



The Centre for Research in Biotechnology for Agriculture

(CEBAR) has a mission to be at the Forefront in Generating and Disseminating Scientific Ideas and knowledge in Biotechnology Research Relevant to support a Sustainable Agriculture Bio economy, and aims to qualify as a Ministry of Education Centre of Excellence (HICoE).

In 2018, CEBAR was awarded as **The Most Excellent University of Malaya Center of Excellent (UMCoE)** in University of Malaya Excellent Awards 2018 for the first time.

CEBAR researchers produced **45 WoS (ISI) publications** with over 50% of these in tier 1 and 2 ranked journals.

CEBAR members secured over **RM4 million in research grants** including from the **Bill and Melinda Gates Foundation** (under the International Institute of Tropical Agriculture (IITA)).

CEBAR also raised income of over **RM1,109.70 through training courses** run by our staff and members.

Currently, CEBAR has **over 74 postgraduate students** under supervision by our **13 Principal Investigators, 13 Associate Members and 1 Adjunct Member** with over half of these at the PhD level. In 2019, CEBAR also hosted **15 national and 3 international interns** in our various labs.

CEBAR staff and students have received a total of **28 International Awards**, were granted with **1 patent in 2018**.

Activities in 2018 included **6 workshop, 7 seminars/mini-symposia** and visits by **international** scientists including from the Nanjing University, Lancaster University, UK), Nara Institute of Science and Technology (NAIST), Japan

National Cheng Kung University, Indian Institute of Technology, Bombay, India and Faculty of Agricultural, Life and Environmental Sciences (ALES).

CEBAR continues to manage and operate the University of Malaya Plant Biotech Facility (PBF), which allows researchers to test novel hybrid plants on a large scale in a contained and climate controlled setting. CEBAR **successfully achieved re-certification** of the Plant Biotech Facility to international standards for Biosafety on **29th November 2018** and the certificate is valid until **28th November 2019**.

In terms of International and national networking, 2018 saw CEBAR activities as co-signatory of **MOAs** including with the **Nara Institute of Science and Technology (NAIST), Japan; International Institute of Tropical Agriculture (IITA), under Gates's Foundation; Kyushu Institute of Technology, Japan; Palacky University Olomouc, Czech Republic; Heleogenics Sdn Bhd.; KGC Eco Resort Sdn. Bhd.; Caya Primer Sains Sdn. Bhd.; Sime Darby Technology Centre Sdn. Bhd. and Universiti Malaysia Kelantan (UMK)**. CEBAR also conducted activities under several on-going **MOU**.

*Centre for Research in Biotechnology for Agriculture (CEBAR)
Highlights of Activities & Achievements in 2019*

CEBAR FACTS & FIGURES FOR THE YEAR 2019

| Item | Detail | Comment |
|---|--|--|
| 45 ISI publications | Tier 1: 14 (31.11%) Tier 2: 11 (24.44%) (Q1&Q2: 55.55 %) | Tier 3: 11 (24.44%) Tier 4: 9 (20%) |
| Research Grants >RM 4.0 million | <p>National grants: RM 1,824,450.22</p> <p>Internal grants RM 3,833,524.97</p> <p>Private Funding: RM 158,674.48</p> <p>International grant: RM 581,562.76</p> | <p>14 MOHE grants: LRGS: 1 – RM 62,000.00 FRGS: 11 - RM 1,426,800.00 KTP: 3 – RM 135,548.50 MOSTI-SCIENCE FUND: 1 – RM 134,063.98 FRIM – RM 66,037.74</p> <p>21 RU grants – RM 2,496,221.85 1 Bantuan Kecil Penyelidikan (BKP) - RM 31,000.00 1 Bantuan Khas Penyelidikan (BKP Special) – RM 50,000.00 3 UMRG AFR Programme – RM 166,592.57 2 UMRG SUS Programme – RM 77,714.22 2 UM Grant – FRG – RM 78,555.33 2 UM Living Lab – SUS – RM 43,800.00 11 Postgrad Research Grant (PPP) - RM 109,641.00 9 Top 100 – RM 780,000.00</p> <p>CAYA PRIMER SAINS SDN. BHD. – RM 70,000.00 Mr. Yiang Kwai Sang (Private) - RM 15,000.00 Yayasan Tan Sri Lee Shin Cheng – RM 68,674.48 Yayasan Emkay - RM 5,000.00</p> <p>IITA (Bill & Melinda Gates Foundation) - RM 214,521.06 Newton (AKADEMI SCIENCE MALAYSIA (ASM)) – RM 75,240.90 British Council - RM 160,546.19 NEWTON - UNGKU OMAR FUND - RM 131,254.61</p> |
| Other income | RM 14,770.00 | <p>Training courses: Bengkel Penanaman Pisang dan Penghasilan Biochar - RM 2,240.00 Terrarium Workshop - RM 480.00 Banana Plant Tissue Culture Workshop - RM 1,400.00 Bengkel Penanaman Pisang dan Fertigasi - RM2,000.00 Workshop on MD2 Tissue Culture - RM 1,200.00 Plant Tissue Culture Workshop - RM 2,400.00 Plant Tissue Culture Workshop - RM 1,200.00 Organic Soap-Making Workshop - RM 1,050.00 Banana Tissue Culture Techniques Workshop - RM 2,800.00</p> |
| 74 Postgraduate students | <p>MSc 33</p> <p>PhD 41</p> | <p>Local: 33 International: 0</p> <p>Local: 32 International: 9</p> |

