Dr. Ruwan Weerasinghe, Chairperson, BOS-BI; Senior Lecturer, UCSC, UoC  
 Dr. OVDSJ Weerasena, Course Coordinator, BOS-MLS; Senior Lecturer, IBMBB  
 Dr. Sisira Pathirana, Course Coordinator, BOS-CMI, Senior Lecturer, IBMBB  
 Dr. Ruwandi Ranasinghe, Co-Course Coordinator, BOS-BI, Scientific Assistant, IBMBB  
 Ms. Rupika Wijesinghe, Co-Course Coordinator, BOS-BI, Senior Lecturer, UCSC, UoC  
 Dr. Sumadee De Silva, Lecturer, IBMBB (Secretary)  
 Dr. Narmada Fernando, Assistant Course Coordinator, BOS-CMI; Senior Lecturer, IBMBB  
 Dr. Sudeshini Hewage, Assistant Course Coordinator, BOS-MLS; Lecturer, IBMBB  
 Prof. S Deraniyagala, Professor in Organic Chemistry, Faculty of Science, UoC  
 Prof. Sulochana Wijesundera, Professor in Biochemistry, Molecular Biology & Biotechnology, Faculty of Medicine, University of Colombo  
 Dr. Kithmini Sirideva, Head/Biochemistry & Molecular Biology, Faculty of Medicine, UoC  
 Prof. Sunil Premawansa, Professor in Zoology, Faculty of Science, University of Colombo  
 Dr. Enoka Corea, Senior Lecturer, Department of Microbiology, Faculty of Medicine, UoC  
 Dr. Rajiva De Silva, Consultant Immunologist, Dept. of Immunology, Medical Research Institute



### **5.1.5. Research and Higher Degrees Committee - 2018**

Prof. Kamani Tennekoon. Senior Professor of Molecular Life Sciences (Chairperson)  
 Prof. Eric Karunanayake, Emeritus Professor of Biochemistry, University of Colombo  
 Prof. Rohini Fernandopulle, Professor of Pharmacology, Kotelawala Defense University  
 Prof. Ariyaranee Gnanathanan, Professor in Medicine, Faculty of Medicine, Univ. of Colombo  
 Prof. Shiroma Handunnetti, Professor in Immunology & Director IBMBB  
 Prof. Nimal Punyasiri, Professor of Biochemistry, IBMBB  
 Prof. Ira Thabrew, Visiting Professor, IBMBB  
 Prof. Shamala Tirimanne, Professor in Plant Sciences, Faculty of Science, Univ. of Colombo  
 Prof. W D Ratnasooriya, Professor of Zoology, Kotelawala Defense University  
 Prof. Nilanthi Dassanayake, Professor in Botany, Faculty of Applied Sciences, University of Sri Jayewardenapura  
 Dr. Kumudu Fernando, Former Director, Agricultural Biotechnology Centre, University of Peradeniya  
 Dr. Sumadee de Silva, Senior Lecturer, IBMBB  
 Dr. O V D S J Weerasena, Senior Lecturer, IBMBB (Secretary)  
 Dr. Ruwandi Ranasinghe, Scientific Assistant, IBMBB (Co-opted member)  
 Dr. Sameera Samarakoon, Lecturer, IBMBB (Co-opted member)

### **5.1.6. Finance & Management Committee - 2018**

|                           |  |
|---------------------------|--|
| Prof. Shiroma Handunnetti | -Director (Chairperson)                              |
| Prof. Eric Karunanayake   | -Member of the Board of Management (Up to June 2018) |
| Mr. Thilak Karunarathna   | -Member of the Board of Management (from July 2018)  |
| Prof. K R R Mahanama      | -Member of the Board of Management                   |
| Ms. W I Nanayakkara       | -Member of the Board of Management                   |
| Prof Ira Thabrew          | -Member of the Board of Management                   |
| Ms. M K Kahawita          | -Deputy Bursar (Convener)                            |

### **5.1.7. Audit Committee - 2018**

Prof. K P Hewagamage - Member of the Board of Management (Chairman from June 2018)  
 Mr. Rajan Asirwatham -Member of the Board of Management (Chairman up to May 2018)  
 Mr. C Maliyadde - Member of the Board of Management  
 Ms. J C Weligamage - Additional Director General, Department of Public Finance, General Treasury  
 Mr. W A T G Weerakkody- Audit Superintendent, Government Audit  
 Mr. K E W Jayasiri - Senior Assistant Internal Auditor, University of Colombo (Secretary)  
 Prof Tara D Silva - Director (Acting; On invitation up to August 2018)  
 Prof. Shiroma Handunnetti - Director (On invitation from September 2018)  
 Ms. Manjula K Kahawita - Deputy Bursar (On invitation from April 2018)  
 Mr. Janaka Gunasekera - Senior Assistant Registrar/ IBMBB -On invitation)

