

CURRICULUM VITAE

KEY ACHIEVEMENTS

NO	SELECTED KEY ACHIEVEMENTS
1.	Published more than 130 papers in refereed and ISI journals, 8 IPs filed, 1 product commercialised (Current H index = 31, citation >2000).
2.	Recipient of more than RM5.5 million grants as Program leader, Project leader and co-researcher.
3.	Graduated 8 PhD and 17 MS students as the main supervisor and > 50 postgraduate students as a co-supervisor.
4.	Advisor to the Tunku Kurshiah College winning debate team (2008) and Science project team (winners at the National Level and International INTEL Invention Competition, USA 2011).
5.	Set-up and Head of the Culture Collection Unit, UPM (registered WFCC) (2009-2013). Set-up and Chair of the Institutional Biosafety Committee, UPM (2009-13)
6.	Two-term President of the Malaysian Society for Microbiology. Current President of the Malaysian Society of Lactic Acid Bacteria. Sec-General for the Asian Federation of Societies for Lactic Acid Bacteria and Malaysian Rep to the Union of International Microbiology Societies.
7.	Established and managed RM30Million for MyPAIR – Malaysian Research and Alliances in Research program (2019). Established international research collaborations for MOE with the 3 British Research Councils (NERC, STFC, MRC), Japan International Collaboration Agency (JICA), JSPS, France Ministry of Higher Education and Research.
8.	Co-author of the Malaysian Education Blueprint (Higher Education) 2015-2025 (Shift 2 and Shift 7). Chairman, working committee for Shift 7 of the Blueprint (Innovation Ecosystem) 2015-2019.
9.	Managed the strategic and operational processes of >RM2.5 Billion total research grants (2014 -2019) and more that 30 thousand proposals. Lead the teams to defend and secure Research grants (Fundamental Research Grant Schemes) for the Ministry of Education (Higher Education); 2015, RMK11 (2016 – 2020).
10.	Steering committee for the development of the Malaysian Code of Responsible Conduct in Research (MCRCR) for National Science Council, 2017. Steering committee for the development of the MTUN blueprint, 2018.



Raha Abdul Rahim, PhD
Professor of Microbiology (microbial genetics)
Universiti Putra Malaysia

Raha graduated with a Degree in Microbiology from Oklahoma State University, USA and proceeded to do her MS degree at the University of Oklahoma. She joined Universiti Putra Malaysia (UPM) in June 1991 as a tutor at the Department of Biotechnology and completed her PhD in Molecular Genetics at the University of Strathclyde, Glasgow.

Her main research interest is the Development of Lactic acid bacteria for delivery of useful proteins; plasmid biology, vaccine delivery and cell factory systems of lactic acid bacteria. She is also involved in other research including identification of genetic markers and authentication of halal products by molecular methods. She has supervised and co-supervised more than 50 post-graduate students, published more than 130 papers in peer-reviewed journals and filed several Intellectual Property rights. She is also consultant to several government agencies and Biotech-related industries.

Raha has held several administrative post in UPM; as the Director of UPM's Research Management Center, Deputy Dean of Research at the Faculty of BioTech, UPM's Biosafety Chair for Genetically Modified Organisms, Head of the Cell and Molecular Biology Department and Coordinator of the Culture Collection Unit, IBS, UPM.

Raha is currently the Vice-Chancellor of UTeM, a public university focusing on technology enhancement and producing highly skilled technologists, since June 16th, 2019. Prior to that, she was seconded to the Ministry of Education Malaysia as the Director, Institution of Higher Education Excellence Planning Division Department of Higher Education, April 2014 – 15 June, 2019. As the Director, she was in-charge of the overall Innovation Ecosystem as stipulated in the Malaysian Higher Education Blueprint 2015-2025. Her division specifically managed MoE's research & development programs that are the Research Universities (RU), Higher Institutions' Centers of Excellence (HICOEs) and MoE Fundamental Grant Scheme (FRGS). The amount of research grants managed by the division since 2014 is in the range of RM350 – RM400 million per year with the number of proposals bidding for the grants at 4000 – 7000 per year. In addition, she also coordinated the RM30 million matching international and industrial grants (MyPAIR - 2019), R&D databases (MyRA and MyGRANTS) and facilitated activities relating to the promotion of R&D products from the Institutions of Higher Learning, Malaysia.

Raha is presently the President of the Malaysian Society of Lactic Acid Bacteria (MSLAB). She was a past President of the Malaysian Society for Microbiology (MSM) and is a continuing EXCO member. She is also affiliated to several other professional societies such as the Malaysian Society for Molecular Biology and Biotechnology and the Malaysian Genetics Society. At the international stage, she is a member of the American Society for Microbiology (ASM) and was the Sec-general to the Asian Federation of Societies for Lactic Acid Bacteria (AFSLAB).

**NAME**

Raha Abdul Rahim (Raha A.R.; Rahim R.A.; Abdul Rahim R.; Rahim A.R.)

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FIELD OF SPECIALIZATION

Microbial Genetics/Molecular Biology

DATE OF BIRTH

May 5th, 1963

ACADEMIC QUALIFICATIONS

Year	Institution	Qualification
1987	Oklahoma State University, USA	BSc (Microbiology)
1990	University of Oklahoma, USA	MSc (Microbial Genetics)
1995	Strathclyde University, UK	PhD (Molecular Biology)

PROFICIENCY IN BAHASA MELAYU AND ENGLISH

Bahasa Malaysia – SPM	A2
Bahasa Inggeris – SPM 122	A1
Bahasa Inggeris – Cambridge 121	A2

CURRENT APPOINTMENTS

NO	POSITION	TERM
1.	Vice Chancellor – Universiti Teknikal Malaysia Melaka	June 2019 – June 2022
2.	Director – Institutions of Higher Education Excellence Planning Division, Department of Higher Education, Ministry of Education, Malaysia	April 2014 – June 2019
3.	Board of Governor , USM	February 2018 – June 2019
4.	Professor , UPM	Since 2007
5.	President , Malaysian Society for Lactic Acid Bacteria	Since 2015
6.	Secretary General Asian Federation of Societies for Lactic Acid Bacteria	Since 2013
7.	Associate Researcher Institute of Bioscience, UPM	Since 2000

8.	Lecturer Department of Cell and Molecular Biology, UPM	Since 1995
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PREVIOUS APPOINTMENTS

NO	POSITION	TERM
1.	Director – Research Management Center UPM	Oct 2012 – March 2014
2.	Evaluation committee – Mahathir Science Award	2012 - 2013
3.	Chairman , Institutional Biosafety Committee UPM	2010 - 2014
4.	Program Review Panel , MQA	2009 - 2014
5.	Head , Culture Collection Unit, IBS	2008 - 2014
6.	Deputy Dean (Research and Post Graduate Studies) , Faculty of Biotechnology and Biomolecular Sciences	Jan2012- Sept 2012
7.	Head , Department of Cell and Molecular Biology	2007-2011
8.	Deputy Director – RMC UPM	2005-2007
9.	President Malaysian Society for Microbiology	2004 - 2006
10.	Head Fermentation Technology Unit Institute of Bioscience UPM	2003-2005
11.	Tutor Department of Biotechnology UPM	1991 –1995

TEACHING EXPERIENCE

No	Course
1.	Course coordinator for the following undergraduate and graduate courses;
2.	Cell and Molecular Biology
3.	Principles of Biotechnology
4.	Genetic Engineering
5.	Introduction to Microbial Biotechnology

6.	Techniques in Molecular Biology
7.	Industrial Microbiology
8.	Research Methodology

UNDERGRADUATE/POSTGRADUATE COURSES TAUGHT IN THE LAST TEN YEARS

Year	Course/code	Credit (No. of contact hours)	Remark
2001/02	Principles of Biotechnology (BTK 300)	2+0	Course Coordinator/ Lecturer
2002/03	Principles of Biotechnology (BTK 300)	2+0	Course Coordinator/ Lecturer
	Cell and Molecular Biology (BTK 303)	4+0	
	Genetic Engineering (BTK 351)	2+1	
2003/04	Cell and Molecular Biology (BTK 303)	3+0	Course Coordinator/ Lecturer
	Cell and Molecular Biology (BTE 3501)	4+0	
	Genetic Engineering (BTK 351)	2+1	
	Genetic Engineering (BTE 4501)	2+1	
	Introduction to Biotechnology (BTE 3001)	2+0	
2004/05	Cell and Molecular Biology (BTE 3501)	4+0	Course Coordinator/ Lecturer
	Genetic Engineering (BTE 4501)	2+1	
	Introduction to Biotechnology (BTE 3001)	2+0	
	Introduction to Biotechnology (BTE 3001)	2+0	
	Techniques in Molecular Biology (BTK4302)	3+1	
2009/10	Cell and Molecular Biology (BTK 3403)	3+1	Course Coordinator/ Lecturer
	Introduction to Microbial Biotechnology (BTK 3301)	2+1	
	Genetic Engineering (BTK3201)	3+1	
	Techniques in Molecular Biology (BTK 4302)	3+1	

Year	Course/code	Credit (No. of contact hours)	Remark
2010/11	Cell and Molecular Biology (BTK 3201)	3+1	Course Coordinator/ Lecturer
	Introduction to Microbial Biotechnology (BTK 3301)	2+1	
	Genetic Engineering (BTK 3203)	3+1	
	Techniques in Molecular Biology (BTK 4302)	3+1	
	Industrial Microbiology (BTK 4301)	3+1	
	Research Methodology (BBS5901)	3+0	
2011/12	Genetic Engineering (BTK 3203)	3+1	Course Coordinator/ Lecturer
	Industrial Microbiology (BTK 4301)	3+1	

SUPERVISION OF POSTGRADUATE STUDENTS

DEGREE/STATUS	TOTAL
PhD Student Graduated	23
As Main Supervisor	8
As Co-Supervisor	15
PhD Student On-going	6
As Main Supervisor	3
As Co-Supervisor	3
MS Student Graduated	43
As Main Supervisor	18
As Co-Supervisor	25
MS Student On-going	8
As Main Supervisor	3
As Co-Supervisor	5

A. POSTGRADUATE RESEARCH DEGREE AS MAIN SUPERVISOR

NO	NAME	DEGREE	TITLE OF THESIS	STATUS
1.	Loke Chui Fong	MS	Molecular Characterization of Salmonella by Plasmid Profiling and Pulsed Field Gel Electrophoresis	Graduated 1997
2.	You Li Ling	MS	Partial Characterization and Some Properties of a Thermophilic Bacterium Isolated from a Petroleum Reservoir in Sarawak, Malaysia	Graduated 1999
3.	Ng Perk Tsong	MS	Cloning and Expression of VP1 in <i>Lactococcus lactis</i>	Graduated 1999
4.	Ernie Eileen Rizlan Ross	MS	Isolation and Characterization of a Lactococcal Plasmid and Preliminary Construction of a <i>Lactococcus</i> – <i>E. coli</i> Shuttle Vector	Graduated 2001
5.	Loke Chui Fung	PhD	Construction of DNA Vaccine Delivery System	Graduated 2003
6.	Latifah Saiful Yazan	PhD	Cytotoxic Properties of Anthraquinones (Nordamnacanthal and damnacanthal) from Roots of <i>Morinda elliptica</i>	Graduated 2004
7.	Yiap Beow Chin	PhD	Functional Characterization of <i>YIRO10W (DSN1)</i> and <i>YOR228C</i> in <i>S. cerevisiae</i>	Graduated 2004
8.	Nadimpalli Ravi Sankara Varma (India)	PhD	Development of Surface Anchoring System to Display Protein on the <i>L. lactis</i> Cell Surface	Graduated 2006
9.	Adelene Auyong	MS	MADS Box Genes of Oil Palm	Graduated 2006
10.	Aida Azrina Azmi	MS	Detection of Food Adulteration by Molecular Techniques	Graduated 2007
11.	Hosseinali Sasan (Iran)	PhD	Cloning Characterization of Virulence Gene Aerolysin and Serine Protease from <i>A. hydrophila</i>	Graduated 2008
12.	Nur Adeela Yasid	MS	Construction of a Novel Subunit Vaccine against NDV	Graduated 2008
13.	Hooi Wei Yeng	MS	Development of <i>L. lactis</i> as a Host Strain and Plasmid characterization	Graduated 2009

