



DR. FATMAWATI ADAM

Associate Professor
Faculty of Chemical and Natural Resources Engineering,
Universiti Malaysia Pahang,
Lebuhraya Tun Razak,
26300 Kuantan,
Pahang, MALAYSIA.

Tel: +609-5492824, +6010-7668771

Email: fatmawati@ump.edu.my, ORCID ID: <https://orcid.org/0000-0001-8748-2812>



Academic Qualifications

PhD in Process, Environmental and Materials Engineering

University Of Leeds, United Kingdom (Sept 2006 – April 2012)

Thesis: An Examination into The Influence and Change of Solution Structure on The Polymorphic Behaviour of 2,6-Dihydroxybenzoic Acid

Master of Engineering (Environmental)

Universiti Teknologi Malaysia, Malaysia. (Jun 2001 – Nov 2002)

Bachelor in Chemical & Process Engineering,

Universiti Kebangsaan Malaysia, Malaysia. (May 1997 – April 2000)

Working Experiences / Appointment

Jun 2000 – Nov 2000	Production Superintendent at WRP Asia Pacific Sdn Bhd
Dis 2002 – Mac 2003	Lecturer at UiTM, Shah Alam
Mac 2003 – Feb 2007	Lecturer at Kolej Universiti Kejuruteraan & Teknologi Malaysia
Feb 2007 – March 2012	Lecturer at Universiti Malaysia Pahang
Sept 2006 – Dec 2008	Teaching Assistant at University of Leeds, UK
Jun 2012 – present	Senior Lecturer at Universiti Malaysia Pahang
5 May 2014 - present	Coordinator for International Exchange Program – FKKSA, UMP
May 2015 – April 2017	Research Fellow in Centre for Advanced Research in Fluid Flow (CARIFF)
1 Jan 2015 - 31 Dec 2016	Research Fellow in Centre for Bio Aromatic, UMP
18 Feb 2014 - Present	Industrial Researcher for Chelating Agent Project for Setegap Ventures Petroleum.

Research Area / Research Interest

Molecular modelling, Advanced material, Solid crystallization, Oil Well Flow Assurance, Groundwater treatment

Professional Qualification / Membership / Affiliation / Experience

Membership	Year	Institution
Member of Board of Engineers Malaysia (Member Num: 48915A)	2006	Board of Engineers Malaysia
Member of British Association of Crystal Growth	2008	British Association of Crystal Growth, United Kingdom
Member of Molecular Graphics and Modeling Society - Deutschsprachige Sektion e.V.	2011	Molecular Graphics and Modeling Society - Deutschsprachige Sektion e.V.
Applied for Chartered Engineer from Energy Institute's	Submitted on Jan 2016	Energy Institute, United Kingdom

Affiliate member in Energy Institute's Membership (Member Num: 0064357)	2016	Energy Institute, United Kingdom
Member in American Chemical Society (Member Num: 30718242)	2016	American Chemical Society, United State

List of Post Graduate Students

MAIN SUPERVISOR


1. **Siti Hana Abu Bakar (M Eng)** - Molecular Interaction Of Patchouli Extraction Process Using Molecular Dynamic Simulation Approach. Jun 2011. **Graduated**.
2. **Norul Afwan Kamarudin (M. Eng)** – Molecular Dynamics Simulation of Patchoulol Biotransformation. **Graduated**.
3. **Aiman Hamdan (M. Eng)** – Investigation of Cellulose Incorporated Into Carrageenan Matrix For hard Capsule Process Development- **Graduated**
4. **Syajaratul Jahriah Hassan (M Eng)** – Investigation of Thermodynamics Properties of Ascorbic Acid Crystal in Different Solvents Using Experimental and Simulation Methods – **Graduated**
5. **Muhammad Hadi Sulaiman (PhD)**- Molecular Interaction and Synthesis of Amino Acid Based Ionic Liquid For Solid Scale Dissolution. **Graduated**.
6. **Jurida Jamaludin (M Eng)** - Development and Characterisation of Gum Arabic-Kappa Carrageenan Composite Film for Hard Capsule Application. **Graduated**
7. **Aiman Hamdan (PhD)**- Development of Carrageenan Biocomposite For Hard Capsule Application. Sept 2018- **2021. Passed Viva Voce Examination.**
8. **Siti Hana Abu Bakar (PhD)** - Development of Stable Hard Capsule From Local Carrageenan October 2014 – Thesis draft submitted for pre viva voce.
9. **Nor Amira Othman (PhD)**- Formulation Of Reinforced Bioplastic From Polysaccharide Seaweed. Jan 2019- Ongoing
10. **Nur Amalina Binti Ramli (PhD)**- Mechanism And Molecular Interaction Of Carrageenan In The Crosslinking Of Cellulose Nanocrystals Biocomposite. Feb 2020- Ongoing
11. **Saidatul Syaima Mat Tari (PhD)** - Molecular Sieve Application in the Recovery of Gaharu Active Marker Compound from Water Mixture Jun 2014 – 2017
12. **Nik Muhammad Ridhwan Nik Razali (M Eng)** - Polymorphism of Pharmaceutical Compound : 2,6-Dihydroxybenzoic Acid Case Study. Feb 2012 – Feb 2014.
13. **Shabirah Ezan (M Eng)** - Modified Sago Starch Application For Pharmaceutical Coating. Jun 2015- Sept 2018.

CO-SUPERVISOR

14. **Siti Kholijah Abdul Mudalip (PhD)** - Application of Process Analytical Technology (PAT) in the Development of Robust Pharmaceutical Crystallisation Process. **Graduated**.
15. **Norida Ridzuan (PhD)** - Local Chemical Inhibitor For Wax Deposition Using Molecular Modelling Technique In The Pipeline System. **Graduated**.
16. **Nur Ezyan Binti Badrul Hisham (M. Sc)**- Study On Composting Process Using Palm Oil Mill Effluent (Pome) Sludge, Decanter Cake And Rice Husk Ash- **Graduated**
17. **Priyatchni A/P Subramanie (M. Sc.)**. Evaluation Of Wax Inhibitor Performance Through Molecular Dynamics Simulation And Experimental. **Graduated**.
18. Wan Amnin Wan Yahaya (PhD), Kinetic mechanism and diffusion release study of a-tocopherol/eugenol/ascorbic acid incorporate active film in food model system, March 2021- ongoing

List of Publications

1. **F. Adam**, R. B. Hammonds, K. J. Roberts, K. Pencheva, R.J.Davey, Dynamics Study of Solvent Mediated Polymorphism : 2,6-Dihydroxybenzoic Acid from Toluene and Chloroform Solution, **17th International Symposium of Industrial Crystallisation Proceeding (Edited by J Ulrich, P Jansens and M Roelands)**, Netherlands, Maastrich, Netherlands, 2008, Volume: 1, 439 – 445. ISBN 9789076019277.
2. Siti Kholijah Abdul Mudalip, Mohd. Rushdi Abu Bakar, **Fatmawati Adam**, and Parveen Jamal, Structures and Hydrogen Bonding Recognition of Mefenamic Acid Form I Crystals in Mefenamic Acid/Ethanol Solution, **International Journal of Chemical Engineering and Applications**, June 2013 Vol. 4, No. 3.
3. **F., Adam**; A. B., Siti Hana; Yusoff, Mashitah M., S. N., Tajuddin, Molecular Dynamic Simulation of The Patchouli Oil Extraction Process, **J. Chem. Eng. Data**, 2014, 59 (2), pp 183–188.

