

Curriculum vitae



Maizatulkmal bt. Yahayu

Personal Particulars

Address	Institute of Bioproduct Development Universiti Teknologi Malaysia 81310 Skudai Johor		
Date/place of birth	: 31 st July 1986 (Perak)	Gender	: Female
Email	: maizatul@ibd.utm.my maizatulkmal@utm.my	Marital status	: Married
Nationality	: Malaysia	Tel. No. (mobile)	: 019-755 1413
		Tel. No. (office)	: 07-553 5294
		Race	: Malay

Educational background

Level	: Master of Science- Chemistry		
Major	: Natural Product		
Name of Institution	: Universiti Putra Malaysia	Status	: Completed
Level	: Degree of Science (Hons) - Chemistry		
Major	: Chemistry		
Name of Institution	: Universiti Putra Malaysia	Status	: Completed
Level	: Matriculation		
Major	: Biological Science		
Name of Institution	: Perak Matriculation College Gopeng	Status	: Completed

Level	: Sijil Pelajaran Malaysia (SPM)		
Major	: Science Stream		
Name of Institution	: Kolej Islam Sultan Alam Shah, Klang	Status	: Completed
Level	: Penilaian Menengah Rendah (PMR)		
Name of Institution	: SMK Bukit Merchu, K. Kangsar	Status	: Completed

Additional Information

Skills

1. Chemistry laboratory skills application (GLP)
 - experienced in pyrolysis process of pineapple and oil palm biomass, activation of charcoal using physical method
 - experienced in isolation of secondary metabolites from plants and lichen using various chromatographic techniques
 - expert in running, processing and interpreting data from **Nuclear Magnetic Resonance Instrument (NMR)**- 400 MHz and 500 MHz (JOEL) and 600 MHz (BRUKER) -experienced in antimicrobial (disc diffusion method), antioxidant (DPPH scavenging) and cytotoxic activity work
 - experienced in handling lab instruments (HPLC-WATERS E2695, UV SHIMADZU-UV 2100, microplate reader, GCMS-QP5050, LCMS, Infrared-Perkin Elmer Model 1725X)

Experiences

1. **As a head of Bioresources unit, IBD, UTM.**
2. **As supervisor for intern student:**
 - Mas Dinah Farisah bt. Ahmad Bustamam (B. Sc. Hons. Chemistry minor in Forensic), UiTM Shah Alam: Antioxidant properties of coconut shell extracts.
3. **As an internal lab co-supervisor for:**
 - Khoirun Nisa Mahmud (PhD student): Anti-inflammatory activity of pyrolygneous acid and its active compounds isolated from oil palm kernel shell.
 - Suzami Junaidah Arifin (MEng student): Fractionation of natural compounds of pyrolygneous acid from palm kernel shell against microbial attacks.
 - Abdul Rahman Shahrudin (MEng student): Production of bioplastic from bacteria using mesocarp palm oil waste as carbon substrate.
 - Jocelyn Cheria (PSM student): Removal of methylene blue by using activated carbon from palm kernel shell.
 - Chai Bing Min (PSM student): Antimicrobial activity of pyrolygneous acid against *E. coli* and *Clavibacter agropyri*.
 - Nurul Husna Rizan (PSM student): Antifungal activity of pyrolygneous acid produced from palm kernel shell against mold and blue sapstain.
4. April 2013 to present- Research Officer at Institute Of Bioproduct Development, UTM (work closely on the utilization of agricultural biomass waste for pyrolysis, fractionation and isolation of

- compounds from pyrolygneous acid).
5. Working with industry for wood preservation using locally developed pyrolysis system (2015-2016)
 6. Working with industry on production of activated charcoal from palm kernel shell (2015).
 7. Working on application of pineapple waste biomass as wood preservative, in collaboration with Forest Research Institute (FRIM), Malaysia (2013).
 8. June 2012 to March 2013- Research Assistant at Pharmacy Dept. UM (Scope of work: purification of targeted compounds from *Cratoxylum arborescens*, antimicrobial work on compounds isolated from plants).
 9. Oct 2011 to May 2012- Research Assistant at School of Chemical Sciences & Food Technology, Faculty of Science and Technology, Universiti Kebangsaan Malaysia (Scope of work: isolation of compounds from lichen, structural elucidation of the isolated compounds using NMR and LCMS, HPLC handling).
 10. 2009 to 2011- assisting supervisor in handling laboratory works for undergraduate and postgraduate students in Natural Product Laboratory.
 11. 2008 to 2011- demonstrator at Chemistry Laboratory for degree subject.
 12. 2010- Demonstrator at Pusat Asasi Sains Pertanian UPM for foundation subject (Organic Chemistry).
 13. 2008- Industrial training at Malaysian Palm Oil Board (MPOB), Bangi.