*Centre for Research in Biotechnology for Agriculture (CEBAR)
Highlights of Activities & Achievements in 2019*

| | | |
|--------------------------------------|--|---|
| | | Dr. Stanford Blade , Faculty of Agricultural, Life and Environmental Sciences (ALES) |
| Physical Resources and System | Re-certification of Plant Biotech Facility to international standards for infrastructure and operation to BSL-2 | The certification inspection was performed on 29 th November 2018 and the certificate is valid until 28 th November 2019. |

Details of awards to CEBAR staff/students in 2019

| No. | Name of PI / student | Award | Level |
|------------|------------------------------------|---|---------------|
| 1 | Prof. Dr. Jennifer Ann Harikrishna | External Examiner PhD University of Nottingham | International |
| 2 | Prof. Dr. Jennifer Ann Harikrishna | External Examiner Masters Thesis, Cape Town University, South Africa | International |
| 3 | Prof. Dr. Jennifer Ann Harikrishna | Review of Manuscript for journal: Engineering in Life Sciences | International |
| 4 | Prof. Dr. Jennifer Ann Harikrishna | Review of manuscript for Plant Physiology and Biochemistry | International |
| 5 | Prof. Dr. Jennifer Ann Harikrishna | Review of Manuscript for Plant Cell, Tissue & Organ Culture (ISI) | International |
| 6 | Prof. Dr. Jennifer Ann Harikrishna | External Examiner PhD thesis, India | International |
| 7 | Prof. Dr. Jennifer Ann Harikrishna | Review of manuscript for for Tree Genetics & Genomes ISSN: 1614-2942 (Print) 1614-2950 (Online) ISI Q1 | International |
| 8 | Prof. Dr. Jennifer Ann Harikrishna | Honorary Fellow of the College of Life Sciences University of Leicester Maurice Shock Building University Road Leicester LE1 7RH | International |
| 9 | Prof. Dr. Jennifer Ann Harikrishna | Reviewer of articles for Biotechnology Advances | International |
| 10 | Prof. Dr. Jennifer Ann Harikrishna | Reviewer of articles for Plant Molecular Biology | International |
| 11 | Prof. Dr. Jennifer Ann Harikrishna | Chair of Scientific Session: Microbiome for Agriculture Congress | International |
| 12 | Prof. Dr. Jennifer Ann Harikrishna | International Conference for Molecular Biology & Biotechnology (ICMBB) | International |
| 13 | Prof. Dr. Jennifer Ann Harikrishna | Judge for Biological Sciences Graduate Conference (BCSG) 2019 | International |
| 14 | Prof. Dr. Noor Hasima Nagoor | Appreciation for scientific and educational exchange activities between the Centre for Research in Biotechnology for Agriculture, University of Malaya and the Division of Biological Science, Nara Institute of Science and Technology | International |
| 15 | Prof. Dr. Noor Hasima Nagoor | Reviewed 'Alpinia conchigera Griff.: A literature-based comprehensive review' for Oriental Pharmacy and Experimental Medicine | International |
| 16 | Prof. Dr. Noor Hasima Nagoor | Reviewed manuscript # JCB-18-3275 entitled "Inhibitory effect of aspirin combined with metformin on colon cancer HT-29 cells and its effect on activation of NF- κ B" for the Journal of Cellular Biochemistry | International |

*Centre for Research in Biotechnology for Agriculture (CEBAR)
Highlights of Activities & Achievements in 2019*