4. Siti Kholijah Abdul Mudalip, Mohd. Rushdi Abu Bakar, **Fatmawati Adam**, Parveen Jamal, Solubility and Dissolution Thermodynamic Data of Mefenamic Acid in Different Classes of Organic Solvents, *J. Chem. Eng. Data*, **2013**, 58 (12), pp 3447–3452.
5. N. Ridzuan, **F. Adam**, Z. Yaacob, **Molecular Recognition of Wax Inhibitor Through Pour Point Depressant Type Inhibitor**, IPTC 17883. **OnePetro**
6. E. E. Masiren, N. Harun, W. H. W. Ibrahim, **F. Adam**, The Effect Of Temperature On Intermolecular Interaction Of Monoethanolamine Absorption Process For CO₂ Removal, October 2014, Volume 5, No.5, **International Journal of Chemical and Environmental Engineering**.
7. Siti K. Abdul Mudalip †, ‡, Mohd R. Abu Bakar §, P. Jamal †, **F. Adam** ‡,*, Zahangir M. Alam, Molecular Recognition and Solubility of Mefenamic Acid in Water, **Asian Journal of Chemistry**, 2015, 28,
8. N. Ridzuan, **F. Adam**, Z. Yaacob, Screening of Factor Influencing Wax Deposition using Full Factorial Experimental Design, 2016, **Petroleum Science and Technology Journal**, Vol 34, No 1,
9. N. Ridzuan, **F. Adam**, Z. Yaacob, Effects of Shear Rate and Inhibitors on Wax Deposition of Malaysian Crude Oil, **Oriental Journal of Chemistry** Vol 31, No4, pp1999-2004.
10. N. Ridzuan, **F. Adam**, Z. Yaacob, Evaluation of the Inhibitor Selection on Wax Deposition for Malaysian Crude Oil, 2016, accepted in **Petroleum Science and Technology Journal**.
(<http://dx.doi.org/10.1080/10916466.2015.1127971>)
11. **Adam, F.**†*, Siti Hana A.B †, S. N. Tajuddin‡ And Yusoff, Mashitah M.‡, Solvent Role in the Molecular Recognition of Patchouli Extraction Process, 2016, accepted in **Asian Journal of Chemistry**, 2016, 28.
12. Ridzuan, N., Yaacob, Z., **Adam, F.**, Response surface methodology on wax deposit optimization, **Malaysian Journal of Analytical Science**, **2017**, 21 (2), pp. 452-459
13. Abdul Mudalip, S.K., Abu Bakar, M.R., Jamal, P., Alam, Z., **Adam, F.** Nucleation events and metastable zone width of mefenamic acid polymorph in ethyl acetate, *Journal of Engineering and Applied Sciences* 12 (4), pp. 1031-103.
14. Syaima, M.T.S., **Adam F.**, Nizam, A.S.M., Farah, M. Z. Y. Saufi, S.M. S., Molecular nano-sieve approach by the application of polypiperazine (PPA) based membrane for the recovery of water soluble agarwood (*Aquilaria Malaccensis*) marker molecules, *ARPJ Journal of Engineering and Applied Sciences*, Volume 11, Issue 4, 2016, 2174-2178.
15. Abu Bakar, S. H., Mohd Said, F., **Adam F.** Application of density functional theory in determining the physical crosslink between carrageenan and crosslinker Z. *Malaysian Journal of Analytical Sciences*. Vol 21 No 4 (2017): 979 - 985.
16. Jamaludin, J., Adam, F., Abdul Rasid, R., Z. Hassan. Thermal studies on Arabic gum - carrageenan polysaccharides film. *Chemical Engineering Research Bulletin*, 19(2017) 80-86.
17. Ezan, S., Zainal Abidin, S., Adam., F. Synthesis and Characterization of Modified Sago Starch Films for Drug Delivery Application. *Australian Journal of Basic and Applied Sciences*, 11(3) Special 2017, Pages: 176-181.
18. Shalyda Md. Shaarani Nurmaryam Aini Hashim, Umami Najihah Md. Hashim, Siti Kholijah Abdul Mudalip, Noorlisa Harun, **Fatmawati Adam**, Rohaida Che Man, Siti Zubaidah Sulaiman, Zatul Iffah Mohd Arshad, Extraction Of Bioactive Compounds (Mangiferin) From Mahkota Dewa (*Phaleria Macrocampa*) Fruits Using Subcritical Water, *Malaysian Journal of Analytical Sciences*, 21(3), 726-734, 2017.
19. Siti Kholijah Abdul Mudalip, Mohd Rushdi Abu Bakar, **Fatmawati Adam**, Parveen Jamal, Zahangir Md Alam, Investigating The Role Of Molecular Interactions In Polymorphism Of Mefenamic Acid In Ethyl Acetate Solution, *Jurnal Teknologi (Sciences and Engineering)*, Vol 79, (5-3), 21-27, 2017.
20. S. Md. Shaarani S. K. Abdul Mudalip, **F. Adam**, J. Parveen, M. R. Abu Bakar, N. Amran, S. Z. Sulaiman, R. Che Man, Z. I. Mohd Arshad, SKA Mudalip, Effect of Cooling Rates on Shape and Crystal Size Distributions of Mefenamic Acid Polymorph in Ethyl Acetate, 205, 2017.
21. Mohd Aiman Hamdan, **Fatmawati Adam**, Khairatun Najwa Mohd Amin, Investigation of Mixing Time on Carrageenan-Cellulose Nanocrystals (CNC) Hard Capsule for Drug Delivery Carrier, *International Journal of Innovative Science and Research Technology*, 3 (1) 2018.
22. S. Hassan1, **F. Adam**1*, M. R. Abu Bakar2, S. K. Abdul Mudalip, Evaluation of solvent effect on solubility and habit in ascorbic acid, *Journal of Saudi Chemical Society*, 2019, 23, 239-248.
23. Siti K. Abdul Mudalip*† , Mohd R. Abu Bakar§, P. Jamal‡, and **F. Adam**, Prediction of Mefenamic Acid Solubility and Molecular Interaction Energies in Different Classes of Organic Solvents and Water, *Ind. Eng. Chem. Res.*, 2019, 58 (2), pp 762–770.
24. **Fatmawati Adam**, Norhayati Abdullah, Muhammad Hadi Sulaiman, Zulkefli Yaacob, Zulhaizan Mohd Noor, Lydia Mohd Yusof, Incorporation of Ionic Liquids (ILs) In Commercial Solvent Agents for Better Downhole Reaction, 2018, Proceeding of 4th National Conference on Knowledge Transfer (NCKT'17).
25. PAP Subramanie, A Padhi, N Ridzuan, **F Adam**, Experimental study on the effect of wax inhibitor and nanoparticles on rheology of Malaysian crude oil, *Journal of King Saud University-Engineering Sciences*, 2019.
26. Siti Kholijah Abdul Mudalip *, **Fatmawati Adam**, Mohd Rushdi Abu Bakar, Evaluation of intermolecular interactions and polymorphism of mefenamic acid crystals in N,N-dimethyl formamide solution: A molecular dynamics simulation and experimental study, *Comptes Rendus Chimie*, 2019, 22 (11-12), 771-778