Committee for Conference and Workshop:

1. Organizing committee for The 7th International Conference on Challenges in Environmental Sciences & Engineering (CESE 2014), 12-16 Oct 2014 at Persada Johor Convention Centre, Johor Bahru.
2. Organizing committee for International Postgraduate Symposium in Biotechnology 2017, 21st and 22nd August 2017 at IBD, UTM Johor Bahru.

Teaching and Training:

1. Trainer for “2-day course plant and microbial-based biological control products for Malaysian Pepper Board”, 8-9 October 2018 at IBD, UTM Johor Bahru.
2. Trainer for “Skills development program on plant and microbial based bioproduct development for Chaipattana Foundation, Thailand”. 1-11 Aug 2017 at IBD, UTM Johor Bahru.
3. Trainer for MKKT 1053 module Master Science (Herbal Technology) semester 20162017/2, 7-11 May 2017 in IBD, UTM.
4. Trainer for MKKT 1053 module Master Science (Herbal Technology) semester 20172018/1, 26-30 November 2017 in IBD, UTM.

Seminars and Workshop Attended

1. Seminar “Advances in Controlled Release and Encapsulation Technologies” on 18 December 2017, UTMKL.
2. Workshop on Academic Writing and Publishing on 6 September 2017 at Universiti Teknologi Malaysia organized by Enago Academy.
3. Workshop on Chromatography and chromatographic techniques, 11 – 13 April 2017 at Atta ur-Rahman Institute for Natural Product Discovery (AuRins), UiTM Puncak Alam Campus.

4. Biorisk Management Workshop, 2-3 August 2017 at Le Grandeur Hotel, Senai, Johor.
5. 16th Asia Pacific International Symposium on Microscale Separations and Analysis, 7 – 10 Nov 2016 at KSL Johor Bahru (Poster presentation).
6. Kursus peralatan ICPOES, UV-Vis, NIRS, CHNS, elemental analyzer, 25 -27 Oct 2016 at ESPEK RISDA Sdn. Bhd.
7. International Biomass Conference 2016, 11 Oct 2016 at Perdana Hall, Menara MITI, KL.
8. Kursus tulis tesis cepat dan pengurusan artikel Mendeley, 5 Mar 2016 at IBD, UTM.
9. The 5th Biomass Short Course: Biomass to Fuels and Chemicals, 28 - 29 Oct 2015 at Impiana KLCC Hotel & Spa, Kuala Lumpur.
10. National Conference on Wood Based Technology, Engineering and Innovation Ncwei'15, 17 -18 Nov 2015, Politeknik Kota Kinabalu (Oral presentation).
11. The 7th International Conference on Challenges in Environmental Science & Engineering, 12-16 October 2014, Persada Johor Bahru (Oral presentation).
12. 5th International Conference on Biotechnology for The Wellness Industry, 10-11 June 2014, UTM Kuala Lumpur (Poster presentation).
13. Karnival Konvensyen Kumpulan Inovatif dan Kreatif, 27th Nov 2013 at UTM.
14. The 4th Biomass Short Course: Biomass To Fuels And Chemicals, 10-11 Oct 2013 At Concorde Hotel, Kuala Lumpur
15. Gas Chromatography Preparative System (GC Prep) Training In Universiti Malaya 2013
16. 8th International Symposium On Chromatography Of Natural Products, Poland 2012
17. NMR For Metabolomic Seminar, UKM November 2011
18. Fundamental Science Congress, UPM Malaysia 2010 And 2011
19. Science Symposium On “Recent Developments In Medicinal Chemistry”-UM Malaysia 5th Malaysian International Conference On Essential Oil, Fragrance And Flavour
20. Materials (MICEOFF5)- Putra World Trade Centre Bandung International Conference On Medicinal Chemistry 16th Medicinal Chemistry Congress, PWTC

Thesis

1. Maizatulkmal Yahayu. Chemical constituents and biological activities of *Glycosmis macrantha* Merr. and *Cratogeomys arborescens* (Vahl) blume. (2012). Master of Science, Universiti Putra Malaysia.
Main Supervisor: Prof. Dr. Mawardi Rahmani.

