



CURRICULUM VITAE

Mas Jaffri Masarudin, Ph.D

Head,
Nanomaterials Synthesis and Characterization Lab,
Institute of Nanoscience and Nanotechnology,

Department of Cell and Molecular Biology,
Faculty of Biotechnology and Biomolecular Sciences,

UNIVERSITI PUTRA MALAYSIA



A. PERSONAL DETAILS		
Full Name Mas Jaffri Masarudin		Title Assoc. Prof. Dr.
Citizenship Malaysian		Gender Male
Current Occupation/Position Associate Professor Head of Laboratory	Place of Work Universiti Putra Malaysia (UPM)	Date of Birth 26 Januari 1983

Current Address	Department / Faculty	Correspondence
Institute of Nanoscience and Nanotechnology, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia.	Nanomaterials and Characterization Lab	E: masjaffri@upm.edu.my P: +603-9769 7547 F: +603-9769 7006
Faculty of Biotechnology and Biomolecular Sciences, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia.	Cell and Molecular Biology	E: masjaffri@upm.edu.my P: +603-9769 1970 F: +603-9769 7510

B. ACADEMIC QUALIFICATIONS			
Qualification Obtained	Institution	Year Obtained	Specialization
Doctor of Philosophy (Ph.D)	La Trobe University, Australia	2013	Nanobiotechnology
Master of Sciences (M.Sc)	Universiti Putra Malaysia, Malaysia	2009	Nanobiotechnology
Bachelor of Sciences (Hons.) (B.Sc)	Universiti Malaysia Sabah, Malaysia	2005	Biotechnology
Technical Assessor, SAMM 17025	Standards Malaysia	2022	Microbiology, Cytotoxicity

C. FIELD OF RESEARCH AND SPECIALISATION	
Nanomedicine	Biomolecules delivery
Nanomaterials and Nanotechnology	Microbial Biotechnology
Nanoscience	Nanobiotechnology

D. PROFESSIONAL AFFILIATIONS	
Member, Asian Council of Science Editors	2024 – Present
Vice President, Malaysian Society for Microbiology (MSM)	2023 – 2025
President, Malaysian Society for Microbiology (MSM)	2019 – 2023
Honorary Secretary, Malaysian Society for Microbiology (MSM)	2013 – 2018
Member, Science Education Working Group, YSN-ASM	2017 – Present
Member, Asian Federation of Biotechnology (AFOB)	2015 – Present

Affiliate Member, Young Scientist Network-Academy of Sciences Malaysia (YSN-ASM)	2015 – Present
Member, IBSE-Module Developer, Academy of Sciences Malaysia	2020 – Present
Research Member, Medical Biotechnology Research Group UPM	2019 – Present
Research Member, Nanomaterial Synthesis and Characterization Lab (NSCL), UPM	2018 – Present
Research Affiliate, UPM-MAKNA Cancer Research IBS, UPM	2017 – Present
Member, Science Education Working Group, YSN-ASM	2019 – Present
Research Affiliate, Malaysian Institute for Innovative Nanotechnology (NanoMITe)	2014 – 2016
Associate Editor, Asia Pacific Journal of Molecular Biology and Biotechnology	2018 – Present
Technical Editor, <i>Journal of Nanoscience and Nanotechnology</i> <i>Journal of Biotechnology</i> <i>Journal of Biological Sciences</i>	2017 – Present

E. ADMINISTRATIVE APPOINTMENTS			
Position	Committee	PTJ	Year
Head of Laboratory	Nanomaterial Synthesis and Characterization Laboratory	Institute of Nanoscience and Nanotechnology (ION2)	2023 – Present
Head	Jawatankuasa Keselamatan dan Kesihatan Pekerja	Institute of Nanoscience and Nanotechnology (ION2)	2023 – Present
Member	Jawatankuasa Kurikulum Jabatan	Faculty of Biotechnology and Biomolecular Sciences (FBBSB)	2024 – Present
Member	Jawatankuasa Kurikulum Fakulti	Faculty of Biotechnology and Biomolecular Sciences (FBBSB)	2024 – Present
Member	<i>Jawatankuasa Inovasi Pengajaran dan Pembelajaran (JKIPP)</i>	Universiti Putra Malaysia	2023 – Present
Coordinator	Mobility and International Attachment	Faculty of Biotechnology and Biomolecular Sciences (FBBSB)	2014 – 2023
Member	Community and Internationalisation	Faculty of Biotechnology and Biomolecular Sciences (FBBSB)	2016 – 2019
Deputy Incident Commander	Special Emergency Action Team	Faculty of Biotechnology and Biomolecular Sciences (FBBSB)	2017 – 2018
Member	Jawatankuasa Alumni Fakulti	Faculty of Biotechnology and Biomolecular Sciences (FBBSB)	2013 – 2015
Member	Jawatankuasa Penyelidikan dan Pengajian Siswazah Fakulti	Faculty of Biotechnology and Biomolecular Sciences (FBBSB)	2013 – 2014