NO	NAME	DEGREE	TITLE OF THESIS	STATUS
14.	Tan Boon Hooi	MS	Expression and Characterization of Superoxide Dismutase Protein from <i>L. lactis</i>	Graduated 2009
15.	Leslie Lau Eng Ti	PhD	A Study on Gene Expression During Oil Palm Tissue Culture via the Generation of Expressed Sequenced Tags (ESTs) and DNA Microarray Analysis	Graduated 2009
16.	Ali baradaran (Iran)	MS	Development of secretory <i>lactococcus lactis</i> vectors with characterized heterologous signal peptide from <i>pediococcus pentosaceus</i>	Graduated 2010
17.	Haryanti Binti Toosa	PhD	Cloning and Expression of Recombinant Vaccine against Cholera.	On-going
18.	Noreen Suliani binti Mat Nanyan	MS	Improvement of folate production in <i>Lactococcus lactis</i> by manipulation of its folate biosynthesis pathway -	Graduated 2011
19.	Vithya a/p Velaithan	MS	Development of secretory expression system using synthetic signal peptides spa and spd for protein production in <i>Escherichia coli</i>	Graduated 2012
20.	Adelene Song Ai Lian	PhD	Development of <i>Lactococcus lactis</i> for production of plant secondary metabolites	Graduated 2012
21.	Ernie Eileen binti Rizlan Ross	PhD	Development of surface display system in <i>Lactococcus</i> as vaccine delivery for fish	On-going
22.	Tannaz Jalilsood (Iran)	PhD	Improvement of biofilm forming capacity on lactic acid bacteria using bacterial signaling system	Graduated
23.	Shamsiah binti Zakaria	MS	Analysis of bacteriocin release protein (brp) for excretion of useful protein in <i>Escherichia coli</i>	On-going
24.	Muhammad Azmi bin Samsudin	MS	The effect of phosphoglucosomerase (<i>hasE</i>) gene on the quality of hyaluronic acid production through different expression strategies in <i>Escherichia coli</i>	Graduated 2014
25.	Omid Bayat (Iran)	MS	Cloning and expression of ifn-alpha in <i>Lactococcus lactis</i>	Graduated 2013

NO	NAME	DEGREE	TITLE OF THESIS	STATUS
26.	Mohd Shawal Thakib bin Maidin	MS	Isolation and characterisation of <i>Lactobacillus</i> plasmid and its development into <i>Lactobacillus-Lactococcal</i> bi-shuttle vector	Graduated 2013
27.	Menaga a/p Subramaniam	MS	Cloning and expression of b-CGtase in <i>Lactococcus lactis</i>	Graduated 2013
28.	Stella Siaw Xiu Joan	MS	Cell surface display of pandemic H1N1 influenza A virus antigen in <i>Lactococcus lactis</i>	Graduated 2014
29.	Abdullah Munir bin Roslan	MS	Construction of <i>Lactococcus lactis</i> integration vector For enhancing the production of vitamin B biosynthesis	Graduated 2016
30.	Ali baradaran (Iran)	PhD	Development of <i>Lactococcus lactis</i> vaccine vectors against breast carcinomas	Graduated 2015
31.	Sarah Safwah Md Sabidi	MS	Comparative analysis of polysaccharide encapsulated <i>Lactobacillus plantarum</i> and <i>Lactococcus lactis</i> with cell wall anchored heterologous protein	Graduated 2017
32.	Inanurdiani Koko	MS	Engineering of food grade synthetic integrative vector for <i>Lactococcus lactis</i> based on phiLC3 integrating system	On-going
33.	Mohd Hairul Abdul Rahim	PhD	Expression of genes involved in the mevalonate pathway from orchids in <i>Lactococcal</i> and yeast systems	On-going
34.	Nor Fadillah Khairul Annuar	PhD	Characterization of collagen binding proteins from bacteria	On-going
35.	NurAqlili	PhD	Mutagenesis of signal peptides for improved secretion of heterologous proteins in <i>L. lactis</i>	On-going
36.	Nurul Aishah	MS	Engineering <i>Lactococcus lactis</i> as a cell factory for the production of plant anticancer compounds, limonene and perillyl alcohol	On-going
37.	Lee Chai Yan	MS	Modulatory effects of selected amino acids on the transcripts associated with protective genes and immunity in poultry	Submitted thesis

B. POSTGRADUATE RESEARCH DEGREE AS CO-SUPERVISOR

NO	NAME	DEGREE	TITLE OF THESIS	STATUS
1.	Norlia Basherudin	MS	DNA Fingerprinting of <i>Theobroma cacao</i>	Graduated 1996
2.	Sharifah Alawiah	PhD	Study of Flowering Genes in Palm Oil	Graduated 1997
3.	Sahilah Abdul Mutalib	MS	Conjugal Transfer of Antibiotic Resistance and Plasmid among <i>Escherichia coli</i> 0157 Isolated from Imported Frozen Beef	Graduated 1997
4.	Nur Asma Ariffin	MS	Genetic Variation Between and Within Three Varieties of Domesticated Tiger Barb (<i>Puntius tetrazona</i>) using RAPD Markers	Graduated 1999
5.	Shar Mariam Mohamed	PhD	Cytotoxic Effects of Methylgerambulin and Bis-(Methylthiomethyl)-Disulphide (SB) on T-Lymphoblastic Leukemic Cell Line (CEM-SS)	Graduated 2000
6.	Vasanthakumari Neela	MS	Molecular and Immunological Characteristics of <i>Vibrio cholerae</i> and <i>Vibrio alginolyticus</i>	Graduated 2000
7.	Khalid Ghazi Daifalla Fandi	PhD	Purification, Characterization and Molecular Studies of F6PPK from Bifidobacteria	Graduated 2001
8.	Sahilah Abdul Mutalib	PhD	Molecular Characterization of <i>Salmonella serovars</i> Isolated from Poultry	Graduated 2001
9.	Nurfilza Ahmat	MS	Cloning and Expression of VP2 Gene of Chicken Anemia Virus Strain CUX-1 in <i>Lactococcus lactis</i> MG1363	Graduated 2001
10.	Chang Li Yen	MS	Cloning and Expression of the Xylanase Gene from <i>B. coagulans</i> and the M Gene of Newcastle Disease Virus in <i>Lactococcus lactis</i>	Graduated 2001
11.	Lesley Maurice Bilung	MS	Isolation and Molecular Characterization of <i>Listeria</i> Species in Poultry meat	Graduated 2001

NO	NAME	DEGREE	TITLE OF THESIS	STATUS
12.	Haryanti Toosa	MS	RAPD Analysis, Plasmid Profiles, Antibiotic Resistance and Occurrence of the <i>van</i> Genes in <i>Enterococcus</i> species Isolated from Human and Poultry	Graduated 2001
13.	Rebecca Robert Rantty	MS	Molecular Analysis of the <i>EMM</i> Gene of Group A <i>Streptococcus</i> Strain D1323	Graduated 2001
14.	Lim Yang Mooi	PhD	Anti-Tumour Promoting Activity of Selected Malaysian Vegetables and Fruits and Identification of Anti-Tumour Promoting and Antioxidant Compounds from <i>Coleus tuberosus</i> , Benth (Ubi Kemili)	Graduated 2002
15.	Ho Hooi Ling	MS	Effect of Medium Different Media Formulation and Growth Condition on the Growth and plasmid Stability of a Recombinant <i>Lactococcus lactis</i> AM3	Graduated 2002
16.	Ng Chyan Leong	MS	Expression of Recombinant Human Renin as a GST and HIS Fusion Protein in <i>E. coli</i>	Graduated 2002
17.	Tan Li Lung	MS	Development of a Novel Local Isolated Aquatic Yeast as a Protein Expression Vector	Graudated 2002
18.	Mickey AK Vincent	MS	Isolation and Molecular Characterization of <i>Vibrio cholera</i> in meat	Graduated 2002
19.	Hajjah Endang Purwati Rahayuningsih	PhD	Molecular Characterization of Listeria spp. Isolated from Beef, Chicken and Fermented Fish in Malaysia	Graduated 2003
20.	Tin Tin Myaing	PhD	Detection of Antibiotic Residues and Isolation of Antibiotic Resistant <i>Escherichia coli</i> from Chicken Meat and Chickens in Malaysia	Graduated 2003
21.	Abeer Hassan Sahtout	PhD	The Prevalence of White Spot Disease in <i>Penaeus Monodon</i> in Relation to Environmental Changes and the Occurrence of Apoptosis	Graduated 2003
22.	Lim Leng Choo	MS	Characterization of a Sulfur Amino Acid lyase from <i>Citrobacter freundii</i> (KP25)	Graduated 2003

NO	NAME	DEGREE	TITLE OF THESIS	STATUS
23.	Wan Somarny Bt. Wan Md. Zain	MS	Molecular Studies of <i>Vibrio cholerae</i> Strains Isolated from Local Outbreak	Graduated 2003
24.	Fennie Fong Kah Ling	MS	Identification of Proto-oncogene Sequences involving <i>ras</i> genes Associated with Pollution in Malaysian Flatfishes from the Straits of Malacca	Graduated 2004
25.	Kwan Yen Yen	MS	A Catalogue of Oil Palm Expressed Sequence Tags (ESTs) from A floral cDNA Library and the Analysis of Two MADS Box Genes	Graduated 2004
26.	Vasanth Kumari Neela	PhD	Utilization of Molecular System for the Identification and Typing of Clinically Relevant Multiple Drug Resistant <i>Staphylococcus aureus</i>	Graduated 2005
27.	Nguyen Chau Thanh Tung	MS	Comparison of DNA Extraction Methods in the Detection of Genetically Modified Food Using Polymerase Chain Reaction	Graduated 2005
28.	Elham Omer Mahagoub	MS	Development of Chicken Anaemia Virus (CAV) Diagnosis Kits, Epidemiological and Serological Survey of (CAV) in Malaysia	Graduated 2005
29.	Taznim Begam Mohd. Mohidin	MS	Study of Specific Interactions Between Nipah Virus Nucleocapsid - (N) Protein and Phospho-(P) using the Yeast Two-Hybrid System	Graduated 2006
30.	Lew Kok Cheong	MS	Development of Fed-Batch Fermentation Technique for the Cultivation of <i>B. subtilis</i>	Graduated 2006
31.	Nagesh Dernissie	PhD	Genetic Diversity and Characterization of Selected Plant Growth Promoting Rhizobacteria from Food Legumes of the Central Highlands of Ethiopia	Graduated 2006
32.	Fatemeh Jahanshiri	PhD	Mapping of the Functional Domains of the Newcastle Disease Virus Phosphoprotein	Graduated 2006
33.	Nguyen Phuoc Dang	PhD	Sequence and Functional Analysis of Salinity Tolerance Genes Isolated from the Mangrove Plant, <i>Acanthus ebracteatus</i> (Sea Holly)	Graduated 2006

NO	NAME	DEGREE	TITLE OF THESIS	STATUS
34.	Lim Kean Jin	MS	ESTs for Banana (pisang rastali)	Graduated 2006
35.	Christina Vimala Suppramaniam	MS	Isolation of Gene that Encode for Plantaricin in <i>Lactobacillus plantarum</i>	Graduated 2006
36.	Jacklyn Ng Wei Sze	MS	Characterization of Methicillin-Resistant <i>Staphylococcus aureus</i> (MRSA) Isolated from Cats and Dogs	Graduated 2006
37.	Lim Chin Ming	PhD	Development of Industrial Probiotic Culture Production with Maximum Activity and Stability	Graduated 2006
38.	Tengku Elida Tengku Zainal Mulok	PhD	Production of L-lactic Acid from Kitchen Waste using Recombinant <i>E. coli</i>	Graduated 2008
39.	Nagi AlHaj	PhD	Development of a PCR Based Technique for Identification of <i>E. coli</i>	Graduated 2009
40.	John Laurence William	PhD	<i>Staphylococcus aureus</i> Carrying by the Football Players during Training Indoor and Outdoor	Graduated 2007
41.	Premalatha a/p Pakirisamy	PhD	Inoculant Formulation, Application and Inoculant Colonization Pattern for Plant Growth-Promoting Rhizobacteria (<i>Bacillus</i> sp.) in Association with a Non-Legume	Graduated 2007
42.	Lim Yin Sze	PhD	The Study of Probiotic Characteristics of <i>Lactobacillus plantarum</i> Species Isolated from Local Foods	Graduated 2008
43.	Ang Kok Nian	MS	Degradation of Lignocelulosic Agro-waste <i>Laccase</i> from Locally Isolated Fungus (White-rot <i>Basidiomycetes</i>)	Graduated 2008
44.	Mohd Zaini Nanyan	MS	Scaling Up Fermentation Process by Using <i>Bacillus</i> sp. as a Probiotic in Aquaculture Industry	On-going
45.	Siti Sarah Osman	MS	Development of a Virulent <i>P. multocida</i> B2 with a Deletion in the GDHA Gene	Graduated 2008
46.	Anuradha a/p Karunakaramoorthy	MS	Effects of recombinant <i>Lactococcus lactis</i> and bacteriocin UI4 in the protection of tilapia (<i>Oreochromis niloticus</i>) against <i>Aeromonas hydrophila</i>	Graduated 2009

NO	NAME	DEGREE	TITLE OF THESIS	STATUS
47.	Dzarifah Mohd. Dzulperi	MS	Development of Avirulent <i>Pasteurella multocida</i> B2: Deletion of ABA392 DNA Fragment	Graduated 2008
48.	Hana Farizah	MS	Expression of <i>Vibrio</i> O-antigen Transport Biosynthesis Genes in Lactococcus Vector	Graduated 2011
49.	Morteza Shojaei Moghadam	MS	Molecular characterization of bacteriocinogenic <i>Lactobacillus plantarum</i> strains isolated from malaysian food	Graduated 2009
50.	Seyed Sadegh Mousavi	MS	Influence of medium formulation and cultural conditions on folate production by lactic acid bacteria	Graduated 2010
51.	Sayed Hameed Mahmoudian	PhD	Prediction of Breast Cancer relapse time in continuous scale based on type-2 tsk fuzzy model	Graduated 2010
52.	Reza	PhD	Title	Graduated 2010
53.	Norfarina bt Muhamad Nor	MS	Improvement of folate biosynthesis by <i>Lactobacillus plantarum</i> I-UI4 using response surface methodology	Graduated 2011
54.	Sharmila Dewi Natarajan	MS	Optimization of bioethanol production from yeast isolated from <i>Nypa sap</i> using response surface methodology	Graduated 2012
55.	Mohd Azuraiddi Osman	MS	Ehippia production and genetic biodiversity on tropical cladoceran <i>Moina micrura</i> Kurz	Graduated 2012
56.	Farzaneh Heidarnia	MS	Metabolic regulation analysis of recombinant <i>Lactococcus lactis</i> carryng aerolysin gene based on gene expression and enzyme activities	Graduated 2011
57.	Azin Amiri	MS	Improvement of cyclodextrin glycosyltransferase biosynthesis by recombinant <i>Lactococcus lactis</i> NZ:NSP:CGT	Graduated 2013
58.	NorKhalidah bt Jamali	MS	Optimisation of nutritional and cultural conditions for the production of bacteriocin by locally isolated strains, <i>Lb plantarum</i> TL1	Graduated 2014

