



The Centre for Research in Biotechnology for Agriculture (CEBAR) www.cebar.um.edu.my

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”.

In the year 2016, CEBAR researchers produced **33 WoS (ISI) publications** with over 85% of these in tier 1 and 2 ranked journals.

CEBAR members secured over **RM6.7 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 **RM 25, 700 through training courses** run by our staff and members.

Currently, CEBAR has **over 64 graduate students** under supervision by our Principal Investigators with over half of these at the PhD level of which over 17% are International students. In 2016, CEBAR also hosted **3 national and 1 international interns** in our various labs.

CEBAR staff and students won a total of **4 International Awards** in 2016 and registered **3 patent applications** and **2 copyrights**.

Activities in 2016 included **7 workshops, 1 training course, 6 seminars /mini-symposia** and visits by **local** (Quest University Perak) and **international** scientists including from **Japan, Arab Saudi, Bangladesh and India**.

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 21st December 2016 and the certificate is valid until 20th December 2017.

In terms of International and national networking, 2016 saw CEBAR as co-signatory to **MOAs** including with the **Nara Institute of Science and Technology (NAIST), JAPAN; University of Leicester, UK; University of California San Francisco (UCSF), USA; International Institute of Tropical Agriculture (IITA)**, under **Gates’s Foundation**, and **Heleogenics Sdn Bhd**. CEBAR also conducted activities under several on-going **MOU**.

In 2016, CEBAR continued development in **inclusive innovation** through various **community outreach activities**. These included participation in Biotechnology Carnival, which was jointly organized by Malaysian Biotechnology Information Centre (MABIC), Monash University Malaysia and Kuen Cheng Independent High School (Kuala Lumpur), and participated Motivation and Science Awareness Programs, which was conducted by Sri Petaling Secondary School and Taman Megah Secondary School. The involvement in these carnival and programs intend to create public awareness on biotechnology topics, including agriculture and tissue culture as well as to engage secondary schools to this burgeoning field.



CEBAR FACTS & FIGURES FOR THE YEAR 2016

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Item	Detail	Comment
33 ISI publications	Tier 1: 17 (51.5%) Tier 2: 11 (33.3 %) (85% Q1&Q2)	Tier 3: 2 (6 %) Tier 4: 1 (3 %)
Research Grants >RM 6.7 million	National grants: RM 3,002,994.83 (44.37%) RU grants: RM 3,606,056.50 (53.28%) Private Funding: RM 150,000.00 (2.2%) International grant: RM 9,324.70 (0.14%)	12 MOHE grants FRGS: 6 – 568,100.00 HIR: 5 – 2,085,415.10 KTP: 1 - 143,179.73 3 MOSTI grants Science Fund: 3 – 206,300.00 3 Bantuan Kecil Penyelidikan (BKP) – RM 108,500.00 10 UMRG Programme – RM 449,300.00 22 Postgrad Research Grant (PPP) - RM 136,550.00 12 RU grants – RM 2,865,006.50 1 UM Living Lab Grant Programme – RM 46,700.00 Dafflow (M) Sdn Bhd IITA (<i>Bill & Melinda Gates Foundation</i>)
Other income	RM 25,764.00	Training courses: RM 25,764.00
64 Postgraduate students	25 MSc 39 PhD	Local: 23 International: 2 Local: 32 International: 7
4 Interns	International : 1 National : 3	Universita Degli Studi Di Catania, Italy Universiti Malaysia Sarawak (UNIMAS) University College Sedaya International (UCSI)
11 MOU/MOA	7 MOA National : 3 International : 4 4 MOU National : 1 International : 3	MOA: Agreement on research collaboration and academic exchanges between University of Malaya & NARA Institute of Science and Technology (NAIST), JAPAN; University of Leicester; University of California San Francisco (UCSF); International Institute of Tropical Agriculture (IITA); Heleooenics Sdn Bhd; Malaysian Agricultural Research and Development Institute (MARDI) and Ministry of Science, Technology and Innovation, (MOSTI) with 4 different CEBAR PIs MOU: Student exchange between University of Malaya and Nara Institute of Science and Technology (NAIST), JAPAN; Fraunhofer- Institute for Molecular Biology and Applied Ecology(IME), Germany; National Institutes of Biotechnology Malaysia represented by Malaysian Institute of Pharmaceuticals and Nutraceuticals and Palacky University Olomouc
4 Awards to CEBAR PI and students	International : 4	Award of Distinguished Women in Science 2016; 7th Asia's Education Excellence Award (Best Professor in Genetics & Molecular Biology);