F. HONOURS AND AWARDS				
Name of awards	Title	Award Authority	Award Type	Year
Academic Awards	Anugerah Fellowship Naib Canselor Kategori Pengajaran	UPM	Fellowship Award	2019
	Putra InnoCreative Carnival for Teaching and Learning	UPM	Silver Medal	2018
	PeCIPTA'19	MOE	Gold Medal	2019
		UPM	Silver Medal	2007

	2007 UPM Research Invention and Innovation Exhibition Academic Training Scheme Scholarship 2014 UPM Research Invention and Innovation Exhibition 32 nd International Invention, Innovation & Technology Exhibition Malaysia (ITEX'21)	Ministry of Education, Malaysia UPM Malaysian Invention and Design Society	Scholarship Silver Medal Gold Medal	2009 2014 2021
<i>Research Awards</i>	Best Poster Award "In vitro localisation, accumulation, and anti-oxidant efficacy of chlorogenic acid (CGA) utilising fluorescently-labeled chitosan nanoparticles as an efficient drug delivery vector" Best Poster Award "Fluorescently-labelled & hydrophobically-modified chitosan nanoparticles as a delivery system for increased accumulation and in vitro intracellular trafficking of chlorogenic acid" Best Poster Award "Encapsulation of miRNA-186 in Chitosan Nanoparticles as a Candidate for an Anti-Metastatic Agent in Cancer Therapy"	Malaysian Society of Applied Biology (MSAB) AFOB-MC2019 Asian Congress of Biotechnology (ACB2015)	Best Poster Best Poster Best Poster	2016 2018 2015
<i>Service Awards</i>	Excellent Service Award	UPM	Recognition	2021

G. LIST OF PUBLICATIONS

H-Index = 29 (Google Scholar, 2820 citations), 26 (SCOPUS, 2269 citations), i10-Index = 48 (Google Scholar)

<i>Journal Articles</i>	<u>2025</u>
	<ol style="list-style-type: none"> 1. Bashirah, R.A., Zamri, N.B., Alitheen, N.B., Ismail, S., Masarudin, M.J. (2025). Synthesis of CNP-SAR405 delivery system for improved therapeutics anticancer activity using A549 human lung cancer cell lines. <i>Naunyn-Schmiedeberg's Archives of Pharmacology</i> https://doi.org/10.1007/s00210-025-04592-z (ISI-Indexed Q2). 2. Mohd Hatta, F.N.N., Jacob, P.J.S., Mohamad, R., Masarudin, M.J. (2025). Production of silver nanoparticles using a locally isolated Malaysian bacterial strain: A microbial approach for alternative antimicrobial agents. <i>Asia-Pacific Journal of Molecular Biology and Biotechnology</i>. (Accepted and awaiting publication) 3. Al-Tameemi, A.I., <u>Masarudin, M.J.</u>, Rahim, R.A., Mizzi, R., Timms, V.J., Mat Isa, N., Neilan, B.A. (2025). Eco-friendly zinc oxide nanoparticle biosynthesis powered by probiotic bacteria. <i>Appl Microbiol Biotechnol</i> 109, 32. https://doi.org/10.1007/s00253-024-13355-4 (ISI-Indexed Q2) 4. Che Rahim, N.F., Hussin, Y., Aziz, M.N.M., Masarudin, M.J., Abd Gani, S., Akhtar, M.N., Nik Abd Rahman, N.M.A., Mohd Alitheen, N.B. (2025). Anti-metastasis Effects and Mechanism of Action of Curcumin Analog (2E,6E)-2,6-bis(2,3-dimethoxybenzylidene) Cyclohexanone (DMCH) on the SW620 Colorectal Cancer Cell Line. <i>Anti-Cancer Agents in Medicinal Chemistry</i>. https://doi.org/10.2174/0118715206336788241029050155 (ISI-Indexed Q3).

