

## CURRICULUM VITAE



Name: Emilia Zainal Abidin  
Position: Associate Professor  
Department of Environmental and Occupational Health  
Faculty of Medicine and Health Sciences  
Universiti Putra Malaysia  
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### Education

1. PhD (Environmental Medicine). University of Aberdeen, United Kingdom. 2012
2. Master of Community Health Science. Universiti Kebangsaan Malaysia. 2006
3. BSc. Biochemistry. Universiti Kebangsaan Malaysia. 2003

### Areas of Interest

1. Exposure Assessment
2. Air Pollution
3. Occupational Safety and Health Management System
4. Biomarker

### Professional Qualification/ Membership/ Affiliation

1. Competency as Lead Auditor for ISO45001:2018. NIOSH Malaysia. 2021
2. Recognised Ergonomic Trained Person For Initial Ergonomic Risk Assessment. Department of Occupational Safety and Health, Ministry of Human Resource. 2021
3. Recognised Ergonomic Trained Person For Advanced Ergonomic Risk Assessment. Department of Occupational Safety and Health, Ministry of Human Resource. 2021

### Appointments (Inside and Outside UPM)

| Date                | Designation                                     | Remarks                                                        |
|---------------------|-------------------------------------------------|----------------------------------------------------------------|
| April 2024-Present  | Deputy Director                                 | Research and Agreement Section, Research Management Centre UPM |
| Jan 2018-Present    | Associate Professor                             | Department of Environmental and Occupational Health, UPM       |
| 2015-2016           | Head of the Occupational Safety and Health Unit | Department of Environmental and Occupational Health            |
| April 2012-Dec 2017 | Senior Lecturer                                 | Department of Environmental and Occupational Health, UPM       |
| 2007-2012           | Tutor                                           | Department of Community Health, UPM                            |
| 2006-2007           | Research Assistant                              | Department of Public Health, Faculty of Medicine, UKM          |

|              |                 |                                                    |
|--------------|-----------------|----------------------------------------------------|
| 2018-Present | Executive board | Malaysian Women's Action for Tobacco and Health    |
|              | Member          | Malaysian Industrial Hygienist Association         |
|              | Member          | Malaysian Environmental Epidemiologist Association |
| 2014-Present |                 | British Occupational Health and Safety Association |
| 2018-Present | Board Member    | Society of Environmental and Occupational Health   |