NO	NAME	DEGREE	TITLE OF THESIS	STATUS
59.	Anuradha a/p Karunakaramoorthy	PhD	Effects of metabolites produced by locally isolated lactic acid bacteria on tilapia, <i>Oreochromis niloticus</i>	Graduated 2015
60.	Nur Elina binti Abdul Mutalib	PhD	Lactococcal vector construction incorporating internal ribosome entry site (ires) for protein delivery in avian cells	Graduated 2015
61.	Ho Wan Yong	PhD	Induction of apoptosis by Elehantopus scaber L. ethanolic extract and effects of its interaction with tamoxifen on human breast cancer MCF-7 spheroids	Graduated 2012
62.	Yee Lian Ngit	PhD	Metabolic engineering of <i>phaZ</i> AND <i>phaC</i> genes in <i>Comamonas</i> sp EB172 for polyhydroxyalkanoates production.	Graduated 2012
63.	Siti Balkhis binti Ibrahim	MS	Growth optimization of recombinant <i>lactococcus lactis</i> carrying domain 1 of aerolysin gene	Graduated 2012
64.	Jeevanathan a/l Kalyanasundram	MS	Construction and characterization of a <i>Lactococcus lactis</i> in-trans surface display system harbouring murine glycosylated tyrosinase related protein-2	Graduated 2015
65.	Anhar Danial	PhD	Development of novel mucosal vaccine for tuberculosis using protein surface display system of <i>Lactococcus lactis</i>	Graduated 2018
66.	Zubaida Hassan	MS	Isolation, characterization and anti-tumour effects of potential probiotic bacteria from human breast milk	Graduated 2015
67.	Lim Ee Lin	MS	Analyses of putative genes involved in the defense mechanism of <i>Gracilaria changii</i> in response to agarose and agarolytic bacteria treatments.	Graduated 2014
68.	Jocelyn	MS	Glycosylation of influenza antigen surface display on <i>Lactococcus lactis</i> elicits protective immune responses	Graduated 2016
69.	Taha	PhD	Carbon nanoparticles as replacement for gold in fluorescence resonance energy transfer for detecting virus	Graduated 2016

NO	NAME	DEGREE	TITLE OF THESIS	STATUS
70.	Laavana a/p M.Kumar	MS	Influence of biofilm-forming lactic acid bacteria against selected pathogenic bacteria	Graduated 2016
71.	Tan Huey Kheng	MS	Purification and characterization of cytobiotic produced by <i>Lactobacillus plantarum</i> I-UL4 on human breast cancer cell line (MCF-7)	Graduated 2018
72.	Khulood Hamid Dakheel	PhD	Mechanism of methicillin-resistant <i>Staphylococcus aureus</i> biofilm degradation by bacteriophages	2018
73.	Nurhidayatul Asma Mohamad	PhD	Real-Time PCR-based detection and quantification of porcine adulteration in processed gelatin and gelatin capsule	2017

SUPERVISION OF UNDERGRADUATE STUDENTS - 39 BACHELOR SCIENCE

No	Name	Title	Year	Status
1.	Bazli Syah Ahmad	Nordamnacanthal-Induced Programmed Cell Death (Apoptosis) in PN6 Cells	1997	Graduated
2.	Muhamad Firdaus Bin Sher Mohamed	Screening and Isolation of Cadmium Resistant Bacteria from Industrial Effluent	1997	Graduated
3.	Boon @ Embun Bte Eli	Characterization of Plasmids Extracted and Antimicrobial Resistant of <i>Salmonella enteritidis</i> isolates	1997	Graduated
4.	Yong Kum Cheng	The Cytotoxic Activity of Nordamnacanthal Compound against Heat Treated PN6 Cell	1998	Graduated
5.	Chang Li Yen	Effects of Damnacanthal and Nordamnacanthal on HeLa and NIH 3T3 Cells	1998	Graduated
6.	Nor HairulNizam Wahid	Effect of Heat on PN6 Cell Line	1998	Graduated
7.	Nurniwalis Abdul Wahab	Construction of Genomic Library for <i>L. lactis</i> MG1363 and <i>Bifidobacteria asteroides</i>	1998	Graduated
8.	Zalyna Yusof	Identification of Bacteria UPM1 and UPM3	1998	Graduated
9.	Chew Elaine	Isolation and Characterization of Selected Lactococcal Plasmids from Chicken Cecum	1999	Graduated

No	Name	Title	Year	Status
10.	Leslie Low Eng Ti	Optimization of Disruption Methods for the Isolation of Intracellular Proteins from a Hyperthermophilic Bacteria	1999	Graduated
11.	Rowina Hartini Monamad Yusof	Characterization of Plasmids Isolated from <i>Bifidobacter</i>	1999	Graduated
12.	Amos Tan	Cloning of VP3 Gene of a Local Isolate into Expression Vector pMG36e	1999	Graduated
13.	Madiah Zawawi	Cloning and Expression of VP1 (Cux-1) in <i>E. coli</i>	1999	Graduated
14.	Saliza Zamani	Subcloning of Xylanase Gene into Plasmid Vector pMG36e	1999	Graduated
15.	Khaw Aik Kia	Construction of a Restriction Map of a Cryptic Plasmid Isolated from <i>Lactococcus</i>	2000	Graduated
16.	Chong Chea Chin	Towards the Construction of Genomic Library of <i>Lactococcus lactis</i> B88.	2000	Graduated
17.	Goh Sor Keim	Studies of a Recombinant <i>Lactococcus lactis</i> under Different pH and Temperature Conditions	2000	Graduated
18.	Gan Bong Hwa	Screening for Bacteriocin Producing <i>Lactococcus lactis</i> Isolated from Chicken Intestine and RAPD Studies	2001	Graduated
19.	Khairul Nizam Hj. Kamaruddin	Curing Studies in <i>Lactococcus lactis</i> using Acridine Orange and Acriflavin	2001	Graduated
20.	Chong Kok Kei		2001	Graduated
21.	Lum Won Yen	Isolation and Cloning of AcmA, a Major Autolysin Gene from <i>Lactococcus lactis</i>	2001	Graduated
22.	Nurul Hafizah Israr	Antibiogram and Determination of Minimum Inhibitory Concentration (MIC) of <i>Lactobacillus spp.</i> Isolated from Chicken Intestine	2001	Graduated
23.	Rosuraya Abdullah	Cloning of the ctx Gene from <i>Vibrio cholerae</i> into pMG36e	2001	Graduated
24.	Hooi Wei Yeng	Cloning and Characterization by Sequencing of Superoxide Dismutase Gene from <i>Lactococcus lactis</i> B61	2002	Graduated
25.	Rusni Abdul Kadir	Plasmid Profiling and Determination of Minimum Inhibitory Concentration (MIC) of <i>Lactobacillus spp.</i> Isolated from Chicken Intestine	2002	Graduated

No	Name	Title	Year	Status
26.	Rosnah Sahilan	RAPD Analysis of <i>Lactococcus spp.</i>	2002	Graduated
27.	Mazrina Ahmad Kamal	Isolation of Organisms from Soil Around the Roots of Lemon-Grass having Potential of Producing Anti- <i>Staphylococcus</i> Substances	2002	Graduated
28.	Tan Boon Hooi	Cloning and Expression of <i>Lactococcus lactis</i> M4 Superoxide Dismutase (SOD) Gene in <i>E. coli</i> BL21(DE3) pLysS	2003	Graduated
29.	Engku Ahmad Nazri Engku Ariff	The Use of Repetitive Sequence-PCR and Randomly Amplified Polymorphic DNA-PCR for Discrimination of <i>Listeria spp.</i>	2003	Graduated
30.	Ang Ley Poh	Cloning of <i>eprA1</i> Gene from <i>Aeromonas hydrophila</i> into <i>Escherichia coli</i>	2004	Graduated
31.	Lionel In Lian Aun	Cloning of <i>Elastase</i> (AhyB) Gene from <i>Aeromonas hydrophila</i> into <i>Escherichia coli</i>	2004	Graduated
32.	Nur Azimah Osman	Screening for L-LDH Gene in The Genomic Library of <i>Enterococcus gallinarum</i> EB1	2005	Graduated
33.	Khadijah Hanim Abdul Rahman	Cloning of Sequences Coding for the Cell Wall Binding Domain of <i>nisP</i> gene in <i>E. coli</i> .	2005	Graduated
34.	Hisyam Bin Abdul Hamid	Cytotoxic Effects of Damnacanthol Towards Human Mammary Carcinoma Cell Line (MDA-MB-231)	2005	Graduated
35.	Seng Liang	Amplification and Cloning of VP1 and VP2 Genes of Chicken Anemia Virus (CAV) into pSVac	2005	Graduated
36.	Ooi Choong Li	Mammary Carcinoma Cells (MDA-MB-231)	2005	Graduated
37.	Mohd. Termizi Bin Yusof	Preliminary Studies on Antibody Produced by Mice Fed with Recombinant Lactococcal	2005	Graduated
38.	Nik Mohd. Afizan Bin Nik Abd. Rahman	Strength Studies of Recombinant <i>E. coli</i> Strain Harboring <i>nisP</i> Protein	2005	Graduated
39.	Marini Ibrahim	Construction of Genomic Library for <i>Enterococcus gallinarum</i> EB1 for Screening the L-Lactate Dehydrogenase Gene	2005	Graduated
40.	There have been more than 30 undergraduate students under my supervision since 2005-2014. There had also been undergraduate students doing their final year projects from UM, UMP, UTM, UIA, Sedaya, Cantho University Vietnam, Yala University Thailand, and others.			

EXPERIENCE AS POSTGRADUATE THESIS EXAMINER

EXTERNAL				
NO	NAME	TITLE	DEGREE	INSTITUTIONS
1.	Saidi Jaafar	Pulse Field Gel Electrophoresis (PFGE) Analysis of <i>Pasteurella multocida</i> Serotype B:2 Genome	MS (2005)	Universiti Malaya
2.	Hasniza Ramli	Cloning and Expression of Glucoamylase cDNA from <i>Amylomyces rouxii</i> in <i>E.coli</i>	MS (2006)	Universiti Teknologi Malaysia
3.	Nor Haslinda Abdul Aziz	Genotyping and Identification of High-Risk Human Papilloma Virus from Cervical Specimens using Polymerase Chain Reaction Approach	MS (2007)	Universiti Malaya
4.	Yam Hock Chai	Characterization of nifBHDK Genes of <i>Paenibacillus polymyxa</i>	MS (2007)	Universiti Sains Malaysia
5.	Marilyn Jaai@Edward	Isolation, Purification and Molecular Characterization of Alpha Amylase from <i>Bacillus Amyloliquefaciens</i>	MS (2007)	Universiti Malaysia Sarawak
6.	Suzana Misbah	Molecular Characterization and Proteomic Studies if Multiple Antibiotic Resistance <i>Acenitobacter baumannii</i>	MS (2008)	Universiti Malaya
7.	Phang Sze How	Cloning and Expresson of a <i>Salmonella entericar serovar typhi</i> DNA Fragment	MS (2008)	Universiti Malaya
8.	Yam Hok Chai	Characterization of Nitrogen Fixation Genes (<i>nif</i>) from <i>Paenibacillus polymyxa</i>	MS (2009)	Universiti Sains Malaysia
9.	Kesaven a/I Bhubalan	Characterization and the application of polyhydroxyalkanoate synthase of Chromobacterium sp USM2 for the production of biodegradable plastic	PhD (2009)	Universiti Sains Malaysia
10.	Yuen Chee Wah	Characterization of the Bulkholderia pseudomallei wzm gene involved in export of capsular polysaccharide	MS (2009)	Universiti Sains Malaysia
11.	Tri Puji Priyanto	Analisis fungsi subunit katalitik protein kinase bersandarkan cAMP dan gen-gen khusus apresorium yang di ekspres semasa morfogenesis <i>Colletotrichum gloeosporioides</i>	PhD (2009)	Universiti Kebangsaan Malaysia

