



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 Bioeconomy*”, and aims to qualify as a Ministry of Education Centre of Excellence (HiCoE) in 2015.

In the year 2014, CEBAR researchers produced **128 WoS (ISI) publications** with over 70% of these in tier 1 and 2 ranked journals.

CEBAR members secured over **RM14 million in research grants** including some International funding from the **Toray Foundation** and from the Bill and Melinda **Gates Foundation** (under the International Institute of Tropical Agriculture (IITA)).

In 2014 the Plant Biotechnology Incubator Unit of CEBAR was proud to launch a spin-off company **Granatech Sdn Bhd**, established to fill in the gaps in the current commercial plant tissue culture practice in Malaysia.

CEBAR also raised income of over **RM27,000 through workshops and training courses** run by our staff and members.

Currently, CEBAR has **over 200 graduate students** under supervision by our Principle Investigators with over half of these at the PhD level of which over 40% are international students. In 2014, CEBAR also hosted 10 local and 3 **international interns** in our various labs.

CEBAR staff and students won a total of **6 national Awards** in 2014 and registered **21 patent applications** with **6 national patents granted**.

Activities in 2014 included 14 workshops, 3 training courses, 4 seminars /mini-symposia and visits by local (GMAG, MABIC and Kolej Komuniti Rembau) and international scientists including from **USA, UK, Japan, Thailand, India and Pakistan**.

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 in September 2014 and the certificate is valid until 10th September 2015.

As part of our continued efforts to improve biosafety awareness and compliance, we produced several safety videos explaining our standard operating procedures (SOP) at the Plant Biotech Facility and 5 of these have been **copyrighted** with the assistance of UMCIC, with more to follow in 2015.

In terms of international and national networking, 2014 saw CEBAR as co-signatory to **MOA** with the University of Leicester, UK; the University of California San Francisco (UCSF), USA; the Nara Institute of Science and Technology (NAIST), Japan; the Institute of Tropical Agriculture (IITA, under Gate's Foundation) & Heleogenics Sdn Bhd. CEBAR also conducted activities under several on-going MOU.

In 2014 CEBAR continued development in **inclusive innovation** through various **community outreach activities**. These included working with **Orang Asli** communities in Pahang and Johor to introduce post-harvest technologies for improved income generation from extended shelf life for fruit and pest management; training courses and interaction with **SME** and **secondary schools** on plant propagation by tissue culture and working with freshwater fish and prawn farm hatcheries for use of biotech to improve breeding programmes for sustainable production of broodstock.

CEBAR members sit on various national and international boards and committees including those for Biosafety, Grant review Panels for MOSTI and MOE, Akademi Sains Malaysia, National Bioethics Council, National Council of Professors, Malaysian Biotechnology Information Centre (MABIC), National Biosafety Board (Ministry of Natural Resource and Environment Malaysia), ASEAN UNI Network in Biology and the International Association of University Technology Managers.