2024

5. Talib, N., Mohamad, N.E., Ho, C.L., Masarudin, M.J., Alitheen, N.B. (2024). Modulatory Effects of Isolated Lactobacillus paracasei from Malaysian Water Kefir Grains on the Intestinal Barrier and Gut Microbiota in Diabetic Mice. *Probiotics & Antimicrobial. Proteins*. <https://doi.org/10.1007/s12602-024-10367-4>. (ISI-Indexed Q1)
6. Taung Mai, L.L.; San, H.P.; Aung, M.M.; Uyama, H.; Mohamed, A.Z.; Bahrin, E.K.; Masarudin, M.J.; Mohamad Zulkifli, A.A.b.; Chew, T.W. Antimicrobial Effect of Waterborne Polyurethane-Based Cellulose Nanofibril/Silver Nanoparticles Composites and Acacia concinna (Willd.) DC Extract (Shikakai). *Polymers* 16, 2683. (ISI-Indexed Q1)
7. Jothi, S., Mohtar, N., Masarudin, M.J., Parumasivam, T. (2024). Novel inhaled andrographolide for treatment of lung cancer: *In vitro* assessment. *Heliyon* 10, E30761. (ISI-Indexed Q2)
8. Wong, Ky., Megat Mazhar Khair, M.H., Song, A.A.L, Masarudin, M.J., Loh, J.Y., Chong, C.M., Beardall, J., Yee, M.M.T., Lian, L.A.I (2024). Recombinant lactococcal-based oral vaccine for protection against Streptococcus agalactiae infections in tilapia (*Oreochromis niloticus*). *Fish and Shellfish Immunology* 149, 109572. (ISI-Indexed Q1).