**5.1.8. Board of Study - Molecular Life Sciences - 2018**

Prof. Kamani Tennekoon - Senior Professor in 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  
 Dr. OVDSJ Weerasena - Senior Lecturer, IBMBB (Secretary)  
 Prof. Nilanthi Dassanayake - Professor in Botany, USJP  
 Dr. Sumadee De Silva - Lecturer, IBMBB  
 Dr. Sudeshini Hewage - Lecturer, IBMBB  
 Dr. Sameera Samarakoon - Lecturer, IBMBB  
 Dr. Ruwandi Ranasinghe - Scientific Assistant, IBMBB

**5.1.9. Board of Study – Cellular and Molecular Immunology - 2018**

Prof. Shiroma Handunnetti, Professor in Immunology (Chairperson)  
 Prof. Sunil Premawansa - Professor in Zoology, Faculty of Science, UoC  
 Dr. Sisira Lal Pathirana - Senior Lecturer, IBMBB  
 Dr. Narmada Fernando - Senior Lecturer, IBMBB (Secretary)  
 Dr. Enoka Corea - Senior Lecturer, Department of Microbiology, UOC  
 Dr. Rajiva de Silva - Consultant Immunologist, Department of Immunology, MRI  
 Dr. Dhanushka Dassanayake - Consultant Immunologist, Department of Immunology, MRI  
 Dr. Dharshan de Silva - Senior Lecturer, Sir John Kotelawla Defense University  
 Ms. Dilini Ishaka - Assistant Lecturer, IBMBB (On invitation)

**5.1.10. Board of Study – Bioinformatics - 2018**

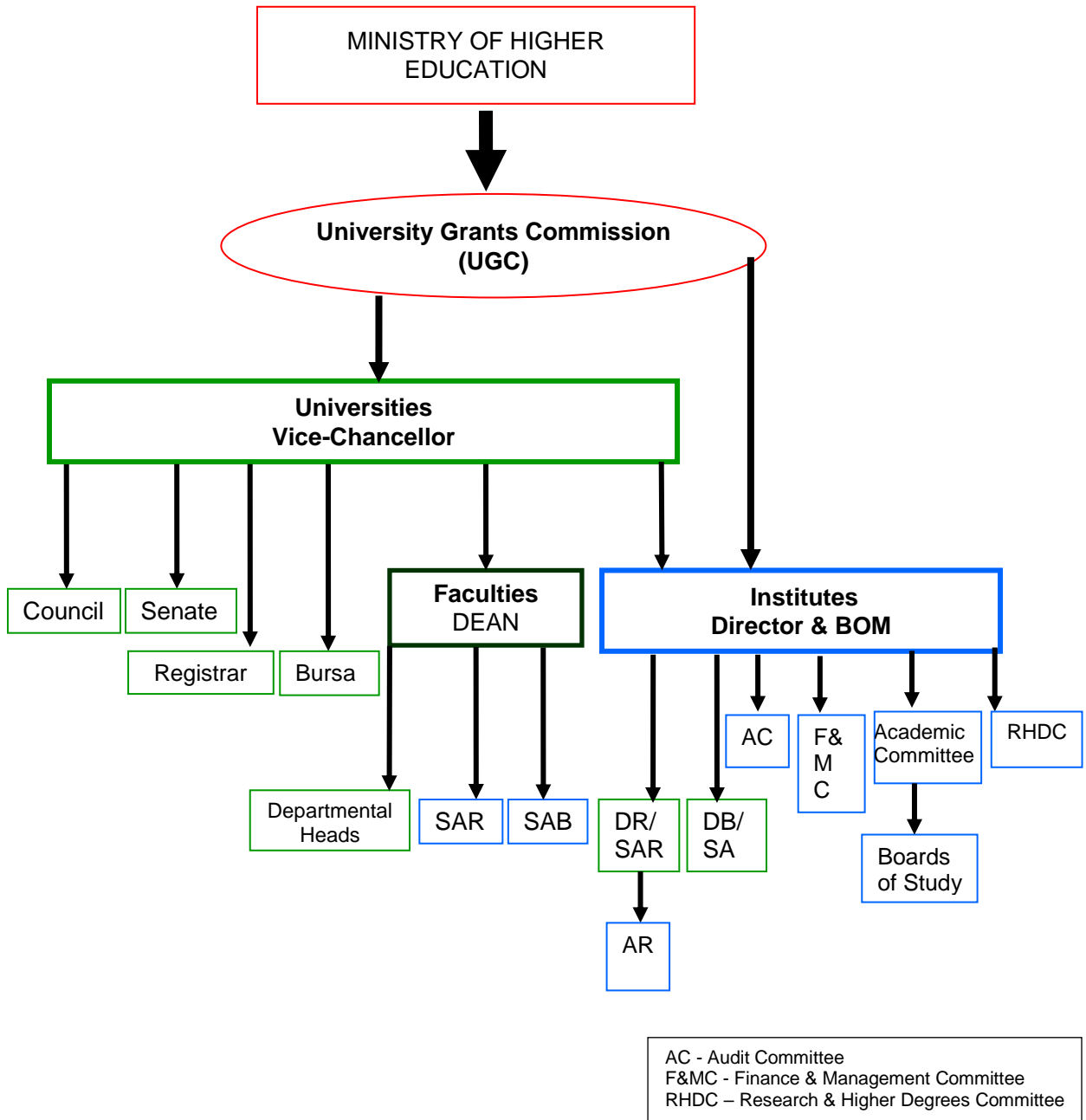
Dr. Ruwan Weerasinghe - Senior Lecturer, UCSC (Chairperson)  
 Prof. Kamani Tennekoon - Senior Professor in Molecular Life Sciences (Deputy Chairperson)  
 Prof. Shiroma Handunnetti - Director-IBMBB (Ex-officio Member)  
 Prof. K P Hewagamage - Director-UCSC (Ex-officio Member)  
 Prof. Eric H Karunanayake - Emeritus Professor of Biochemistry, IBMBB  
 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. O V D S J Weerasena - IBMBB  
 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 & Secretary)  
 Mr. Kanchan S Senanayake - Former IBMBB Co-Coordinator (On invitation when required)