EXTERNAL				
NO	NAME	TITLE	DEGREE	INSTITUTIONS
12.	Muhd Danish Daniel bin Abdullah	Mengkaji komuniti bakteria yang berasosiasi dengan dinoflagelat yang toksik yang di jumpai di perairan Malaysia	PhD (2009)	Universiti Kebangsaan Malaysia
13.	Tee Soo Yee	Family 11 Xylanase (AfxynG1) from <i>Aspergillus fumigatus</i> RT-1: Expression and Biochemical Characterization of the Recombinant Enzyme	MS (2010)	Universiti Teknologi Malaysia
14.	Chandrika Murugaiah	Construction and evaluation of multigene mutants of <i>Vibrio cholera</i> 0139	PhD (2010)	Universiti Sains Malaysia
15.	Noor Azah Jema'on	Genome sequence survey of alkaliphilic <i>Bacillus lehensis</i> G1 and candidate genes involved in pH homeostasis	MS (2010)	Universiti Teknologi Malaysia
16.	Hussin Alwan Rothan Al -Maamuri	Construction and expression of human adipopectin in prokaryotic and eukaryotic expression systems and the study of its effect on selected blood parameters and expression of related genes	PhD (2011)	Universiti Malaya
17.	Laith Abulhassan Mohammad Jawad	Molecular cloning, phylogenetic analysis, and expression of two immune related genes, serum amyloid A (SAA) and C-reactive protein (CRP) from Asian seabass (<i>Lateolabrax niloticus</i>)	PhD (2011)	Universiti Kebangsaan Malaysia
18.	Gan Han Ming	Identification of catabolite genes for 4-aminobenzenesulfonate biodegradation by <i>Hydrogenophaga</i> sp PBC and <i>Ralstonia</i> sp PBA.	PhD (2011)	Universiti Teknologi Malaysia
19.	Kogubalan a/I Ilan Sollan	MCM-41 as support for immobilization of NAR-1 bacterial consortium in the biodegradation of remazol black B	MS (2011)	Universiti Sains Malaysia
20.	Poh Keng Chong	Cloning, expression and preliminary characterization of selected hypothetical proteins from <i>Klebsiella pneumoniae</i> MGH 78578	MS (2012)	Universiti Sains Malaysia
21.	Noor Munyati Othman	Pengekspresan dan pencirian hidrolase daripada <i>Rhodococcus ruber</i> (UKMP-5M)	MS (2012)	Universiti Kebangsaan Malaysia
22.	Hadini bin Mokhsin	Title	MS (2012)	USM
23.	Syaidatul Najiah Zakaria	Cloning, expression and site directed mutagenesis of single chain FV of C3A8 hybridoma against breast	MS (2012)	Universiti Sultan Zainal Abidin

EXTERNAL				
NO	NAME	TITLE	DEGREE	INSTITUTIONS
		MCF-7 carcinoma cells in <i>Pichia pastoris</i>		
24.	Frederick Adzitey	Prevalence, antibiotic resistance and genetic diversity of <i>Campylobacter</i> species, <i>Salmonella</i> serovars and <i>Listeria monocytogenes</i> isolated from ducks, their rearing and processing environment in Penang, Malaysia	PhD (2012)	USM
25.	Mardani Abdul Halim	Development of thermostable variants of <i>Zymomonas mobilis</i> alcohol dehydrogenase by directed evolution	MS (2012)	USM
26.	Fatemeh Shahhosseini	Molecular studies of <i>Chalcone synthase</i> in <i>Boesenbergia rotunda</i>	PhD (2012)	UM
27.	Kamariah bt Hassan	Elucidation of PHA biosynthesis regulatory elements in <i>Pseudomonas</i> sp. USM 4-55	PhD (2013)	USM
28.	Theresa Yap Wan Chen	Title	MS (2013)	UKM
29.	Siti Mariam Mawarni Ramli	In Vitro Selection of RNA Aptamers that Specifically Bind to 50kDA Outer Membrane Protein of <i>Salmonella enterica</i> serovar Typhi	MS (2016)	USM
30.	Zarita Zakaria	Molecular and Enzymatic Studies of Fibrinolytic Enzyme from <i>Bacillus</i> SP.	PhD (2014)	UTM
31.	Parastoo Tajzadeh	Characterisation of Transpeptidase and Transglycosylase Domains of Penicillin-Binding Protein from <i>Burkholderia pseudomallei</i> and Their response to Antibacterial Agents	PhD (2014)	UKM
32.	Hazirah Abdol Wahab	Pengubahsuaian Genetik Terhadap Jujukan Isyarat Rembesan Homolog BAgI Meningkatkan Pengekspresan Ekstrasel Beta-galaktosidase di Dalam <i>Aspergillus Niger</i>	MS (2016)	UKM
33.	Balqis Abdul Ghani	Development of Industrial Strain for the Production of poly (3-hydroxybutyrate-co-3-hydroxyhexanoate)	PhD (2016)	USM
34.	Ng Fui Ling	Interaction between the bacteria clonal colonies	PhD (2019)	USM

EXPERIENCE AS POSTGRADUATE THESIS EXAMINER

INTERNAL EXAMINER				
NO	NAME	TITLE	DEGREE	UNIVERSITY
1.	Ainu Husna Suhaimi	Determination of the Nucleotide Sequence of a Thermostable Xylanase Gene from <i>Baillus coagulans</i> ST-6	MS	Faculty of Science and Environmental Studies
2.	Mojtaba Khayyam Nekouei	Germplasm Collection and Molecular Characterization of Endophyte Fungi in Iranian Tall Fescue	PhD	Faculty of Food Science and Biotechnology
3.	Suhaili Abdul Hamid	Cloning and Expression of Alkaline Protease	MS	Faculty of Science and Environmental Studies
4.	Au Siang Loong	Isolation and Characterization of cDNA Clones Encoding ADP-Glucose Pyrophosphorylase (AGP) from Sago Palm (<i>Metoxylon sago</i>)	MS	Faculty of Food Science and Biotechnology
5.	Sugumaran Manickam	The Cloning and Characterization and Antisense Cassette Construction for some Pigmentation Genes from <i>Oncidium</i>	MS	Faculty of Food Science and Biotechnology
6.	Chin John Hun	Molecular Cloning Sequencing and Expression of an Organic Solvent-Tolerant Lipase Gene from <i>Bacillus Sphaericus</i> 205Y	MS	Faculty of Science and Environmental Studies
7.	Ooi Wai Ling	Prevalence and Molecular Characterization of Vancomycin-Resistant Enterococci Isolated from Poultry, Raw Vegetables and Clinical Sources	PhD	Faculty of Science and Environmental Studies
8.	Kwan Yen Yen	A Catalogue of Oil Palm ESTs from a Floral cDNA Library and the Analysis of Two Mads Box Genes	MS	Faculty of Food Science and Biotechnology
9.	Sushil Kaur A/P N. Gurnam Singh	Development of Diagnostic DNA Probe for the Detection of <i>Escherichia coli</i> O157:H7	MS	Faculty of Food Science and Biotechnology

INTERNAL EXAMINER				
NO	NAME	TITLE	DEGREE	UNIVERSITY
10.	Siti Norita Mohamad	Optimization of Mannan-Degrading Enzymes Production by <i>Aspergillus niger</i> in Fermentation Using Shake Flasks and 2L Stirred Tank Fermenter	MS	Faculty of Food Science and Biotechnology
11.	Sew Yun Shin	Characterization of Allergens from the Dust Mite, <i>Tyrophagus putrescentiae</i>	MS	Institute of Bioscience
12.	Nor Suhaila Yaacob	Performance of Solvent (Acetone-Buthanol-Ethanol) Fermentation by <i>Clostridium sacharobutylicum</i> Strain P262 and NCIMB8052 Using Free and Immobilized Cells System	MS	Institute of Bioscience
13.	Jeffrey Lim Seng Heng	Screening of <i>Actinomyces</i> from Soils and Endophytic Fungi from Medicinal Plants in Malaysia for Bioactive Compounds	MS	Faculty of Food Science and Biotechnology
14.	Mohd Abdullah Eltaweel	Production, Expression and Characterization of Heat-Stable Organic Solvent Tolerant Lipase from <i>Bacillus</i> sp. Strain 42	PhD	Faculty of Biotechnology and Biomolecular Sciences
15.	Lalitha Ambigai	The Nucleocapsid Protein in Newcastle Disease Virus as a Carrier for the VP1 Polypeptides of Enterovirus 71	MS	Faculty of Biotechnology and Biomolecular Sciences
16.	Rafidah Saadun	Improvement of the Solubility of the VP2 Hypervariable Region of Infectious Bursal Disease Virus by Fusion to the NP Protein of Newcastle Disease Virus	MS	Faculty of Biotechnology and Biomolecular Sciences
17.	Nurhasmimi Hussein	Subcloning of the Xylanase Gene of <i>Fibrobacter succinogenes</i> S85 from the Recombinant Xylanolytic Plasmid pBX6 Using Polymerase Chain Reaction	MS	Faculty of Biotechnology and Biomolecular Sciences

No	Name	Title	Degree	University
18.	Wong Siew Tung	Development of a DNA Vaccine against Enterovirus 71	MS	Faculty of Medical and Health Sciences
19.	Noor Suhana Adzahar	The Interaction Sites of Newcastle Disease Virus L protein Conserved Domains with P and NP Proteins	MS	Faculty of Biotechnology and Biomolecular Sciences
20.	Shalihah Mahamad	Cloning, Sequencing and Expression of an Organic Solvent Tolerant Protease from <i>Bacillus pumilus</i> 115B	MS	Faculty of Biotechnology and Biomolecular Sciences
21.	Yap Fei Ling	Development of a DNA Vaccine against Human Breast Cancer	MS	Faculty of Medical and Health Sciences
22.	Raha Ahmad Raus	Development of a Panel of Monoclonal Antibodies Against Protein of Newcastle Disease Virus and its Application in the Study of NP-P Interactions	PhD	Faculty of Biotechnology and Biomolecular Sciences
23.	Syahanim bt Shahwan	Isolation and Characterization of Oleo-co Desaturase Gene from Oil Palm (<i>Elaeis Guineensis</i>)	MS	Faculty of Biotechnology and Biomolecular Sciences
24.	Balkis Bt Haji A.Talip	Molecular Characterization of Infectious Bronchitis Virus	MS	Veterinary Medicine
25.	Ahmad Faizal Abdul Razis	Cloning and Expression of Recombinant Human Epidermal Growth Factor Cultured in <i>E. coli</i>	MS	ITMA
26.	Abdul Masani Md Yunus	Production of Biodegradable Plastics in Transgenic Arabidopsis and Oil Palm	MS	Faculty of Biotechnology and Biomolecular Sciences
27.	Mohd. Shukuri bin Mohamad Ali	Studies of a cold active bifunctional lipase from antarctic microorganism strain pi12	PhD	Faculty of Biotechnology and Biomolecular Sciences
28.	Zuhaida Asra Ahmad	Construction of single chain fragment variable fragment (scfv) antibody against mcf-7 breast cancer cells by phage display technology	MS	Institute Bioscience

No	Name	Title	Degree	University
29.	Ong Swee Tin	Structural analysis of the nucleocapsid proteins of nipah virus and newcastle disease virus	PhD	Faculty of Biotechnology and Biomolecular Sciences
30.	Lee Chin Mei	Molecular Approaches for Identification, Characterisation and Quantification of Probiotic Lactobacillus Strains for Poultry	PhD	Institute Bioscience
31.	Nurmas Idayu Mashan	Antibacterial activity of seaweed extract and elucidation of essential genes in inhibited <i>Staphylococcus aureus</i>	MS	Faculty of Medicine and Health Sciences
32.	Norfarrah Mohamed Alipiah	Antibacterial activity of sea-cucumber extract and elucidation of essential genes in inhibited <i>Staphylococcus aureus</i>	MS (2013)	Institute Bioscience
33.	Nadine HayudiniNogales	Oral immunization of cholera DNA vaccine employing a microencapsulation	PhD (2013)	Faculty of Medicine and Health Sciences
34.	Fatemeh Baran Talab	Identification and expression of differentially expressed proteins biomarkers for prognosis in acute myeloid leukemia	PhD (2013)	Faculty of Medicine and Health Sciences
35.	Ira Amira Rosti	Recovery and purification of epidermal growth factor from fermentation broth using expanded bed chromatography	MS (2013)	Institute Bioscience
36.	Salman Sahab Athshan	Applying molecular and proteomics tools for characterization and identification of various clone types of biofilm-producing <i>Staphylococcus aureus</i> clinical isolates	PhD (2013)	Faculty of Medicine and Health Sciences
37.	Norhafizah Ahmad Kamaruddin	Expression, characterization and structural modification for a cold-adapted, organic solvent from <i>Staphylococcus epidermidis</i> AT2	PhD (2014)	Biotechnology and Biomolecular Sciences

ADMINISTRATIVE DUTIES – International Level

NO	NATURE OF DUTIES/RESPONSIBILITIES	YEAR
1.	Secretary General of Asian Federation of Societies for Lactic Acid Bacteria (AFSLAB)	2013 -2018
2.	EXCO member of AFSLAB , Asian Federation of Societies for Lactic Acid Bacteria (AFSLAB)	Since 2005
3.	Country representative – International Union of Microbiology Societies	2011 - 2013
4.	Member , Japanese Society for the Promotion of Science (JSPS)	2002 – 2005
5.	Member , Japan International Cooperation Agency Alumni Society of Malaysia (JICA)	1997 – 2005