CEBAR FACTS & FIGURES FOR THE YEAR 2014

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Item	Detail	Comment
128 ISI publications	Tier 1: 33 (25.98 %) Tier 2: 59 (46.45 %) (70% Q1&Q2)	Tier 3: 32 (25.19 %) Tier 4: 4 (3.14 %)
Research Grants >RM 14 million	National grants: RM 6,715,689.83 (45%) RU grants: RM 8,169,850.01 (54.7%)	14 MOHE grants FRGS: 4 ERGS: 2 HIR: 9 6 MOSTI grants ScienceFund: 5 TechnoFund: 1 26 RU grants
	2 International grants: RM 39,876.02	Malaysian Toray Science Foundation (MTSF) IITA (Bill & Melinda Gates Foundation)
Other income	RM 27,870.00	Workshops: RM 19,910.00 Training courses: RM 7,960.00
>200 Postgraduate students	99 MSc 119 PhD	MSc Local: 89 (90%) MSc International: 10 (10%) PhD Local: 76 (63.9%) PhD International: 43 (36.1%)
13 Interns	3 International 10 National	India institute of Technology Varanasi, India; National Institute of Technology Karnataka, India
9 MOU/MOA	5 MOA 1 National 4 International 4 MOU 1 National 3 International	MOA: University of Leicester & University of Malaya (UM); Heleogenics Sdn Bhd & UM; Research collaboration and academic exchanges between UM and Nara Institute of Science and Technology (NAIST), Japan; CEBAR, UM & University of California San Francisco (UCSF); International Institute of Tropical Agriculture (IITA) & UM (under Gate's Foundation) MOU: student exchange between UM and Nara Institute of Science and Technology (NAIST), Japan; National Institutes of Biotechnology Malaysia (iPHARM) & UM; Asia Pacific International Molecular Biology Network (A-IMBN), Korea & UM; Fraunhofer-Institute for Molecular Biology and Applied Ecology(IME), Germany & UM
6 Awards to CEBAR PI and students	6 National awards	University of Malaya Three-Minute Thesis (UM3MT); 21st MSMBB Annual Scientific Meeting 2014 (2); Malaysian Agriculture Innovation Challenge 2014 (MAGiC 2014); UTAR NPFASS 2014 (2)
Intellectual property	21 Patents 5 Copyrights	Granted : 6 National Pending: 15 National & 2 International
Company spin -off	Granatech Sdn Bhd was formed on 29 August 2015 to fill in the gaps in the current commercial plant tissue culture practice in Malaysia	One stop centre for activities related to plant tissue culture: information dissemination, provision of materials, consultation on media formulation, lab set up and technical troubleshooting.
CEBAR activities	14 Workshops 3 Training courses 4 Seminar/symposia 2 Expositions (participation)	Topics included: plant tissue culture; plant bioreactor; molecular biology techniques; biosafety standard operating procedure development; grant preparation; scientific writing
Visitors hosted	3 National 7 International	International visitors included: Prof. Dr. Maarten Chrispeels (UC San Diego, USA); Prof. Dr. Steve Rusell (University of Cambridge, UK); Prof. Dr. Kazuo Watanabe (U Tsukuba, Japan); Prof. Dr. Hisaji Maki (NAIST, Japan); Dr. C. Ramalingam (VIT, India)
Physical Resources and Systems	Re-certification of Plant Biotech Facility to international standards for infrastructure and operation to BSL-2	The certification inspection was performed on 3 rd September 2014 and the certificate is valid until 10 th September 2015.



Appendixes (tables of details)

Details of awards to CEBAR staff / students in 2014

No.	Name of PI / student	Award	Level
1	Assoc. Prof. Dr. Noor Hasima Nagoor & Phuah Neoh Hun	First place in Poster Competition, under category of Biomedical Science and Cell Biology, 21st MSMBB Annual Scientific Meeting 2014	National
2	Prof. Dr. Jennifer Ann Harikrishna & Shetlee Ng	Third place in Poster Competition, under category Genetic and 'Omics', 21st MSMBB Annual Scientific Meeting 2014	National
3	Prof. Dr. Rofina Yasmin Othman, Assoc. Prof. Dr. Subha Bhassu & Sarasvathi Easvaran	Malaysian Agriculture Innovation Challenge 2014 (MAGIC 2014) under the category Aquaculture, Bronze Medal	National
4	Prof. Dr. Zulqarnain Mohamed & Ili Syazwana Abdullah	Winner of the competition "University of Malaya Three-Minutes Thesis" (UM3MT)	National
5	Dr. Chan Kok Gan	Best Oral Paper Award, UTAR, 2014	National
6	Dr. Chan Kok Gan	Best Oral Paper Award, UTAR NPFASS 2014	National