		First Place Award for Poster Presentation at 21st Biological Sciences Graduate Congress (BSGC) 2016; Award for Outstanding Adjudication Work in The 19th FLTRP CUP National English Debating Competition Nationals.
Intellectual property	3 Patents	Pending: 3, National
	2 Copyrights	National
CEBAR activities	7 Workshops 1 Training course 6 Seminar/symposia 1 Expositions (participation in booth exhibition)	Topics included: Plant Biotechnology methods; genetic engineering; molecular biology techniques, plant tissue culture; cryopreservation; biosafety standard operating procedure development; grant preparation; scientific writing; Drought stress triggers remodeling of plant cytoskeleton, the biological clock that controls animal development; Molecular mechanisms of generating and suppressing spontaneous chromosome-rearrangement
Visitors hosted	1 National 3 International	International visitors: Director, Mawlana Bhashani Research Centre Mawlana Bhashani, Al-Qaseem private colleges, Arab Saudi & Professor Takashi Hashimoto, Professor Yasumasa Bessho Professor Hisaji Maki
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 21 st December 2016 and the certificate is valid until 20 th December 2017.

Details of awards to CEBAR staff / students in 2016

No.	Name of PI / student	Award	Level
1	Assoc. Professor Dr. Subha Bhassu	Award of Distinguished Women in Science 2016	International
2	Assoc. Professor Dr. Subha Bhassu	7th Asia's Education Excellence Award (Best Professor in Genetics & Molecular Biology)	International
3	Assoc. Professor Dr. Subha Bhassu	First Place Award for Poster Presentation at 21st Biological Sciences Graduate Congress (BSGC) 2016.	International
4	Assoc. Professor Dr. Chandran Somasundram	Award of Outstanding Adjudication Work in The 19th FLTRP CUP National English Debating Competition Nationals.	International

Details of patents to CEBAR staff / students in 2016

No.	Name of PI	Name of Patent	Certificate No.	Level
1	Professor Dr. Norzulaani Binti Khalid , Professor Dr. Jennifer Ann Harikrishna	Rnai-Mediated Silencing Of The Cinnamate-4-Hydroxylase Gene Alters Amino Acid Metabolism And Reduces Flavonoid Levels In	PI 2016700799 (Pending)	National



		Boesenbergia Rotunda (New Title: A Method Of Altering Metabolite Levels In Boesenbergia Rotunda By Rna Interference-Mediated Silencing Of The Cinnamate-4-Hydroxylase Gene)		
2	Assoc. Professor Dr. Subha A/P Bhasu, Professor Dr. Rofina Yasmin binti Osman	Multiplex Molecular Diagnostic in Shrimp Diseases-Prwan Checker-L (New Title: Method and Kit For Simultaneous and Rapid Detection of Prawn Viruses)	PI 2016001031 (Pending)	National
3	Assoc. Professor Dr. Subha A/P Bhasu	Multiplex Molecular Diagnostic In Shrimp Disease-Prawn Checker-V1 (New Title: Rapid Detection of prawn viruses, method and kit thereof)	PI 2016001710 (Pending)	National