Publications

1. Norliza Abdul Latiff, Chua Lee Suan, , Mohammad Roji Sarmidi, Ismail Ware, Siti Nur Azlina Abdul Rashid, **Maizatulkmal Yahayu**. Liquid chromatography tandem mass spectrometry for the detection and validation of quercetin-3-o-rutinoside and myricetin from fractionated *Labisia pumila* var. *alata*, (2018). Malaysian Journal of Analytical Sciences. 22 (5): 817-827.
2. **Maizatulkmal Yahayu**, Khoirun Nisa Mahmud, Mohammed Nabil Mahamad, Sulaiman Ngadiran, Shahlinney Lipeh, Salmiah Ujang, Zainul Akmar Zakaria. Efficacy of pyroligneous acid from pineapple waste biomass as wood preserving agent, (2017). Jurnal Teknologi. 79 (4): 1-8.
3. Khoirun Nisa Mahmud, **Maizatulkmal Yahayu**, Siti Hajar Md. Sarip, Nurul Husna Rizan, Chai

- Bing Min, Nurul Farhana Mustafa, Sulaiman Ngadiran, Salmiah Ujang & Zainul Akmar Zakaria. (2016). Evaluation on efficiency of pyroligneous acid from palm kernel shell as antifungal and solid pineapple biomass as antibacterial and plant growth promoter. *Sains Malaysiana*, 45 (10): 1423-1434.
4. Heyam Mohamed Ali Sidahmed, Najihah Mohd Hashim, Syam Mohan, Siddig Ibrahim Abdelwahab, Manal Mohamed Elhassan Taha, Firouzeh Dehghan, **Maizatulkmal Yahayu**, Gwendoline Cheng Lian Ee, Mun Fai Loke, Jamuna Vadivelu. (2016) Evidence of the gastroprotective and anti- *Helicobacter pylori* activities of β -mangostin isolated from *Cratoxylum arborescens* (Vahl) blume. *Drug Design, Development and Therapy*, 10, 297-313
 5. Mohamed Yousif Ibrahim, Najihah Mohamed Hashim, Syam Mohan, Mahmood Ameen Abdulla, Siddig Ibrahim Abdelwahab, Ismail Adam Arbab, **Maizatulkmal Yahayu**, Landa Zeenelabdin Ali, Omer Elhag Ishag. (2015) α -Mangostin from *Cratoxylum arborescens*: an in vitro and in vivo toxicological evaluation. *Arabian Journal of Chemistry*, 8, 129-137
 6. Mohamed Yousif Ibrahim, Najihah Mohamed Hashim, Syam Mohan, Mahmood Ameen Abdulla, Siddig Ibrahim Abdelwahab, Behnam Kamalidehghan, Mostafa Ghaderian, Firouzeh Dehghan, Landa Zeenelabdin Ali, Hamid Karimian, **Maizatulkmal Yahayu**, Gwendoline Ee Cheng Lian, Abdoreza Soleimani Farjam, Hapipah Mohd Ali (2014) Involvement of NF- κ B and HSP70 signaling pathways in the apoptosis of MDA-MB-231 cells induced by a prenylated xanthone compound, α -mangostin, from *Cratoxylum arborescens*. *Drug Design, Development and Therapy*, 8, 2193-2211
 7. Mohamed Yousif Ibrahim, Najihah Mohamed Hashim, Syam Mohan, Mahmood Ameen Abdulla, Behnam Kamalidehghan, Mostafa Ghaderian, Firouzeh Dehghan, Landa Zeenelabdin Ali, Ismail Adam Arbab, **Maizatulkmal Yahayu**, Gwendoline Ee Cheng Lian, Fatemeh Ahmadipour, Hapipah Mohd Ali (2014). α -Mangostin from *Cratoxylum arborescens* demonstrates apoptogenesis in MCF-7 with regulation of NF- κ B and Hsp70 protein modulation in vitro, and tumor reduction in vivo. *Drug Design, Development and Therapy*, 8, 1629-1647
 8. Suvitha Syam, Ahmad Bustamam, Rasedee Abdullah, Mohamed Aspollah Sukari, Najihah Mohd Hashim, **Maizatulkmal Yahayu**, Pouya Hassandarvish, Syam Mohan, Siddig Ibrahim Abdelwahab (2014) Cytotoxicity and oral acute toxicity studies of β -mangostin isolated from *Cratoxylum arborescens*. *Pharmacognosy Journal*, 6(1), 47-56
 9. Suvitha Syam, Ahmad Bustamam, Rasedee Abdullah, Mohamed Aspollah Sukari, Najihah Mohd Hashim, Syam Mohan, Chung Yeng Looi, Wong Won Fen, **Maizatulkmal Yahayu**, Siddig Ibrahim Abdelwahab (2014) β -Mangostin suppress LPS-induced inflammatory response in RAW264.7 macrophages *in vitro* and carrageenan-induced peritonitis *in vivo*. *Journal of Ethnopharmacology*, 153(2), 435-445.
 10. **Maizatulkmal Yahayu**, Mawardi Rahmani, Najihah Mohd Hashim, Gwendoline Cheng Lian Ee, Mohd Aspollah Sukari, Abdah Md Akim. (2013) Cytotoxic and antimicrobial xanthenes from *Cratoxylum arborescens* (Guttiferae). *Malaysian Journal of Science*. 32(1): 53-60
 11. Sidahmed, H.M.A., Abdelwahab, S.I., Syam, M., Abdulla, M.A., Taha, M.M.E., Hashim, N.M., Hadi, A.H.A., Vadivelu, J., Fai, M.L., Rahmani, M., **Yahayu, M.** (2013) α -Mangostin from *Cratoxylum arborescens* (Vahl) Blume demonstrates anti-ulcerogenic property: a mechanistic study, Evidence-based complementary and alternative medicine, volume 2013, article ID 450840, 10 pages
 12. Hashim, N.M., Rahmani, M., Gwendoline, C.L.E.E., Sukari, M.A., **Yahayu, M.**, Amin, M.A.M.,