| | | | |
|----|---------------------------------------|---|---------------|
| 17 | Prof. Dr. Noor Hasima Nagoor | Reviewed manuscript ETM-10975-219706 "miR-6852 suppresses proliferation and invasion in glioma by directly targeting LEF1" submitted to Experimental and Therapeutic Medicine | International |
| 18 | Prof. Dr. Noor Hasima Nagoor | Reviewed manuscript ID# 207091 for Oncotargets & Therapy | International |
| 19 | Prof. Dr. Noor Hasima Nagoor | Invitation to contribute to the article "Guidelines for the Use and Interpretation of Assays for Monitoring Autophagy (4th edition)" as a co-author | International |
| 20 | Prof. Dr. Noor Hasima Nagoor | Reviewed manuscript CBF-19-0264 for the journal Cell Biochemistry & Function | International |
| 21 | Prof. Dr. Noor Hasima Nagoor | 2nd Runner Up for PECHA KUCHA (MOLECULAR BIOLOGY) competition | International |
| 22 | Prof. Dr. Rofina Yasmin Othman | Biosafety expert member for open ended forum on synthetic biology | International |
| 23 | Prof. Dr. Rofina Yasmin Othman | Senior management programme on managing research technology organisations WAITRO | International |
| 24 | Assoc. Prof. Dr. Subha Bhassu | Educators participation for Higher Education in a Disruptive Landscape: The State and Future of STEM Education Symposium in Singapore | International |
| 25 | Assoc. Prof. Dr. Chandran Somasundram | Judge of Biological Science Graduate Congress (BSGC) | International |
| 26 | Assoc. Prof. Dr. Chandran Somasundram | Judge of Asian Intergovernmental Commission on Human Rights (AICHR) Youth Debate | International |
| 27 | Dr. Tan Boon Chin | Judge in 3rd International Conference on Molecular Biology and Biotechnology 2019 (ICMBB 2019) poster presentation competition | International |
| 28 | Dr. Teo Chee How | Invited for research visit to Nanjing Agricultural University | International |
| 29 | Dr. Teo Chee How | Graduate School of Human Development and Environment, Kobe University | International |
| 30 | Dr. Teo Chee How | Reviewer for Journal of Biotechnology (JBIOTEC-D-19-01306): Transcriptomic analysis of pepper plants provides insights into host responses to <i>Fusarium solani</i> infestation | International |
| 31 | Dr. Teo Chee How | Reviewer for Planta manuscript (PLAA-D-19-00079): Metabolome profiling of various seaweed species discriminates between brown, red, and green algae | International |
| 32 | Dr. Teo Chee How | Reviewer for Physiological and Molecular Plant Pathology manuscript (YPMPP_2019_133): Nitric oxide Improves Tolerance to <i>Fusarium oxysporum</i> f. sp. <i>cubense</i> Tropical Race 4 in Banana | International |
| 33 | Dr. Teo Chee How | Reviewer for Life Sciences manuscript (LifeSci-19-106): Development of a single nucleotide polymorphism marker associated with white spot syndrome virus resistance in black tiger shrimp (<i>Penaeus monodon</i>) | International |
| 34 | Dr. Teo Chee How | Doctor of Philosophy thesis entitled "De novo assembly of the black pepper transcriptome (<i>Piper nigrum</i> L.) and molecular characterization of <i>Piper</i> resistance genes", Swinburne University of Technology | International |
| 35 | Dr. Norhafizah Binti Mohd Arshad | Reviewed a manuscript entitled "Transcriptome analysis of <i>Phytophthora</i> infestans and <i>Colletotrichum coccodes</i> in tomato to reveal resistance | International |

*Centre for Research in Biotechnology for Agriculture (CEBAR)
Highlights of Activities & Achievements in 2019*