2023

9. Talib, N., Mohamad, N.E., Yeap, S.K. Ho, C.L., Masarudin, M.J., Abd Aziz, S., Mohd Izham, M.N., Rajah Kumar, M., Hussin, Y., Alitheen, N.B. (2023). Anti-Diabetic Effect of Lactobacillus Paracasei Isolated from Malaysian Water Kefir Grains. *Probiotics & Antimicro. Prot.* <https://doi.org/10.1007/s12602-023-10159-2>.
10. Othman, N., Md. Jamil, S.N.A., Masarudin, M.J., Mohd Jusoh, R.A.B., Alamassi, M.N. (2023). Increased radical scavenging activity of thymoquinone and L-ascorbic acid dual encapsulated in palmitoyl-chitosan nanoparticles in a human normal lung fibroblast, MRC-5 due to synergistic antioxidative effects. *RSC Adv.*, 2023, 13, 27965-27983. (ISI-Indexed Q2).
11. Al-Tameemi, A.I., Masarudin, M.J., Abdul Rahim, R., Mills, T., Timms, V.J., Neilan, B.A., Mat Isa, N. (2023). Biosynthesis of zinc oxide nanoparticles using the supernatant of Weissella cibaria UPM22MT06 and its antibacterial and cytotoxicity properties. *Biologia* <https://doi.org/10.1007/s11756-023-01506-3>. (SCOPUS-Indexed Q3).
12. Alabawi, F., Hussein, M.Z., Fakurazi, S., Masarudin, M.J. (2023). Fabrication and characterization of nanodelivery platform based on chitosan to improve the anticancer outcome of sorafenib in hepatocellular carcinoma. *Scientific Reports* 13 (1), 1-13 (ISI-Indexed Q1).
13. Mesrati, M.M., Tajudin, A.A., Masarudin, M.J., Alamassi, M.N., Abuhamad, A.Y., Amir Syahir, A.A. (2023). Hyaluronic acid/chitosan-coated poly (lactic-co-glycolic acid) nanoparticles to deliver single and co-loaded paclitaxel and temozolomide for CD44+oral cancer cells. *Open Nano* 12. <https://doi.org/10.1016/j.onano.2023.100166> (SCOPUS-Indexed Q1).
14. Shaharuddin, S., Nik Abd Rahman, N.M.A., Masarudin, M.J., Alamassi, M.N., Ahmad Saad, M.F.F. (2023). HIF-1 Sensor in Detecting Hypoxia Tolerance at High Altitude. *Aerospace Medicine and Human Performance* 94. <https://doi.org/10.3357/AMHP.6166.2023>
15. Megat Mazhar Khair, M.H., Tee, A.N., Wahab, N.F., Othman, S.S., Goh, Y. G., Masarudin, M.J., Chong, C.M., Lian, L.A.I., Gan, H.M., Song, A.A.L. (2023). Comprehensive Characterization of a Streptococcus agalactiae Phage Isolated from a Tilapia Farm in Selangor, Malaysia, and Its Potential for Phage Therapy. *Pharmaceuticals* 16:698. (ISI-Indexed Q1).
16. Shaharuddin, S., Nik Abd Rahman, N.M.A., Masarudin, M.J., Alamassi, M.N. (2023). HIF-1 Activation and Inflammatory Responses to Hypoxia. *International Journal of Aviation, Aeronautics, and Aerospace*. DOI: 10.58940/2374-6793.1798.
17. Shaharuddin, S., Nik Abd Rahman, N.M.A., Masarudin, M.J., Alamassi, M.N., Ahmad Saad, F.F. (2023). HIF-1 Sensor in Detecting Hypoxia Tolerance at High Altitude. *Aerospace Medicine and Human Performance* 94(6):1-3. (ISI-Indexed Q4).
18. Alamassi, M.N., Suet Lin, C., Che Abdullah, C.A., Masarudin, M.J. (2023). Increased Efficacy of Biologics Following Inhibition of Autophagy in A549 lung cancer cells in Bimodal Treatment of Doxorubicin and SAR405-Loaded Chitosan Nanoparticles. *Open Nano* 11 (Article in press, SCOPUS-Indexed Q1).
19. Hashimi, T., Joyce, D., Mohd Nasir, S., Masarudin, M.J., Salleh, A., Othman, S. (2023). Characterisation of the Putative Antigenic Genes of the Outer Membrane Proteins (OMPs) of Pasteurella multocida B:2 Strain PMTB2.1 through in silico Analysis. *Tropical Agricultural Science*, 46 (1), 277-313. (SCOPUS-Indexed Q4).

2022

20. Behrooz, A.B, Vazifehmand, R., Tajudin, A.A., Masarudin, M.J., Sekawi, Z., Masomian, M., Syahir, A. (2022). Tailoring drug co-delivery nanosystem for mitigating U-87 stem cells drug resistance. *Drug Delivery and Translational Research* 12: 1253-1269 (ISI-Indexed Q1).
21. Wong, K.Y, Megat Mazhar Khair, M.H, Song, A.A.L, Masarudin, M.J., Chong, C.M, In, L.L.A, Teo, M.Y.M (2022). Endolysins against Streptococci as an antibiotic alternative. *Frontiers in Microbiology* 13:935145 (ISI-Indexed Q1).
22. Yee Kuen, C., Masarudin, M.J. (2022). Chitosan Nanoparticle-Based System: A New Insight into the Promising Controlled Release System for Lung Cancer Treatment. (Accepted and awaiting publication in *Molecules*, ISI-Indexed Q2).
23. Naganthran, A., Verasoundarapandian, G., Khalid, F.E., Masarudin, M.J., Zulkarnain, A., Mohammad Nawawi, N., Karim, M., Che Abdullah, C.A., Ahmad, S.A. (2022). Synthesis, Characterization and Biomedical Applications of Silver Nanoparticles. *Materials* 15(2): 427. (ISI-Indexed Q2).