27. **Fatmawati Adam^{a,b,*}**, Mohd Aiman Hamdan^a, Siti Hana Abu Bakar^a, Mashitah Mohd Yusoff^c, Rajan Jose^d, Molecular Recognition of Crosslinked Carrageenan for Biocomposite Application, Chemical Engineering Communications, 2020.
28. MH Sulaiman, **F Adam**, Z Yaacob, Z Mohd Noor, Synthesis of Ionic Salt for Calcite and Barite Solid Scale Dissolution, -IOP Conference Series: Materials Science and Engineering, 2020.
29. MA Hamdan, SS Lakashmi, KN Mohd Amin, F Adam, Carrageenan-based hard capsule properties at different drying time -IOP Conference Series: Materials Science and Engineering, 2020.
30. Muhamad Hadi Sulaiman¹, Fatmawati Adam^{1,2,*}, Zulkefli Yaacob¹, Mohamad Zulhelmy Sujak¹, Zulhaizan Mohd Noor, Intermolecular Interaction of Carboxylic Group with Calcium Ions and Dissolution of Solid Scales in Bmim-PF6 and Tba-NfO Ionic Liquid Solution, Malaysian Journal of Microscopy Vol.16, No.1 (2020), Page 205-216.
31. Fatmawati Adam^{1,2}, Jurida Jamaludin¹, Siti Hana Abu Bakar¹, Ruwaida Abdul Rasid¹ and Zulkafli Hassan¹. Evaluation of Hard Capsule Application from Seaweed: Gum Arabic-Kappa Carrageenan Biocomposite Films, CogentEngineering, 2020.
32. Mohamed Hassan Hussain, Noor Fitrah Abu Bakar, Ana Najwa Mustapa, Kim-Fatt Low, Nur Hidayati Othman, Fatmawati Adam, Synthesis of Various Size Gold Nanoparticles by Chemical Reduction Method with Different Solvent Polarity, Nanoscale Res Lett **15**, 140 (2020).
33. Nor Amira Othman^a, Fatmawati Adam^{a,b,*}, Nur Hidayah Mat Yasin, Reinforced Bioplastic Film at Different Microcrystalline Cellulose Concentration, Materialstoday: PROCEEDING, 2021
34. MA Hamdan, NA Ramli, NA Othman, KNM Amin, F Adam, Characterization and property investigation of microcrystalline cellulose (MCC) and carboxymethyl cellulose (CMC) filler on the carrageenan-based biocomposite film, Materials Today: Proceedings 42, 56-62, 2021.
35. MH Hussain, NFA Bakar, KF Low, AN Mustapa, F Adam, Growth-controlled synthesis of polymer-coated colloidal-gold nanoparticles using electrospray-based chemical reduction, Particuology, Sciences & Technology of Particles, 2021.
36. MA Hamdan, KNM Amin, R Jose, D Martin, F Adam, Tuning mechanical properties of seaweeds for hard capsules: A step forward for a sustainable drug delivery medium, to Food Hydrocolloids for Health, 1, (2021), 100023.
37. MA Hamdan, NH Sulaiman, KNM Amin, F Adam, Moisture content and mechanical properties reduction of hard capsules upon prolong drying process, IOP Conference Series: Materials Science and Engineering 1092 (1), 012057, 2021.
38. Muhamad Hadi Sulaiman¹, Fatmawati Adam^{1,2,*}, Zulkefli Yaacob¹, Zulhaizan Mohd Noor³, Norhayati Abdullah¹ Evaluation of Carboxylic Acid and Amine Groups with Calcite, Ferrite and Barite; Molecular Dynamic Simulations and Experimental Study, Correction submitted to Arabian Journal for Science and Engineering.
39. Nor Amira Othman, Nur Alia Pentaris, Nurul Aini Mohd Azman, Noor Fitrah Abu Bakar, Fatmawati Adam, Thermal Mixing Evaluation on Carrageenan-Polylactic Acid (PLA) Film, Manuscript was submitted to ASM Sc. J.
40. Nor Amira Othman, Nur Alia Pentaris, Nurul Aini Mohd Azman, Noor Fitrah Abu Bakar, Fatmawati Adam, Evaluation of Reinforced and Green Bioplastic from Carrageenan Seaweed with Nanocellulose Manuscript was submitted to Chemical Papers
41. Development of Descaling Formulations for Calcium Carbonate, Barium Sulphate And Iron Sulfide Scales In Oil Well submitted to MUCET 2021.
42. Nur Amalina Ramli¹, Fatmawati Adam^{1,2}, Khairatun Najwa Mohd Amin¹, Adibi Rahiman Md. Nor³, Michael E. Reis⁴, Evaluation of Mechanical and Thermal Properties of Carrageenan/Hydroxypropyl Methyl Cellulose Hard Capsule, Submitted to Canadian Journal of Chemical engineering.

Article

1. 'Kejuruteraan Kimia di dalam Al-Quran', Utusan Malaysia, page 12, Friday, 2nd November 2012.
2. **PHARMACEUTICAL INDUSTRY: Boost efforts to make our own drugs**, News Strait Times, page 15th April 2013.
3. 'Sound Fundamental Understanding in Molecular Engineering Essential for a Thriving Chemical Industry', November 2015, Numb 10, Pekan Review.