| | | | |
|----|---------------------------------------|---|---------------|
| | | mechanisms" for the Asia Pacific Journal of Molecular Biology and Biotechnology (APJMBB) | |
| 36 | Dr. Norhafizah Binti Mohd Arshad | Reviewed a manuscript # CBR-2019-2983-OA entitled "miR-205 promotes apoptosis of cervical cancer cells and enhances drug sensitivity of CDDP by inhibiting YAP1" for Cancer Biotherapy and Radiopharmaceuticals | International |
| 37 | Dr. Norhafizah Binti Mohd Arshad | Reviewed a manuscript entitled "Investigation of potential in vitro anti-cancer properties of fermented locust bean seeds" for International Journal of Food Scienc | International |
| 38 | Prof. Dr. Jennifer Ann Harikrishna | External Examiner PhD Thesis Taylor's University | National |
| 39 | Prof. Dr. Jennifer Ann Harikrishna | Invited Judge for the MINDS conference on Women in Science | National |
| 40 | Prof. Dr. Jennifer Ann Harikrishna | Review MYGRANTS proposal: FRGS for Taylor's University | National |
| 41 | Prof. Dr. Jennifer Ann Harikrishna | Review MYGRANTS proposal: FRGS for Ministry of Natural Resources & Environment | National |
| 42 | Prof. Dr. Jennifer Ann Harikrishna | Invited member of advisory board to the National Pepper Board (Lembaga Lada Malaysia) | National |
| 43 | Prof. Dr. Jennifer Ann Harikrishna | Appointment as an expert panel research, development and commercialisation fund project, R,D&C (MESTECC) | National |
| 44 | Prof. Dr. Jennifer Ann Harikrishna | Judge for Quest International University Intersarsity Science Symposium (QISS) 2019 | National |
| 45 | Prof. Dr. Jennifer Ann Harikrishna | Judge for National Science Slam, Malaysian Society for Molecular Biology and Biotechnology (MSMBB) | National |
| 46 | Prof. Dr. Noor Hasima Nagoor | External Examiner for undergraduate degree programme Taylors University Malaysia | National |
| 47 | Prof. Dr. Rofina Yasmin Othman | External Examiner for undergraduate degree programme Taylors University Malaysia | National |
| 48 | Prof. Dr. Norzulaani Khalid | External examiner Bachelor of Biotechnology (Hons), Faculty of Integrative Sciences & Technology, Quest International University Perak | National |
| 49 | Assoc. Prof. Dr. Chandran Somasundram | Interview Panel for Yang Di-Pertuan Agong Scholarship | National |
| 50 | Dr. Tan Boon Chin | Teknologis Berijazah | National |
| 51 | Dr. Teo Chee How | Expert advisor for Transformation protocol of chrysanthemum (<i>Chrysanthemum morifolium</i>) with luciferase gene using <i>Agrobacterium tumefaciens</i> , Kimagri Corporation Sdn Bhd | National |
| 52 | Dr. Teo Chee How | Master Thesis entitled "Population Genomics Study on Sabah Weedy Rice Using Genotyping-by-Sequencing (GBS)", Monash University Malaysia | National |
| 53 | Dr. Norhafizah Binti Mohd Arshad | 'Meet the Scientist Program' in conjunction with the 2019 National Science Week, National Science Centre (Pusat Sains Negara) | National |
| 54 | Dr. Fiqri Dizar Khaidizar | Judge for Poster Presentation, 13th Malaysian Genetic Congress | National |
| 55 | Prof. Dr. Rofina Yasmin Othman | Internal Examiner for PhD Thesis Faculty of science Genetics | University |
| 56 | Prof. Dr. Rofina Yasmin Othman | Internal Examiner for PhD Thesis Faculty of science UM Phage technology | University |

*Centre for Research in Biotechnology for Agriculture (CEBAR)
Highlights of Activities & Achievements in 2019*

| | | | |
|----|----------------------------------|---|------------|
| 57 | Prof. Dr. Rofina Yasmin Othman | Advisory Committee for MSc programme , review panel for MSC Parasitology UM | University |
| 58 | Dr. Tan Boon Chin | Panel Member for the Screening Interview of Academic Staff | University |
| 59 | Dr. Tan Boon Chin | Coordinator for UMCoe Working Group for Undergraduate Programme | University |
| 60 | Dr. Teo Chee How | Invited lecture for MIC4002 Ambang Sains Bioperubatan (Biomedical Science Horizons) | University |
| 61 | Dr. Norhafizah Binti Mohd Arshad | Evaluator of FRGS grant application (CEBAR applicants) | University |
| 62 | Dr. Norhafizah Binti Mohd Arshad | A panel of assessor for the Candidature Defence- Sophia Sok Ping Meow (HVA170026), Doctorate of Science Faculty | University |
| 63 | Dr. Fiqri Dizar Khaidizar | Internal Examiner for the MIC 4005 Research in Biomedical Science course (Undergraduate) | University |
| 64 | Dr. Fiqri Dizar Khaidizar | Assessor for Postgraduate Proposal Defence (ISB), Sem 1 2018/2019 | University |
| 65 | Dr. Fiqri Dizar Khaidizar | Assessor for Postgraduate Proposal Defence (ISB), Sem 2 2018/2019 | University |
| 66 | Dr. Fiqri Dizar Khaidizar | Postgraduate Candidature Defense (ISB) Sem 2 2018/2019 | University |

Details of patents to CEBAR staff/students in 2019

| No. | Name of PI | Name of Patent | Certificate No. | Level |
|-----|------------|----------------|-----------------|-------|
| 1 | | | | |