Details of copyrights to CEBAR staff / students in 2016

No.	Year	Title	No Filing	Filing date	Authors
1	2016	Effect of Sonication and ultraviolet-C treatment in a hurdle concept for Chokanan mango (<i>Mangifera indica</i> L.) juice processing	LY2016001450	6-June-16	Assoc. Professor Dr. Chandram Somasundram, Professor Dr. Vicknesha A/P Santhirasegaram
2	2016	Ultrastructural Changes and Genetic Material Assessment in Banan Root Infected by <i>Fusarium</i> , <i>Ralstonia</i> sp and <i>Meloidogyne</i>	LY2016001767	24-Aug-16	Assoc. Professor Dr. Chandram Somasundram

Details of MOA & MOU activities by CEBAR staff / students in 2016

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) 1. Visit by UM students to NAIST for pre-screening for PhD programme on 20th-29th January 2016 2) Visit by UM student, Sophia Sok to NAIST for joint PhD programme 3) Visit by UM student, Yvonne Liew Jing Mei to NAIST for a collaboration research on plant biotechnology from 10th July 2016 - 10th September 2016	Prof Dr Jennifer Harikrishna Prof Dr. Noor Hasima Nagoor	16 th Mar 2009 - 15 th Mar 2014 (renewed 25 th Feb 2014 - 24 th Feb 2019)



		4) Students: i) Nabeel Ata Abd Muneim (SGR 130068) ii) Ong Guang Han (MGN 1000049) iii) Sophia Sok (SGR130082) iv) Yvonne Liew Jing Mei		
2	Agreement on research collaboration and academic exchanges between University of Malaya & NARA Institute of Science and Technology (NAIST), JAPAN	1) Joint members of organising committee of ICMBB on 9th-11th March 2016 2) Visit to NAIST by Prof Dr Norzulaani Khalid: 30th May-05th June 2016 - Discussion of joint research project with Prof Dr Taku Demura 3) Visit to NAIST by Dr Tan Boon Chin: 26th May-01st June 2016 - Discussion of joint research projects with: a) Prof Dr Takashi Hashimoto and Assoc Prof Dr Tsubasa Shoji b) Prof Dr Taku Demura 4) CEBAR Expert Seminar Series 6/2016 by Prof Dr Kazuhiro Shiozaki on 19th December 2016	Prof. Dr. Jennifer 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 between University of Malaya and on research collaboration between University of Malaya and University of Leicester	1) Visit to University of Leicester by Prof Jennifer Ann Harikrishna 13-17th June 2016 2) Ongoing joint research on HIR project 3) Publications arising from activity 2: - R. Karim, M. Nuruzzaman, N. Khalid & J.A. Harikrishna.(2016) Importance of DNA and histone methylation in in vitro plant propagation for crop improvement: A review. Annals of Applied Biology doi:10.1111/aab.12280 - Theresa Lee Mei Ng, Rezaul Karim1, Yew Seong Tan,Huey Fang Teh, Asma Dazni Danial, Li Sim Ho, Norzulaani Khalid, David Ross Appleton, and Jennifer Ann Harikrishna (2016) Amino acid and	Prof Dr Jennifer Ann Harikrishna Prof Dr Norzulaani Khalid	2 nd July 2014 - 1 st July 2017