**5.1.11. Quality Assurance Cell - IBMBB - 2018**

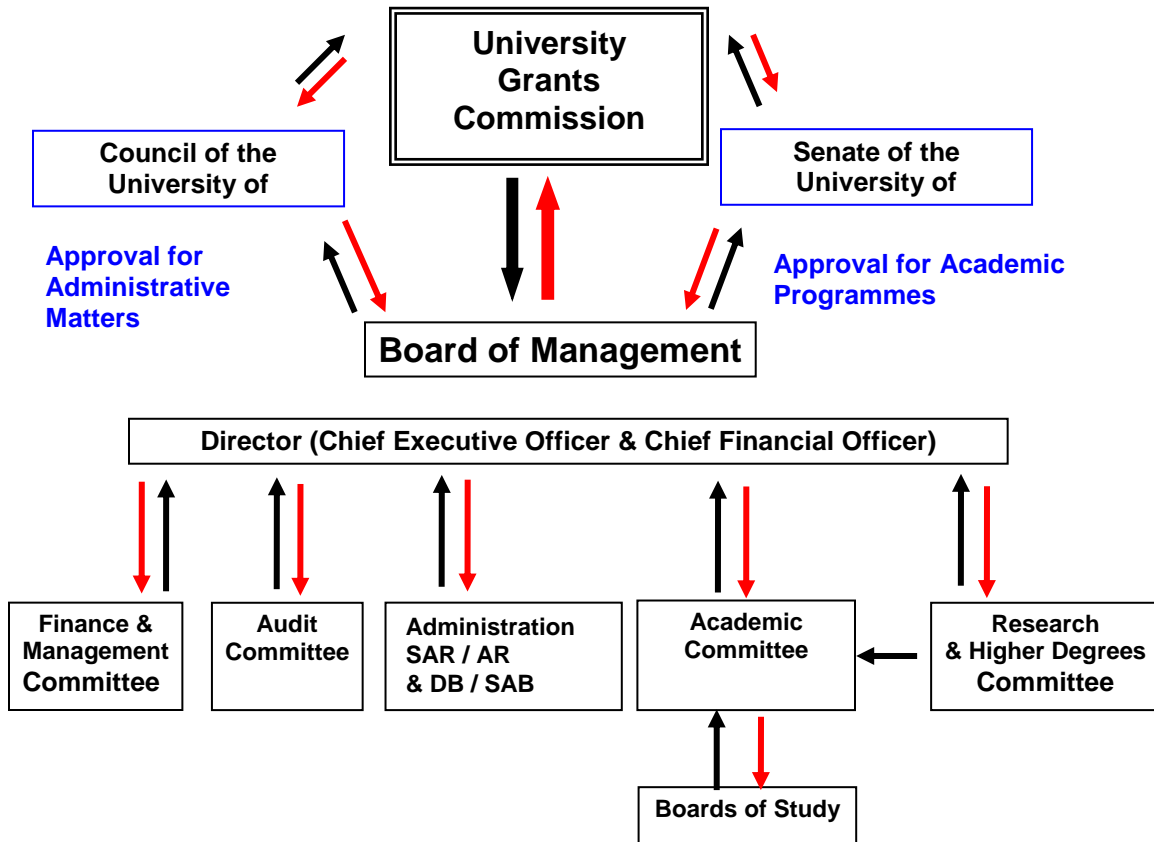
Prof. Shiroma Handunnetti - Director (Chairperson); Chairperson BOS-CMI  
Prof. Kamani Tennekoon - Chairperson, BOS-MLS & RHDC  
Dr. Ruvan Weerasinghe - Chairperson, BOS-BI  
Dr. Jagathpriya Weerasena - Secretary, BOS-MLS & Secretary- RHDC  
Dr. Sisira Pathirana - Course Coordinator - CMI  
Ms. Rupika Wijesinghe - Co-Course Coordinator –BI (UCSC)  
Dr. Sumadee de Silva - Secretary, Academic Committee  
Dr. Ruwandi Ranasinghe Co-Course Coordinator –BI (IBMBB)  
Prof. Nimal Punyasiri - Professor of Biochemistry, IBMBB  
Dr. Narmada Fernando - Secretary, BOS-CMI  
Ms. Sudeshini Hewage - Assistant Course Coordinator - MLS  
Mr. JSRS Gunasekara - SAR-IBMBB (Convener)  
Ms. MK Kahawita- DB-IBMBB  
Ms. Harshani Jayaweera - AR- IBMBB  
Ms. Anoma Jayasoma - Technical Officer  
Ms. Jayani Kariyawasam - Scientific Assistant & Coordinator - QAC-IBMBB

## 5.2. ORGANIZATIONAL CHART

### 5.2.1. Current administrative structure of the University system & IBMBB



### 5.2.2. Administrative Organization of IBMBB



## 6. CURRENT PERFORMANCE

IBMBB currently has a student population of 31 Master of Science Students (20 reading for Molecular Life Sciences, 11 reading for Cellular and Molecular Immunology and 30 Master of Philosophy / Doctor of Philosophy students. There is a total of 61 post-graduate students registered for the MSc, MPhil & PhD degrees at the IBMBB.