2021

24. Mohamad Jaafar, A., Hasnu, N., Zainal, Z., Masarudin, M.J., Aung, M.M., Rayung, M. (2021). Preparation, Characterization and Antibacterial Activity of Carvacrol Encapsulated in Gellan Gum Hydrogel. *Polymers* 13(23):4153. (ISI-Indexed Q1).
25. Mohd Izham, M. N., Hussin, Y., Che Rahim, N. F., Aziz, M. N. M., Yap, S. W., Rahman, H. S., Masarudin, M.J., Mohamad, N. E., Abdullah, R., Alitheen, N. B. (2021). Physicochemical Characterization, Cytotoxic Effect and Toxicity Evaluation of Nanostructured Lipid Carrier Loaded with Eucalyptol. *BMC Complementary Medicine and Therapies* 21:1-17, ISI-Indexed Q1).
26. Behrooz, A. B., Vazifehmand, R., Tajudin, A. A., Masarudin, M. J., Sekawi, Z., Masomian, M., Syahir, A. (2021). Tailoring Drug Co-Delivery Nanosystem for Mitigating U-87 Stem Cells Drug Resistance. *Drug Delivery and Translational Research*. <https://doi.org/10.1007/s13346-021-01017-1>.
27. Aziz, M.N.M., Che Rahim, N.F., Hussin, Y., Yeap, S.K., Masarudin, M.J., Mohamad, N.E., Akhtar, M.N., Osman, M.A., Cheah, Y.K., Alitheen, N.B. (2021). Anti-metastatic and anti-angiogenic effects of curcumin analog DK-1 on human osteosarcoma cells *in vitro*. *Pharmaceuticals* 14(6), 532; <https://doi.org/10.3390/ph14060532> (ISI-Indexed Q1).
28. De Silva, C.; Nawawi, N.M.; Abd Karim, M.M.; Abd Gani, S.; Masarudin, M.J.; Gunasekaran, B.; Ahmad, S.A. (2021). The Mechanistic Action of Biosynthesised Silver Nanoparticles and Its Application in Aquaculture and Livestock Industries. *Animals* 11:2097. <https://doi.org/10.3390/ani11072097>. (ISI-Indexed Q1).
29. Kumar, M.R., Yeap, S.K., Mohamad, N.E., Abdullah, J.A., Masarudin, M.J., Khalid, M., Leow, A.T.C., Alitheen, N.B. (2021). Metagenomic and phytochemical analyses of kefir water and its subchronic toxicity study in BALB/c mice. *BMC Complementary Medicine and Therapies* 21:183. <https://doi.org/10.1186/s12906-021-03358-3>. (ISI-Indexed Q4).
30. Kumar, M.R.; Yeap, S.K.; Lee, H.C.; Mohamad, N.E.; Nazirul Mubin Aziz, M.; Khalid, M.; Masarudin, M.J.; Leow, A.T.C.; Abdullah, J.O.; Alitheen, N.B. (2021). Selected Kefir Water from Malaysia Attenuates Hydrogen Peroxide-Induced Oxidative Stress by Upregulating Endogenous Antioxidant Levels in SH-SY5Y Neuroblastoma Cells. *Antioxidants* 10:940. <https://doi.org/10.3390/antiox10060940>. (ISI-Indexed Q1).
31. Albalawi, F., Hussein, M.Z., Fakurazi, S., Masarudin, M.J. (2021). Engineered Nanomaterials: The Challenges and Opportunities for Nanomedicines. *International Journal of Nanomedicine* 16:161-184. (JIF=4.471, ISI-Indexed Q1).
32. Ruman, U., Buskaran, K., Pastorin, G., Masarudin, M.J., Fakurazi, S.F., Hussein, M.Z. (2021). Synthesis and Characterization of Chitosan-Based Nanodelivery Systems to Enhance the Anticancer Effect of Sorafenib Drug in Hepatocellular Carcinoma and Colorectal Adenocarcinoma Cells. *Nanomaterials* 11(2), 497; <https://doi.org/10.3390/nano11020497> (ISI-Indexed Q1).
33. Chan, L.C., Kalyanasundram, J., Leong, S.W., Masarudin, M.J., Veerakumarasivam, A., Yusoff, K., Chan, S.C., Chia, S.L. (2021) Persistent Newcastle disease virus infection in bladder cancer cells is associated with putative pro-survival and anti-viral transcriptomic changes. *BMC Cancer* 21, 625. <https://doi.org/10.1186/s12885-021-08345-y> (ISI-Indexed Q1).
34. Rahim, N.F.C., Hussin, Y., Aziz, M.N.M., Mohamad, N.E., Yeap, S.K., Masarudin, M.J., Abdullah, R., Akhtar, M.N., Alitheen, N.B. Cytotoxicity and Apoptosis Effects of Curcumin Analogue (2E,6E)-2,6-Bis(2,3-Dimethoxybenzylidene) Cyclohexanone (DMCH) on Human Colon Cancer Cells HT29 and SW620 In Vitro. *Molecules* 2021, 26, 1261. <https://doi.org/10.3390/molecules26051261> (ISI-indexed Q2).