Details of MOA & MOU activities by CEBAR staff/students in 2019

| No. | MOU/MOA | Activity under the MOA/MOU | CEBAR Staff &*students involved | MOA/MOU Active Period |
|-----|---|--|---|---|
| 1 | Memorandum of Agreement on student exchange between University of Malaya and Nara Institute of Science and Technology (NAIST), JAPAN | 1. The 2019 NAIST pre-screening internship for doctorate course, April/October 2020 enrollment Two candidates: i) Hani Sapili ii) Wong Hao Jie | Prof Dr Jennifer Ann Harikrishna Prof Dr. Noor Hasima Nagoor | 16 th Mar 2009 – 15 th Mar 2014 (renewed 25 th Feb 2014 – 24 th Feb 2019) |
| 2 | Memorandum of Agreement on research collaboration and academic exchanges between University of Malaya & NARA Institute of Science and Technology (NAIST), JAPAN | . Visit by Professor Hisaji Maki, Professor Masaaki Umeda, Professor Yasumasa Bessho as invited speaker for CEBAR Expert Seminar Series 2/2018 on 17th August 2018 | Prof. Dr. Jennifer Ann Harikrishna Prof. Dr. Norzulaani Khalid Prof. Dr. Noor Hasima Nagoor | 16 th Mar 2009 – 15 th Mar 2014 (renewed 25 th Feb 2014 – 24 th Feb 2019) |
| 3 | Memorandum of Agreement for Dual Doctoral Degree | Sophia has admitted as a Doctoral student in NARA on 1 st October 2017 | Prof. Dr. Noor Hasima Nagoor | 16 th May 2017 – 31 st Mar 2020 |

*Centre for Research in Biotechnology for Agriculture (CEBAR)
Highlights of Activities & Achievements in 2019*

| | | | | |
|----|---|--|---|---|
| | Programme between University of Malaya & NARA Institute of Science and Technology (NAIST), JAPAN | until 31 st March 2019 (18 months). Then she will return to UM to complete the 18 months study in UM until 31 st March 2020 | Student: Sophia Sok Ping Meow | |
| 4 | Memorandum of Understanding for Academic Cooperation between University Malaya and Palacky University Olomouc | General MOU | Prof Dr Jennifer Ann Harikrishna | 2016-2021 |
| 5 | Memorandum of Student Programme Exchange Agreement between University Malaya and Palacky University Olomouc | Student Exchange Programme | Prof Dr Jennifer Ann Harikrishna | 2016-2021 |
| 6 | Memorandum of Agreement between International Institute of Tropical Agriculture (IITA) and University of Malaya (UM) | Research on-going | 1. Prof. Dr. Jennifer Ann Harikrishna 2. Prof. Dr. Rofina Yasmin Othman 3. Dr. Teo Chee How | 1 st Oct 2014 – 30 th Sep 2019 |
| 7 | Memorandum of Understanding for Academic Cooperation between University of Malaya and Assam University, India | Academic cooperation | Prof Dr Jennifer Ann Harikrishna | 2017-2022 |
| 8 | Memorandum of Agreement between Heleogenics Sdn Bhd and the University of Malaya | Experiment finished. | Prof Dr Rofina Yasmin Othman | 31 st Dec 2013 – 30 th Dec 2018 |
| 9 | Memorandum of Understanding between National Institutes of Biotechnology Malaysia represented by Malaysian Institute of Pharmaceuticals and Nutraceuticals and University of Malaya | 1. Experiment done 2. Research manuscript entitled "Anti-proliferation, apoptotic induction and anti-migratory effects of hemi-synthetic ACA analogs on MDA-MB-231 breast cancer cells" has been accepted for publication in Drug Design, Development and Therapy journal | Prof Dr. Noor Hasima Nagoor | 4 th Sept 2014 – 3 rd Sept 2019 |
| 10 | Memorandum of Understanding for Academic Cooperation between University of Malaya and Global Integrated Associates Sdn Bhd (Quest International University Perak) | Academic cooperation | Prof Dr Jennifer Ann Harikrishna | 19th Dec 2016 - 18th Dec 2021 |
| 11 | Memorandum of Understanding between the University of Dundee and University of Malaya | Research attachment in University of Dundee, Dr. Tan Boon Chin (Senior Lecturer CEBAR) from 25th March to 24th June 2018. | . Prof Dr Jennifer Ann Harikrishna . Dr. tan Boon Chin | 2018 - 2023 |
| 12 | Memorandum of Understanding for Academic Cooperation between Kyushu Institute of Technology and University of Malaya | . Joint research . Exchange of academic material and publication . Exchange of faculty members for research, discussion & lectures | . Prof. Dr. Jennifer Ann harikrishna | 4th Oct 2018 - 3rd Oct 2023 |

*Centre for Research in Biotechnology for Agriculture (CEBAR)
Highlights of Activities & Achievements in 2019*