- Ali, A.M., Go, R. (2012) Antioxidant, antimicrobial and tyrosinase inhibitory activities of xanthenes isolated from *Artocarpus obtusus*. *Molecules*, 17, 6071-6082.
13. Hashim, N.M., Rahmani, M., Gwendoline, C.L.E.E., **Yahayu, M.**, Oktima, W., Ali, A.M., Go, R. (2012). Antiproliferative activity of xanthenes isolated from *Artocarpus obtusus*, *Journal of Biomedicine and biomolecule*, volume 2012, article ID 130627, 9 pages.
 14. **Yahayu, M.**, Rahmani, M., Hashim, N.M., Amin, M.A.M., Gwendoline, C.L.E.E., Sukari, M.A., Akim, A.M. (2011). Two new acridone alkaloids from *Glycosmis macrantha*, *Molecules*. 16, 4401-4407.

Book Chapters

1. **Maizatulkmal Yahayu**, Fatimatul Zaharah Abas, Seri Elyanie Zulkifli, Farid Nasir Ani, "Utilization of Oil palm Fiber and Palm Kernel Shell in Various Applications", in Zainul Akmar Zakaria (ed.), *Sustainable Technologies for Management of Agricultural Waste - Applied Environmental Science and Engineering for a Sustainable Future*, Springer, Singapore. (2017). ISBN: 9811050619.
2. Zainul Akmar Zakaria, Khoirun Nisa Mahmud, **Maizatulkmal Yahayu**, Suzami Junaidah Ariffin, Abdul Rahman Shahrudin, "Oil Palm Biomass: Management and Pretreatment Technologies for Biofuel and Bioproducts Generation", in J.N. Govil (ed.), *Environmental Science and Engineering Vol. 5: Municipal Solid Waste*, Studium Press LLC, USA (2017). ISBN: 1-62699-093-X.
3. Sindhu Mathew, **Maizatul Akmal Yahayu**, Khoirun Nisa Mahmud, Zainul Akmar Zakaria, "Pyrolygneous Acid from Plant Biomass and Its Applications" in Ani Idris, Ulises Sedran, Zainul Akmar Zakaria (ed.), *Biotechnology Development in Agriculture, Industry and Health – Advanced Conversion Technologies for Lignocellulosic Biomass*, UTM Press, Johor Bahru. (2014). 27-46, ISBN: 978-983-52-1026-6.