			Secondary Metabolite Production in Embryogenic and Non-Embryogenic Callus of Fingerroot Ginger (<i>Boesenbergia rotunda</i>). PloS ONE (in revision)	
4	Research collaboration agreement between CEBAR, University of Malaya and University of California San Francisco (UCSF)	<p>1) A set of 94 sequences were randomly selected from 229 upregulated putative <i>Fusarium oxysporum</i> f. sp. cubense Tropical Race 4 (Foc TR4) secretomic genes (Shetty et al., in review)</p> <p>2) Out of 94 selected genes, 76 pair primers were successfully designed and synthesized. 18 genes were successfully cloned into pGWB502-C-SF-TAP plant overexpression vector using cDNA synthesized from mRNA of infected banana roots (<i>Musa acuminata</i> variety Berangan).</p> <p>3) All the plant overexpression vectors with 18 different inserts were transformed into <i>Agrobacterium tumefaciens</i> strain LBA4404.</p> <p>4) <i>Agrobacterium</i>-mediated plant transformation of banana roots (<i>Musa acuminata</i> variety Berangan) is now being carrying out with 18 plant overexpression vectors mentioned above</p>	Prof Dr Rofina Yasmin Othman Prof Dr Jennifer Harikrishna	4 th June 2014 - 3 rd June 2016
5	Memorandum of Understanding between University of Malaya and Fraunhofer- Institute for Molecular Biology and Applied Ecology (IME), Germany	<p>1) Student and/or academic and administrative staff exchanges</p> <p>2) Joint research activities</p> <p>3) Exchanges of publications, reports, regulatory guidelines and other academic materials and information.</p> <p>4) Experiment is on going</p>	Prof Dr Rofina Yasmin Othman	17 th Dec 2013 - 16 th Dec 2016
6	Agreement International Institute of Tropical Agriculture (IITA) and University of Malaya (UM)	<p>1) On-going research on the mentioned research project</p> <p>2) Ongoing joint research programme and hosting of IITA –sponsored PhD Candidate co-supervised by Prof Rofina Yasmin Othman and Prof Jennifer Ann Harikrishna</p>	Prof. Dr. Jennifer Ann Harikrishna Prof.Dr. Rofina Yasmin Othman	1 st Oct 2014 - 30 th Sep 2016 (renewed on 11 th July 2016)
7	Memorandum of Understanding for Academic Cooperation between	1) Agreement signed on 2nd March 2016	Prof Dr Jennifer Ann Harikrishna	2nd March 2016 - 1st March 2021



	University Malaya and Palacky University Olomouc				
8	Memorandum of Agreement between Heleogenics Sdn Bhd and the University of Malaya	1) Identification and collection of naturally diverse Banana cohort from 100 samples. 2) Completion of transcriptome sequencing of 100 samples. 3) MOA signed with MARDI and phenotypic characterization experiment commenced to enable analysis to proceed	Prof Dr Rofina Yasmin Othman	31 st Dec 2013 - 30th 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) Preparation of Manuscript	Prof Dr. Noor Hasima Nagoor	4 th Sep 2014 - 3 rd Sep 2019	
10	Memorandum of Agreement between Malaysian Agricultural Research and Development Institute (MARDI) and University of Malaya	1) Field analysis of banana germplasm for new traits, marker development and virus indexing	Prof Dr Jennifer Ann Harikrishna	1st Dec 2013 - 31st Dec 2016	
11	Research Agreement between Government of Malaysia represented by Ministry of Science, Technology and Innovation, (MOSTI) and University of Malaya	Research project: Biotransformation of flavanoids by microbial and plant cell cultures for biomedical applications RM239,000 awarded for the research Investigation on: 1) Enhancement of anti-dengue compound production, panduratin A, by using plant cell suspension cultures via biotransformation process 2) Production panduratin (anti-dengue compound) and flavonoids derivatives via microbial cultures 3) Functional characterization of the derivative compounds generated via biotransformation process Publication: - Wong SM, Zoolkefli F.I.R.M., Karim R., Tan B.C., Harikrishna J.A., Khalid N. (2015) Stable integration of mgfp5 transgenes following Agrobacterium mediated transformation in Boesenbergia rotunda cell suspension culture. <i>Frontiers in Life Science</i>	Prof. Dr. Norzulaani Khalid	24th July 2014 - 23th July 2016	