Full time Academic staff consists of one (01) Senior Professor who is the Former Director, two (02) Professors including the Director, three (04) Senior Lecturers & (03) three Lecturers. Recruitment to one Professor (Chair) post is in progress. Visiting Faculty is as follows. Visiting Faculty for taught Master of Science programmes comprises 10 Professors, 4 Senior Lecturers, 11 Specialist Clinicians, 2 senior Scientists and 6 Scientists. Eight Professors, 2 Associate Professors, 3 Senior Lecturers, 9 Specialist Clinicians and 2 Senior Scientists collaborate on various research programmes and some of them also function as supervisors/ co-supervisors for MPhil/PhD students.

Most of the state of the art equipment needed for research in Molecular Life Sciences and related fields as well as infrastructure for Bioinformatics is available in the IBMBB. IBMBB is designated as a **Resource Centre for Molecular Life Sciences in Asia** by the International Programme in Chemical Sciences (IPICS), University of Uppsala and was recently elected as the **National Node for European Molecular Biology Network (EMBnet)**. IBMBB was also selected as one of the two Institutes/Universities in Sri Lanka to host Commonwealth Scholarships since 2014 and to date IBMBB had received six scholars from the commonwealth countries.

Several Universities and Research Institutes in Sri Lanka currently benefit from the training / research programmes conducted at the IBMBB. These include postgraduate training of probationary academic staff, short courses for academics and technical staff, collaborative research programmes and facilities for postgraduate and postdoctoral training.