Patent

1. High-value added application of wood vinegar from pineapple waste biomass, PI 2015 702148, patent filing.

Award

1. Anugerah Perkhidmatan Cemerlang tahun 2017, UTM.
2. International Conference and Exhibitions on Inventions by Institutions of Higher Learning (PECIPTA'17) at Stadium Tertutup Kompleks Sukan Negeri Gong Badak Kuala Nerus, Kuala Terengganu 7-9th October 2017. Silver Medal Award (OPPA- Ecofriendly Natural Wood Preservative and Plant Growth Enhancer).
3. Anugerah Staf Cemerlang 2016, IBD.
4. ITEX Exhibition 2016 at KLCC- Gold Medal Award (OPPA- Ecofriendly Natural Wood Preservative and Plant Growth Enhancer).
5. INATEX Exhibition 2015 at UTM- Silver Medal Award (OPPA- Ecofriendly Natural Wood Preservative and Plant Growth Enhancer).
6. Colloquium GUP UTM- Best Poster Award (Extraction of Valuable Biocompound from Lignin of Oil Palm Frond Biomass Using Environmental-friendly Approach).

Professional Membership

1. Member: Malaysian Institute of Chemistry (M/4373/7270/16)
2. Member: Malaysian Natural Product Society (Membership no. B0339)

Manuscript Reviewer

1. Manuscript reviewer for Desalination and Water Treatment (2017).
2. Manuscript reviewer for Environmental Science and Pollution Research (2018).

Research Grant (2013-2018)

Title of Research	Grant's name	Position/role	Duration	Start date	End date
Efficacy of pyroligneous acid-treated rubberwood composite against wood-degrading agents	Tier 2 Encouragement Grant	Project Leader	1 year 3 months	1/9/2015	30/11/2016
Fractionation, Isolation and Purification of Bioactive Phytochemicals from fruit biomass of <i>Ananas comosus</i> and <i>Cocos nucifera</i>	HICOE	Researcher	3 years	1/1/2017	31/12/2019
Study on Plant Extract by Lyophilized Method for Nutraceutical Application	HICOE	Researcher	years	1/1/2017	31/12/2019
Alat pengurusan sisa biomas nanas	Industrial grant	Researcher	1 year	1/4/2016	31/3/2017
Synthesis of pyroligneous acid from oil palm fiber via microwave-assisted heating	Flagship- UTM SMILE	Researcher	1 year 6 months	15/1/2016	14/7/2017
Improvement for method of treating timber after cutting without reduce quality of the wood	PPRN	Researcher	6 months	1/9/2015	1/3/2016
Anti-inflammatory, antioxidant and wood preservative properties of pyroligneous acid and its	GUP (Tier 1)	Researcher	1 year 6 months	1/5/2015	31/10/2016

active compounds isolated from oil palm kernel shell					
Production and optimization of palm kernel shell (PKS) as biocharcoal	PPRN	Researcher	6 months	15/2/2015	15/8/2015
Modelling and Optimization of Product Related to Clay for Cleansing Method in Islam	PPRN	Researcher	9 months	15/1/2015	15/10/2015
Potential application of wood vinegar from pineapple waste biomass as an ecofriendly alternative for antioxidant, antibacterial and wood preservative agent	GUP (Tier 1)	Researcher	2 years	1/4/2014	31/3/2016
Application of pineapple waste wood vinegar (pyroligneous acid) in multi-purpose insect repellent	Industrial grant	Researcher	8 months	1/5/2013	31/12/2013