Nurul Husna Shafie

CURRICULUM VITAE

A. ***(Personal Details)***		
(Full Name)	Nurul Husna Shafie	***(Title)*** Dr
(Citizenship) Malaysian	***(Race)*** Malay	***(Gender)*** Female

(E-mail Address and URL)	***Department***
E-mail: nhusnashafie@upm.edu.my or nhusna.shafie@gmail.com Tel: +603 8947 2470 Fax: +603 8942 6769	Department of Nutrition and Dietetics Faculty of Medicine and Health Sciences Universiti Putra Malaysia 43400 UPM Serdang, Selangor

B. ***(Academic Qualification)***			
(Certificate / Qualification obtained)	***(Name of School / Institution)***	***(Year obtained)***	***(Area of Specialization)***
Bac. Sc. (Hons)	Universiti Malaya	2008	Genetics and Molecular Biology
PhD	Universiti Putra Malaysia	2013	Pharmacology

C. ***(Scientific experience and Specialisation)***				
Organization	***Position***	***Start Date***	***End Date***	***Expertise***
Molecular Pharmacology and Pathology Program Department of Pathology and Bosch Institute, The University of Sydney, Australia	Endeavour Research Awardee from DEEWR, Australian Government	March 2012	August 2012	Biochemistry and Pharmacology
Molecular Pharmacology and Pathology Program Department of Pathology and Bosch Institute, The University of Sydney, Australia	Post-doctoral Researcher	March, 2013	March, 2014	Project title: Induction of endoplasmic reticulum stress after iron depletion in tumour cells.

European Journal of Cancer Prevention	Journal Reviewer	2014	Current	
Cluster of Regenerative and Medicine, Advanced Medical and Dental Institute (AMDI), Universiti Sains Malaysia, 13200 Kepala Batas, Penang.	Post-Doctoral Fellow	July 2014	November 2014	Generation of stable knock-out cell lines using CRISPR system
Food Chemistry	Journal Reviewer	October 2015	Current	
Malaysian Journal of Medicine and Health Sciences	Journal Reviewer	2018		
6th International Symposium on Applied Engineering and Sciences (SAES2018) at Kyushu Institute of Technology, Fukuoka Japan.	Master of ceremony	15th – 16th Dec 2018		

D. *(Employment)*

Employer	***Designation***	***Department***	***Start Date***	***Date Ended***
Universiti Putra Malaysia, Malaysia	Research Assistant	Institute Of Bioscience	January 2009	July 2009
The University of Sydney, Australia	Post-doctoral Fellow	Molecular Pharmacology and Pathology Program, Department of Pathology and Bosch Institute	March, 2013	March, 2014
Universiti Sains Malaysia	Post-doctoral Fellow	Advanced Medical and Dental Institute	July, 1st 2014	Nov, 9th 2014
Universiti Putra Malaysia	Senior lecturer	Department of Nutrition and Dietetics, FMHS	Dec, 1st 2014	Current

E. *(Honours and Awards)*

Name of awards	***Title***	***Award Authority***	***Award Type***	***Year***
Research Awards	**1)** Silver Medal in Invention, Research & Innovation Exhibition (PRPI 2010), UPM with entitled '*The Suppression Mechanism of Rice Bran Phytic acid in In vivo and In vitro Studies as Anticancer Agent.*	UPM	University	2010
	2) Silver Medal in Invention, Research & Innovation Exhibition (PRPI 2011), UPM with entitled '*Anti-cancer Effects of Phytic Acid Extracted From Malaysian Rice Bran On Human Colorectal Adenocarcinoma Cells.*	UPM	University	2011
	3) Endeavour Research Awards,	Australian	International	2012

	DEEWR, Australian Government	Government		
	4) NSM Best Poster Award (Consolation Prize) - 31st Scientific Conference ' Better Nutrition, Healthier Malaysians	Nutrition Society of Malaysia (NSM)	National	2016
	5) Anugerah Insentif Makalah Jurnal 2016	TNC PI, UPM	National	2017
	6) Anugerah Perkhidmatan Cemerlang 2016	UPM	National	2017