IBMBB currently does not admit undergraduate students but, cooperates with other Faculties, Universities and private sector educational institutes to provide familiarization programmes, in-plant training and final year research projects. Provision of in-plant training and research projects for undergraduates from other faculties/Universities is currently made utilizing research funds secured by IBMBB Faculty.

At present the manpower and finances needed to expand ongoing programmes in human resource development and research and development are highly inadequate. The field of “Molecular Life Sciences” is resource extensive as the Laboratory reagents and consumables needed as well as capital for and maintenance of equipment are rather expensive. However, the locally provided training which meets international standards saves on foreign exchange (equivalent training in a Western country for example in the United Kingdom costs

approximately 4 times for a MSc degree and approximately double for a MPhil/PhD for tuition fees alone), addresses nationally relevant problems and has a better retention of trained personnel.

Competitive Research Grants secured by Academic Staff has been the vital source for functioning of the IBMBB. In order to maintain the activities of IBMBB and to enhance/strengthen the same considerable Government investment will be needed. Currently most of the Government Grant is utilized for meeting the cost of salaries and utilities and for the first time funding for a research programme was secured from the Ministry of Higher Education from 2012-2015 which supported 4 to 5 MPhil/PhD students.

One of the main issues in increasing student intake is the unavailability of enough space in the building. Therefore IBMBB has requested approval from University of Colombo to extend the available space facilities in the IBMBB constructing new laboratory areas. University of Colombo accepted the requirement and our proposal has been considered at their Building & Maintenance Committee and our plan has been incorporated to the Master Plan of University of Colombo.

By the end of 2018, the Academic cadre & Administrative cadre is filled, the recruitment of support staff is yet to be completed.

## **7. GOALS**

- Goal No: 1 To produce High Quality Internationally recognized postgraduates in Molecular Life Sciences and allied fields
- Goal No: 2 To be the Centre of Excellence in Genomics, Proteomics, Bioinformatics and Immunology contributing to National Development
- Goal No: 3 To provide a conducive institutional environment and supportive culture
- Goal No: 4 To achieve the self-financing through research, services and product development
- Goal No: 5 To promote Good Governance



## 8. OBJECTIVES & STRATEGIES

| Goal  | Objectives  | Strategies   |   |
|---|---|--|---|
| <b>1.</b> To produce High Quality Internationally recognized postgraduates in Molecular Life Sciences and allied fields | <b>1.1</b> Increase post-graduate student intake & output<br>1.1.a. Increase intake of MSc students to 100% by 2023<br>1.1.b. Increase (cumulative) output of PhD student to 30 by 2023<br>1.1.c. Increase foreign student intake to 20% within the batch by 2023 | 1.1.1. Increase student intake to existing MSc programmes & Strengthen ongoing programmes                      |   |
|   |   | 1.1.2 Initiate new postgraduate programmes   |   |
|   |   | 1.1.3 Initiate new MPhil/PhD research programmes& Strengthen ongoing programmes                                |   |
|   |   | 1.1.4 Initiate Postdoctoral and other research programmes  |   |
|   |   | 1.1.5. Establish new Scholarship/ Collaborative programmes   |   |
|   |   | 1.1.6. Increase advertising and awareness among potential students   |   |
|   | <b>1.2.</b> Increase the academic & scientific staff  | 1.2.a.Increase the number of Permanent Academic Cadre (PAC), 100% by 2019                                      | 1.2.1. Establish a comprehensive resource pool of faculty |
|   |   | 1.2.b.Create additional 4 positions of Scientific Assistants (SA), by 2023                                     |   |
|   |   | 1.2.c. Create6 positions of Post-Doctoral Scientists (PDS) by 2023   |   |
|   |   | 1.2.d.Increase positions for International Faculty (IF) to 10, by 2023   |   |
| <b>1.3.</b> Enhance student centered learning   | 1.3.a. Increase the usage of multimedia and other A-V aids to 100% by 2023  | 1.3.1. Maintain research & learning friendly environment and a state of the art research and learning facility |   |
|   | 1.3.b. Increase the number of computers and accessories to 100% by 2023   |  |   |
|   | 1.3.c. Improve presentation skills of students to 100% by 2021  | 1.3.2. Strengthen modern teaching, learning methods  |   |