| Publications          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Journals (in 5 years) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1.                    | Ghapa, N.A.A., Hashim, H., Rasdi, I., <b>Abidin, E.Z.</b> The Relationship Between Safety Culture Maturity and Mental Health among Workers in Automotive Industry (2023) <i>Malaysian Journal of Medicine and Health Sciences</i> , 19, pp. 101-108. DOI: 10.47836/mjmhs.19.s14.11                                                                                                                                                                                                                                                                                                             |
| 2.                    | Mahmmud, M.A., <b>Abidin, E.Z.</b> , Rahmat, H., Hashim, H. Critical Success Factors in Occupational Safety and Health Management System: A Review Existing Literature (2023) <i>Malaysian Journal of Medicine and Health Sciences</i> , 19, pp. 131-140. DOI: 10.47836/mjmhs.19.s14.14                                                                                                                                                                                                                                                                                                        |
| 3.                    | Ismail, H., <b>Abidin, E.Z.</b> , Rasdi, I., Mani Subramaniam, K.K.C., Cheah, P.K. A Comparative Analysis of Auxiliary Enforcement Bodies for Security, Safety and Health Officer Roles in Malaysia – A Narrative Review (2023) <i>Malaysian Journal of Medicine and Health Sciences</i> , 19, pp. 239-249.                                                                                                                                                                                                                                                                                    |
| 5.                    | Ismail, S.N.S., Nasir, N.M., <b>Abidin, E.Z.</b> , Ranga, J.A. Exploring Urban Residents' Understanding, Attitudes and Behaviors Towards Disaster Waste Management: A Survey-based Study (2023) <i>Malaysian Journal of Medicine and Health Sciences</i> , 19, pp. 19-31.                                                                                                                                                                                                                                                                                                                      |
| 6.                    | Ismail, S.N.S., Tamrin, N.A.M., <b>Abidin, E.Z.</b> , Rasdi, I., Shamsuddin, A.S., Udin, N.M. Assessing the Impact of COVID-19 on Solid Waste Generation and Environmental Health Footprint: A Case Study (2023) <i>Malaysian Journal of Medicine and Health Sciences</i> , 19, pp. 127-136.                                                                                                                                                                                                                                                                                                   |
| 7.                    | Abdul Motalib, R.N.S., Abd Rani, N.L., Zulkifli, A., Abd Latif, N.H., Dobson, R., Engku Ibrahim, T.A., Semple, S., <b>Abidin, E.Z.</b> , Uny, I., O'Donnell, R. Knowledge, Beliefs, and Behaviors Related to Secondhand Smoke and Smoking in the Home: A Qualitative Study With Men in Malaysia (2023) <i>Nicotine and Tobacco Research</i> , 25 (4), pp. 821-827. DOI: 10.1093/ntr/ntac239                                                                                                                                                                                                    |
| 8.                    | Aziemah Zulkifli, Nurul Latiffah Abd Rani, Raisya Nur Syazmeen Abdul Motalib, Ruairaidh Dobson, Tengku Azmina Engku Ibrahim, Norul Hernani Abd Latif, Rachel O'Donnell, Isabelle Uny, Emilia Zainal Abidin, Sean Semple. Measuring secondhand smoke in homes in Malaysia: A feasibility study comparing indoor fine particulate (PM <sub>2.5</sub> ) concentrations following an educational feedback intervention to create smoke-free homes during the COVID-19 pandemic. <i>Tob Induc Dis.</i> (2022); 20: 64. doi: <a href="https://doi.org/10.18332/tid/150338">10.18332/tid/150338</a> . |
| 9.                    | Mohamed, N., <b>Abidin, E. Z.</b> , Rasdi, I., & Ismail, Z. S. (2022). The Impact of COVID-19 Pandemic On Malaysian Police Officers Mental Health: Depression, Anxiety and Stress. <i>International Journal of Infectious Diseases</i> , 116, S45. <a href="https://doi.org/10.1016/j.ijid.2021.12.108">https://doi.org/10.1016/j.ijid.2021.12.108</a>                                                                                                                                                                                                                                         |
| 10.                   | Semple, S., Dobson, R., O'Donnell, R., <b>Abidin, E. Z.</b> , Tigova, O., Okello, G., & Fernández, E. (2022). Smoke-free spaces: A decade of progress, a need for more?. <i>Tobacco Control</i> , 31(2), 250-256. <a href="https://doi.org/10.1136/tobaccocontrol-2021-056556">https://doi.org/10.1136/tobaccocontrol-2021-056556</a>                                                                                                                                                                                                                                                          |
| 11.                   | Ahmad, C. W. A. A. C., <b>Abidin, E. Z.</b> , & Ismail, N. H. (2022). Low technological competence as barrier to online teaching and its impact on anxiety among teachers during movement control order in a rural district in Terengganu, Malaysia. <i>Malaysian Journal of Medicine and Health Sciences</i> , 18(Supp 5), 10-22. <a href="https://medic.upm.edu.my/upload/dokumen/202204110946262_1044.pdf">https://medic.upm.edu.my/upload/dokumen/202204110946262_1044.pdf</a>                                                                                                             |