| | | | | |
|----|---|---|---|--------------------------------|
| | | Exchange of undergraduates and graduate students for study and research | | |
| 13 | Memorandum of Agreement for Students and Staff Exchange between Kyushu Institute of Technology and University of Malaya | Student and staff exchange | Prof. Dr. Jennifer Ann harikrishna | 4th Oct 2018 - 3rd Oct 2023 |
| 14 | Memorandum of Agreement between Sime Darby Technology Centre Sdn. Bhd. and University of Malaya | <ol style="list-style-type: none"> 1. Collections of drought treated oil palm seedlings completed deliverables. 2. Small RNA sequencing completed deliverables. 3. Bioinformatics analysis completed deliverables. 4. Validation of miRNA expression through qPCR completed deliverables. 5. Shared publications | <ol style="list-style-type: none"> 1. Dr. Katharina Mebus 2. Dr. Teo Chee How 3. Dr. Tan Boon Chin | 14th May 2018 - 13th May 2020 |
| 15 | Memorandum of Agreement between Caya Primer Sains Sdn. Bhd. and University of Malaya | To carry out the Development, Testing and Validation of Molecular Diagnostics for Shrimp Disease | Assoc. Prof. Dr. Subha Bhassu | 8th Nov 2018 - 7th May 2019 |
| 16 | Memorandum of Agreement between KGC Eco Resort Sdn. Bhd. and University of Malaya | To carry out the Strengthening of Freshwater Prawn Industry through Technology Transfer and Commercial Production for Poverty Elevation. This project is focusing on improving the survivability of the giant freshwater prawn and increase the income yield from each cycle of harvesting. | Assoc. Prof. Dr. Subha Bhassu | 8th Nov 2018 - 7th May 2019 |
| 17 | Memorandum of Agreement between Universiti Malaysia Kelantan and Universiti Malaya | Research collaboration for the project entitled "Improvement of banana for smallholder farmers in the Great Lake region of Africa" | Prof. Dr. Rofina Yasmin Othman | 1st May 2018 - 30th April 2020 |

Details of CEBAR activities in 2019: Workshops

| No. | Title | Date/venue | Output |
|-----|--|--|--------------------|
| 1 | NGS Data Analysis workshop | 30 th - 31 st January 2019/ Computer Lab Level 2, RMIC | Knowledge Transfer |
| 2 | Scientific Writing Workshop | 12 th February 2019/ CEBAR Meeting Room | Knowledge Transfer |
| 3 | Introduction of Safety in workplace and HIRAC workshop | 3rd May 2019/ CEBAR Meeting Room | Knowledge Transfer |

*Centre for Research in Biotechnology for Agriculture (CEBAR)
Highlights of Activities & Achievements in 2019*

| | | | |
|----------|--|---|--------------------|
| 4 | Communications workshop on short videos for the general public | 7th August 2019/ CEBAR Meeting room | Knowledge Transfer |
| 5 | Nanopore workshop | 1st & 2nd August 2019/ CEBAR Meeting room | Knowledge Transfer |
| 6 | Plant Biosafety RNAi Workshop | 5th December 2019/ iCUBE room | Knowledge Transfer |

Details of CEBAR activities in 2019: Seminar/symposia

| No. | Title | Date/venue | Output |
|------------|--|--|--------------------|
| 1 | CEBAR Expert Seminar Series 1/2019 by Dr. Nisha Govender, Dr. Sima Taheri & Dr. Takuyaki Kondo | 15 th January 2019/Jupiter Meeting Room | Knowledge Transfer |
| 2 | CEBAR Expert Seminar Series 2/2019 by Dr. Michael R Roberts from Lancaster University 2/2019 | 19 th April 2019/ Video Conference Room | Knowledge Transfer |
| 3 | CEBAR Expert Seminar Series 3/2019 by Professor Akira Kurisaki & Professor Hiroshi Takagi from Nara Institute of Science and Technology (NAIST), Japan | 23 th April 2019/ Jupiter Meeting Room | Knowledge Transfer |
| 4 | CEBAR Expert Seminar Series 4/2019 by Dr. Hong-Hwa Chen from National Cheng Kung University | 23rd July 2019/ Jupiter meeting room | Knowledge Transfer |
| 5 | CEBAR Expert Seminar Series 5/2019 by Professor Gordon Simpson & Dr. Matthew Parker (University of Dundee, United Kingdom) | 1st August 2019/Jupiter meeting room | Knowledge Transfer |
| 6 | CEBAR Expert Seminar Series 6/2019 by Assistant Professor Dr. Agus Budi Setiawan | 30th September 2019/Jupiter Meeting Room | Knowledge Transfer |
| 7 | CEBAR Expert Seminar Series 6/2019 by Dr. Raihan Ismil | 21st November 2019/Jupiter Meeting Room | Knowledge Transfer |

Details of CEBAR activities in 2019: Other activities/Research activities

| No. | Title | Date/venue | Output |
|------------|--|--|---------------|
| 1 | CEBAR team building & appreciation lunch | 30th March 2019/ Nu Sentral & Hilton Hotel | |
| 2 | Meet the Scientist (Science Week) | 6th April 2019/ Pusat Sains Negara | |
| 3 | UM Plant Biotech Facility (PBF) Open Day | 4th December 2019/ PBF | |

*Centre for Research in Biotechnology for Agriculture (CEBAR)
Highlights of Activities & Achievements in 2019*