Details of patents to CEBAR staff / students in 2014

No.	Name of PI	Name of Patent	Certificate No.	Level
1	Assoc. Prof. Dr. Fauziah Abdullah	Method of Controlling Termite Pest	MY-150764-A	National
2	Assoc. Prof. Dr. Fauziah Abdullah	Method of Controlling Termite Pest (A)	MY-150708-A	National
3	Prof. Dr. Irene Tan & Prof. Dr. M. Suffian Annuar	Eco-friendly Plasticizer for Poly(vinyl chloride)	MY-151111-A	National
4	Assoc. Prof. Dr. Fauziah Abdullah	Natural Bio pesticide from Centella Extract	MY-151443-A	National
5	Assoc. Prof. Dr. Fauziah Abdullah	Pheromone Attractant for Male Bagworms	MY-151368-A	National
6	Prof. Dr. Norzulaani Binti Khalid	A Medicament for Treating Dengue	MY-151198-A	National
7	Prof. Dr. Mohamad Suffian Bin Mohamad Annuar,	Lactobacillus Plantarum Fermentation of <i>Momordica charantia</i> Fresh Juice	PI2014700004	National
8	Prof. Dr. Mohamad Suffian Bin Mohamad Annuar,	Shape memory and pH responsive hydrogel	PI2014700071	National
9	Prof. Dr. Mohamad Suffian Mohamad Annuar	An Up-flow Anaerobic Sludge Blanket with Fixed Film (UASB-FF) Bioreactor	PI2013004461	National
10	Prof. Dr. Mohamad Suffian Bin Mohamad Annuar	A Method to Mass-Produce Pisang Berangan Cell Suspension Culture in pH-Controlled Air Driven Bioreactor	Pending - Waiting for Malaysian Pattern Office	National
11	Prof. Dr. Mohamad Suffian Bin Mohamad Annuar	Ultrasound-assisted rapid extraction of bacterial mcl-PHA	PI2014701570	National
12	Prof. Dr. Mohamad Suffian Mohamad Annuar	A method to produce an alpha-glucosidase inhibitor by fermenting a <i>Momordica charantia</i> juice using probiotic Lactobacillus plantarum for use as a medicament for diabetes treatment	Pending - Waiting for Malaysian Pattern Office	National
13	Prof. Dr. Mohamad Suffian Bin Mohamad Annuar	Fermented <i>Momordica charantia</i> Juice Exhibiting Alpha-Glucosidase Inhibitory Activities	Pending - Waiting for Malaysian Pattern Office	National
14	Prof. Dr. Rofina Yasmin	A Method for Producing Bio-Active Agent for the Prevention of Disease Caused by White Spot Syndrome Baculovirus Complex and a Bio-Active Agent Derived Thereof	US: No 13/884.689	International
15	Prof. Dr. Rofina Yasmin Othman & Assoc. Prof. Dr. Subha Bhassu	Real time PCR detection kit for IHHNV	PI2012700037	International



16	Prof. Dr. Rofina Yasmin Othman	A Vaccine against White Spot Syndrome Virus	PI 2010005261	National
17	Prof. Dr. Rofina Yasmin Othman	A Vector for Producing Antigenic Peptides of White Spot Syndrome Baculovirus Complex and Uses Thereof	PI 2010005866	National
18	Prof. Dr. Rofina Yasmin Othman	A Bioreactor for Algae Cultivation	PI 2011000803	National
19	Prof. D.r Rofina Yasmin Othman & Assoc. Prof. Dr. Subha Bhassu	A Method for Detecting Infectious Hypodermal and Haematopoeitic Necrosis Virus	PI 2011002235	National
20	Assoc. Prof. Dr. Subha Bhassu	A Method of Identifying Parentage in Freshwater Prawn Macrobrachium	PI 2013701608	National
21	Assoc. Prof. Dr. Noor Hasima Nagoor	A Composition for Treating a Neoplasm	PI2013702062	National