List of Book

1. N. Ridzuan, Z. Yaacob and **F. Adam**, Evaluation on the Effect of Inhibitor Ratio to the Wax Deposition in Malaysian Crude, 87 -94. ICGSCE 2014 Proceedings of the International Conference on Global Sustainability and Chemical Engineering, 2015, **Springer**.
2. **Fatmawati Adam**, Saiful Nizam Tajuddin, Joharizal Johari, 2012 Rahsia dan Keunikan Gaharu (The Unique of Oud/Agarwood), **Penerbit UMP**.

3. F., Adam; Mohd Aiman Hamdan, A. B., Siti Hana, CARRAGEENAN; A Novel and Future Biopolymer, Book Chapter Submitted to Industrial Applications of Biopolymers and their Environmental Impact, Chemical Engineering Science, Edited by Abdullah Al Mamun, Jonathan Y. Chen, CRC Press, 2020.
4. Coffeetable Book: Exclusive Herbs of Malaysia, Book draft in progress. Editing by Fatmawati Adam RT AL, Penerbit UMP (UMP Book Press)

List of Consultancy

1. **Chelate Agent (Setegap Ventures Petroleum)** – Feb 2014- present. RM 30 000- Characterisation and Analysis of Chelate Agent
2. **Chelate Agent (Setegap Ventures Petroleum)** – Feb 2014-present. RM 245 000.00- Knowledge Transfer Programme for incorporation of Ionic Liquid into Chelate Agent.
3. **CMSS for Pharmaceutical Application (My Synergy Factors (M) Sdn Bhd)– UIC150705.** Jun 2015. RM42 990.
4. **CMSS for Food Application (My Synergy Factors (M) Sdn Bhd)– UIC150704.** Jun 2015. RM25 200.
5. **Groundwater Treatment System for Ladang Perdana Resident- CTS 190142.** May 2019. RM 29915
6. **Water Quality Monitoring at Ladang Sri Gelam, LCSB Sdn Bhd , 2020**
7. **Water Quality Monitoring at Ladang Chini & Ladang Penor Perdana, CTS200130,CTS200131, LCSB Sdn Bhd , 2020**
8. **Water Quality Monitoring at Ladang Tanjung Gemok, Yayasan Pahang , 2021**
9. **Water Quality Monitoring at Ladang Chini & Ladang Penor makmur LCSB Sdn Bhd , CTS210116, CTS210117, 2021.**

List of Research Grant / Project

PENYELIDIKAN (LEADER/KETUA)

EXTERNAL GRANT

1. The Investigation of Molecular Solution Chemistry Linking to The Thermodynamics Properties of Active Pharmaceutical Ingredient Polymorph. RDU 120607. **ERGS-KPT Grant. Approved amount RM 80 000.** July 2012- Jun 2015.
2. Modelling Dynamics Simulation of Aspergillus sp. Biotransformation by Molecular Mechanical Approach. RDU 110105 – **FRGS - KPT Grant. Approved amount RM 97 000.** Feb 2010 – Jan 2013.
3. Form Molecule to Product: Development of Stable Kappa-Carrageenan Capsule Through Molecular Properties Manipulation. RDU140504 – **e-Science (MOSTI). Approved amount RM 200 000.** Jun 2014 –December 2016.
4. Developing CMSS Application in Pharmaceutical as HALAL binder, thickener and Soft /Hard Capsule. **Approved amount UIC150705 - RM 42 990/ PPRN (KPT-Industri).** Jun 2015 - Mac 2016.
5. Incorporation of Ionic Liquids (ILs) in commercial Solvent Agents for better downhole reactions. – **Knowledge Transfer Program-KPT Grant. Approved amount RM 82 717.** Feb 2016 to Feb 2018.
6. Development Of Glutamic Acid And Fluorine Based Ionic Liquid For Solid Scale Dissolution, UIC 170801, **Approved RM 20 0000. Industrial Grant,** Feb 2017 – Jan 2018.
7. Role of molecular interaction on carrageenan toughening in the crosslinking of nanocellulose Biocomposite, RDU RDU 1901111, **FRGS - KPT Grant. Approved amount RM 109 800.** Sept 2019 – Jan 2022.

INTERNAL GRANT

1. Polymorphism of Pharmaceutical Compound : 2,6-dihydroxybenzoic Acid Case Study.RDU110308 - **UMP Grant. Approved amount RM 37 700.** Sept 2011 to Sept 2013.
2. Molecular Sieve Application In The Recovery Of Gaharu Active Marker Compound From Water Mixture. RDU 140301 – **UMP Grant. Approved amount RM 31 500.** Jan 2014 to Jan 2016.
3. The Extraction of Gaharu Essential Oil. RDU 04/1/17 – **UMP Grant. Approved amount RM 35 000.** 2004 to 2006.
4. Molecular Sieve Application in the Recovery of Gaharu Active Marker Compound from Water Mixture. RDU140301- **UMP Grant. Approved amount RM 31 750.** April 2014 – Mac 2016.

5. Molecular Dynamics Simulation: Modeling the Biotransformation of Patchoulol in Extraction Process. GRS 130305 – **UMP PGRS. Approved amount RM 2 500.** April 2013 – Mac 2015.
6. An Investigation Of Thermodynamic Properties Of Ibuprofen Crystal Polymorph. GRS 120301 – **UMP PGRS. Approved amount RM 2 500.** April 2013 – Mac 2015.
7. The Investigation Of Molecular Solution Chemistry Linking to The Thermodynamics Properties of Active Pharmaceutical Ingredients Polymorph. GRS130396 – **UMP PGRS. Approved amount RM 3 500.** Feb 2014 – Feb 2016.
8. Design and Development of Affinity Nanofiltration (NF) Membrane for The Recovery of Water Soluble Gaharu (Aduillaria Malaccensis) Active marker Compound. GRS1403122 – **UMP PGRS. Approved amount RM 5 000.** Oct 2014 – Oct 2017.
9. The Crystallisation of polysaccharide From Local Seaweed. GRS1503112 – **UMP PGRS. Approved amount RM 2 000.** Aug 2015 – Aug 2017.
10. Development of Glutamic Acid Incorporated With Fluorine Ionic Liquid for Dissolution of Solid Scale. RDU 170322.UMP Internal Grant. **Approved RM 38 500.** March 2017- March 2019.
11. Vegetarian Capsule For Drug Delivery Carrier, UMPCOMMUNITY TECHNOLOGY SOLUTION PLATFORM EVALUATION 2016, **Approved RM 80 000.**Jan 2017-Feb 2018.
12. Formulation Of Reinforced Bioplastic From Polysaccharide Seaweed, RDU1803187- **UMP Grant. Approved RM 33,500.00,** Dec 2018- March 2021.
13. Development Of Aromatherapy And Scented Gel Product From Local Seaweed, PDU213218, **Approved RM39 250,** July 2021-July2023