12. Shamsuddin, A. S., Ismail, S. N. S., **Abidin, E. Z.**, Bin, H. Y., Juahir, H., & Bakar, W. A. M. (2021). Application of GIS-based DRASTIC model approaches in assessing groundwater vulnerability for shallow alluvial aquifer deposited. *Arabian Journal of Geosciences*, 14(23), 1-21. <https://doi.org/10.1007/s12517-021-08865-8>
13. Mohamed, N., **Abidin, E. Z.**, Rasdi, I., Ismail, Z. S., & Ismail, N. H. (2021). occupational stressors experienced by police officers during Coronavirus disease (Covid-19) outbreak – A systematic literature review. *Malaysian Journal of Medicine and Health Sciences*, 167-176.
14. Razali, A., Syed Ismail, S. N., Awang, S., Praveena, S. M., & **Abidin, E. Z.** (2021). Distribution and source analysis of bioavailable metals in highland river sediment. *Environmental Forensics*, 22(1-2), 205-218. <https://doi.org/10.1080/15275922.2020.1834020>
15. Ismail, S. N. S., **Abidin, E. Z.**, Rasdi, I., Ezani, N. E., Che, N., & Dom, A. S. S. (2021). COVID-19: the Epidemiological Hotspot and the Disease Spread in Malaysia. *Malaysian Journal of Medicine and Health Sciences*, 17(SUPP8), 42-50. [https://medic.upm.edu.my/upload/dokumen/202111231849317\\_2021\\_0639.pdf](https://medic.upm.edu.my/upload/dokumen/202111231849317_2021_0639.pdf)
16. Ismail, S. N. S., **Abidin, E. Z.**, & Rasdi, I. (2020). A case study of Pasir Gudang chemical toxic pollution: A review on health symptoms, psychological manifestation and biomarker assessment. *Malaysian Journal of Medicine and Health Sciences*, 16(SUPP11), 175-184. [https://medic.upm.edu.my/upload/dokumen/2020112512422223\\_2020\\_0379.pdf](https://medic.upm.edu.my/upload/dokumen/2020112512422223_2020_0379.pdf)
17. Abdul Raji, A. R., & **Abidin, E. Z.** (2020). Distribution of musculoskeletal symptoms and ergonomic risk assessment among housekeepers at budget hotels in Sepang, Selangor. *Malaysian Journal of Medicine and Health Sciences*, 16(111), 102-108. [https://medic.upm.edu.my/upload/dokumen/2020112512365514\\_2020\\_0917.pdf](https://medic.upm.edu.my/upload/dokumen/2020112512365514_2020_0917.pdf)
18. Zulkifli, A., **Abidin, E. Z.**, Ismail, N. H., & Abidin, E. Z. (2021). The need for policy on labelling requirement of e-liquid products: A case study on nicotine-containing e-liquid refills sold on e-commerce platform in Malaysia. *Malaysian Journal of Medicine and Health Sciences*, 16(SUPP11), 144-149. [https://medic.upm.edu.my/upload/dokumen/2020112512400119\\_2020\\_0926.pdf](https://medic.upm.edu.my/upload/dokumen/2020112512400119_2020_0926.pdf)
19. Zulkifli, A., & **Abidin, E. Z.** (2020). Trend of Electronic cigarette use among adult population in multiple countries across regions: A systematic review. *Malaysian Journal of Medicine and Health Sciences*, 16(SUPP11), 185-193. [https://medic.upm.edu.my/upload/dokumen/2020112512424924\\_2020\\_0403.pdf](https://medic.upm.edu.my/upload/dokumen/2020112512424924_2020_0403.pdf)
20. Razali, A., Syed Ismail, S. N., Awang, S., Praveena, S. M., & **Abidin, E. Z.** (2020). The impact of seasonal change on river water quality and dissolved metals in mountainous agricultural areas and risk to human health. *Environmental Forensics*, 21(2), 195-211. <https://doi.org/10.1080/15275922.2020.1728434> (IF: 0891)
21. Abidin, N. F. Z., Anuar, S. F. H., Bakar, A. A., Isa, I., Mahiddin, N. A. K., Shafie, F. A., **Abidin, E. Z.**, ... & Veeramohan, S. (2020). On social norm: Extension of non-smoking areas: The Langkawi charter on urban health. *MAEH Journal of Environmental Health*, 2(1), 12-14. <https://jurnal.maeh4u.org.my/index.php/home/article/download/19/20>
22. Sambasivam, S., Aziz, A. A., Karuppiah, K., **Abidin, E. Z.**, Tamrin, S. B. M., Naeini, H. S., ... & Alias, A. N. (2019). Prevalence of safety equipment and helmet use among school students commuting to school in South Selangor, Malaysia. *Songklanakarin Journal of Science and Technology*, 42(3), 721-724. <http://rdo.psu.ac.th/sjst/Ar-Press/2019May/16.pdf>
23. Zam, H. P., **Abidin, E. Z.**, Karuppiah, K., & Salit, M. S. (2019). Humidity controlling material development from diatomite, waste glass and cockle shell powder: An Experimental Study. *Malaysian Journal of Medicine and Health Sciences*, 15(204), 99-105. [https://medic.upm.edu.my/upload/dokumen/2019121207372114\\_MJMHS\\_0272.pdf](https://medic.upm.edu.my/upload/dokumen/2019121207372114_MJMHS_0272.pdf)
24. Zulkifli, A., **Abidin, E. Z.**, Abidin, N. Z., Praveena, S. M., Ghazali, H. M., & Nordin, A. S. A. (2019). Health risk assessment of electronic cigarette use among adults in Klang Valley, Malaysia. *Malaysian Journal of Medicine and Health Sciences*, 15(204), 55-61. [http://psasir.upm.edu.my/id/eprint/76433/1/2019121207342408\\_MJMHS\\_0271.pdf](http://psasir.upm.edu.my/id/eprint/76433/1/2019121207342408_MJMHS_0271.pdf)