Details of copyrights to CEBAR staff / students in 2014

No.	Year	Title	No Filing	Filing date	Authors
1	2014	Gowning & Degowning – SOP 6 (CEBAR Plant Biotech Facility Standard Operation Procedure 6 : Gowning And Degowning Video)	DV2014002340	31-Dec-14	Prof. Dr. Jennifer Ann Harikrishna, Cik Lau Su Ee, Puan Zarina Binti Md Ali
2	2014	Waste Management – SOP 12 (CEBAR Plant Biotech Facility Standard Operation Procedure 12 : Waste Management Video)	DV2014002341	31-Dec-14	Prof. Dr. Jennifer Ann Harikrishna, Cik Lau Su Ee, Puan Zarina Binti Md Ali
3	2014	Biosafety Cabinet – SOP 10 (CEBAR Plant Biotech Facility Standard Operation Procedure 10 : Biosafety Cabinet Video)	DV2014002342	31-Dec-14	Prof. Dr. Jennifer Ann Harikrishna, Cik Lau Su Ee, Puan Zarina Binti Md Ali
4	2014	Transfer Of Genetic Modified Organism (GMO) – SOP 7 (CEBAR Plant Biotech Facility Standard Operation Procedure 7 : Transfer Of Genetic Modified Organism (GMO) Video)	DV2014002343	31-Dec-14	Prof. Dr. Jennifer Ann Harikrishna, Cik Lau Su Ee, Puan Zarina Binti Md Ali
5	2014	Operation Of Autoclave – SOP 11 (CEBAR Plant Biotech Facility Standard Operation Procedure 11 : Operation Of Autoclave Video)	DV2014002344	31-Dec-14	Prof. Dr. Jennifer Ann Harikrishna, Cik Lau Su Ee, Puan Zarina Binti Md Ali

Details of MOA & MOU activities by CEBAR staff / students in 2014

No.	MOU/MOA	Activity under the MOA/MOU	CEBAR Staff & *students involved	MOA/MOU Active Period
1	Memorandum on student exchange between University of Malaya and Nara Institute of Science and Technology (NAIST), JAPAN	1) Official visit to NAIST for signing Memorandum on student exchange between University of Malaya and Nara Institute of Science and Technology (NAIST), JAPAN 2) Pre-screening for PhD Fellowships at the NAIST, Nara, Japan (for April/October 2015 enrolment) 3) NAIST Visit to UM -Meeting to discuss joint UM-NAIST joint PhD program	Prof. Dr. Jennifer Ann Harikrishna Prof. Dr. Norzulaani Khalid A/P Dr. Noor Hasima Nagoor A/P Dr. Chandran A/L Somasundram Aida Nazlyn Nazari Lau Su Ee *Chang Phooi Yee *Chin Lit Chien *Mohd Izwan Zainol	16thMar2009-15thMar2014 (renewed 25thFeb2014-24thFeb2019)
2	Agreement on research collaboration and academic exchanges	1) Visit of Prof Dr. Hisaji Maki from Naist to CEBAR for discussing on official visit to NAIST on 2014	Prof. Dr. Jennifer Harikrishna Prof. Dr. Norzulaani Khalid A/P Dr. Noor Hasima Nagoor	16thMar2009-15thMar2014 (renewed)