- 8: 249-255
- Tan B.C., Tan S.K., Wong S.M., Ata N., Rahman N.A. and Khalid N. (2015) Distribution of flavonoids and cyclohexenyl chalcone derivatives in conventional propagated and in vitro-derived field-grown of *Boesenbergia rotunda* (L.) Mansf. Evidence-based Complementary and Alternative Medicine 2015, Article ID 451870, 7 pages
 - Ata N, Yusuf NA, Tan B.C., Husaini A., Yusuf Y.M., Majid N.A., Khalid N. (2015) Expression profiles of flavonoid-related gene, 4 coumarate: coenzyme A Ligase, and optimization of culturing conditions for the selected flavonoid production in *Boesenbergia rotunda*. Plant Cell Tissue Culture and Organ Culture 123: 47-55
- Poster (International Conference)
- Elucidating biosynthetic pathway of prenylated chalcone derivatives: Isolation and characterization of prenyltransferases from *Boesenbergia rotunda* (9-11 March 2016), International Conference of Molecular Biology and Biotechnology, Bangsar South, Kuala Lumpur
- Oral (National Conference)
- Elucidating the unresolved biosynthetic pathway in cyclohexenyl chalcone derivatives (8-9 September 2015), 22nd Annual Scientific Meeting Malaysian Society of Molecular Biology and Biotechnology, University of Malaya, Kuala Lumpur
- Patent application:
- A method of altering metabolite levels in *Boesenbergia rotunda* by rna interference-mediated silencing of the cinnamate-4-hydroxylase gene (Patent application no: PI 2016700799)



			Inventor (UM staff/student): i. Prof. Dr. Jennifer Ann Harikrishna ii. Prof. Dr. Norzulaani Binti Khalid iii. Dr. Tan Boon Chin iv. Wong Sher Ming		
12	Research Agreement between Government of Malaysia represented by Ministry of Science, Technology and Innovation, (MOSTI) and University of Malaya	1)	Submitted progress report of Science Fund on 16th May 2016	A/P Dr. Chandran Somasundram	1st Nov 2014 - 30th April 2017
13	Research Agreement between Government of Malaysia represented by Ministry of Science, Technology and Innovation, (MOSTI) and University of Malaya	1)	Manuscript submitted to journal for publication	Prof. Dr. Zulqarnain Mohamed	June 2013 - November 2017
14	Research Agreement between Government of Malaysia represented by Ministry of Science, Technology and Innovation, (MOSTI) and University of Malaya	1)	One publication published: Menaga Subramaniam, Lionel L. A In, Ashutosh Kumar, Niyaz Ahmed, and Noor Hasima Nagoor. 2015. Cytotoxic and apoptotic effects of heat killed Mycobacterium indicus pranii (MIP) on various human cancer cell lines. Scientific Reports 6:19833 DOI: 10.1038/srep19833 (ISI-Cited Publication)	Prof. Dr. Noor Hasima Nagoor	June 2013 - November 2017

Details of CEBAR activities in 2016: Workshops

No.	Title	Date/venue	Output
1	Banana Scalp Technology workshop	25 th – 26 th May 2016	Knowledge Transfer
2	Banana Cell suspension culture workshop	30 th – 31 st May 2016	Knowledge Transfer
3	Public Interest Statement workshop	24 th August 2016/ Mars Meeting Room	Knowledge Transfer
4	CEBAR Postgraduate course outline – Biosecurity	15 th September 2016/ CEBAR Meeting Room	Knowledge Transfer
5	Brainstorming workshop: UMCoE/HiCoE in umplanet	23 rd September 2016/ Mars Meeting Room	Knowledge Transfer
6	“Process for Biosafety of RNAi & Genome editing technologies in	26 th September 2016/ CEBAR Meeting Room	Knowledge Transfer



crop plants: Malaysian and Australian perspectives” Workshop organizing committee meeting			
7	IRU-MRUN teleconference workshop	12 th October 2016/ Bilik e-kuliah c1, Fac. Science UM	Knowledge Transfer

Details of CEBAR activities in 2016: Training courses

No.	Title	Date/venue	Output
1	3130xl Genetic Analyzer Instrument and Hands-on Training	11 th – 12 th May 2016/Infra Lab	Knowledge Transfer
2	Liquid nitrogen handling training	6 th December 2016/ HIR, University of Malaya	Knowledge Transfer