25. Mezlan, N. S., **Abidin, E. Z.**, Karuppiah, K., Rasdi, I., Norkhadijah, S., Ismail, S., & Ismail, N. H. (2019). Development of smart fruit basket for pineapple harvesting. *Malaysian Journal of Medicine and Health Sciences*, 15(204), 26-34. [https://medic.upm.edu.my/upload/dokumen/2019121207304204\\_MJMHS\\_0124.pdf](https://medic.upm.edu.my/upload/dokumen/2019121207304204_MJMHS_0124.pdf)
26. Kassim, N., Karuppiah, K., **Abidin, E. Z.**, & Tamrin, S. B. M. (2019). Latex glove industry: Prevalence of heat-related illness among Malaysian workers. *Human Factors and Ergonomics in Manufacturing & Service Industries*, 29(2), 172-176. <https://doi.org/10.1002/hfm.20771>
27. Zakaria, M. Z., **Abidin, E. Z.**, & Ya'acob, N. A. (2019). Hazard identification, risk assessment and risk controls of work tasks in selected tea and cocoa plantations in Malaysia. *Malaysian Journal of Medicine and Health Sciences*, 15(S3), 93-95. <https://repository.unair.ac.id/87474/2/Jurnal%203%20Indra.pdf#page=96>
28. Udin, N. M., Ismail, S. N. S., How, V., & **Abidin, E. Z.** (2019). Dermal Exposure to Pesticides among Sprayers in Different Agriculture Subsectors in Malaysia: Observational Method using DREAM. *Malaysian Journal of Medicine and Health Sciences*, 15(204), 76-81. [https://medic.upm.edu.my/upload/dokumen/2019121207355211\\_MJMHS\\_0444.pdf](https://medic.upm.edu.my/upload/dokumen/2019121207355211_MJMHS_0444.pdf)

#### Conference Proceedings (in 5 years)

1. Ismail, H., **Zainal Abidin, E.**, Rasdi, I., Mani@Subramaniam, K. K. C., Cheah, P. K. (2024) Comparative analysis of auxiliary enforcement bodies and safety and health officers in Malaysia – A Documentary Review. *Asia Pacific Environmental and Occupational Health Journal* (ISSN 2462 -2214), Vol 10 (6): 3 - 4, 2024.
2. **Zainal Abidin, E.**, Hazmi, M. Z., Karuppiah, K., Ismail, N. H. (2024) The effects of training intervention on knowledge level of occupational risk assessment among engineering students in a public university in Selangor. The 15th International UNIMAS Engineering Conference 2024 (EnCon2024), Kuching, Sarawak, 14-16 February 2024.
3. **Zainal Abidin, E.**, Ahmad Mahmmud, N. M., Hashim, H., Ramat, H. (2024) Critical Success Factors In the Implementation of OSH Management System in Public Institutions of Higher Education in Malaysia. 24<sup>th</sup> Conference and Exhibition on Occupational Safety and Health, Kuala Lumpur, 19-20 February 2024.
4. Suhaimi, S. N. A., **Abidin, E. Z.**, Malek, M. H., Ismail, S. N. S., Rasdi, I., Karuppiah, K., and Ismail, N. H. (2023) Testing And Evaluation Of Newly Developed Harvesting Basket Among Male Pineapple Harvesters In Johor, Malaysia. 6th International Conference on Agricultural and Food Engineering 2023 (CAFEI2023), 16-17 August 2023, Kuala Lumpur.
5. **Zainal Abidin, E.**, Semple S, O'Donnell R, Uny I, Dobson R, Ibrahim A, Latif N, Zulkifli A, Rani N, Mutalib R, Ali RM, Abdullah MS, Ho RY. MyFamily MySmoke: Supporting men who smoke at home to take it right outside (2022) Nicotine Addiction International Conference, Kuala Lumpur, 3 October 2022.
6. **Zainal Abidin, E.**, Semple S, O'Donnell R, Uny I, Dobson R, Ibrahim A, Latif N, Zulkifli A, Rani N, Mutalib R, Ali RM, Abdullah MS, Ho RY. My family, My Smoke – A Smoke-Free Home Environment. National Tobacco Control Conference, Kuala Lumpur, 14 October 2020.