ADMINISTRATIVE DUTIES – National Level

NO	NATURE OF DUTIES/RESPONSIBILITIES	YEAR
1.	Director , Higher Institutions' Excellence Planning Division, Dpt of Higher Education, Ministry of Education, Malaysia (MOE).	2014 - 2019
2.	Chairman , working committees for research programs at MOE	2014 - 2019
3.	President , Malaysian Society for Microbiology (MSM)	2004- 2006
4.	Member of National Technical Advisory Committee for Food Safety Procedures 1985 (JPTPM)	2005 – 2006
5.	Panel to Assess Application for Development of MS Bioteknologi Program, UTM	2005
6.	Technical Panel to Assess IRPA, EAR Application - MARDI (Biological Sciences).	2005-2006
7.	Member of the National Discussion Group on 'Research Priority in Biotechnology'	2005
8.	National Biosafety Working Committee	2013 - 2014
9.	Project Leader , IRPA Top Down Project – Development of Recombinant Bacteria for Delivery of Useful Proteins	2003 - 2006
10.	Sub-Project Leader – IRPA Top Down Project – EPO	2002 – 2006
11.	Sub-Project Leader – IRPA Top Down Project – EV71	2002 – 2005
12.	Auditor - Malaysian Society for Molecular Biology and Biotechnology (MSMBB)	2003 - 2007
13.	Vice president MSM	2004 - 2005

NO	NATURE OF DUTIES/RESPONSIBILITIES	YEAR
14.	Faculty Representative to the Ministry of Health on GMO	2003-2004
15.	Treasurer MSM	2001 – 2003
16.	Co-Project leader – IRPA Top Down Project – Development of Recombinant Bacteria for Vaccine Delivery	1997 – 2002
17.	Sub-project leader – Institutional research grants (MGI, IPhARM)	2007-2013
18.	Panel for MQA	2009-2013
19.	Exco Malaysian Society for Microbiology	2007-current

ADMINISTRATIVE DUTIES – University Level

NO	NATURE OF DUTIES/RESPONSIBILITIES	YEAR
1.	Director of Research Management Center, UPM	Oct 2012 – March 2014
2.	Chairman of Institutional Biosafety committee UPM	2010 - 2014
3.	Unit Head – Microbial Culture Collection Unit, Institute of Biosciences, UPM	2008 - 2014
4.	Deputy Dean , Faculty of Biotechnology and Biomolecular Sciences	2012
5.	Head , Department of Cell and Molecular Biology, FBSB	2007-2011
6.	Head , panel for selection of research grant applications for RUGS, ERGS, FRGS	2011-2012
7.	Auditor for COPPA UPM	2011
8.	Deputy Director of Research Management Center, UPM	2005 – 2007
9.	Member of Research Committee, UPM	2005 – 2007
10.	Member of UPM Selection Committee for National and International Exhibitions and Competition	2005 - 2011
11.	Editor to UPM Research Bulletin, Synthesis	2005 – 2007
12.	Editor to UPM's Annual Report Publication	2005 – 2007
13.	Member of University's Biosafety Committee	2005
14.	Unit Coordinator , Laboratory of Fermentation Technology, IBS, UPM	2004
15.	Member of PPA	Since 2002
16.	Chairman of Thesis Examination Committee (Postgraduate School)	

ADMINISTRATIVE DUTIES – Faculty Level

YEAR	NATURE OF DUTIES/RESPONSIBILITIES
2012	Deputy Dean Research and Innovation
2008 - 2014	Unit Head – Microbial Culture Collection Unit, Institute Biological Sciences, UPM
2007 - 2011	Head of Department – Department of Cell and Molecular Biology, Faculty of Biotechnology and Biomolecular Sciences, UPM (committee member for Research and Innovation, Curriculum etc.etc.)
2005	Starting November 2004 - 2005 (FBSB)
	Internal Auditor of MS ISO 9001:2000
	Ahli Jawankuasa Pepandu MS ISO 9001:2000
	Member of Quality Assurance MS ISO 9001:2000 Committee
	Member of Research Committee
	Member of Curriculum Committee
	Member of Bulletin@Putra Committee (Nov. – May)
	Board Editor of Research Bulletin (BioTechCommunication)
	Member of Minor Technical Tender Committee
2004	Until Nov. 2004 (FSB)
	Committee Member of Post Graduate Seminar
	Chairman for MS Molecular Biology Course Development
	Lab Manager MKT
	Member of Safety and Health Committee (FSMB)
	Member of Postgraduate Committee (FBSB)
2003	Member of Postgraduate Seminar Committee
	Member of Curriculum Committee
	Chairman for MS Molecular Biology
2002	Member of Postgraduate Seminar Committee
	Member of Curriculum Committee
	Chairman for MS Molecular Biology
2000	Chairman of the Organizing Committee for the Workshop on “Application of DNA Technology on Crime Investigations”
	Organizing Committee and Lecturer for the Seminar and Workshop on “Continuous Culture, Theories and Applications”
	Faculty Representative for the UPM’s MS. Genetics Program
	Member of the Faculty Committee on Curriculum
1999	Member of the Faculty Committee for the Re-Evaluation of the Biotechnology Program
	Member of the Discussion Group on “Research Priority in Biotechnology”
	Member of the Organizing Committee for a Workshop on Animal Biotechnology
	Member of the Social Committee for Microbiology Seminar
1998	Member of the Curriculum Committee for BSc. Molecular Biology
	Advisor to Students’ Project – ‘Longest Sandwich’
1997- 2000	Member of the Organizing Committee for the Workshop on ‘Molecular Tools for Biotechnology’ Series I – IV
1997	Member of the Curriculum Committee for B.Sc. Molecular Biology

YEAR	NATURE OF DUTIES/RESPONSIBILITIES
	Secretary, Organizing Committee for Masters Class in `New Technologies for the Measurement of Biodiversity.
	Secretary, Organizing Committee for the 3 rd Symposium on Trends in Biotechnology
1996-98	Advisor to the Faculty of Food Science and Biotechnology Students' Association
1996-97	Treasurer for `Kelab Kebajikan', FSMB

RESEARCH EXPERIENCE: >20 years

RESEARCH ACTIVITIES – Recipient of More than 10 Grants from UPM, IRPA and Other National and International Bodies Amounting to More than RM5 Million.

1. Name of Grant	Seed Money UPM
Title	To Study the Molecular Effects of Anthraquinone Isolated from <i>Morinda elliptica</i> on Human Cell Lines
Allocation	RM 15,000
Period	1996-1997
Role	Project leader
Output	3 Proceedings, 1 PhD student
Remarks	The ability of anthraquinone isolated from <i>Morinda elliptica</i> (mengkudu) to kill cancer cells was studied at the molecular level. Anthraquinone was found to be able to cause CEM-SS cell death by apoptosis
2. Name of Grant	Seed Money UPM
Title	RFLP Analysis of Genomic DNA Extracted from <i>Salmonella</i> Species Isolated from Poultry
Allocation	RM5,000
Period	1996-1997
Role	Project leader
Output	1 MS Student, 1 Journal, 1 Proceeding
Remarks	Pulsed field gel electrophoresis and plasmid profiling studies were carried out on DNA extracted from <i>Salmonella</i> species isolated from poultry. This study showed the prevalence of <i>Salmonella</i> in poultry industries in Malaysia.
3. Name of Grant	IRPA Top Down (TM-02-07-01) UPM/MARDI
Title	Development of Continuous Culture for the Production of Fermentation Media for Food Ingredient Production
Allocation	RM211, 500
Period	1997 – 2001
Role	Co-researcher
Output	1 MS Student, 1 Proceeding

RESEARCH ACTIVITIES – Recipient of More than 10 Grants from UPM, IRPA and Other National and International Bodies Amounting to More than RM5 Million.	
Remarks	Fermentation media was formulated using the continuous culture to produce novel food ingredients for animal feed.
4. Name of Grant	IRPA (09-02-04-0152)
Title	Production and Characterization of Thermostable Enzymes of Hyperthermophilic Bacteria Isolated from Oil-Wells
Allocation	RM170, 000
Period	2000 – 2003
Role	Co-researcher
Output	1 MS Student, 1 Journal, 2 Proceedings
Remarks	A hyperthermophilic microbe isolated from oil well was studied for enzyme production. The study involved breaking down the cell wall and isolation of DNA and proteins from the microbe.
5. Name of Grant	IRPA Top Down (01-02-04-T002) UPM/VRI
Title	Construction of Recombinant Bacteria for Vaccine Delivery
Allocation	RM1,350,000
Period	1996-2001
Role	Project leader
Output	3 MS Students, 2 journal publications, 5 Proceedings, 2 Awards
Remarks	The bacterium <i>Lactococcus lactis</i> was isolated from chicken caecum and cow's milk to be developed into a protein/vaccine carrier. Identification of the strains were carried out by RAPD and 16s RNA. Plasmids were isolated and genes coding for viral epitopes were cloned and expressed in <i>E. coli</i> and <i>L. lactis</i> .
6. Name of Grant	IRPA Top Down ABCC (09-02-04-006-BTK/ER/024) UPM/UKM/UTM
Title	Development of Recombinant Bacteria for Delivery of Useful Protein
Allocation	RM 1,662,600
Period	2003-2005
Role	Project leader
Output	1 PhD and 2 MS Students, 4 Journal Articles, 10 Proceedings, 2 Patents, 5 Awards at National Level
Remarks	Extension of the previous project. Plasmids and promoters from <i>L. lactis</i> was isolated and studied. Novel vectors were constructed for both <i>E. coli</i> and <i>L. lactis</i> . A surface display system was developed for <i>L. lactis</i> .
7. Name of Grant	IRPA Top Down PNBCC (06-02-05-002-BTK/ER/011) USM/UPM
Title	Production of Recombinant Pharmaceuticals in Pilot Scale Bioreactor
Allocation	RM 300,000
Period	2002-2006
Role	Sub - Project leader

RESEARCH ACTIVITIES – Recipient of More than 10 Grants from UPM, IRPA and Other National and International Bodies Amounting to More than RM5 Million.	
Output	1 MS Student, 2 Proceedings, 1 Bulletin, 1 Award at UPM
Remarks	EPO was cloned into pCDNA plasmid and tranfected into CHO cells. Expression was studied by SDS-PAGE and Western blot. The recombinant cells were then grown in animal cell bioreactor systems.
8. Name of Grant	IRPA Top Down MBCC (06-02-09-001-BTK/TD/002) UNIMAS/UPM/UM/USM
Title	Development of Vaccine Delivery Platforms for Tropical Infectious Diseases
Allocation	RM 450,000
Period	2002-2005
Role	Sub - Project leader
Output	1RA, 1 paper, 2 Proceedings
Remarks	Several delivery platforms were utilized to deliver recombinant vaccines. Genes coding for EV71 epitopes were cloned and expressed in <i>L. lactis</i> . Immunological studies were carried out to check the immune response of mice against EV.
9. Name of Grant	EAR
Title	Development of Nisin Inducible Expression Vector in <i>Lactococcus</i>
Allocation	RM 230,000
Period	2002-2004
Role	Project leader
Output	1RA, 1 Journal, 1 Proceeding
Remarks	The inducible nisin promoter was cloned into available plasmid and Green fluorescence protein was cloned downstream of the promoter and used a reporter protein. Expression of the GFP was shown in <i>L. lactis</i> .
10. Name of Grant	EAR
Title	Development of Local <i>Lactococcus</i> Recombinant Bacteria Against Cholera
Allocation	RM 289,000
Period	2002-2004
Role	Project leader
Output	1MS, 1 paper in ISI journal
Remarks	The ctx and zot genes of <i>Vibrio cholera</i> were subcloned into available <i>L. lactis</i> plasmids and expressed. The level of expression and stability of the plasmids was not satisfactory and the intention to do animal trials was not carried out.
11. Name of Grant	IRPA (09-02-04-0113)
Title	Production of Yeast Protein Through Fermentation of Recombinant Yeast Using Sago Starch as Low Carbon Source
Allocation	RM170, 000
Period	1999-2001

RESEARCH ACTIVITIES – Recipient of More than 10 Grants from UPM, IRPA and Other National and International Bodies Amounting to More than RM5 Million.	
Role	Co-researcher
Output	1 PhD Student, 2 papers in ISI journals
Remarks	Recombinant yeast harboring the gene coding for amylase was obtained from Japan. The production of alpha amylase was studied using sago starch as the growth medium for the recombinant microbe.
12. Name of Grant	IRPA Top Down FBCC (01-02-10-002-BTK/ER/39) UMS/UPM/USM
Title	Utilization of Microorganisms and Their Metabolites for the Improvement of the Fermentation Process of Selected Malaysian Fish - and Vegetables/Fruit – Based Foods
Allocation	RM 990,000
Period	2004 – 2006
Role	Co-researcher
Output	1 MS student, 1 paper
13. Name of Grant	Toray
Title	The Mechanisms of Damnacanthol-Induced Apoptotic Cell Death in the T-Lymphoblastic Leukaemia Cells (CEM-SS)
Allocation	RM 30,000
Period	2005 – 2006
Role	Co-researcher
Output	1 MS student, 1 paper in ISI journal
14. Name of Grant	MAKNA
Title	The In Vivo Anti-Tumour Promoting Activity of Bacteriocins from Lactic Acid Bacteria on Chemical Carcinogenesis in Mice Skin
Allocation	RM30, 000
Period	2005 - 2006
Role	Co-researcher
Output	1 MS student, 1 proceeding
15. Name of Grant	FRGS(05-10-07-365FR)
Title	Molecular Elucidation of an Extracellular Hydrolase for a Lactococcal Expression System
Allocation	RM 65,000
Period	2006-2009
Role	Project leader
Output	The cell wall binding fragment and signal peptide of <i>Pediococcus acidilactici</i> UB6 was identified. New gene sequence deposited into GenBank – EU652943
16. Name of Grant	MGI-MOSTI(07-05-MGI-GMB011)
Title	Development of excretory expression system for enzyme/protein production in bacteria and fungi
Allocation	RM 373,718
Period	2007-2009