F. ***Name of scholarship***	***Scholarship Authority***	***Year***
1. Jabatan Perkhidmatan Awam (JPA) for undergraduate scholarship	JPA, Malaysia	2005-2008
2. National Science Fellowship (NSF) by Ministry of Science, Technology and Innovation, Malaysia (MOSTI)	MOSTI, Malaysia	2009-2011
3. MyBrain15 MyPhD Scholarship by Ministry of Higher Education, Malaysia (MOHE)	MOHE, Malaysia	2011-2012
4. Postgraduate research support scheme, travel scholarship by Universiti Putra Malaysia Malaysia (UPM)	UPM	2011
5. Endeavour Research Fellowship from DEEWR, Australian Government.	Australia	March 2012- August 2012
6. USM Post-Doctoral Fellowship	USM	July – Nov 2014

G. ***(List of publications – author (s), title, journal, volume, page and year published)***	
Journal	1. Mohd Amir Ashraf Meli, **Nurul Husna Shafie**, Su Peng Loh, Asmah Rahmat. (2019). Anti-proliferative and Apoptosis-Inducing Effects of Morinda citrifolia L. Shoot on Breast, Liver, and Colorectal Cancer Cell Lines. Malaysian Journal of Medicine and Health Sciences. 15 (SP 1): 129-135 (Scopus) 2. Thiagarajan, S.K., Rama Krishnan, K., Ei, T., **Nurul H. Shafie**, Arapoc, D.J., Bahari, H.. (2019). Evaluation of the Effect of Aqueous Momordica charantia Linn. Extract on Zebrafish Embryo Model through Acute Toxicity Assay Assessment. Evidence-based Complementary and Alternative Medicine Volume 2019, 2019, Article number 9152757 (Q2-Scopus) 3. Thiagarajan, S., Arapoc, D.J., **Nurul H. Shafie**, (...), Adam, Z., Ei, T. (2019). Momordica charantia (Indian and Chinese Bitter Melon) Extracts Inducing Apoptosis in Human Lung Cancer Cell Line A549 via ROS-Mediated Mitochodria. Evidence-based Complementary and Alternative Medicine vol. 2019, Article ID 2821597, 9 pages (Q2-Scopus). 4. **Shafie, N.H**., Idris, S.L., Hamdan, N.N., (…), Bahari, H., Kadir, K.K.A. (2018). Nutritional composition, antioxidative and inhibitory effects against pancreatic lipase, α-amylase and α –glucosidase of Lasia pinose. Journal of Engineering and Applied Sciences 13(Specialissue11), pp. 8898-8905. (Scopus)