	between University of Malaya & NARA Institute of Science and Technology (NAIST), JAPAN	2) Official visit to NAIST for signing Memorandum on student exchange between University of Malaya and Nara Institute of Science and Technology (NAIST), JAPAN 3) NAIST Visit to UM -Meeting of University of Malaya representatives for discussion on Material Sciences	A/P Dr. Chandran A/L Somasundram	25thFeb2014-24thFeb2019)
3	Memorandum of Agreement between University of Malaya and on research collaboration between University of Malaya and University of Leicester	1) To collaborate on research in Zingiberales, focusing on B. rotunda 2) One month research attachment at University of Leicester	Prof. Dr. Jennifer Harikrishna Prof. Dr. Norzulaani Khalid	15thMay2013-14thMay2016
4	Research collaboration agreement between CEBAR, University of Malaya and University of California San Francisco (UCSF)	To conduct joint education and scientific research projects: Interactome experimentation on MS platforms Optimisation of MS platform on HIR Orbitrap instrument of plant-microbe applications	Prof. Dr. Rofina Yasmin Othman Prof. Dr. Jennifer Ann Harikrishna Prof. Dr. Norzulaani Khalid Dr. Yusmin Yusof Dr. Syarifah Aisyafaznim Dr. Nazia Abdul Majid	4thJune2014-3rdJune2016
5	Memorandum of Understanding between University of Malaya and Asia Pacific International Molecular Biology Network (A-IMBN), Korea	Research Cooperation: A-IMBN Programs Electronic International Molecular Biology Laboratory Program (eIMBL) A-IMBN Research	Prof. Dr. Norzulaani Khalid Prof. Dr. Jennifer Harikrishna	11thApr2011-10thApr2016
6	Memorandum of Understanding between University of Malaya and Fraunhofer- Institute for Molecular Biology and Applied Ecology(IME), Germany	Academic Cooperation Student and/or academic and administrative staff exchanges Joint research activities in the field of plant biotechnology production of plant made pharmaceuticals, new disease targets, secondary metabolites, enzymes and polymers, scale up and downstream processing, QA and QC. Exchanges of publications, reports, regulatory guidelines and other academic materials and information	Prof. Dr. Rofina Yasmin Othman	25thNov2013-24thNov2016
7	Agreement International Institute of Tropical Agriculture (IITA) and University of Malaya (UM)	Implementation of a project entitled 'Improvement of Banana for smallholder farmers in the Great Lakes Region of Africa'	Prof. Dr. Jennifer Harikrishna & Prof. Dr. Rofina Yasmin Othman	1st Oct 2014 - 30th Sep 2015
8	Memorandum of Agreement between Heleogenics Sdn Bhd and the University of Malaya	Banana RNA samples transfer	Prof Dr Rofina Yasmin Othman Prof Dr Jennifer Harikrishna Prof Dr Norzulaani Khalid Dr. Yusmin Yusof	31stDec2013-30thDec2018
9	Memorandum of Understanding between National Institutes of Biotechnology Malaysia represented by Malaysian Institute of Pharmaceuticals and Nutraceuticals and University of Malaya	1) Research collaboration: Exchange research personnel which can be involved in activities such as courses, seminars, conferences and research collaboration Student echange program Joint laboratory 2) Liew Su Ki, student of A/P Dr. Noor Hasima Nagoor attended the field trip at IPharm on 10-11th November 2014 3) Liew Su Ki student of A/P Dr. Noor	A/P Dr. Noor Hasima Nagoor	4th Sep 2014 - 3rd Sep 2019



Hasima Nagoor attended Computer Aided Drug Design and Natural Product Seminar & Workshop at IPHarm on 2nd - 5th December 2014.

Details of CEBAR activities in 2014: Workshops

No.	Title	Date/venue	Output
1	Plant Tissue culture workshop (Banana)	26 th & 27 th February 2014/ Plant Biotechnology Incubator Unit (PBIU), IPS	Income: RM 6,750.00
2	University of Malaya-University Tsukuba Workshop on Biotechnology & its Institutional Management	17 th March 2014 – Anggerik Meeting Room, IPS 18 th March 2014 – Main Meeting Room UMCIC, RMI Complex	Knowledge exchange
3	PBF SOP Video Brainstorming Workshop	26 th March 2014 – PBF meeting room	Produce 9 PBF GP BSL2 SOP videos, 5 videos were filed in 2014
4	Workshop on winning MTSF research grant and award 2014 by Prof Dr Mohd Ali Hashim	15 th April 2014 – Azalea Room, IPS	Income: RM 60.00
5	Orchid Tissue culture & Gardening workshop	23 rd & 24 th April 2014/ Plant Biotechnology Incubator Unit (PBIU), IPS	Income: RM 700.00
6	Paper writing workshop	21 st & 28 th May, 4 th June 2014/ CEBAR meeting room.	Knowledge Transfer
7	Plant Tissue culture workshop (Pineapple)	25 th & 26 th June 2014/ Plant Biotechnology Incubator Unit (PBIU), IPS	Income: RM 1,400.00
8	PBF Self-audit Workshop	2 nd July 2014/ Plant Biotech Facility, UM	Leading to pass of the PBF recertification
9	PBF SOP Reviewing Workshop	5 th August 2014/ / Plant Biotech Facility, UM	PBF SOP reviewed
10	Cell Suspension Workshop	27 th & 28 th August 2014/ Plant Biotechnology Incubator Unit (PBIU), IPS	Income: RM 6,750.00
11	CEBAR MEMBERS BRAINSTORMING WORKSHOP	21 st October 2014 /Hotel Eastin, Petaling Jaya.	CEBAR future plan
12	Plant Bioreactor Workshop	29 th October 2014/ Plant Biotechnology Incubator Unit (PBIU), IPS	Income: RM 3,500.00
13	CEBAR Scientific Writing Workshop	5 th December 2014 / Anggerik Meeting Room, IPS	Knowledge Transfer
14	Plant Tissue culture workshop (Banana)	17 th & 18 th December 2014/ Plant Biotechnology Incubator Unit (PBIU), IPS	Income: RM 750.00