RESEARCH ACTIVITIES – Recipient of More than 10 Grants from UPM, IRPA and Other National and International Bodies Amounting to More than RM5 Million.	
Role	Sub-project leader
Output	Two different vectors were constructed for projects 1a and b respectively. The signal peptide sequences will be patented and we expect to publish at least 2 papers in peer-reviewed journals from the work. 2 MS students, 2 papers published in ISI journals
17. Name of Grant	Top Down –MOSTI(09-02-04-006 BTK/ER/024)
Title	Development of recombinant bacteria for delivery of functional proteins
Allocation	RM635, 600
Period	2007-2009
Role	Project leader
Output	<p>UPM/Malaysia became known as a centre for research in Lactic acid bacteria, specifically on the development of plasmid vectors and <i>Lactococcus lactis</i> as host for delivery of useful proteins in biotechnological industries.</p> <ul style="list-style-type: none"> • 5 publications in ISI journals, <i>L. lactis</i> plasmid pAR141 full sequence – DQ288662 • <i>L. lactis</i> plasmid pAR141 RepA gene sequence – ABB89944 • <i>L. lactis</i> plasmid pAR141 RepB gene sequence – ABB89945, • 1 PhD graduated – Post Doc at Virginia Tech • 1 PhD graduated – Lecturer in Iran • 1 PhD – ongoing • 1 MS – graduated – working in Biotech Industry in Malaysia • 4 MS ongoing • 2 RAs • 2 Malaysian patents filed
18. Name of Grant	MGI-MOSTI (09-05-GMI-GMB003)
Title	Development of <i>Lactococcus lactis</i> as cell factory through vector construction and manipulation of Vitamin B biosynthesis
Allocation	RM257,000
Period	2010-2011
Role	Sub-project leader
Output	2 MS students, publications
19. Name of Grant	IFN-MOSTI (09-05-IFN-BPH-005)
Title	Mapping the dynamics of genetic variations of Malaysian Influenza viruses towards the development of new diagnostic and therapeutic strategies
Allocation	RM 250,000
Period	2010-2011
Role	Sub-project leader
Output	2 MS students, publications
20. Name of Grant	RUGS Initiative 1

RESEARCH ACTIVITIES – Recipient of More than 10 Grants from UPM, IRPA and Other National and International Bodies Amounting to More than RM5 Million.	
Title	Development of surface displayed <i>Lactococcus lactis</i> as vaccine delivery
Allocation	RM200,000
Period	2011-2012
Role	Project leader
Output	1 PhD student, publications
21. Name of Grant	Sciencefund MOSTI
Title	Engineering Synthetic Biological Platform for Bacterial Surrogates
Allocation	RM258,000
Period	Dec 2012-2014
Role	Project leader
Output	1 PhD and 1MS, publications
22. Name of Grant	FRGS
Title	Mutagenesis and impact of signal peptide SPK1 for secretion of heterologous proteins in <i>Lactococcus lactis</i>
Allocation	RM115,000
Period	Dec 2013-2015
Role	Project leader
Output	1 MS, publications
23. Name of Grant	Newton Fund
Title	Research management and governance – to review current research management, governance and policy formulation framework and identify the needs for improvement
Allocation	88, 743 pounds (RM576,830)
Period	2015-2017
Role	Project leader
Output	Support for the visit of 20 officers from MOE and several participating universities to visit relevant agencies in UK. In addition, a report identifying gaps of research management, governance and policy formulation in Malaysia, and future recommendations was produced.

INTELLECTUAL PROPERTY RIGHTS (IPR) – 6 Filed Patents and 1 Product to be commercialized

1. Invention Name	A System for Controlled Docking of Anchor Fusions to the Cell Wall Surface of Microorganisms
Patent Filing No	PI20044832
Filing Date	22 November 2004
Filing Country	Malaysia
Name	Raha A.R., Nadimpalli Varma, K. Yusoff, H.L.Foo
2. Invention Name	A Process and Kit for Isolating and Purifying Biological Materials
Patent Filing No	PI20044831
Filing Date	22 November 2004
Filing Country	Malaysia
Name	Raha A.R., Yiap, B.C.
3. Invention Name	A Process for Producing Bacteriocin from <i>Lactococcus lactis</i>
Patent Filing No	PI2002295
Filing Date	15 June, 2004
Filing Country	Malaysia
Name	Foo, H.L., Loh T.C., Lim Y.T., Raha A.R., Gulam, R.
4. Invention Name	A Process for Producing Bacteriocin from <i>Lactobacillus plantarum</i>
Patent Filing No	PI20042296
Filing Date	15 June, 2004
Filing Country	Malaysia
Name	Foo H.L, Loh T.C., Gulam R., Raha A.R.
5. Invention name	A Lactococcal Bicistronic Vector System for Gene Delivery and Method of Preparation Thereof
Patent Filing No	PI 2013701635
Filing Date	2013
Filing Country	Malaysia
Name	Nurulfiza M.I., Raha A.R., Noorjahan B.M.A. and Nur Elina A.M.
6. Invention Name	<i>Lactococcus lactis</i> dual expression vector
Patent Filing No	PI2015701147
Filing Date	10 April, 2015
Filing Country	Malaysia
Name	Raha A.R., Badaradan, A., Yusoff, K., Shafie, N., Sarah, S., and Othman, S.S.
5. Product (to be commercialized) :	Triomic™, a DNA, RNA and Protein Extraction Kit
Industrial Partner	An R & D Status Company
Commercialization	Licensing (Trademark – 6006520)

PUBLICATIONS: a. More than 100 papers published in Refereed Journals. H Index = 23 (Dec 2018)

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4. Arbakariya Ariff, Rosfarizan Mohammad, Suraini Abdul Aziz, and **Raha Abdul Rahim** (2005). Sago Starch as a Green Fermentation Feedstock for Solvent (Acetone-Butanol-Ethanol) Production. *BioTech Communications*. 1: 6 – 11.
5. Rosfarizan Mohammad, **Raha Abdul Rahim** and Arbakariya Ariff (2005). Fed-Batch Culture: An Approach for the Improvement of Fermentation Performance. *BioTech Communications* 2: 26 – 31. Monograph - Continuous Culture: Theory and Applications (2000) Eds: A.B Ariff, M.Y. Hirzun, M. Rosfarizan, M.N. Kamal, and **A.R. Raha**.
6. Monograph – Strain Improvement. (2004) eds: A. B. Ariff, **Raha A.R.**, Rosfarizan M.
7. Laboratory Manual for Cell and Molecular Biology (2003- 2006) eds. **Raha A.R.**, Norihan M.S. and Parameswari
8. Laboratory Manual for Genetic Engineering (2003-2006) eds. **Raha A.R.** and Parameswari
9. Laboratory Manual for Advanced Techniques in Molecular Biology (2004) eds. **Raha Abdul Rahim** and Ho Chai Ling
10. Laboratory Manual for Introduction to Microbial Biotechnology (2007) ed. **Raha Abdul Rahim**
11. Proceedings Malaysian Society for Microbiology (2008) ed. **Raha Abdul Rahim et al.**
12. Proceedings Malaysian Society for Microbiology (2011) Vol I and Vol II ed. **Raha Abdul Rahim et al.**
13. **Raha A.R.**, Yusoff K., Foo H.L., Mariana, N.S., Varma N.R.S. and Hooi, W.Y. (2006). *Lactococcus lactis*: A Model Lactic Acid Bacteria for Expression and Delivery of Useful Proteins. *BioTech Communications* 3: 22 – 26.
14. **Raha A.R.**, K. Yusoff, H.L. Foo, Rosfarizan M., A. Ariff, Mariana N.S., Varma N.R.S., NorAzlina A. and Wan Siti Atikah W.O. (2006). Display of an Anchor Protein (NisP) on the Surface of *Lactococcus lactis*. *Bioscientist* vol. 4(1): 12-14.

15. Kit TriOmic – ‘Ekstrak DNA, RNA dan Protein serentak’. 30 March 2006. Utusan Malaysia (Biotek).
16. Lee Y.K., Shio, W., Su, J., Yan, W, Ganguly, B., Rahayu, E. **Raha A.R.**, Foo, H.L., Tan, J., Chen, M-J and Nittisinprasert, S. 2011. Lactic Acid Bacteria: Microbiological and Functional Aspects, (4th Edition). Eds. Lahtinen, S. et al. pp 713 – 756. CRC Press, Taylor and Francis Group Ltd, Milton Park, Oxford, OX1 4RN, UK. ISBN 978-1-43-983677-4.
17. Adelene Song Ai Lian, Lionel In Lian Aun, Foo Hooi Ling and **Raha Abdul Rahim**. Anti-allergic Properties of Fermented Food. In Health Benefits of Fermented Foods and Beverages. 2015 (pp. 515-532). Florida: CRC Press, Taylor and Francis Group.
18. Song A.A., Musliyana M. and **Raha A.R.** Minute Biocreasures. In Nature’s Yield and Wonders of Arts (NYAWA) 14’: MICROBE. Eds. Faridah Q.Z., Nasir B., Shureen F.A.K., Song A.A. and Raha A.R. Universiti Putra Malaysia Press, Serdang, Selangor, 2014.
19. Higher Education Blue Print 2015-2025 PPPM (PT) 2015. Co-author for Shift 2 (Talent Excellence) and Shift 7 (Innovation Ecosystem)
20. Rosfarizan, M., Zee-Wei, L., Raha A.R. and Ariff, A.B. 2014. Biotechnological Approach of Natural Biopolymer Synthesis for Biomedical and Industrial Applications. INTROPica Issue 8: 17-19. ISSN 1895-4951.
21. The Malaysian Code of Responsible Conduct – 2017 (ISBN 978-967-15258-0-7)

Genbank deposits

1. Co-author of a published sequence of VP3 gene from a locally isolated chicken anemia virus, deposited into Gene Bank account # AF030518 (1997).
2. *L. lactis* pAJ01 – replication gene sequence – A (2003)
3. *L. lactis* plasmid pAR141 full sequence – DQ288662 (2005)
4. *L. lactis* plasmid pAR141 RepA gene sequence – ABB89944 (2005)
5. *L. lactis* plasmid pAR141 RepB gene sequence – ABB89945 (2005)
6. Sequence of a cell wall binding protein of *Pediococcus acidilactis* UB6 GenBank (National Center for Biotechnology) Accession number GQ351558 (2009).
7. Yee,L.-N., Hassan, M.A., **Abdul Rahim, R.**, Sudesh,K., Chong,M.-L. and Phang,L.Y.Molecular characterization of intracellular depolymerase, PhaZ gene of Comamonas sp. EB172 – HM853676 (2010)
8. Shojaei Moghadam, M., Foo, H.L., Thean Chor, L. and **Abdul Rahim R.** 2009. Thirty intergenic and spacer sequences of *Lactobacillus plantarum* strains (publication) deposited (examples):
 - ACCESSION: GU322933^[1]_{SEP}Shojaei Moghadam, M., Foo, H.L., Thean Chor, L. and Abdul Rahim, R. (2009). *Lactobacillus plantarum* strain UL4 23S-5S ribosomal RNA intergenic spacer, partial sequence.