Details of CEBAR activities in 2016: Seminar/symposia

No.	Title	Date/venue	Output
1	CEBAR Expert Seminar Series 1/2016: IRRI’S experience on confined field trial of transgenic rice: the Do’s and Don’ts and transgenic stewardship in general	25 th February 2016/ Mars Meeting Room	Knowledge Transfer
2	CEBAR Expert Seminar Series 2/2016: Application of FISH and GISH techniques to identification and characterization of chromosomal changes in higher plants	5 th May 2016/ Mars Meeting Room	Knowledge Transfer
3	CEBAR Expert Seminar Series 3/2016: One stone and too many birds: Re-understanding molecular biology of plants by viewing through a genomics lens	19 th May 2016/ Mars meeting room	Knowledge Transfer
4	CEBAR Expert Seminar Series 4/2016: Transcriptome analysis of red/weedy rice (<i>Oryza sativa</i> spp); Understanding biotechnology approaches in agriculture	19 th July 2016/ Mars Meeting Room	Knowledge Transfer
5	CEBAR Expert Seminar Series 5/2016: Professor Takashi Hashimoto – Drought stress triggers remodeling of plant cytoskeleton. Professor Yasumasa Bessho – The biological clock that controls animal development.	1 st November 2016/ Mars Meeting Room	Knowledge Transfer



Professor Hisaji Maki – Molecular mechanisms of generating and suppressing spontaneous chromosome-rearrangement

6	CEBAR Expert Seminar Series 6/2016: Molecular mechanisms that control target of Rapamycin (TOR) complexes in response to nutrient by Professor Kazuhiro Shiozaki	19 th December 2016/ Mars Meeting Room	Knowledge Transfer
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Details of CEBAR activities in 2016: Other activities

No.	Title	Date/venue	Output
1	CEBAR 10 th Anniversary Meeting: School Science Challenge	2 nd February 2016/ CEBAR Meeting Room	Knowledge Transfer
2	CEBAR 10 th Anniversary Meeting: School Science Challenge with 6 representative committee	3 rd February 2016/ CEBAR Meeting Room	Knowledge Transfer
3	CEBAR PI (Member/ Assoc. member) &RU 2015 Meeting	14 th April 2016/ CEBAR Meeting Room	Knowledge Transfer
4	CEBAR KeepAble Ginger	17 th June 2016/ UMEC	Knowledge transfer and therapy for cancer survivors
5	Industry Day Meeting	14 th July 2016/ Mars meeting room	Establish links with the public and industry for research and innovation
6	SWOT analysis and risk assessment and Quality objectives Meeting	21 st July 2016/ Mars meeting Room	Knowledge transfer
7	Biotechnology Carnival	23 rd July 2016/ Kuen Cheng High School	Knowledge Transfer
8	Program Motivasi dan kesedaran sains (Kelab Sahabat) Fasa 1: Sekolah Kebangsaan Taman Megah	3 rd August 2016/ Sekolah Taman Megah	Knowledge Transfer
9	Discussion on post-grad courses	4 th August 2016/ Mars Meeting Room	Knowledge Transfer
10	Program Motivasi dan kesedaran sains (Kelab Sahabat) Fasa 1: Sekolah Kebangsaan Sri Petaling	9 th August 2016/ Sekolah Kebangsaan Sri Petaling	Knowledge Transfer
11	PBF User meeting & SOP review and self-audit workshop	10 th August 2016/ PBF Meeting Room	Knowledge Transfer
12	Follow-up meeting UM111 & CEBAR 10 th Anniversary Book	14 th September 2016/ CEBAR Meeting Room	Knowledge Transfer



13	2 nd Follow up meeting plan for CEBAR Space in proposed "UM Planet" Research Complex	5 th October 2016/ Neptune Meeting Room	Knowledge Transfer
14	21 st BGSC (Biological Sciences Graduate Congress) - Booth participation	15 th – 16 th December 2016/ Dewan Pameran IPPP	Knowledge Transfer
15	PBF Certification Inspection by Basler & Hofman	21 st December 2016/ PBF	Re-certification of Plant Biotech Facility to international standards for infrastructure and operation to BSL-2