#### Books (If any)

1. **Abidin, E. Z.** (2020). Workbook for occupational safety and health management system. Penerbit UPM
2. **Abidin, E. Z.**, Mohd Tamrin, S. B., Karuppiah, K., & Rasdi, I. (2016) Occupational health learning module. Penerbit UPM Education and Training. Serdang.
3. Rasdi, I., **Abidin, E. Z.**, Syed Ismail, S.N., Mahmod, A., & Saliluddin, M. S. (2015) Mind MAP: Control and Management of Infectious Diseases. (ISBN 9789671304907).
4. Ismail, N. H., & **Abidin, E. Z.** (2014). *Kesihatan di tempat Kerja (Health at the Workplace)*. Dewan Bahasa dan Pustaka Publications (ISBN 978- 983-46-1198-9)
5. **Abidin, E. Z.**, Mohd Tamrin, S. B., Karuppiah, K., & Rasdi, I. (2013) *Occupational health learning module*. Penerbit UPM Education and Training. Serdang.

#### Chapter in Books (If any)

1. **Abidin, E. Z.** (2015). Penggunaan penanda biologi dalam kajian kesihatan persekitaran. In S. N. Syed Ismail, & M. A. Abu Samah (eds.), *Meneroka interaksi dinamik dalam kesihatan persekitaran: Himpunan*

*siri kajian di Malaysia*. Fakulti Perubatan dan Sains Kesihatan, Universiti Putra Malaysia. (ISBN 978-983-2408-29-1)

- Syed Ismail, S.N., Praveena, S. M., **Abidin, E. Z.**, & Rasdi, I. (2014). PhD dan Saya. Antara cita dan air mata. Teguh Optimis Enterprise, (ISBN 978-967-12680-0-1)

| Research Grants |                                                                                                                                         |                               |               |                                              |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------|----------------------------------------------|
| No.             | Project Title                                                                                                                           | Amount (RM)                   | Year          | Source of Fund                               |
| 1.              | Communities Facilitating increasing Smoke-free Homes (CO-FRESH)                                                                         | GBP167,880.00<br>RM925,018.00 | 2022          | Research Medical Centre UK                   |
| 2.              | SumoSack Pineapple harvesting basket                                                                                                    |                               | November 2020 | Yayasan Inovasi Malaysia dan SME Corporation |
| 3.              | MyFamily My Smoke: Protecting My Family from Secondhand Smoke; Let's take it right outside                                              | RM408,000                     | May 2020      | British Council, MIGHT, Malaysia             |
| 4.              | Critical success factors to the successful implementation of OSHMS in Malaysian Universities                                            | RM56,500                      | Sept 2019     | Ministry of Education                        |
| 5.              | Identification and evaluation of design specification for prototype development of pineapple harvesting basket                          | RM130,000. 00                 | Aug 2019      | Ministry of Education                        |
| 6.              | A study on the effects of Training on Knowledge of Occupational Safety and Health on Attitude and Practice among zookeepers in Malaysia | RM22,000                      | 2018-2020     | Universiti Putra Malaysia,                   |

| Awards/ Recognition (Current) |                                                                                                                                                                       |                                                |                                  |      |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------------------|------|
| No.                           | Name of awards                                                                                                                                                        | Award Authority                                | Award Type                       | Year |
| 1.                            | High Performing Researcher 2019                                                                                                                                       | Faculty of Medicine and Health Sciences, UPM   | Faculty Level                    | 2020 |
| 2.                            | Silver Medal for Occupational Safety and Health Management System Workbook in 2 <sup>nd</sup> International Putra Innocreative Carnival in Teaching and Learning 2019 | Universiti Putra Malaysia                      | National Level                   | 2019 |
| 3.                            | Gold Medal in 5th Korea Creative Invention Contest (CiC 2018) For Modified diatomite as walling materials to control humidity and inhibit bacterial growth            | KiNEWs                                         | International                    | 2018 |
| 4.                            | Bronze Award in Malaysia Technology Expo 2018 for Smart Fruit Harvesting Basket                                                                                       | Malaysian Association of Research Scientists   | National                         | 2018 |
| 5.                            | Best Researcher (3 <sup>rd</sup> place) – Faculty Excellence Week                                                                                                     | Faculty of Medicine and Health Sciences, (UPM) | Faculty Level                    | 2015 |
| 6.                            | Excellent Service Award 2014                                                                                                                                          | Universiti Putra Malaysia (UPM)                | National                         | 2015 |
| 7.                            | Travel Scholarship to Abu Dhabi                                                                                                                                       | International Union Against Tuberculosis and   | Travelling grant – International | 2015 |