|   |   |   |  |
|---|---|---|--|
|   |   | 1.3.d. Increase Library facilities by 100% by 2023  | 1.3.3. Increase Library space, reading/discussion areas and use of e-learning materials  |
|   |   | 1.3.e. Increase student study areas, discussion rooms and recreation areas by 300% by 2023  |  |
|   |   | 1.3.f. Increase the number of recommended books and journals to 100% by 2023  |  |
| 2. To be the Centre of Excellence in Genomics, Proteomics, Bioinformatics and Immunology contributing to National Development | 2.1. Increase / Maintain international recognition of Faculty members           | 2.1.a. Publish 35 per year International peer-reviewed publications by 2023   | 2.1.1. Continue performance based appraisal taking into consideration indexed publications, research funds secured, excellence in teaching and ability to generate funds for the institute<br><br>2.1.2. Encourage and assist in participation at International conferences by faculty members/ collaborators/students to present research carried out at the IBMBB  |
|   |   | 2.1.b. Increase the number of International presentations to 20 by 2023   |  |
|   | 2.2. Establish new and continue ongoing nationally relevant research programmes | 2.2.a. Establish 4 new nationally relevant research programmes by 2023 in priority areas requiring solutions based on tools of Molecular Life Sciences, Immunology and Bioinformatics | 2.2.1. Identify priority areas requiring solutions based on tools of Molecular Life Sciences and Allied fields<br><br>2.2.2. Implementation of research programmes directed towards identification of novel drug candidates/agents from medicinal plants/ marine resources<br><br>2.2.3. Screen for bioactivity of existing traditional medicine to provide scientific basis for usage and alleviate fears of toxicity<br><br>2.2.4. Establish new research programmes for R and D work aimed at personalized medicine and |
|   |   | 2.2.b. Continue the 10 ongoing nationally relevant research until 2023  |  |

|   |  |   |   |
|---|--|---|---|
| <p>2. To be the Centre of Excellence...<br/>...</p> |  |   | <p>human DNA variation</p> <p>2.2.5. Continue existing programmes in biomedical sciences and plant molecular biology and develop new research programmes based on findings when warranted</p> <p>2.2.6. Encourage and assist in obtaining National/ International competitive research grants by faculty members/collaborators</p>  |
|   | <p>2.3. Establish new linkages /partnerships with academic and research institutes, both local and international and with industry</p> | <p>2.3.a. Establish 10 new Local collaborations by 2023</p> <p>2.3.b. Establish 10 new partnership with Industry by 2023</p> <p>2.3.c. Establish 5 new international collaborations by 2023</p>   | <p>2.3.1. Enact Memoranda of Understanding with Research Institutes</p> <p>2.3.2. Strengthen collaborative research programmes with health sector</p> <p>2.3.3. Strengthen cooperation with other Faculties /Universities and private sector Educational Institutes</p> <p>2.3.4. Enhance existing /develop new collaborations with Universities and Research Institutes overseas</p> <p>2.3.5. Develop collaboration with Industry</p> |
|   | <p>2.4. Become a resource center in Molecular Life Sciences, Bioinformatics and allied fields</p>                                      | <p>2.4.a. Hold 3<sup>rd</sup> International conference in 2020</p> <p>2.4.b. Hold 4 Annual Scientific Sessions by 2023</p> <p>2.4.c. Conduct 10 National symposia/ seminar/ workshops by 2023</p> | <p>2.4.1. Provide training in Molecular Life Sciences, Bioinformatics, Immunology and allied fields, nationally and regionally</p> <p>2.4.2. Dissemination of knowledge/ research findings</p> <p>2.4.3. Maintenance of available infrastructure for bioinformatics and upgrading/ updating of</p>  |

|  |  |  |  |
|--|--|--|--|
|  |  |  | facilities<br><br>2.4.4. Maintain and update mirrors of Biological databases<br><br>2.4.5. Provide on-line tools for Bioinformatics based/ learning /research  |
|  |  | 2.4.d. Conduct 10 short courses by 2023                                |  |
|  |  | 2.4.e. Conduct 5 Annual Open Days & Public lectures by 2023            |  |
|  |  | 2.4.f. To further develop the website to increase visibility           | Recruit Scientific Assistant- Information Technology & Graphic Design  |
|  | 2.5. Contribute to undergraduate training  | 2.5.a. Initiate planning of undergraduate course(s)                    | 2.5.1. Evaluate feasibility of conducting undergraduate course(s)  |
|  |  | 2.5.b. To provide internship and research training to undergraduates   | 2.5.2. To provide in-plant training and research training to final year undergraduates   |
|  | 2.6. Establish a repository of archives of land mark developments in MLS                                 | 2.6. Complete documentation and preservation by 2019                   | 2.6.1. Establish a repository of Archives giving the land mark developments in the field of Molecular Life Sciences  |
|  |  |  | 2.6.2. Establish Archives of historical developments resulting in the establishment of IBMBB   |
| 3. To provide a conducive institutional environment and supportive culture | 3.1. To provide online courses and become an E-learning center for Bioinformatics, MLS and allied fields | 3.1.a. Establish 1 online certificate courses in Life Sciences by 2023 | 3.1.1. Develop content for E- learning for students/ teachers in Bioinformatics, Molecular Life Sciences, Immunology and allied fields<br><br>3.1.2. Provide facilities for high throughput Data Analysis and efficient Storage of Biological data |
|  |  | 3.1.b. Conduct 5 online certificate courses                            |  |
|  |  | 3.1.c. Increase computers and Accessories by 200% by 2023              |  |
|  |  | 3.1.d. Expand the space of server room by 200% by 2023                 |  |
|  |  | 3.1.e. Increase IT staff by 200% by 2023                               |  |