Details of visitors to CEBAR in 2019

| No. | Visitor(s) | Institute/Organization | Date of Visit | Activity |
|-----|---|---|--|--|
| 1 | Delegation from Nanjing University under the project of CRISPR Cas9 and Rice project (a collaboration between MARDI, UM, UKM, USM and Nanjing University China) | Nanjing University | 22nd January 2019/ PBF | Visit PBF & CEBAR |
| 2 | Dr. Michael R Roberts | Lancaster University, UK) | 19 th April 2019/ Video Conference Room | As speaker for CEBAR Expert Seminar Series |
| 3 | Professor Akira Kurisaki & Professor Hiroshi Takagi | Nara Institute of Science and Technology (NAIST), Japan | 23rd April 2019/Jupiter Meeting Room | As speaker for CEBAR Expert Seminar Series 2/2019 |
| 4 | Mr. Hrushikesh M. Nagwekar | Indian Institute of Technology, Bombay, India | 25th June 2019/PBF & CEBAR Meeting Room | A visit from IITB representative under AUA Staff Exchange Program to CEBAR |
| 5 | Dr. Chen Hong Hwa | National Cheng Kung University | 23rd July 2019/Jupiter Meeting Room | As speaker for CEBAR Expert Seminar Series 3/2019 |
| 6 | Dr. Stanford Blade | Faculty of Agricultural, Life and Environmental Sciences (ALES) | 24th October 2019/CEBAR Meeting Room | Discussion the Research Project Dr. Stanford Blade |

Details of interns hosted by CEBAR in 2019

| No. | Name | Institute/ Country | Duration of attachment |
|-----|--|--|--------------------------------------|
| 1 | Mohd Azahar Bin Baharim | Kolej Vokasional Pertanian Teluk Intan | 7th January – 24th May 2019 |
| 2 | Chalani Ganeson | Taylor University | 7th January 2019 - 22nd March 2019 |
| 3 | Muhammad Zayd Bin Khairil Anwar | Taylor University | 7th January 2019 - 22nd March 2019 |
| 4 | Nurul A'qilah Farhana Binti Anuarsadat | Universiti Sultan Zainal Abidin (UNISZA) | 22nd January 2019 - 5th July 2019 |
| 5 | Yap Kah Sing | TAR University College (TARUC), KL | 18th February 2019 - 27th April 2019 |
| 6 | Ewe Zhuang Hua | UNIMAS (Universiti Malaysia Sarawak) | 17th June 2019 - 23rd August 2019 |

*Centre for Research in Biotechnology for Agriculture (CEBAR)
Highlights of Activities & Achievements in 2019*

| | | | |
|----|----------------------------------|--|-------------------------------------|
| 7 | Loo Mu Teng | UNIMAS (Universiti Malaysia Sarawak) | 17th June 2019 - 23rd August 2019 |
| 8 | Joslyn Song Jia Yi | UNIMAS (Universiti Malaysia Sarawak) | 17th June 2019 - 23rd August 2019 |
| 9 | Raja Nurajeerah | Universiti Kebangsaan Malaysia (UKM) | 24th June - 30th August 2019 |
| 10 | Neshima Mavani | Jacobs University, German | 1st July 2019 - 9th August 2019 |
| 11 | Low Kah Wah | UNIMAS (Universiti Malaysia Sarawak) | 17th June 2019 - 23rd August 2019 |
| 12 | Muhammad Hafiz Bin Zulkifli | Universiti Kebangsaan Malaysia (UKM) | 24th June - 30th August 2019 |
| 13 | Husna Atirah Mohd Yazid | Universiti Kebangsaan Malaysia (UKM) | 24th June - 30th August 2019 |
| 14 | Nadja Nolte | Erlangen - Universität Erlangen - Nurnberg, German | 5th August - 12 October 2019 |
| 15 | Wing Sam Lum | University of Surrey | 25th August 2019 - 15th May 2020 |
| 16 | Arba Aleem | Quest International University, Perak | 11th November - 24th April 2020 |
| 17 | Nur Dalilah Binti Mohd Razi | Politeknik Nilai | 9th December 2019 - 24th April 2020 |
| 18 | Muhammad Shazrol Azwan Bin Seman | Politeknik Nilai | 9th December 2019 - 24th April 2020 |