Details of CEBAR activities in 2014: Training courses

No.	Title	Date/venue	Output
1	Plant Biotech Facility, GP-BSL2 SOP Training	14 th March 2014 / Plant Biotech Facility, UM	Trained 3 PBF new users
2	Training course in Basic Molecular Genetic/ Biology Techniques by Dr Teh Ser Huy and Professor Dr Zulqarnain Mohamed (4 weeks) Trainee from Royal Court Affairs, Sultanate of Oman	31 st March – 25 th April 2014 / CEBAR Molecular Biology Lab, UM	Income: RM 7,960.00
3	Plant Biotech Facility, GP-BSL2 SOP Training	9 th July 2014 / Plant Biotech Facility, UM	Trained 1 PBF new user



No.	Title	Date/venue	Output
1	Cebar Mini-Symposium on Plant Science & with Keynote by Prof. Dr. Chrispeels, UCSD, USA	9 th January 2014/ Anggerik Meeting Room, IPS, UM	Knowledge Transfer
2	Visit by CEBAR scientists to the Nara Institute of Science and Technology (NAIST), Nara, Japan	25 th – 28 th February 2014 / NAIST, Nara, JAPAN	Renewed signing of two MOU and initiation of Dual PhD programme (UM-NAIST)
3	CEBAR-MSMBB Seminar (Domains and Boundaries in the Eukaryotic Genome) by Prof. Dr. Steve Rusell, University of Cambridge, UK	28 th March 2014 – Anggerik Meeting Room, IPS	Knowledge Transfer
4	CEBAR Seminar Series : Laboratory scale production of “ <i>Bacillus thuringiensis</i> (Bt)-based biopesticide and field evaluation against <i>Helicoverpa armigera</i> infesting chickpea in Pakistan” by Dr. Khaliq Ahmed.	9 th May 2014 – Anggerik Meeting Room, IPS	Knowledge Transfer

Details of CEBAR activities in 2014: Other activities

No.	Title	Date/venue	Output
1	PBF SOP Video Shooting	6 th – 8 th May 2014, Plant Biotech Facility, UM	Produce 9 PBF GP BSL2 SOP videos, 5 videos were filed in 2014.
2	Fire Drill	12 th June 2014/ Plant Biotech Facility, UM	CEBAR staff and PBF users learned how to extinguish the fire
3	PBF GP-BSL2 re-certification	Tentatively on 3 rd September 2014/ Plant Biotech Facility, UM	The certification inspection was performed on 3 rd September 2014 and the certificate is valid until 10 th September 2015.
4	BioMalaysia & BioEconomy Asia Pacific 2014 Conference & Exhibition (In charge of UM booth)	19 th – 20 th November 2014, IPPP Building UM	Establish links with the public and industry for research and innovation