|   |  |   |  |
|---|--|---|--|
|   | 3.2. To increase facilities for e-learning and Research                                      | 3.2. Provide online selection test for admission to all existing MSc programmes by 2023 | 3.2.1. Establish links with international centers of excellence for e- teachers and e-resources in Bioinformatics and other fields<br><br>3.2.2. Develop IT skills of students, support staff and teachers |
|   |  | 3.3 Enhance quality of teaching/learning /research/evaluation/administration            | 3.3.1. Provide software tools and facilities to enhance quality of teaching/learning /research/evaluation/administration   |
| 4. To achieve the self-financing through research, services and product development | 4.1. Strengthen the Business Development Unit to increase publicity for courses and services |   | 4.1.1 Continue product development based on research findings.   |
|   | 4.2. Improving finances  |   | 4.2.1. Provide Diagnostics/Services<br><br>4.2.2. Provide consultancies<br><br>4.2.3. Offer fee-levying Postgraduate and other training programmes<br><br>4.2.4. Offer Internship training programmes      |
|   | 4.3 Enhance social responsibility activities   |   | 4.3.1. Conduct Social Harmony Programmes   |

|                               |  |   |   |
|-------------------------------|--|---|---|
| 5. To promote Good Governance | 5.1. Human Resource Development and Management                     | 5.1.a. Provide 10 Staff training opportunities by 2023<br>5.1.b. Provide health Insurance plan for all staff members by 2020<br>5.1.c. Establish a performance appraisal system by 2020 | 5.1.1. Provide opportunities for short – term (National/international) training (including outbound) of staff members<br>5.1.2. Establish health insurance and welfare schemes for employees<br>5.1.3 Develop a scheme for performance appraisal of staff |
|                               | 5.2. To enhance supportive management systems                      |   | 5.2.1 Establish Management Information System (MIS)   |
|                               | 5.3. Corporate Social responsibility approach in capacity building | 5.3.a. Provide specialized testing services for state and private sector  | 5.3.1. Human resource training for academic and research institutes   |
|                               |  | 5.3.b. Provide community services   | 5.3.2. Ethical practices in scientific and biomedical research<br>5.3.3. Ethical, societal and legal implications of genetic research and genetic information   |
|                               | 5.4 Ensure Quality of academic and other activities                |   | 5.4.1.Continue quality assurance activities through the QA-Cell-IBMBB   |