PENYELIDIKAN (CO-RESEARCHER)

EXTERNAL GRANT

1. Local Inhibitor for Wax Deposition in The Pipeline System by Using Molecular Modelling Approaches. RDU121414 – **RAGS-KPT Grant. Approved amount RM 55 000.** Dec 2012 to June 2015.
2. Molecular Interaction Establishment of Amine Based Absorption Process for CO₂ Removal. RDU 130109- **FRGS-KPT Grant. Approved amount RM 117 500.** Apr 2013 to Sept 2015.
3. A Fundamental Study of Oestrogen Sorption in Soil. RDU 130102 - **FRGS-KPT Grant. Approved amount RM 70 000.** Apr 2013 to Mac 2015.
4. Interaction Mechanism of Formulation of Superhydrophobic Polypropylene membrane for CO₂ Absorption. RDU120113 - **FRGS-KPT Grant. Approved amount RM 94 900.** Mei 2012 to Apr 2014.
5. Keberkesanan Teknologi Pengekstrakan dan Penentuan Kuantiti Produk berasaskan Gaharu. RDU120113 – **Knowledge Transfer Programme-KPT Grant. Approved amount RM 172 000.** October 2012 to September 2014.
6. Application of Process Analytical Technology-based Approaches for the Control of Crystal Properties of Mefenamic Acid for Efficient Downstream Operations and Effective Therapeutic Performance. RAGS 12-026-0026 – **RAGS (KPT) IIUM -KPT Grant. Approved amount RM RM 40 000.** December 2012 to December 2014.
7. Investigation Of Co-Gasification Of Hybrid Fuels In An Entrained Flow Gasifier (EFG), RDU140134 - **FRGS-KPT Grant. Approved amount RM 122 300.** July 2014 to Jun 2017.
8. In-Situ High Intensity (HIU) Assisted For Stainless Steel Leaf Filtration. RDU140504 – **e-Science (MOSTI). Approved amount RM 140 000.** 2006 –December 2009.
9. CMSS as Halal Thickener For Food And Beverages Industry. **Approved amount UIC150704 - RM 25 200/ PPRN (KPT-Industri).** Jun 2015 - Mac 2016.
10. Studies On Isotherm, Kinetic And Mechanism Of Rare Earth Elements (REE) Adsorption On Polymeric Resin Supported Ionic Liquid (PSIL), RDU150115 - **FRGS-KPT Grant. Approved amount RM 127 500.** November 2015 to November 2017.
11. Mechanism Of Self-Diffusion And Molecular Recognitions Of Mahkota Dewa (Phaleria Macrocarpa) Active Ingredients In Green Solvents Extraction Process. RDU151402 – **RAGS-KPT Grant. Approved amount RM 39 300.** Dec 2015 – Dec 2017.
12. Essential oil Quality and Standards Based on Novel Marker Compounds Isolated and Identified For Aqualaria Malaccensis-e-Sience-MOSTI. Dec 2006 – November 2008
13. Behavioral of Activated Carbon as Attached Growth in Microbial Fuel Cell for Wastewater Treatment and Energy Recovery Sustainability, **FRGS-KPT Grant. Approved amount RM 116 200.** Sept 2019 to November 201.
14. Mechanism of microencapsulation and its correlations with physicochemical properties of Manopterus Albus oil powder extracts, **FRGS-KPT Grant. Approved amount RM 85 200.** Sept 2019 to November 201.
15. Elucidation of Solvents and Additive on Hydrogen Bond Network of urea. **RACER-KPT Grant. Approved amount RM 51 200.** Sept 2019 to November 2021.

16. Kinetic mechanism and diffusion release study of α -tocopherol/Camellia sinensis active compounds incorporated with active CN-film in food model systems, **FRGS-KPT Grant, RM140015**, Sept 2021 to Sept 2024.

INTERNAL GRANT

1. Solubility Determination for Carbamazepine via Succinic Acid Co-Crystal in Ethanol Solution System Varies Temperature. RDU110355 – **UMP Grant. Approved amount RM37 500**. Mac 2011 – Feb 2014.
2. Properties Of Ultra Fine Pofa Cement Brick Containing Crushed Cockle Shell As Partial Replacement Material. RDU120310 – **UMP Grant. Approved amount RM 29 960**. Feb 2012 – Jun 2015.
3. Design And Development Of A Tubular Flow Gasifier For The Production Of Syngas From Coal And Biomass Mixtures. RDU140323 – **UMP Grant. Approved amount RM 33 400**. April 2014 – Mac 2016.
4. Effects of Ultrasonic Intensifications on Shape and Crystal Size Distributions of Mefenamic Acid Polymorphs in Batch Cooling Crystallisation Process. RDU150359- **UMP Grant. Approved amount RM 35 000**. October 2015 – Sept 2017.
5. Evaluation Of Wax Inhibitor Performance Through Molecular Dynamics (MD), **Approved RM 20 800**, April 2017- March 2019.
6. Molecular Interaction Prediction of Polymorphic form And Crystal Morphology of Active Pharmaceutical Ingredients (API) Grown In green solvent For Sustainable Crystallisation Process. UMP-IIUM-UITM Sustainable research collaboration. **Approved RM20 000**, Dec 2020 - 22/12/2022.