	5. Muhammad Khairi Ahmad, Nur Ainina Abdollah, **Nurul Husna Shafie**, Narazah Mohd Yusof, Siti Razila Abdul Razak (2018). Dual-specificity phosphatase 6 (DUSP6): A Review of Its Molecular Characteristics and Clinical Relevance in Cancer. Cancer Biology & Medicine 15: 14-28. (Q1-Scopus) 6. Amirah Haziyah Ishak, **Nurul Husna Shafie**, Norhaizan Mohd Esa, Hasnah Bahari and Amin Ismail (2018). From Weed to Medicinal Plant: Antioxidant Capacities and Phytochemicals of Various Extracts of Mikania micrantha. International Journal of Agriculture and Biology 20: 561-568. (Q2-Scopus) 7. Suk Huei Chan, Azrina Azlan, Amin Ismail, **Nurul Husna Shafie** (2017). Total Phenolics and Antioxidant Properties of Red Hot Chilli Peppers of Different Varieties in Malaysia as Potent Nutraceutical. Thai Journal of Pharmaceutical Sciences. 41 (5th IPNaCS Conference Issue), 45-48. (Scopus) 8. Amirah Haziyah Ishak, **Nurul Husna Shafie**, Norhaizan Mohd Esa & Hasnah Bahari (2016). Nutritional, Phytochemical and Pharmacological Properties of *Mikania micrantha* Kunth. ***Pertanika Journal of Scholarly Research Reviews*** 2(3): 123-132. 9**.** Angelica M. Merlot, **Nurul Husna Shafie,** Yu Yu, Vera Richardson, Patric J. Jansson, Sumit Sahni, Darius J.R. Lane, Zaklina Kovacevic, Danuta S. Kalinowski and Des R. Richardson (2016). Mechanism of the Induction of Endoplasmic Reticulum Stress by the Novel Anti-Cancer Agent, Di-2-pyridylketone 4,4-dimethyl-3-thiosemicarbazone (Dp44Mt): Activation of PERK/Eif2α, IRE1α, ATF6 and Calmodulin Kinase. ***Biochemical Pharmacology*** 109: 27-47. **IF: 5.009.** 10**.** **Nurul Husna Shafie**, Mohamed Saleem, Emmanuel Jairaj Moses, Siti Razila Abdul Razak and Narazah Mohd Yusoff (2014). CRISPR-Cas9 System: A new dawn in gene editing. ***Journal of Bioanalysis and Biomedicine*** 6: 45- 48. **IF: 3.101.** 11**.** Darius J.R. Lane, Thomas M. Mills, **Nurul Husna Shafie**, Angelica M. Merlot, Rayan Saleh Moussa, Danuta S. Kalinowski, Zaklina Kovacevic and Des R. Richardson (2014). Expanding Horizons in Iron Chelation and the Treatment of Cancer: Role in the Regulation of ER Stress and the Epithelial-to-Mesenchymal Transition. ***BBA Reviews on Cancer*** 1845: 166-181. **IF: 9.033.** 12. **Nurul Husna Shafie,** Norhaizan Mohd Esa, Hairuszah Ithnin, Abdah Md Akim, Norazalina Saad & Ashok Kumar Pandurangan (2013). Pro-apoptotic effect of rice bran inositol hexaphosphate (IP6) on HT-29 colorectal cancer cells. ***International Journal of Molecular Sciences*** 14**:** 23545-23558. **IF: 2.464.** 13. **Nurul Husna Shafie,** Norhaizan Mohd Esa, Hairuszah Ithnin, Abdah Md Akim, Norazalina Saad & Ashok Kumar Pandurangan (2013). Preventive inositol hexaphosphate (IP6) extracted from rice bran inhibits colorectal cancer through involvement of Wnt/-catenin and COX-2 pathway. ***BioMed Research International*** 2013: 1-10. **IF: 2.88.** 14. Saad Norazalina, Mohd Esa Norhaizan, Ithnin Hairuszah, Abdul Rahman Sabariah and **Nurul Husna Shafie**. (2011). Antiproliferation and apoptosis induction of phytic acid in Hepatocellular Carcinoma (HEPG2) cell line. ***African Journal of Biotechnology*** 10(73):16646-16653. **IF: 0.57.** 15**.** Norazalina Saad, Norhaizan Mohd Esa, Hairuszah Ithnin and **Nurul Husna Shafie** (2011). Optimization of optimum condition for phytic acid extraction from rice bran. ***African Journal of Plant Science*** 5: 168-176. 16**.** **Nurul Husna Shafie**, Mohd Esa Norhaizan, Ithnin Hairuszah, Md Akim Abdah, Saad Norazalina and Ismail Norsharina (2010). Rice bran phytic acid (IP6) induces growth inhibition,cell cycle arrest and apoptosis on human colorectal adenocarcinoma cells. ***Journal of Medicinal Plants Research*** (21): 2283-2289. **IF: 0.59**
Book/ Monograph/ Book Chapter	1.**Nurul Husna Shafie** and Norhaizan Mohd Esa (2014). Anti-cancer and mechanism of action of phytic acid. Lambert Academic Publishing GmbH & Co. KG Dudweiler Landstraße 99, 66123 Saarbrücken, Germany. 2.**Nurul Husna Shafie**, Norhaizan Mohd Esa (2017). The Healing Components