Details of visitors to CEBAR in 2016

No.	Visitor(s)	Institute/Organization	Date of Visit	Activity
1	Director, Mawlana Bhashani Research Centre	Research Centre Mawlana Bhashani Science & Technology	7 th June 2016	Visit to Plant Biotech Facility & CEBAR
2	Quest International University Perak	Quest International University Perak	8 th August 2016	Visit to Plant Biotechnology Incubator Unit, Plant Biotech Facility & CEBAR
3	Delegation from Al-Qaseem Private Colleges, Arab Saudi	Al-Qaseem private colleges, Arab Saudi	1 st December 2016	Introduction to Graduate Program at Galaxy Meeting Room, KPPI
4	NAIST VISIT	NARA Institute of Science and Technology (NAIST), JAPAN	1 st November 2016	UM Mini Symposium & Introduction to Graduate Program for PhD in the Graduate School of Biological Sciences @NAIST, JAPAN

Details of interns hosted by CEBAR in 2016

No.	Name	Institute/ Country	Duration of attachment
1	Ch'ng Voon Hong	University College Sedaya International (UCSI)	4th January 2016-29th February 2016
2	Mahfuza Pervin	Universita Degli Studi Di Catania, Italy	9 March 2016 - 31st Oct 2016
3	Ton Mak Sin-Yi	Universiti Malaysia Sarawak (UNIMAS)	4th July 2016-23th September 2016
4	Christie Soo Tze Chiew	Universiti Malaysia Sarawak (UNIMAS)	4th July 2016-23th September 2016



Details of CEBAR PI's Professional Memberships (ongoing in 2016) www.cebar.um.edu.my

No	Organization	Academic Staff	Professional Membership	Duration	Level
1	Innovation Technology Managers Association Malaysia	Prof. Dr. Rofina Yasmin Othman	1st Vice President	17/02/2015-17/02/2016	International
2	EU-Malaysia Chamber Of Commerce	Prof. Dr. Rofina Yasmin Othman	Deputy Chairman	17/07/2015-17/03/2016	International
3	International Society Of Horticultural Science	Assoc. Prof. Dr. Chandran A/L Somasundram	Member	01/01/2015-31/01/2017	International
4	Malaysian Genomic Institute (MGI)	Prof. Dr. Norzulaani Binti Khalid	Academic, Joint Research	2012-2017	National
5	Institute Of Food Technologies	Assoc. Prof. Dr. Chandran A/L Somasundram	Member	01/02/2017-31/01/2018	International
6	Applied Entomology and Zoology	Associate Prof. Dr. Fauziah Binti Abdullah	Member	01/01/2013-31/12/2017	International
7	The Entomological Society of America	Associate Prof. Dr. Fauziah Binti Abdullah	Member	01/01/2010-31/12/2016	International
8	English-Speaking Union Of Malaysia	Assoc. Prof. Dr. Chandran A/L Somasundram	Member	Life Member	National
9	Malaysian Genetics Society	Prof. Dr. Jennifer Ann Harikrishna	Member	Life Member	National
10	Malaysian Society Of Molecular Biology And Biotechnology (MSMBB)	Prof. Dr. Jennifer Ann Harikrishna	Member	Life Member	National
11	Malaysian Genetics Society	Prof. Dr. Noor Hasima Nagoor	Member	Life Member	National
12	Malaysian Society Of Molecular Biology And Biotechnology (MSMBB)	Prof. Dr. Noor Hasima Nagoor	Committee Member	Life Member	National
13	Malaysian Society Of Molecular Biology And Biotechnology (MSMBB)	Prof. Dr. Norzulaani Binti Khalid	Member	Life Member	National
14	Malaysian Genetics Society	Prof. Dr. Rofina Yasmin Othman	Member	Life Member	National
15	Malaysian Genetics Society	Assoc. Prof. Dr. Subha Bhassu	Member	Life Member	National
16	Malaysian Society Of Molecular Biology And Biotechnology (MSMBB)	Assoc. Prof. Dr. Subha Bhassu	Member	Life Member	National