Research Achievements / Awards

1. 1st winner of PETRONAS Plant Design Undergraduate Project competition in UKM, Fatmawati Adam, Kiew Wei Peng, Khairul Anwar Kassim, Anjuran UKM & Petronas, 2000.
2. **UMP Staff Excellence Service Year 2016**
3. **Bronze Medal** in IPTA Research and Development Expo - "Essential Oil Extraction From GAHARU", 2005.
4. **Bronze Medal** in BioAsia, "Pre-treatment of Gaharu Essential Oil Extraction Using Cellulase Enzyme", 2005.
5. **Bronze Medal** in Malaysian Technology Expo 2006, "Essential Oil Extraction from Gaharu", 2006.
6. **Silver Medal** at Creation, Innovation, Technology and Research (CITREX2014), Evaluation of Wax Inhibitor Performance on the Wax Deposition of Malaysian Crude Oils, 2014.
7. **Bronze Medal** at Creation, Innovation, Technology and Research (CITREX2014), 'Molecular Recognition Of Best Inhibitor In Wax Deposition Problem', 2014.
8. **Silver Medal** in Creation, Innovation, Technology & Research Exposition (CITReX 2015), Universiti Malaysia Pahang for "Nanofiltration Membrane for Gaharu Sesquiterpenoid Recovery", 2015.
9. **Gold Medal** in Creation, Innovation, Technology & Research Exposition (CITReX 2015), Universiti Malaysia Pahang for "Novel Vegetarian drug Delivery Carrier", 2015.
10. **Gold Medal** in Creation, Innovation, Technology & Research Exposition (CITReX 2017), Universiti Malaysia Pahang for "Vegetarian Capsule For drug Delivery Carrier", 2017.
11. **Silver Medal** in Malaysian Technology expo 2018, "CARRA CAPS: Nanocellulose Formulated".
12. **Silver Medal** in Creation, Innovation, Technology & Research Exposition (CITReX 2018), Universiti Malaysia Pahang for "VANISHIL: Solid Scale Dissolver", 2018.
13. **Semifinalist** of Teraju Superb S1 2017 Grant.
14. **Special Award** for "SEAFILM" in ITEX 2020
15. **Gold Medal** for "SEAFILM" in ITEX 2020
16. Anugerah **Hadiah Sanjungan UMP** bagi '**Kategori Penerbitan Jurnal**' bagi "Molecular Dynamic Simulation of The Patchouli Oil Extraction Process", 2013.
17. Anugerah **Hadiah Sanjungan UMP** bagi '**Kategori Penerbitan Jurnal**' bagi "Solubility and Dissolution Thermodynamic Data of Mefenamic Acid in Different Classes of Organic Solvents", 2013.
18. '**Anugerah Buku Negara**' dibawah **BUKU UMUM TERBAIK (Agro Technology)** for "Rahsia & Keunikan Gaharu", Majlis Anugerah Buku Negara 2014.
19. Anugerah **Hadiah Sanjungan UMP** bagi '**Kategori Penerbitan Buku**' bagi "Rahsia & Keunikan Gaharu", 2014.
20. **SLAB-KPT Scholarship** for PhD Study at University of Leeds, UK (2006-2010).
21. **MARA Scholarship** for Undergraduate Study
22. **MARA Scholarship** for Matriculation Study
23. **Certificate of Participation PECIPTA 2015 - Novel Stable Vegetarian Hard Capsule**

24. **Certificate of Excellence for GOOD performance in The Instructional Evaluation** –Basic Engineering Lab (BKF 2731), Sem I Session 2010/2011
25. **Certificate of Excellence for GOOD performance in The Instructional Evaluation** –Chemistry Lab (BKF 2721), Sem I Session 2010/2011.
26. **Certificate of Excellence for GOOD performance in The Instructional Evaluation** –Unit Operation (BKF 3463), Sem I Session 2012/2013.
27. **Certificate of Excellence for GOOD performance in The Instructional Evaluation** –Unit Operation (DKK 2453), Sem II Session 2012/2013.
28. **Certificate of Excellence for GOOD performance in The Instructional Evaluation** –Unit Operation (DKK 3433), Sem II Session 2012/2013.
29. **Certificate of Excellence for GOOD performance in The Instructional Evaluation** –Unit Operation Lab (BKF 3731), Sem II Session 2012/2013.
30. **Certificate of Excellence for GOOD performance in The Instructional Evaluation** –Mass Transfer (BKF 2432), Sem I Session 2013/2014.
31. **Certificate of Excellence for GOOD performance in The Instructional Evaluation** –Mass Transfer (BKF 2432), Sem II Session 2013/2014.
32. **Certificate of Excellence for GOOD performance in The Instructional Evaluation** –Mass Transfer (BKF 2432), Sem I Session 2014/2015.
33. **Certificate of Excellence for GOOD performance in The Instructional Evaluation** –Mass Transfer (BKF 2432), Sem I Session 2013/2014.
34. **Certificate of Excellence for GOOD performance in The Instructional Evaluation** –Unit Operation Lab (BKF 3731), Sem I Session 2014/2015.
35. **Certificate of Excellence for GOOD performance in The Instructional Evaluation** –Mass Transfer (BKF 2432), Sem II Session 2014/2015.
36. **Certificate of Excellence for GOOD performance in The Instructional Evaluation** –Unit Operation Lab (BKF 3731), Sem II Session 2014/2015.
37. **Certificate of Excellence for GOOD performance in The Instructional Evaluation** –Mass Transfer (BKF 2432), Sem I Session 2015/2016.
38. **Certificate of Excellence for GOOD performance in The Instructional Evaluation** –Unit Operation Lab (BKF 3731), Sem I Session 2015/2016.

Patent

1. **GAHARU HYDROSOL NANO SIEVER** – Submitted to Patent Application (Under – Fatmawati Adam, Saidatul Syaima Mat Tari, Mazrul Nizam bin Abu Seman)-Patent Filed (PI 2015002620)
2. **NOVEL AND STABLE VEGETARIAN CAPSULE**- Submitted to Patent Application (Under – Fatmawati Adam, Siti Hana Abu Bakar)-Patent Filed (PI 2016702081)
3. **A Composition for Hard Capsule and A Method for Producing Thereof**- Patent Filed (PI 2018701992)
4. **PACKAGING FILM AND METHOD OF MANUFACTURING THEREOF**- Patent filed (PI 2020006140)
5. **LABORATORY CAPSULE DIPPING MACHINE**-Submitted for Patent Approval to Uni Malaysia Pahang

List of Course / Conference Attended and Conducted

1. **F. Adam, M. Mohamed (2003). The Development of Sensory Taste Analysis of Malaysia Drinking Water Standard**, Proceeding of National Environmental Seminar 2003, UKM Bangi.
2. **F. Adam, R. B. Hammonds, K.J. Roberts, K. Pencheva, R.J. Davey (2008), Molecular Dynamics Simulation of Solvent mediated Polymorphism: 2,6-dihydroxybenzoic Acid from Toluene & Chloroform Solution**, 17th International Symposium of Industrial Crystallisation, Maastricht, Netherland.
3. **F. Adam, R. B. Hammonds, K.J. Roberts, K. Pencheva, R.J. Davey (2008), Molecular Dynamics Simulation Study of 2,6-dihydroxybenzoic Polymorph Acid from Toluene & Chloroform Solution**, BACG Conference , Loughborough, United Kingdom.
4. **F. Adam, R. B. Hammonds, K.J. Roberts, K. Pencheva,(2009), Solvent Effect on 2,6-dihydroxybenzoic Crystal Morphology From Different Crystallisation Solvent**, BACG Conference , Bristol, United Kingdom.
5. **F. Adam, R. B. Hammonds, K.J. Roberts (2009), Molecular Dynamics Study of Solvent Mediated Polymorphism : 2,6-Dihydroxybenzoic Acid from Toluene and Chloroform Solution**, 8th World Chemical Engineering Congress, Montreal, Canada.