Details of visitors to CEBAR in 2014

No.	Visitor(s)	Institute/Organization	Date of Visit	Activity
1	Genetic Modification Advisory Committee (GMAC)	Dept. of Biosafety, Ministry of Natural Resources and Environment (NRE).	02-01-14	GMAC Visit to CEBAR Plant Biotech Facility - Assessment of contained use activities [JBK (S) 602-1/2/37- JBK(S) 602-1/2/40] .
2	Prof. Dr. Maarten Chrispeels	Section of Cell and Development Biology, University of California, San Diego (UCSD), USA.	09-01-14	Keynote speaker at CEBAR Mini-Symposium on Plant Science
3	A/P Dr. Manupat Lohinavey & A/P Dr. Bradley Reisfeld	Naresuan University, Thailand	11-02-14	Research Lab visit
4	Dr.C. Ramalingam	School of Biosciences & Tech, VIT University, India.	01-03-14	Meeting for possible research collaboration
5	Prof. Dr. Kazuo Watanabe	University Tsukuba, Japan	17-03-14	University of Malaya-University Tsukuba Workshop on Biotechnology & its Institutional Management
6	Prof. Dr. Steve Rusell	Cambridge Systems Biology Centre, University of Cambridge	28-03-14	CEBAR-MSMBB Seminar (Domains and Boundaries in the Eukaryotic Genome)
7	Dr. Khaliq Ahmed	Karakoram International University, Pakistan.	09-05-14	CEBAR Seminar Series : Laboratory scale production of “ <i>Bacillus thuringiensis</i> (Bt)-based biopesticide and field evaluation against <i>Helicoverpa armigera</i> infesting chickpea in Pakistan”



8	Puan Mahaletchumi	Kolej Komuniti Rembau	23 & 25–9-14	Visit to Plant Biotech Incubator Unit (PBIU)
9	Dr. Mahaletchumy Arujanan	Executive Director of Malaysian Biotechnology Information Centre (MABIC), Monash University	15-10-14	Research Visit to Plant Biotech Facility (PBF)
10	Prof. Dr. Hisaji Maki	Graduate School of Biological Sciences, NAIST, Japan	01-12-14	NAIST-UM joint and dual PhD discussion

Details of interns hosted by CEBAR in 2014

No.	Name	Institute/ Country	Duration of attachment
1	Vicneshan A/L Rajagopal	University Selangor	13 th January – 14 th June 2014
2	Sarah Zulkifli	Universiti Malaysia Pahang	17 th February – 1 st August 2014
3	Rajat Sharma	India institute of Technology Varanasi, India	2 nd May 2014 – 31 st July 2014
4	Abilash Dhal	India institute of Technology Varanasi, India	2 nd June 2014 – 11 th July 2014
5	Apoorva Suresh Bademi	National Institute of Technology Karnataka, India	1 st June 2014 – 31 st July 2014
6	Ashwaani Mangavelu	Nilai University, Selangor	2 nd June 2014 – 30 th September 2014
7	Nur Fatin Amysya Mohd Fuzi	Universiti Islam Antarabangsa Malaysia	16 th June 2014 – 30 August 2014
8	Siti Zulaiha Binti Ahamad Azhar	Universiti Malaysia Sarawak	30 th June 2014 – 21 st September 2014
9	Ravinder Kaur A/P Karpal Singh	Universiti Malaysia Sarawak	30 th June 2014 – 21 st September 2014
10	Nurul Atika Binti Ruslan	Geomatika University	30 th June 2014 – 21 st September 2014
11	Diviyah A/P Nagaratnam	Faculty of Health and Life Sciences, MSU, Selangor	1 st December 2014 – 16 th April 2015
12	Larcana A/P Balasingam	Faculty of Health and Life Sciences, MSU, Selangor	1 st December 2014 – 16 th April 2015
13	Nurul Ain Khoruddin	Faculty of Health and Life Sciences, MSU, Selangor	3 rd December 2014 – 8 th March 2015

Details of CEBAR PI's Professional Memberships (ongoing in 2014)