	of Rice Bran. *In Functional Foods Wonder of the World: Evidence-Based Functional Foods in Health & Disease*. Azrina Azlan and Amin Ismail (Eds). Publisher: UPM Press, Malaysia. Pp 341-368.
Other publications / conferences/ proceedings	1. **Nurul Husna Shafie**, Norhaizan Mohd Esa, Hairuszah Ithnin, Abdah Md Akim and Norazalina Saad. Molecular Mechanism of Rice Bran Phytic Acid as Anticancer in Human Colorectal Adenocarcinoma Cells. OzBio2010: The Molecule of Life-from Discovery to Biotechnology. 26 September – 1 October 2010. Melbourne, Australia. 2. Saad, N., Mohd Esa, N., Ithnin, H., Abdul Rahman, S. and **Shafie, N.H**. Antiproliferative activity and proteomic analysis of gene expressed in hepatocellular carcinoma (HepG2) cancer cell lines treated with phytic acid. OzBio2010: The Molecule of Life-from Discovery to Biotechnology. 26 September – 1 October 2010. Melbourne, Australia. 3. **Nurul Husna Shafie**, Norhaizan Mohd Esa, Hairuszah Ithnin, Abdah Md Akim and Norazalina Saad. Rice bran IP_6 induces Growth inhibition, cell cycle arrest and apoptosis on human colorectal cancer cells. Association of Biochemistry and Biology Molecule Malaysia) on 27-28 July, 2010 4. **Nurul Husna Shafie**, Norhaizan Mohd Esa, Hairuszah Ithnin, Abdah Md Akim and Norazalina Saad. Anti-cancer effects of phytic acid extracted from Malaysian rice bran on colon cancer. 25th Scientific Meeting of Malaysian Society of Pharmacology and Physiology- Drug Development for a Better Well-Being " at Faculty of Medicine and Health Sciences, UPM on 25-26 Mei 2011 5. **Nurul Husna Shafie**, Norhaizan Mohd Esa, Hairuszah Ithnin, Abdah Md Akim and Norazalina Saad. *In vivo* Suppression of Colorectal Cancer Growth by Inositol Hexaphosphate: Inhibition of Aberrant Crypt Foci and Downregulation of β-catenin and COX-2 Genes. BIT's 4th Annual Congress and Expo of Molecular Diagnostic-2011. September 22-24, 2011, Beijing International Convention Centre, China. 6. Norhaizan Mohd Esa, **Nurul Husna Shafie**, Hairuszah Ithnin, Abdah Md Akim and Norazalina Saad. *In vitro* Cell Cycle Inhibition, Regulation of Caspase Expression and Apoptosis by Inositol Hexaphosphate on Colorectal Cancer Cells. BIT's 4th Annual Congress and Expo of Molecular Diagnostic-2011. September 22-24, 2011, Beijing International Convention Centre, China. 7. Norazalina Saad, Norhaizan Mohd Esa, Sabariah Abdul Rahman, Hairuszah Ithnin and **Nurul Husna Shafie**. *In vitro* Cytotoxicity and Apoptotic Gene Expression on Human Liver Cancer Cell (HepG2) Induced by Rice Bran Phytic Acid. BIT's 4th Annual Congress and Expo of Molecular Diagnostic-2011. September 22-24, 2011, Beijing International Convention Centre, China. 8. Norhaizan Mohd Esa, **Nurul Husna Shafie**, Hairuszah Ithnin and Norazalina Saad. Changes in Bax, Bcl-xl, Caspase-3 and 8 contribute to phytic acid (IP6) induced apoptotic in HT-29 cells. International Union of Nutritional Sciences (IUNS). 15 Sept 2013, Netherlands. 9. Emmanuel Jairaj Moses, Md Azman PKM Seeni Mohamed**, Nurul Husna Shafie**, Mohamed Saleem, Siti Razila Abdul Razak and Narazah Mohd Yusoff. Knockdown of AML1-ETO gene in SKNO-1 cells induces a G1 phase cell cycle arrest. AMDI Postgraduate Colloqium. Universiti Sains Malaysia. 9-10 Sept 2014. 10. **Nurul H. Shafie**, Norhaizan Mohd Esa. Targeting the iron metabolic pathways in cancer: Role of synthetic and natural chelators. Cancer Metabolism Cambridge, Robinson College, September 28-30, 2015 11. Chang Wei Lin, **Nurul Husna Shafie**, Hasnah Bahari. Anti-obesity and anti-diabetic effects of Elateriospermum tapos crude extracts in vitro. 31st Scientific Conference ' Better Nutrition, Healthier Malaysians 31 May – 1 June 2016. 12. Saadiah Abu Bakar, **Nurul Husna Shafie**, Hasnah Bahari. Inhibitory effects