<p>- ACCESSION: GU322934^[SEP]Shojaei Moghadam, M., Foo, H.L., Thean Chor, L. and Abdul Rahim, R. (2009). <i>Lactobacillus plantarum</i> strain TL1 23S-5S ribosomal RNA intergenic spacer, partial sequence.</p> <p>- ACCESSION: GU322935^[SEP]Shojaei Moghadam, M., Foo, H.L., Thean Chor, L. and Abdul Rahim, R. (2009). <i>Lactobacillus plantarum</i> strain RG14 23S-5S ribosomal RNA intergenic spacer, partial sequence.</p>
<p>9. Hui Foong Tai, Hooi Ling Foo, Raha Abdul Rahim, Teck Chewn Loh and Mohd Puad Abdullah. 2012. DNA sequence for plw loci of <i>L. plantarum</i> I-UL4. GU322921.</p>
<p>10. Hui Foong Tai, Hooi Ling Foo, Raha Abdul Rahim, Teck Chewn Loh and Mohd Puad Abdullah. 2012. DNA sequence for plnEF loci of <i>L. plantarum</i> I-UL4. GU138149</p>
<p>11. Sequence of a <i>Lactobacillus plantarum</i> strain pA18 plasmid, complete cds GenBank (National Center for Biotechnology) Acession no. JN601038 (2012).</p>
<p>12. Sequence of <i>Lactobacillus plantarum</i> strain pA18 plasmid, pR18 replication protein (repA) gene, complete GenBank (NCB) Accession no. JN601039 (2013).</p>
<p>13. Sequence of <i>Lactobacillus plantarum</i> strain Taj-Apis362 glutamate decarboxylase (gadB) gene, complete cds. GenBank (NCB) Accession no. KF770955.1 (2014)</p>

NO	AWARDS AND FELLOWSHIPS
1.	Advanced Cambridge Leadership Program - Cambridge Judge Business School, Cambridge, UK, 2019 (Fellowship JPA).
2.	Senior management development program - Havard Business School, Perth, Australia, 2018 (Fellowship AKEPT).
3.	Fellowship to participate and as international advisor to the International Union of Microbiological Societies' Congress, Saporro, Japan - 2011
4.	Anugerah Perkhidmatan Cemerlang (Kategori Ketua Jabatan) UPM - 2009
5.	Anugerah Penyelidik Cemerlang, Institut Biosains UPM - 2007
6. Research and Innovation Exhibition (PRPI - UPM):	
Gold:	
"Novel feed supplement for aquaculture animals derived from the metabolites of probiotic strains of <i>Lactobacillus plantarum</i> I-UL4 at the Invention, Research and Innovation exhibition organized by Universiti Putra Malaysia (2010).	
"Novel Neutraceutical Metabolites Produced by Probiotic Strains of <i>Lactobacillus plantarum</i> Exert Selective Cytotoxic and Antiproliferative Effects on Human Cancer Cells" at the Invention, Research and Innovation exhibition organized by Universiti Putra Malaysia (2011).	
S.O. Sarah, M. Zamri-Saad, Z. Zunita and A.R. Raha . 'Towards a New Vaccine – Live attenuated <i>Pasteurella multocida</i> B:2'	
Foo Hooi Ling, Lim Yin Tze, Raha Abdul Rahim, Loh Teck Chwen, Mohd Hair Bejo, Gulam Rusul Rahmat Ali. 'Novel Probiotic	
<i>Lactobacillus</i> sp Isolated from Malaysian Fermented Food and Feed Supplement in Animal Industry	

Silver:	
Raha Abdul Rahim, Nur Adeela Yasid, Khatijah Yusoff and Shahrul Ezhar. `A Novel Approach Towards the Construction of A Recombinant Vaccine Against NDV`.	
Raha Abdul Rahim, Tan Boon Hooi and Foo Hooi Ling. `Exploration of a Recombinant Superoxide Dismutase, a Vital Biological Antioxidant Enzyme`.	
Foo Hooi Ling, Thung Tze Young, Ng Kok Yau, Raha Abdul Rahim and Hasanah Mohd. Ghazali. `The Fermentation Mechanism of Malaysian Fish Sauce`.	
Premalatha, P., Zulkifli H.S., M. Mahmood, Raha A.R., and H.M. Saud	
"Transformation of Wild-type Plant Growth-Promoting Rhizobacteria (PGPR) <i>Bacillus sphaericus</i> UPMB 10 with Chimeric Plasmid Containing Green Fluorescence Protein".	
Mariana, N.S., Nagi, AlHaj, Raha A.R., and Zamri, I. "Rapid and Simple Test for <i>E. coli</i> , <i>Salmonella spp.</i> , and <i>V. cholerae</i> Based Carbohydrate of Lipopolysaccharide".	
Che Man Y., Aida, A.A., Raha A.R., and S. Radu. "Polymerase Chain Reaction: Analysis of Raw Pork and Lard for Halal Authentication".	
Bronze:	
Ho Chai Ling, Phang Siew Moi, Raha Abdul Rahim, Teo Swee Sen, Teoh Seddon and Lee Weng Wah. `Transcriptomic Analyses of and Agar Producing Seaweed, <i>Gracilaria changii</i> `.	
Nadimpali, V., Raha A.R., K. Yusoff, H.L. Foo, Mariana N.S., Haryanti T., and Azlina A. "A Revolutionized Approach for Surface Display in <i>Lactococcus</i> : From Protein Display to Drug Delivery".	
"The Novel Feed Additives Produced by Beneficial Lactic Acid Bacteria, <i>Lactobacillus plantarum</i> I-UL4, Isolated from Fermented Tapioca (<i>Manihot esculanta</i>)"	
BioTech ASIA (2005).Gold medal for the Project Entitled "The Novel Feed Additives Produced by Beneficial Lactic Acid Bacteria, <i>Lactobacillus plantarum</i> I-UL4, Isolated from Fermented Tapioca (<i>Manihot esculanta</i>)"	
7.	Anugerah Perkhidmatan Cemerlang (Award for Excellent Performance) , Universiti Putra Malaysia (2005).
8.	Japanese Society for the Promotion of Science(JSPS) , 2004 Biotechnology Conference, Bali, Indonesia
9.	Japanese Society for the Promotion of Science (JSPS)Grant (2weeks– 2004). "Surface Display of Poteins on Lactic Acid Bcteria" atUniversity of Osaka
10.	Malaysian Science, Technology and Innovation Expo (2004). Bronze Medal Raha A.R., and Yiap, B.C., "TriOMIC – DNA, RNA, Protein Extraction".
11.	Research and Innovation Exhibition(PRPI-UPM) , 2004 – 1 bronze
12.	Anugerah Perkhidmatan Cemerlang (Award for Excellent Performance) , Universiti Putra Malaysia (2004).
13.	International Technology Exhibition(ITEEX – Malaysia) , 2003. Silver Medal . Mariana N.S., Neela, V. Rosita, R., and Raha A.R. – "SASSAR Kit: Multiplex PCR for the Detection of MRSA" .
14.	Anugerah Pengajar Terbaik (Award for Best Lecturer at the Faculty) , Faculty of Food Science and Biotechnology (2003).
15.	1st Prize Undergraduate Molecular Biology Project from MSMBB (2003). "Cloning and Expression of SOD from <i>L. lactis</i> M14 in <i>E. coli</i> ", Tan Boon Hooi, Chong Pei Pei and Raha Abdul Rahim.
16.	Anugerah Perkhidmatan Cemerlang (Award for Excellent Performance) , Faculty of Food Science and Biotechnology (2002).
17.	Research and Innovation Exhibition (PRPI - UPM) , 2002 – 2 Silvers and 1 bronze.
Silver	
	Hirzun Mohd. Yusof, Ng Chyan Leong, Julia Ibrahim, Raha Abdul Rahim and Ho Chai Ling. "Production of Recombinant Human Protein in <i>E.coli</i> ".

	Foo Hooi Ling, Lee Yock Ann, Son Radu, Raha Abdul Rahim and Gulam Rusul Rahmat Ali. "The Study of a Novel Natural Biopreservative, Nisin, Produced by Lactic Acid Bacteria Isolated from Malaysian Ikan Rebus".
Bronze	
	Hirzun Mohd Yusof, Tan Li Lung, Raha Abdul Rahim and Arbakariya Ariff. "Characterization of Locally Isolated Yeast Strain Towards Industrial Application".
18.	2nd Prize from Malaysian Society for Molecular Biology and Biotechnology (MSMBB) for a Paper Presentation (2000). "Cloning and Expression of the Fusion (F) and Haemagglutinin-Neuraminidase (HN) Genes from Newcastle Disease virus (NDV) Strain AF2240 in a Mammalian Expression System", by Loke CF, Raha A.R. , Omar, AR. and Yusoff K.
19.	1st Prize for Best Presentation at 4th UNESCO National Workshop on Promotion of Microbiology in Malaysia (2000) by Micky Vincent, Son Radu, Raha Abdul Rahim , Patrick Guda, Gulam Rusul
20.	Japan International Cooperation Agency (JICA) Grant (2 months, 1999) – "Enzyme Assays for Methionine – γ –Lyase and Degenerated PCR Cloning", at Okayama University, Japan
21.	1st Prize for Best Undergraduate Student Research Competition for Thesis from the Faculty of Food Science and Biotechnology (1998). "Effects of NH ₃ and NH ₄ against HeLa and 3T3 Cells", by Chang Li Yen
22.	Malaysian Science and Technology HRD Taveling Grant (6 weeks, 1997) – "Utilization of <i>Lactococcal</i> Vectors for Cloning and Expression of Viral Genes", at Biologisch Centrum, University of Gronigen, Holland.
23.	Malaysian Government Scholarship - JPA (3 years, 1991-1995) "Characterization of Heat Shock Protein Genes in Cot Death Babies", at University of Strathclyde, Glasgow, Scotland
24.	Golden Key (American Chapter) – Undergraduate Program, USA
24.	Young Lecturer's Scheme/Malaysian Government Scholarship - BSc and MS Degree (Microbiology).

MEETINGS/SEMINARS/EXHIBITIONS/WORKSHOP - AS FACILITATOR

Year	Symposium/Seminar/Conference	Type of involvement	Place
1997	Master Class in New Technologies for the Measurement of Biodiversity	Organizing Committee	UPM
	The 3 rd Symposium on Trends in Biotechnology and the 7 th Meeting of MSMBB	Organizing Committee	UPM
	Seminar-Workshop on Molecular Tools for Biotechnology	Lecturer/Organizing Committee	UPM
1998	Seminar-Workshop on Molecular Tools for Biotechnology	Organizing Committee	UPM

Year	Symposium/Seminar/Conference	Type of involvement	Place
1999	Workshop Animal Biotechnology- DNA Markers	Committee Member	UPM
2000	Tools for Molecular Biology, “A Training Course in PCR”	Lecturer/Committee	UPM
	Workshop-Seminar on `The Application of DNA Technology on Crime Investigations”	Chairman-Lecturer	UPM
	Fermentation Technology Workshop-Seminar, `Continuous Culture, Theories and Application	Lecturer/Organizing Committee	UPM
2001	24 th National Microbiology Symposium	Organizing Committee	Pahang
	Seminar and Workshop on GMO Detection	Organizing Committee	UPM
2003	26 th National Microbiology Symposium/ Asia Pacific Microbiology Conference	Organizing Committee	Kuala Lumpur
	Protein Purification Workshop	Chairman and Lecturer	FTU, IBS
2004	Protein purification Workshop	Organizing committee	FTU, IBS
	27 th National Microbiology Symposium	Organizing Committee	Langkawi
2005	28 th National Microbiology Symposium	Organizing Committee	Penang
	UPM related national and international exhibitions	Chairman	
2006	Malaysian Society for Microbiology Symposium	Chairman of the Organising committee	Malacca
2007	Malaysian Society for Microbiology Symposium	Advisor	Kuala Terengganu
2008	Malaysian Society for Microbiology Symposium	Chairman of the Scientific committee	Kuantan

Year	Symposium/Seminar/Conference	Type of involvement	Place
2009	International Cconference of the Malaysian Society for Microbiology	Scientific Committee	Penang
	The Fifth Asian Conference of Lactic Acid Bacteria: Microbes in Disease Prevention & Treatment	Advisory committee	Singapore
2010	International symposium for Lactic acid Malaysia	Chairman of the Organising committee	Putrajaya
2011	International Conference for Structural Biology and Functional Genomics	Chairman of the Organising committee	Putrajaya
	International Congress for Malaysian Society for Microbiology	Chairman of the Scientific Committee	Penang
	International Congress of the International Union for Microbiology Societies	International Advisory Board Member	Sapporo, Japan
2012	AFSLAB international symposium	International committee member	Wuxi, China
	MSM symposium	Scientific committee	Kota Kinabalu, Sabah
2013	AFSLAB international congress	International committee member	New Delhi, India
	ICMSM	Scientific committee	Langkawi
2014	AFSLAB international congress	International committee	Phillipines

MEETINGS/SEMINARS/EXHIBITIONS/WORKSHOP - AS PRESENTER

Year	Symposium/Seminar/Conference	Type of involvement	Place
1996	8 th National Biotechnology Seminar	Oral presenter	Johor Bahru
1997	9 th National Biotechnology Seminar	Oral presenter	Penang
1998	21 st National Microbiology Conference	Poster presenter	Selangor
	10 th National Biotechnology Seminar	Poster presenter	SIRIM
1999	22 nd National Microbiology Conference	Poster presenter	Penang
	11 th National Biotechnology Seminar	Poster presenter	Malacca
2000	The 10 th Scientific Meeting of MSMBB	Keynote Speaker	Selangor
	Proceedings of the 2 nd International Conference on Advances in Strategic Technologies,(ICAST)	Oral presenter	Putrajaya
	The 12 th National Biotechnology Seminar	Oral Presenter	Perak
	Conference for Lecturers of Health Inspectors, Kementerian Kesihatan Malaysia	Invited Speaker	Terengganu
	23 rd National Microbiology Conference	Poster presenter	Langkawi

Year	Symposium/Seminar/Conference	Type of involvement	Place
2002	The 12 th Scientific Meeting of MSMBB	Poster presenter	Selangor
	Media workshop: Dissecting the Myths on Frankenfoods	Invited Speaker	UPM
	CID seminar “Towards an Effective and Efficient Investigation”	Invited Speaker	Terengganu
	Muzakarah pakar GM Food – Satu perspektif dalam Islam	Invited speaker	IKIM
	Bengkel Pemantauan Projek Bioteknologi RM7 dan RM8	Paper presenter	Johor Bahru
	25 th National Microbiology Society Conference	Poster presenter	Kelantan
2003	The 13 th Scientific Meeting of MSMBB	Poster presenter	Selangor
	Thailand-Malaysia Biotechnology Working Group Meeting/BioThailand	Oral presenter	Thailand
	Bengkel Pemantauan Projek Bioteknologi RM8	Paper presenter	Sarawak
	3 rd Federation of Asia Pacific Microbiology Societies Symposium	Poster presenter	Kuala Lumpur
2004	The 14 th Scientific Meeting of MSMBB	Poster presenter	Melaka
	Malaysian Society for Microbiology Symposium	EXCO meeting, poster presenter	Langkawi
	Muzakarah Makanan Halal, JAKIM	Invited Speaker	Genting
2005	The 14 th Scientific Meeting of MSMBB	EXCO meeting, poster presenter	Kuala Lumpur Holland
	Proceeding of 4th NIZO Conference. Papendal, Netherland. 15-17 Jun.	Poster presenter	Kuala Lumpur
	International Scientific Congress	Oral presenter	Penang
	Malaysian Society for Microbiology Symposium	EXCO meeting, poster presenter	