	Organization	Academic Staff	Professional Membership	Duration	Level
1	Asia Pacific Journal of Molecular Biology & Biotechnology (APPJMB)	Prof. Dr. Rofina Yasmin Othman	Editor-in-Chief	2012-2014	International
2	ASEAN UNI Network in Biology	Prof. Dr. Rofina Yasmin Othman	Founding Member	2014	International
3	Association of University Technology Managers	Prof. Dr. Rofina Yasmin Othman	Member	2013-2015	International
4	International Society for Horticultural Science (ISHS)	Prof. Dr. Rofina Yasmin Othman	Member	2014	International
5	International Society for Horticultural Science (ISHS)	Assoc Prof Dr. Chandran Somasundram	Member	2013-2014	International
6	The Entomological Society of America	Assoc Prof Dr. Fauziah Abdullah	Member	2010-2014	International
7	International Society of Chemical Ecology	Assoc Prof Dr. Fauziah Abdullah	Member	2006-2014	International
8	Japanese Society of Applied Entomology and Zoology	Assoc Prof Dr. Fauziah Abdullah	Member	1987-2014	International
9	Innovation & Technology Managers Association Malaysia	Prof. Dr. Rofina Yasmin Othman	Founding committee member	2014	National
10	Genetics Society of Malaysia	Prof. Dr. Rofina Yasmin Othman	Member	Life member	National
11	Akademi Sains Malaysia	Prof. Dr. Rofina Yasmin Othman	Associate	2012-2014	National

*Centre for Research In Biotechnology for Agriculture (CEBAR)
Highlights of Activities & Achievements in 2014*



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12	The Scientific Malaysian	Prof. Dr. Rofina Yasmin Othman	Advisory Board Member	2014	National
13	Malaysian Journal of Science	Prof. Dr. Rofina Yasmin Othman	Editorial Board	2014	National
14	National Bioethics Council (Majlis Bioetika Negara)	Prof. Dr. Rofina Yasmin Othman	Core Committee (Legal & Social)	2012-2014	National
15	Science and Mathematics Cluster, National Council of Professors	Prof. Dr. Rofina Yasmin Othman	Member	2014	National
16	Malaysian Biotechnology Information Centre (MABIC)	Prof. Dr. Rofina Yasmin Othman	Fellow	2014	National
17	Malaysian Society of Molecular Biology & Biotechnology (MSMBB)	Prof. Dr. Rofina Yasmin Othman	Life member	2014	National
18	National Biosafety Board Ministry of Natural Resource and Environment Malaysia	Prof. Dr. Rofina Yasmin Othman	Member	2010-2015	National
19	Malaysian Genetics Society	Prof. Dr. Jennifer Ann Harikrishna	Member	Life member	National
20	Malaysian Society of Molecular Biology and Biotechnology (MSMBB)	Prof. Dr. Jennifer Ann Harikrishna	Council Member	Life member	National
21	FRGS & ERGS (MOE) and Science fund (MOSTI) evaluation panels	Prof. Dr. Jennifer Ann Harikrishna	Evaluation Committee	2013-2014	National
22	Malaysian Society of Molecular Biology and Biotechnology (MSMBB)	Assoc. Prof. Dr. Noor Hasima Nagoor	Committee Member	Life member	National
23	Genetics Society of Malaysia	Assoc. Prof. Dr. Noor Hasima Nagoor	Member	Life member	National
24	Malaysian Genomic Institute (MGI)	Prof. Dr. Norzulaani Khalid	Academic, Joint Research	2012-2017	National
25	University Malaya Academic Association	Assoc. Prof. Dr. Fauziah Abdullah	Member	1991-2014	National
26	Malaysian Society of Molecular Biology and Biotechnology (MSMBB)	Prof. Dr. Zulqarnain Mohamed	Member	Life member	National
27	Malaysian Genetics Society	Prof. Dr. Zulqarnain Mohamed	Member	Life member	National
28	Malaysian Society of Molecular Biology and Biotechnology (MSMBB)	Assoc. Prof. Dr. Subha Bhassu	Member	Life member	National
29	Genetics Society of Malaysia	Assoc. Prof. Dr. Subha Bhassu	Member	Life Member	National
30	Malaysian Society of Molecular Biology and Biotechnology (MSMBB)	Dr. Zuliana Razali	Member	2013-2014	National