of pancreatic lipase, α- amylase and α- glucosidase in Lasia pinose in vitro. 31st Scientific Conference ‘ Better Nutrition, Healthier Malaysians 31 May – 1 June 2016.

13. Syaza Lyana Idris, **Nurul Husna Shafie**, Hasnah Bahari, Nai’mah Isa. Nutritional Composition of Citrus microcarpa and Citrus hystrix. 31st Scientific Conference ‘ Better Nutrition, Healthier Malaysians 31 May – 1 June 2016.
14. Nurul Nadiah Hamdan, **Nurul Husna Shafie**, Hasnah Bahari, Amirah Haziyah Ishak. Determination of total phenolic content, total flavonoid content and antioxidant activity in Lasia pinose. 31st Scientific Conference ‘ Better Nutrition, Healthier Malaysians 31 May – 1 June 2016.
15. Nurul Syahirah Mohammad Bakhtiar, **Nurul Husna Shafie**, Hasnah Bahari, Amirah Haziyah Ishak. Screening for total phenolic content, total flavonoid content and antioxidant activity of E.tapos in aqueous and ethanol extracts. 31st Scientific Conference ‘ Better Nutrition, Healthier Malaysians. Hotel Renaissance, Kuala Lumpur, Malaysia. 31 May – 1 June 2016.
16. Na’imah Isa, Norhaizan Mohd Esa, Amirah haziyah Ishak and **Nurul Husna Shafie**. Proximate analysis and mineral composition of leaves and stems of Mikania micrantha Kunth. ICMST ‘Continuing Challenges in 21st Century Healthcare". Hotel Bangi-Putrajaya. 23 – 24 November 2016.
17. Amirah Haziyah Ishak, **Nurul Husna Shafie**, Na’imah Isa, Norhaizan Mohd Esa and Hasnah Bahari. Antioxidant contents and antioxidant capacities of different parts of Selaput Tunggul (Mikania micrantha Kunth). ICMST 'Continuing Challenges in 21st Century Healthcare". Hotel Bangi-Putrajaya. 23 – 24 November 2016.
18. **Nurul Husna Shafie**, Syaza Lyana Idris, Nurul Nadiah Hamdan, Saadiah Abu Bakar, Amirah haziyah Ishak, Na’imah Isa and Hasnah Bahari. Nutritional Composition, antioxidative, and inhibitory effects against pancreatic lipase, alpha-amylase and alpha-glucosidase of Lasia spinosa. Herbstem 2016 International Conference on Herbal Science, Technology & Medicine. Krabi, Thailand. 30 November – 2 December 2016.
19. Angelica M. Merlot, **Nurul Shafie**, Yu Yu, Danuta S. Kalinowski, and Des R Richardson (2016). The Redox Active Anti-Cancer Drug, Dp44mT, Induces Endoplasmic Reticulum Stress Activating Pro-Apoptotic Pathways of the Unfolded Protein Response in Cancer Cells. ***Free Radical Biology and Medicine*** 100, Supplement, S126.
20. Zulika A, **Nurul Husna S**, Hasnah B. (2017). The potential of Pithecellobium bubalinum (kerdas) and Pithecellobium jiringa (jering) seeds to inhibit pancreatic lipase, α-amylase and α-glucosidase activities in vitro. ***Malaysian Journal of Nutrition*** 23 (Supplement): S144
21. Azlinda Ibrahim, **Nurul Husna Shafie**, Tan Si Ying, Rosmaieda Rozaini, Amirah Haziyah Ishak and Hasnah Bahari. Antioxidant Contents and Activities of Pithecellobium jiringa (Jering) Seeds. IABS Conference 2017. UPM, Serdang, Malaysia. 1 – 2 August 2017.
22. Mohd Amir Ashraf Meli, Nurul Husna Shafie, Su Peng Loh, Asmah Rahmat. 2017. Anti-proliferative and Apoptosis Induction Effects of Cashew Shoot Extract in Breast Cancer Cells. ***Malaysian Journal of Medicine and Health Sciences 13*** (Supplement 1):21
23. Zarith Nameyrra Md Nesran, Nurul Husna Shafie, Norhaizan Mohd Esa, Amin Ismail (2017). Anti-proliferative Effect of Green Tea Epigallocatechin-3-gallate (EGCG) on Colorectal Cancer HT-29 Cell Lines: A Cytotoxicity Analysis. ***Malaysian Journal of Medicine and Health Sciences*** 13 (Supplement 1): 25.
24. A Merlot, **N Shafie**, G Porter, S Sahni, D Richardson (2018). The formation of redox active complexes is important for the induction of the UPR by Dp44mT Molecular Cancer Therapeutics 17 (1 Supplement): B143-B143.