Lung Disease,  
France

| Professional Services/ Consultation |              |                                                                                                                                                                                                              |                                                          |
|-------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| No.                                 | Year         | Title                                                                                                                                                                                                        | Authority                                                |
| 1.                                  | 2021-2026    | Lead auditor (IRCA approved) from Russian Register                                                                                                                                                           | NIOSH Certification Sdn. Bhd. Malaysia                   |
| 2.                                  | 2014         | Passed Part I of II for competency as Indoor Air Quality Assessor                                                                                                                                            | NIOSH Malaysia                                           |
| 3.                                  | 2008-Present | Hygiene measurements – Indoor air                                                                                                                                                                            | Scottish Centre of Indoor Air,<br>University of Aberdeen |
| 4.                                  |              | Indoor air quality (in pursuant of IAQ assessor competency, Part II)                                                                                                                                         |                                                          |
| 5.                                  |              | Epidemiology, Tobacco research and child health                                                                                                                                                              |                                                          |
| 6.                                  |              | Occupational Safety and Health Management System Malaysian Standard MS 1722:2011 and Occupational Health and Safety Assessment Series (OHSAS) 18001:2007 (in pursuant of Lead Auditor competency, Module II) |                                                          |

| Student Supervision   |                       |                                                                                                                                                                              |                  |
|-----------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| PhD (Main Supervisor) |                       |                                                                                                                                                                              |                  |
| No.                   | Name                  | Title                                                                                                                                                                        | Status           |
| 1.                    | Huong Pei Zam         | Development Of New Humidity Control Material Prepared From The Sintering Of Diatomite, Waste Glass And Cockle Shells To Balance Indoor Relative Humidity                     | Graduated (2022) |
| 2.                    | Nor Syazwani Mohammad | Determination of blood cholinesterase, neurobehavioral performance and genetic damage due to organophosphate exposure among male cocoa farmers in pahang and perak, Malaysia | Graduated (2022) |
| 3.                    | Najihah Zainol Abidin | vaping topography, analysis of e-cigarette vapours and Health risk assessment among current male users in selected population                                                | Graduated (2022) |
| 4.                    | Aziemah Zulkifli      | Usage patterns, chemical analysis of e-liquids and health risks assessment of electronic cigarette use among adults in the Klang Valley, Selangor, Malaysia                  | Graduated (2019) |

| Master with Thesis (Main Supervisor) |                     |                                                                                                                 |                  |
|--------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------|------------------|
| No.                                  | Name                | Title                                                                                                           | Status           |
| 1.                                   | Nurazirah Kassim    | Heat-related illnesses and physiological changes among latex glove industry workers under heat stress condition | Graduated (2019) |
| 2.                                   | Nor Afifah Ya'acob  | Kiken-Yochi Training intervention among pineapple plantation workers to reduce MSD                              | Graduated (2017) |
| 3.                                   | Aziza S. Abdulkadir | Assessing exposure to indoor air pollution from biomass cooking fuels and determining its association with      | Graduated (2016) |

respiratory health of women and children  
in Chukwani, Zanzibar

| Attended Seminars/ Workshops/ Forums both National and International |      |       |            |
|----------------------------------------------------------------------|------|-------|------------|
| No.                                                                  | Year | Title | Organizers |

- 1.
- 2.

| Intellectuals Property |      |            |      |
|------------------------|------|------------|------|
| Patent Field           |      |            |      |
| No.                    | Date | Patent No. | Name |

1. 27 November 2017 An ergonomically designed fruit collection basket, - PI2017704536 **Emilia Zainal Abidin**, Karmegam Karuppiah, Irniza Rasdi, Sharifah Norkhadijah Syed Ismail, Sarva Mangala Praveena, Noor Hassim Ismail, Nurul Shahida Mezlan
2. July 2016 Industrial Design (Malaysia) for Water Filter (Derivate Work); 16-00682-0101, Sarva Mangala Praveena, Ahmad Zaharin Aris, Leslie Tham, Karmegam Karuppiah, Irniza Rasdi, Sharifah Norkhadijah Syed Ismail, **Emilia Zainal Abidin**.