Year	Symposium/Seminar/Conference	Type of involvement	Place
2006	R&D way forward - Department of Computer Science	Invited speaker	Port Dickson
2008	Malaysian Society for Molecular Biology and Biotechnology	Plenary speaker	Hyatt Saujana Subang
2009	Malaysian Genetics Congress	Invited speaker	Genting
	UK-Malaysia Symposium 'Current Strategies in Antimicrobial Therapies'	Invited speaker	UM
	Scientific writing skills – UTM	Invited speaker	Port Dickson
	PTK UPM – Research Philosophy and Ethics	Invited speaker	UPM
	International Symposium for Lactic Acid Bacteria	Exco meeting, workshop, poster	Singapore
2010	International Symposium for Lactic Acid Bacteria	EXCO meeting, Poster	Malaysia
2011	International Vaccine Congress	Oral presenter	Beijing, China.
	Structural Biology and Functional Genomics	Poster presenter	Putrajaya
	Seminar Kebangsaan Kesihatan dan Keselamatan	Invited speaker	UPM
	International Union for Microbiology Societies	Country rep. meeting, poster presentation	Sapporo, Japan
2012	Culture Isolation and Management	Keynote speaker	IBS, UPM
	International Symposium for Lactic Acid Bacteria	EXCO meeting, poster presentation	Wuxi, China
	19 th Scientific Meeting of the Malaysian Society for Molecular Biology and Biotechnology 31Oct – 1 st Nov 2012. University of Malaya, Kuala Lumpur –. Abstract : Lactic acid bacteria: Old microbes with new missions	Invited speaker	Kuala Lumpur

Year	Symposium/Seminar/Conference	Type of involvement	Place
2013	AKEPT workshop 'Demand driven proposal writing'	Chairman	Sepang
	Research Week UM conference	Invited speaker	Kuala Lumpur New Delhi
	International congress of AFSLAB	Invited speaker	UPM
	Culture Collection workshop and seminar	Invited speaker	
2014	Seminar Ilmu – JAKIM	Invited speaker	Putrajaya
	Women in Science – Gender equality in STEM research	Invited Speaker	Univ of Nottingham
	Taiwan-Malaysia Higher Education Forum	Invited Speaker	Taiwan
	Top Research Scientist ASM program	Speaker	Kuala Lumpur
2015	AFSLAB Congress	Invited speaker	Bangkok
	R&D month seminar UIAM	Invited speaker	Selangor
	EU-Member of Commerce and Industry Research and Innovation Seminar	Speaker	Kuala Lumpur
	9 th international postgrad forum on health system and policy	Invited speaker	Kuala Lumpur
	ICMSM	Chairman for Oral, poster	Penang
	R&D seminar UTM	Speaker	Johor
2016	R&D seminar – IOHUN	Invited Speaker	Putrajaya
	R&D seminar UUM	Invited Speaker	Kedah
	Academia-Industry Research Conference – Funding research on a changing landscape	Invited Speaker	Kuala Lumpur
	International AFSLAB conference	Invited speaker	Taiwan
2017	R&D seminar UIA Kuantan	Invited speaker	Kuantan
	R&D seminar UiTM	Invited speaker	Shah Alam
	Grant opportunities at KPT - MIDA	Invited speaker	KL

Year	Symposium/Seminar/Conference	Type of involvement	Place
2018	WiEF Social enterprise Forum, UIAM	Invited Speaker	ISTAC, KL
	1 st French-Malaysian Convention on Higher Education and Research	Invited Speaker	KL
	19 th International Conference for University Administrators, UiTM	Invited speaker	Shah Alam
	34 th Symposium of the Malaysian Society for Microbiology	Keynote Speaker	Penang
	Young Scientist Network – AKEPT International Research conference, Sepang	Invited speaker	Sepang
	USIM Research Forum, USIM	Invited speaker	Nilai
2019	Going Global 2019: The conference for leaders of International Education, 13-15 May, Berlin, Germany (fully sponsored by British Council)	Panel speaker	Berlin, Germany

MEETINGS/SEMINARS/EXHIBITIONS/WORKSHOP - AS PARTICIPANT

Year	Symposium/Seminar/Conference	Type of involvement	Place
1995	Workshop on Liposome –Mediated Gene Transfer	Participant	UM, Selangor
1999	Japanese National Molecular Biology and Chemistry Conference	Participant	Yokohama, Japan
2000	Asean Regional Workshop on Biosafety of Genetically Modified Organisms	Participant	KL
2002	Kuliah Aplikasi ON-Line	Participant	UPM, MTDC Kuala Lumpur PWTC
	Molecular Biology and Biochemistry Conference	Participant	
	BioMalaysia 2002	Participant	
2003	Science and Technology Conference	Participant	Selangor

Year	Symposium/Seminar/Conference	Type of involvement	Place
	BioThailand Biotechnology Conference	Participant	Thailand
	ISO 9000 Courses FSMB	Participant	FSMB, UPM
2004	Seminar on “Annealing Control Primer (ACP) Technology – New Era of PCR Technology”	Participant	MARDI
	Seminar on “Solving Problems in Recombinant Protein Expression”	Participant	Shah Alam
	Bengkel Polisi Teknologi Kebangsaan	Participant	Putrajaya
	Kursus ISO 9001:2000 Audit Dalaman	Participant	UPM
2005	BIO2005 Philadelphia	Participant	USA
	National Virology Colloquium	Participant	Putra Jaya
	Biotech Asia	Participant	Putra Jaya
	Seminar on Thinking	Participant	KL
	Leadership in Crisis Management	Participant	KL
			Bangi
2006	Learning Outcome 1	Participant	UPM
	Learning Outcome 2	Participant	UPM
	Internal Auditor	Participant	UPM
2008	Health care and Biotechnology Symposium	Participant	KL
	Animal Feedstuffs in Malaysia	Participant	Bangi
2009	Biosafety Workshop -	Participant	NRE
2010	Biosafety Workshop – Transgenic Microbe	Participant	KL
2011	Bengkel Percambahan Fikiran Penyediaan dan penetapan Biological Weapons Selected Agents List Rang Undang-Undang Konvensyen Senjata Biologi – Kementerian Pertahanan Malaysia	Participant	Putrajaya
2015	Global CEO conference	Participant	Kuching

Year	Symposium/Seminar/Conference	Type of involvement	Place
2016	Research Management Agency workshops – EPU (series 2-5)	Participant	Putrajaya
2018	9 th Asean Senior Management Development Program – Harvard Business School (KPM)	Participant	Bangi Selangor
	Research Integrity APEC – Australia (sponsored by APEC)	Participant	Tokyo
	Senior management Development Program – Harvard Business School (Sponsored by AKEPT)	Participant	Perth
2019	Advanced Cambridge Leadership Program (Sponsored by JPA)	Participant	United Kingdom

EXTRA CURRICULAR ACTIVITIES

- Advisor to Undergraduate Students' Society – Tennis (1996), Inter Department Table-tennis (1997), Longest Sandwich Project (1998).
- Advisor for setting up Teaching Laboratory for Molecular Biology and Biochemical Techniques Course in Universiti Islam Antarabangsa (2003).
- Advisor to the Debate Team of Tunku Kurshiah College (Finals 2004) on the Topic – Genetically Modified Food, Friend of Foe.
- Member of Parents-Teachers Association (Sekolah Kebangsaan Bandar Kinrara) – 2009-2013.
- Advisor to the Tunku Kurshiah College Science Project team (2010-2011) – won at National and International (USA) levels
- Member - National STEM movement
- KanWALK Selangor
- Member – War on Cancer Malaysia

CONSULTANCY

- Consultant Scientist to **Malaysian Health Department** for Identification of Food Pathogens (Molecular Biology/Microbiology) (2002-03).
- Panel member for evaluation of IGS Grant Applications under **Ministry of Science and Environment** (2001/02).
- Consultant for **JAKIM (Malaysian Religious Council)** i. Halal Food Processing using Microbes (2003), ii. Genetically modified microbes (2006)
- Consultant for **Polis DiRaja Malaysia (Malaysian Royal Police)** on “Aid of DNA in Police Investigation” (2001-2002).
- Consultant to **Vivantis Technologies Sdn. Bhd.** – Enzyme Discovery from Malaysian Bioresources (2002).
- Consultant to **Intermed** - Probiotic for Human (2004).

- Research consultant to **Sabah Fisheries Department** – Project State Government/MOSTI (2006 - 2007).
- Consultant to **AgriHiTech** – Culture Collection and Strain Improvement (2005 - 2006)
- Consultant to **EcocillusSdn Bhd** – Biomolecular Extraction Techniques and Services (2006-2007)
- Consultant to **VRI** – Isolation and detection of lactic acid bacteria (2010)
- Consultant to **KFI** – Enzymatic biorefining of kenaf (2010-2011).
- Board Member USIM (2015-2017)
- Board Member (exchange member) USM (2015-2016)
- Board member Crop of the Future Sdn Bhd (2016)
- Board member USM (2017 – current)

OTHER PROFESSIONAL ACTIVITIES

No	ACTIVITY	YEAR
1.	Reviewer for Articles in Journals <ul style="list-style-type: none"> • Journal Bioscience (USM), • Journal Teknologi (UTM), • Asia-Pacific Journal of Molecular Biology and Biotechnology • MARDI Journal of Tropical Agriculture and Food Science • The Medical Science Monitor • Genetics Vaccines and Therapy • Molecular Biotechnology • Current Microbiology • Journal of Biotechnology 	
2.	Panel judge for Research Exhibitions/Poster/Oral at National Symposiums <ul style="list-style-type: none"> • “Persidangan Biokimia dan Biologi Molekul Malaysia” Poster Competition • “Pameran Rekapipta dan Penyelidikan” in the Area of Biotechnology, UKM • Malaysian Society of Microbiology Symposium 	2003 2005 2003, 2004, 2009
3.	Panel of interviewer for “PASCA Siswazah Pegawai dalam Perkhidmatan” – MOSTE	2004
4.	Panel of interviewer for National Science Fellowship Scholarship (NSF) – MOSTE. MOSTI	2003, 2004, 2009, 2010, 2011, 2012, 2013
5.	Panel judge for “Pameran Rekapipta dan Penyelidikan” at Faculty and Institute Level, UPM.	Since 2004
6.	Life member – Malaysian Society for Microbiology	Since 2001

No	ACTIVITY	YEAR
7.	Life member – Malaysian Society for Molecular Biology and Biotechnology	Since 1996
8.	Interviewed by TV3, RTM, NTV7, Utusan on the areas of Molecular Biology, Genetically Modified Organisms and Biotechnology, Higher education Blue-print Chapters 2&7	
9.	External reviewer for IRPA research proposals – MARDI	2005, 2006
10.	External reviewer for e-science research proposals – UiTM, UKM	2006, 2007
11.	Academic Reviewer for Assoc. Professor Applications UKM, UMT, UPM, UTM, UNIMAS, UM	2006, 2009, 2010, 2011, 2012, 2013, 2015, 2016
12.	Academic Reviewer for Professorial Applications UKM, UTM, UMT, UPM	2006, 2009, 2011, 2012, 2013, 2015, 2016
13.	Reviewer for academic programs – IMU, UTM, UKM, UiTM	2010, 2011, 2012
14.	Panel for MQA – UTAR, IMU, UM programs (BS Biotechnology, MS, PhD)	2009-2011
15.	Evaluation committee for young scientist awards – Merck young scientists	2011-2013
16.	Evaluation committee for research awards – Mahathir Science Award	2012-2013
17.	Evaluation committee for young researcher awards – L'oreal Award	2012
18.	Co-author (Chapters 2 and 7)– Higher education Blue-print 2015-2025	2014-2015
19.	International organizing committee member to AFSLAB conference (China, India, Bangkok)	2011, 2013, 2015
20.	Technical committee – setting up of Research Management Agency	2016
21.	Malaysian Code of Responsible Conduct in Research (MCRCR) working group 2016	2016
22.	Science Outlook 2017, ASM - working group	2016-2017

This lecturer's area of expertise is microbial genetics and her areas of research interest include plasmid biology, development of recombinant bacterial vaccine and cell factory using lactic acid bacteria, as well as molecular diagnostics for halal food research.

Since she became a Director at the Department of Higher Education, Ministry of Education, Malaysia in 2014, she has committed her time to administrative work especially to bid and manage the million dollars worth of grants received by MOE for research and development, along with the thousands of proposals sent by the IHL researchers applying for the grants. The tasks also allows her to share her experience and expertise with researchers and research administrators at the universities, as well as with national and international funding agencies. She finds the job challenging and stimulating.