	25. Merlot, A., **Shafie, N**., Lim, E., Chen, A., Sahni, S., Yu, Y., & Richardson, D. (2018). Cellular metal sequestration and redox stress by thiosemicarbazones induces endoplasmic reticulum stress in tumors to suppress cancer progression. Free Radical Biology and Medicine, 120, S37. 26. Merlot, A., **Shafie, N**., Lim, E., Chen, A., Sahni, S., Yu, Y., & Richardson, D. (2018). PO-460 Targeting endoplasmic reticulum stress using thiosemicarbazones to suppress cancer progression. 27. Zarith Nameyrra Md Nesran, **Nurul Husna Shafie**, Norhaizan Mohd Esa, Amin Ismail. Mechanism of actions of green tea epigallocatechin-3-gallate (EGCG) targeting iron chelation activity and endoplasmic reticulum (ER) stress pathway in colorectal cancer cell lines HT-29. 3rd AMDI International Biohealth Sciences Conference (IBSC) 2018, Sarawak, 19 January 2018. 28. Zarith Nameyrra Md Nesran, **Nurul Husna Shafie**, Norhaizan Mohd Esa, Amin Ismail. Mechanism of actions of green tea epigallocatechin-3-gallate (EGCG) targeting iron chelation activity and endoplasmic reticulum (ER) stress pathway in colorectal cancer cells. Bromo Conference Symposium on Natural products & Biodiscovery. Surabaya, 11-12 July 2018. 29. Siti Nuratiqah Rambli, **Nurul Husna Shafie**, Hasnah Bahari. Zebrafish embryo assay: A rapid and alternative model for in vivo toxicity screening. 6th International Symposium on Applied Engineering and Sciences (SAES2018) Kyushu Institute of Technology, 15th – 16th Dec 2018

H. *Past/Current Research Project*

Project No.	***Project Title***	***Role***	***Year***	***Source of fund***	***Status***
FRGS 1/2018	*Bioavailability, toxicity and chemopreventive efficacy of chitosan-based nanoformulation of tea polyphenols for colorectal cancer therapy* ***(RM 192 000)***	*Principle investigator*	*2019-2021*	MOHE	On-going
RUGS (University Grant-UPM)	*Study on the expression of pro- and anti-apoptotic effects of phytic acid on human colorectal cancer cells (HT-29)*	Co-researcher	2011-2012	UPM	Completed
UNIVERSITY OF SYDNEY NHMRC, AUSTRALIA	*CLARIOstar Multimode Microplate Reader with Advanced LVF Monochromators and Adjustable Bottom Reading Capacity for Cell-based Microplate Assays*	Co-researcher	2013-2014	NHMRC, Australia	Completed
FRGS 1/2015	*Mechanism of iron chelation of green tea catechin and its role in inducing endoplasmic reticulum (ER) stress for colon cancer therapy* ***(RM 72 500)***	Principle Investigator	2015-2018	MOHE	Completed