## 9. KEY PERFORMANCE INDICATORS OF PLANNED ACTIVITIES

| Key Performance Indicators   | 2016  | 2017  | 2018  | 2019  | 2020  | 2021  | 2022  | 2023  |
|--|-------|-------|-------|-------|-------|-------|-------|-------|
| Employability of Postgraduates   | 91%   | 95%   | 95%   | 95%   | 95%   | 95%   | 95%   | 95%   |
| Proportion of PhD holders among academics  | 80%   | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  |
| Student registered to existing MSc programmes  | 21    | 11    | 19    | 45    | 50    | 50    | 65    | 70    |
| Foreign students enrolment   | 1     | 2     | 1     | 2     | 3     | 4     | 4     | 4     |
| Number of MSc students graduated   | 17    | 12    | 15    | 40    | 60    | 60    | 60    | 60    |
| New PhD research programmes/ No. of research grants received                                     | 7     | 9     | 10    | 12    | 12    | 15    | 15    | 15    |
| New student admissions to MPhil/PhD programmes   | 4     | 7     | 5     | 5     | 20    | 20    | 25    | 25    |
| No. of MPhil/PhDs completed  | 2     | 6     | 3     | 5     | 8     | 10    | 12    | 15    |
| No. trained in short courses & workshops   | 60    | 80    | 100   | 100   | 135   | 150   | 200   | 200   |
| No. of permanent academic staff (Cadre positions)  | 7     | 11    | 11    | 12    | 12    | 15    | 15    | 15    |
| No. of Scientific Assistants   | 3     | 3     | 3     | 5     | 8     | 10    | 12    | 12    |
| No. of Post-Doctoral /Research Scientists  | 4     | 3     | 3     | 3     | 6     | 6     | 6     | 6     |
| No. of International Faculty   | 7     | 8     | 10    | 10    | 10    | 12    | 12    | 12    |
| No. of SCI/Other indexed publications  | 18    | 20    | 24    | 25    | 30    | 30    | 35    | 35    |
| No. of presentations made (International)  | 3     | 7     | 12    | 10    | 15    | 15    | 20    | 20    |
| No. of Research Communications (Local)   | 35    | 30    | 30    | 35    | 40    | 40    | 45    | 45    |
| No. of Awards (International)  | 2     | 1     | 6     | 7     | 10    | 12    | 12    | 15    |
| No. of regional/international training programmes completed                                      | 4     | 3     | 5     | 7     | 8     | 10    | 12    | 12    |
| Quality of presentation skills of students (% of students with >60% marks)                       | 80%   | 85%   | 90%   | 95%   | 100%  | 100%  | 100%  | 100%  |
| Ratio of computers to student users  | 0.6:1 | 0.7:1 | 0.8:1 | 0.8:1 | 0.8:1 | 0.8:1 | 0.8:1 | 0.8:1 |
| No. of collaborations with Research Institutes & HEIs  | 23    | 24    | 25    | 25    | 25    | 25    | 25    | 25    |
| No. of collaborations with international Institutes  | 8     | 9     | 10    | 10    | 15    | 15    | 15    | 25    |
| No. of collaborations with Industry  | 5     | 2     | 6     | 6     | 7     | 7     | 8     | 8     |
| No. of times the databases accessed  | 300   | 400   | 500   | 500   | 500   | 500   | 500   | 500   |
| Repository of Archives-% activity completed  | 40%   | 40%   | 80%   | 100%  | 100%  | 100%  | 100%  | 100%  |
| Access to E-learning resources   | 63    | 61    | 61    | 80    | 90    | 95    | 115   | 120   |
| No. of laboratory services/ tests offered  | 450   | 450   | 500   | 550   | 600   | 600   | 600   | 600   |
| No. of Local/Regional/International Conferences, Annual Scientific Sessions/ Workshops organized | 4     | 4     | 6     | 6     | 6     | 6     | 6     | 6     |
| Quantum of Generated Funds (Millions per annum)  | 6     | 8     | 10    | 12    | 15    | 15    | 20    | 20    |
| Quantum of Research Funds(Millions per annum) NSF/NRC/Other                                      | 13    | 24.5  | 25    | 25    | 30    | 30    | 35    | 35    |
| No of Guest Lectures   | 4     | 5     | 10    | 10    | 10    | 15    | 15    | 15    |
| Availability of administrative/support staff   | 85%   | 90%   | 70%   | 90%   | 100%  | 100%  | 100%  | 100%  |

## 10. Impelling Forces & Impeding Forces (SWOT Analysis)

### Strengths

1. Government Patronage
2. Leader in Molecular Life Sciences
3. Advanced Laboratory facilities
4. High Quality Research
5. Experienced, Qualified, Committed, Accessible staff
6. International Recognition
7. Location – central location

### Opportunities

1. Develop more short training /certificate programmes
2. Attract more students
3. Utilization and commercialization of research results
4. Use Web-enabled advertising
5. Become a Centre of Excellence in the Region
6. Minimize usage of paper & become a “Green Institute”

### Weaknesses

1. Lack of government funds for research
- ~~2. Inadequate Number of Academic Staff~~
2. Changes in the Leadership every 3 years
- ~~3. Inadequate Staff Training opportunities~~
4. Uncertainty of Financial Allocations
5. Limitations in laboratory and other spaces
5. Inadequate funding for attracting qualified staff, career development, welfare facilities, and academic activities etc.

### Threats

1. Mushrooming of Low Cost, Poor Quality Training Programmes elsewhere due to lack of an Accreditation System
2. Ever increasing electricity charges
3. Competition from other Public and Private Sector Institutes