Details of CEBAR PI's Professional Memberships (ongoing in 2019)

| No. | Organization | Academic Staff | Professional Membership | Duration | Level |
|-----|--|-------------------------------|-------------------------|-------------------------|---------------|
| 1 | PiscoMed Publishing | Assoc. Prof. Dr. Subha Bhassu | Editor in Chief | 26/01/2017 - 25/01/2019 | International |
| 2 | Asian Federation of Biotechnology | Dr. Jamilah Syafawati Yaacob | Member | Life Member | International |
| 3 | European Biotechnology Network | Dr. Jamilah Syafawati Yaacob | Member | Life Member | International |
| 4 | The Society for Experimental Biology | Dr. Tan Boon Chin | Member | 05/02/2018 - 07/01/2019 | International |
| 5 | Asia Pacific Journal of Molecular Biology and Biotechnology, Malaysian Society For Molecular Biology and Biotechnology (MSMBB) | Dr. Tan Boon Chin | Editorial Board | 01/12/2017 - 30/11/2019 | International |
| 6 | Asia Oceania Agricultural Proteomics Organization | Dr. Tan Boon Chin | Council Member | Jan 2018-Dec 2019 | International |
| 7 | Asia Pacific Biosafety Association | Dr. Tan Boon Chin | Member | Life Member | International |

*Centre for Research in Biotechnology for Agriculture (CEBAR)
Highlights of Activities & Achievements in 2019*

| | | | | | |
|----|---|---|------------------------|-------------------------|---------------|
| 8 | International Plant Proteomic Organization | Dr. Tan Boon Chin | Member | Life Member | International |
| 9 | eLife Community Ambassador | Dr. Tan Boon Chin | Member | 11/04/2019 - 30/04/2020 | International |
| 10 | Open Access Journal of Microbiology & Biotechnology | Dr. Teo Chee How | Editorial Board | Life Member | International |
| 11 | Asian Chromosome Colloquium | Dr. Teo Chee How | Committee Member | Life Member | International |
| 12 | The Scientific Malaysian Advisory Board Members | Prof. Dr. Rofina Yasmin Othman | Advisory Board Members | Life Member | National |
| 13 | Fellow, Academy of Sciences Malaysia | Prof. Dr. Rofina Yasmin Othman | Fellow | | National |
| 14 | Board of Directors of Malaysian Global Innovation and Creativity Centre (MaGIC) | Prof. Dr. Rofina Yasmin Othman | Board of Directors | | National |
| 15 | Malaysian Society Of Molecular Biology And Biotechnology (MSMBB) | Prof. Dr. Noor Hasima Nagoor | Committee Member | Life Member | National |
| 16 | Genetics Society of Malaysia | Prof. Dr. Noor Hasima Nagoor | Member | Life Member | National |
| 17 | English-Speaking Union Of Malaysia | Assoc. Prof. Dr. Chandran A/L Somasundram | Member | Life Member | National |
| 18 | Malaysian Genetics Society | Prof. Dr. Jennifer Ann Harikrishna | Member | Life Member | National |
| 19 | Malaysian Society Of Molecular Biology And Biotechnology (MSMBB) | Prof. Dr. Jennifer Ann Harikrishna | Member | Life Member | National |
| 20 | Malaysian Society Of Molecular Biology And Biotechnology (MSMBB) | Prof. Dr. Norzulaani Binti Khalid | Member | Life Member | National |
| 21 | Malaysian Genetics Society | Prof. Dr. Rofina Yasmin Othman | Member | Life Member | National |
| 22 | Malaysian Genetics Society | Assoc. Prof. Dr. Subha Bhassu | Member | Life Member | National |
| 23 | Malaysian Society Of Molecular Biology And Biotechnology (MSMBB) | Assoc. Prof. Dr. Subha Bhassu | Member | Life Member | National |
| 24 | Malaysian Society Of Plant Physiology | Dr. Tan Boon Chin | Member | Life Member | National |
| 25 | Malaysia Board of Technologists (MBOT) | Dr. Tan Boon Chin | Member | 09/04/2019 | National |
| 26 | Malaysian Society For Molecular Biology and Biotechnology (MSMBB) | Dr. Tan Boon Chin | Council Member | 19/05/2017 - 18/05/2019 | National |
| 27 | Malaysian Biosafety and Biosecurity Association | Dr. Tan Boon Chin | Member | 28/02/2017 - 28/02/2020 | National |
| 28 | Malaysian Agricultural Proteomics Society | Dr. Tan Boon Chin | Honorary Secretary | 05/09/2016 - 04/09/2020 | National |
| 29 | Scientific Malaysian | Dr. Tan Boon Chin | Committee Member | | National |

*Centre for Research in Biotechnology for Agriculture (CEBAR)
Highlights of Activities & Achievements in 2019*

| | | | | | |
|----|--|----------------------------------|--------|-------------------------|----------|
| 30 | Persatuan Genetik Malaysia | Dr. Norhafizah Binti Mohd Arshad | Member | 23/02/2018 - 22/02/2019 | National |
| 31 | Persatuan Saintis Muslim Malaysia (PERINTIS) | Dr. Norhafizah Binti Mohd Arshad | Member | 14/06/2019 - 13/06/2020 | National |
| 32 | Persatuan Genetik Malaysia | Dr. Fiqri Dizar Khaidizar | Member | 21/06/2019-20/06/2020 | National |