6. **F. Adam**, R. B. Hammonds, K.J. Roberts (2011), **Solvent Role on the Solid Form and Morphology of 2,6-Dihydroxybenzoic Acid**, ICCEIB 2011, Kuantan, Pahang.
7. **Adam F.**, Bahari N., Johari J., Mohamad N. A. (2011), **Identification Study of *Aquilaria malaccensis* Essential Oil Quality Using Solvent and Clavenger Extraction Processes**, 1st International Conference of Women Engineers, Kuantan, Pahang
8. Abu Bakar S. H., **Adam F.**, Tajuddin S. N., Mohd Yusoff M (2012), **Solvation Recognition of Patchoulol Compound in Steam Distillation Using Molecular Dynamic Simulation**, 2nd International Conference on Computation for Science and Technology, Nidge, Turki.
9. **F. Adam**, N. K. Abd Khar (2012), **Molecular Recognition of 2,6-Dihydroxybenzoic Acid Polymorph in Ethanol, Methanol and p-Xylene Solution**, Nidge, Turki
10. Abu Bakar S. H., **Adam F.**, Tajuddin S. N., Mohd Yusoff M, (2012), **Solvation Recognition of Patchoulol During Solvent Extraction Using Molecular Dynamic Simulation**, Nanomaterials Technology Specialized Conference 2012, UTM Skudai.
11. N. A. Kamaruddin, **Adam F.**, Tajuddin S. N., Mohd Yusoff M, (2012), **Molecular Dynamics Simulation: Modeling The Biotransformation Of Patchoulol to 10-Hydroxypatchoulol**, Nanomaterials Technology Specialized Conference 2012, UTM Skudai.
12. S. H. Abu Bakar, **Adam F.**, Tajuddin S. N., Mohd Yusoff M, (2012), **Molecular Dynamic Simulation, A Solution For Green Technology : Solvent Extraction Of Patchouli Oil**, NCON-PGR 2012, UMP Kuantan.
13. N. A. Kamaruddin, **F. Adam**, (2013) **Molecular Recognition of Patchulol-Oxygen in The Biotransformation of Patchulol**, ICCEIB 2013, Kuantan, Pahang.
14. Norida Ridzuan, **Fatmawati Adam**, Zulkifli Yaacob (2013), **Molecular Dynamic Simulation Study Of Wax Inhibition Through Pour Point Depressant Type Inhibitor**, Qatar Foundation Annual Research Conference 2013, Doha, Qatar.
15. Norida Ridzuan, Zulkefli Yaacob, **Fatmawati Adam**, (2014), **Evaluation on The Effect of Inhibitor Ration to the Wax Deposition of Local Malaysian Crude**, ICGSCE 2014, UiTM Shah Alam.
16. Norida Ridzuan, Zulkefli Yaacob, **Fatmawati Adam**, (2014), **Molecular Recognition of Wax Inhibitor Through Pour Point Depressant Type Inhibitor**, International Petroleum Technology Conference 2014, Kuala Lumpur, Malaysia
17. **Fatmawati Adam**, Mohd. Rushdi Abu Bakar, Syajaratul Jahriah Hassan, (2014), **Solubility prediction of L-ascorbic acid by using COSMO-RS**, 1st International Conference on Industrial Pharmacy, IIUM Kuantan.
18. E. E. Masiren, N. Harun, W. H. W. Ibrahim, **F. Adam** (2014), **The effect of temperature on intermolecular interaction of monoethanolamine absorption process for CO₂ removal**, 5th International Chemical and Environmental Engineering Conference (ICEEC-2014), Kuala Lumpur, Malaysia.
19. **Fatmawati Adam**, Mohd. Rushdi Abu Bakar, Syajaratul Jahriah Hassan, (2015), **The effect of solvent on L-ascorbic acid crystal morphology**, Conference on Nano- & Bioresource Technology 2015, Bangi, Malaysia.
20. E. E. Masiren; N. Harun, W. H. W. Ibrahim; **F. Adam** , (2015), **Effect of Temperature on Diffusivity of Monoethanolamine (MEA) on Absorption Process for CO₂ Capture**, NCON-2015, UMP Kuantan.
21. Syaima, M.T.S., **Adam, F.** , Nizam A.S.M , Farah, M.Z.Y, (2015), **Molecular nano-sieve application for the recovery of water soluble agarwood (*Aquilarria Malaccensis*) marker molecules**, FluidsChe 2015, Langkawi, Malaysia.
22. Jurida Jamaludin, **Fatmawati Adam**, Ruwaida Rasid, (2015), **Development of Arabic Gum for Pharmaceutical Applications**, FluidsChe 2015, Langkawi, Malaysia.
23. S. K. Abdul Mudalip, M. R. Abu Bakar, P. Jamal, F. Adam, Z. Alam (2015). **Investigating the Role of Molecular Interactions in Polymorphism of Mefenamic Acid in Ethyl Acetate Solution**, 28th Symposium of Chemical Engineers, SOMChE 2015, Putrajaya, Malaysia.
24. N. Ridzuan, Z. Yaacob and F. Adam (2015). **Screening of Factor Influencing Wax Deposition using Full Factorial Experimental Design** published in Proceeding of 28th Symposium of Malaysian Chemical Engineers (SOMChE), Putrajaya, Malaysia.
25. Abu Bakar, S. H., Mohd Said, F., Adam F. Application of density functional theory in determining the physical crosslink between carrageenan and crosslinker Z. ICCEIB 2016, Melaka Malaysia.
26. Jamaludin, J., Adam, F., Abdul Rasid, R., Z, Hassan. Thermal studies on Arabic gum - carrageenan polysaccharides film. ICCEIB 2016, Melaka Malaysia.
27. Ezan, S., Zainal Abidin, S., Adam., F. Synthesis and Characterization of Modified Sago Starch Films for Drug Delivery Application. ICCEIB 2016, Melaka Malaysia
28. Fatmawati Adam, Norhayati Abdullah, Muhammad Hadi Sulaiman, Zulkefli Yaacob, Zulhaizan Mohd Noor, Lydia Mohd Yusof, Incorporation of Ionic Liquids (ILs) In Commercial Solvent Agents for Better Downhole Reaction, 2018, Proceeding of 4th National Conference on Knowledge Transfer (NCKT'17), Sintok, Malaysia.
29. Muhamad Hadi Sulaiman, Assoc. Prof. Dr. Fatmawati Adam, Prof. Dr. Zulkefli Yaacob, Zulhaizan Mohd Noor, Dr. Norhayati Abdullah, Molecular Interaction of Carboxylic and Amine Groups with