FRGS 1/2015	*Mechanisms of oncogenic activation of DUSP6 and RUNX1/ETO in human acute myeloid leukaemia* ***(RM 168 000)***	Co-researcher	2015-2018	MOHE	On-going
Grant Putra-IPM	*Investigation of potential apoptosis inducing effect of Momordica charantia (bitter melon) extract in human lung cancer cell lines NCI -H1688 & NCI-H2135* ***(RM 60 000)***	Co-researcher	2016-2018	UPM	Completed
Grant Putra-IPS	*Antioxidant Activities and Potential Inhibitory Effects of Mikania micrantha against Key Enzymes Involved in Hypercholesterolemia and Hypertension In Vitro* ***(RM 20 000)***	Principle Investigator	2016-2017	UPM	Completed
Grant Putra-IPS	*Anti-diabetic and anti-obesity activity of leaves and stems of Mikania micrantha H.B.K In Vitro* ***(RM 20 000)***	Co-researcher	2016-2017	UPM	Completed
FRGS 1/2016	*Investigating E.tapos and its omega-3 fatty acids in ameliorating maternal obesity effects on offsprings through the mesolimbic reward pathway.* ***(RM 95 200)***	Co-researcher	2016-2019	MOHE	On-going
Grant Putra-IPS	*Acute oral toxicity study of phytic acid encapsulating nanoparticles in mice* ***(RM 20 000)***	Co-researcher	2016-2018	UPM	On-going
Grant Putra-IPM	*Lipid-lowering effects of ethyl acetate extract of Mikania micrantha stems (EAMMS) and its regulation on key enzymes involved in cholesterol metabolism in high-cholesterol-fed rat.* ***(RM 60 000)***	Principle Investigator	2017-2019	UPM	On-going

I. *Supervision of Postgraduate students*

Main Supervision

1. Mohd Amir Ashraf Meli (MSc.- Completed: **Senate date: 8 February 2018**)

2.Amirah Haziyah Ishak (MSc.- Completed: **Senate date: 12 July 2018**; Nutritional Sciences Awardee, FMHS, UPM)

3. Zarith Nameyrra Md Nesran (MSc.- Completed: **Senate date: 20 March 2019**)

4. Noor Syafiqa Aqila Mohd Rosmi (MSc.- On-going)

5. Azlinda Ibrahim (PhD.- On-going)

6. Amirah Haziyah Ishak (PhD.- On-going)

Co- Supervision

1. Thomas M. Mills (Honors; The University of Sydney-Completed)

2. Nai'mah Isa (Msc.- On-going)

3. Chan Suk Huey (MSc.- On-going)

4. Norain Mohd Tamsir (PhD.- On-going)

5. Chew Lye Yee (PhD.- On-going)

6. Santhra Segaran A/L Balan (PhD.- On-going)

7. Azrina Zainal Abidin (PhD.- On-going)

8. Emily Tang Sou Teng (PhD.- On-going)

J. Supervision of Undergraduate students
2015-2016 1. Syaza Liana bt Idris 2. Nurul Nadiah binti Hamdan 3. Nurul Syahirah Mohammad Bakhtiar 4. Saadiah binti Abu Bakar 5. Chang Wei Lin **2016-2017** 1. Tan Si Ying 2. Rosmaieda Rozaini 3. Wong Poh Yin 4. Zulika Arshad **2017-2018** 1. Chai Pui Teng 2. Siti Nur Atiqah binti Rambli 3. Noor Syafiqa Aqila binti Mohd Rosmi **2018-2019** 1. Nur Diyana Zolkiffly 2. Nik Nur Husna Bt Nik Fauzi 3. Fatin Izzati Bt Ibrahim 4. Muhammad Azmi Bin Mohamad A’sri