- Calcite and Ferrite during Solid-Scale Dissolution in an Oil Well, ICCEIB 2018, Kuala Lumpur, Malaysia.
30. M. A. Hamdan, S. S. Lakashmi, K. N. Mohd Amin, F. Adam, Carrageenan-based hard capsule properties at different drying time, ENERGY SECURITY AND CHEMICAL ENGINEERING CONGRESS 2019, PARK ROYAL HOTEL, PULAU PINANG, MALAYSIA
 31. M. H. Sulaiman, F. Adam, Z. Yaacob and Z. Mohd Noor, Synthesis of Ionic Salt for Calcite and Barite Solid Scale Dissolution, ENERGY SECURITY AND CHEMICAL ENGINEERING CONGRESS 2019, PARK ROYAL HOTEL, PULAU PINANG, MALAYSIA
 32. Nor Amira Othman^a, Fatmawati Adam^{a,b*}, Nur Hidayah Mat Yasin, Reinforced Bioplastic Film at Different Microcrystalline Cellulose Concentration, MUCET 2019, Kuantan, Malaysia.
 33. Muhamad Hadi Sulaiman¹, Fatmawati Adam^{1,2,*}, Zulkefli Yaacob¹, Mohamad Zulhelmy Sujak¹, Zulhaizan Mohd Noor, Intermolecular Interaction of Carboxylic Group with Calcium Ions and Dissolution of Solid Scales in Bmim-PF₆ and Tba-NfO Ionic Liquid Solution, 28th Scientific Conference of Microscopy Society of Malaysia, 2019, Kuantan, Malaysia

List of Workshop Presented and Conducted & Journal Review & Thesis Examiner

1. Presenter, Molecular Modelling 25th Workshop 2011, Force Field Performance in recognition of solvent mediated polymorphism of 2,6-dihydroxybenzoic acid from toluene and chloroform solution. 46 April 2011, Erlangen University, German.
2. Speaker, Seminar for Undergraduate Research Project II, Thesis Writing. Sept 2012, FKKSA, UMP.
3. Presenter, Rare Earth Research Centre Colloquium, Molecular modeling in Chemical Engineering, 8 Mac 2014, FKKSA, UMP.
4. Speaker, Chemistry and Microscopic of Solid scale in Oil Well, UMP-SVP Knowledge Transfer Program Workshop, 2016.
5. Speaker, Molecular Dynamics Simulation of Solid Scale & Chelate Agent System, UMP-SVP Knowledge Transfer Program Workshop, 2016.
6. Speaker, UMP-SVP Cooperation: Research and Development Outcome and Way Forward, UMP-SVP Knowledge Transfer Program Workshop, 2017.
7. PAKAD 2018 Program -Fasilitator for Industrial Consultancy Project
8. Trainer for Water Treatment plant for Ladang Perdana LKPP, 2019.
9. Speaker of **Molecular Modelling & Simulation Application in Material and Chemical Engineering** for workshop HOW TO WRITE A GOOD JOURNAL PAPER: MODELLING WORK AN ADDED VALUE, 19th Jan 2021, UMP
10. Mentor mentee For Draft Paper Clinic 2021, UMP
11. Speaker for "COFFEETABLE BOOK- EXCLUSIVE HERBS OF MALAYSIA" WORKSHOP, 23 July 2021.
12. Journal reviewers for **3 Biotech, Microscopy Research & Technique, Applied Nanoscience, Organic Process Research & Development, Indonesian Journal of Chemistry, Industrial Crops & Products, Korean Journal of Chemical Engineering, Original Research, Front. Chem. - Physical Chemistry and Chemical Physics, RASAYAN Journal of Chemistry, Materials Today Proceeding.**
13. Examiners for Final viva voce of 5 PhD and 5 master students and 1PhD conversion.

Community Project Conducted

1. Volunteers For Flood Disaster of UMP Program 2014/2015.
2. Program Motivasi Intensif QGen 2015,FKKSA, UMP, Program Director & Program Pioneers
3. Program Motivasi Intensif QGen 2016,FKKSA, UMP- Sponsorship committee
4. Program Motivasi Intensif QGen 2017,FKKSA, UMP- Sponsorship committee
5. Program Motivasi Intensif QGen 2018,FKKSA, UMP- Promotion committee
6. PAKAD Academic CSR 2018- Speaker
7. PAKAD Academic CSR 2019- Program Director
8. Ahli Lembaga Koperasi UMP-2016-2017
9. Persatuan Akademik UMP, Financial Auditor, 2017-2018
10. Highly Immersive Program between Sekolah Kebangsaan Gambang,Malaysia, Universitas Ahmad Dahlan, Indonesia, Universitas Aisyiyah Yogyakarta, Indonesia, Universiti Malaysia Pahang 2018. Program Fasilitator.
11. Star Trek Fun Run 2018, Deputy of Program Director
12. Program Pemindahan Ilmu "Pengantarabangsaan & Mobiliti Sekolah" Universiti Malaysia Pahang Bersama Sekolah Menengah Kebangsaan Agama Pahang 2019 to Australian Islamic School & Fountain College, Perth. Program Director
13. REACH Program 2019 UMP-Sekolah Kebangsaan Gambang-Program Advisor

14. STEM- Fountain College, Perth Australia- Sekolah Menengah Kebangsaan Agama Pahang, Malaysia- Speaker
15. Committee of Fund Raising for the Construction of Surau Sekolah Kebangsaan Gambang, 2018-2019
16. Committee of Parents & Teachers Association of Sekolah Kebangsaan Gambang, 2018-2019
17. Committee of Parents & Teachers Association of Sekolah Menengah Kebangsaan Agama Pahang, 2018-2019
18. Technical Advisor For “Carra Scented Gel” Project with Sekolah Kebangsaan Gambang for CITREX 2020 (Innovation Competition & Exhibition)
19. Technical Advisor For “Murofiqussolah: A solat Buddy” Project with Sekolah Menengah Kebangsaan Agama Pahang for CITREX 2020 (Innovation Competition & Exhibition)
20. COFFEETABLE BOOK- EXCLUSIVE HERBS OF MALAYSIA“ WORKSHOP- Program Director 2021
21. Committee of Parents & Teachers Association of Sekolah Kebangsaan Gambang, 2020-2021.
22. Fund Contributor to Tabung Yayasan Mygift UMP
23. Fund Contributor to Star Trek Fun Run 2018
24. Fund Contributor to Young Scientist Program 2019
25. Committee of Parents & Teachers Association of Sekolah Menengah Kebangsaan Agama Pahang, 2021-2023.