35. Buskaran, K., Bullo, S., Hussein, M.Z., Masarudin, M.J., Mohd Mokhlas, M.A., Fakurazi, S. (2021). Anticancer molecular mechanism of protocatechuic acid loaded on folate coated functionalized graphene oxide nanocomposite delivery system in human hepatocellular carcinoma. *Materials* 14(4):817. (JIF=3.057, ISI-Indexed Q2).
36. Buskaran, K., Hussein, M.Z., Mohd Moklas, M.A., Masarudin, M.J., Fakurazi, S. (2021). Graphene Oxide Loaded with Protocatechuic Acid and Chlorogenic Acid Dual Drug Nanodelivery System for Human Hepatocellular Carcinoma Therapeutic Application. *International Journal of Molecular Sciences* 22(11), 5786; <https://doi.org/10.3390/ijms22115786> (ISI-Indexed Q2).
37. Labibah, Q., Tun, K.N.W., Aminah, N.S., Kristanti, A.N., Ramadhan, R., Takaya, Y., Abdullah, C.A.C., Masarudin, M.J. (2021) Cytotoxic Constituent In The Fruit Peel Of *Lansium domesticum*. *Rasayan Journal of Chemistry* 14(2):1336-1340.

2020

38. Yee Kuen, C., Galen, T., Fakurazi, S., Othman, S.S., Masarudin, M.J. (2020) Increased Cytotoxic Efficacy and Sustained Release of Protocatechuic Acid in A549 Human Lung Cancer Delivered via Hydrophobically Modified-Chitosan Nanoparticles as an anticancer modality. *Polymers* 12(9):1951 (JIF=3.426, ISI-Indexed Q1).
39. Othman, N., Md. Jamil, S.N.A., Masarudin, M.J., Abdullah, L.C., Daik, R., Sarman, S. (2020) L-Ascorbic Acid and Thymoquinone Dual-Loaded Palmitoyl-Chitosan Nanoparticles: Improved Preparation Method and Encapsulation Efficiency. *Processess* 8(9): 1040. (JIF=2.973, ISI-Indexed Q2).
40. Nordin, N., Swee Keong, Y., Rahman, H.S., Zamberi, N.R., Mohamad, N.E., Abu, N., Masarudin, M.J., Abdullah, R., Mohd Alitheen, N.B. (2020) Antitumor and Anti-Metastatic Effects of Citral-Loaded Nanostructured Lipid Carrier in 4T1-Induced Breast Cancer Mouse Model. *Molecules* 25:2670. (JIF=2.81, ISI-indexed Q2).
41. Ruman, U., Fakurazi, S., Masarudin, M.J., Hussein, M.Z. (2020) Nanocarrier-Based Therapeutics and Theranostics Drug Delivery Systems for Next Generation of Liver Cancer Nanodrug Modalities. *International Journal of Nanomedicine* 15:1437-1456. (JIF=4.471, ISI-Indexed Q1).
42. Usman, M. S., Hussein, M. Z., Kura, A. U., Fakurazi, S., Masarudin, M. J., Ahmad Saad, F. F. (2020) Chlorogenic acid intercalated Gadolinium-Zinc/Aluminium layered double hydroxide and gold nanohybrid for MR imaging and drug delivery. *Materials Chemistry and Physics*, 122232. (JIF= 2.781, ISI-Indexed Q2).
43. Sulita, N., Zainuddin, N., Ahmad, M., Masarudin, M.J. (2020) Preparation, Characterization and Swelling Studies of Carboxymethyl Sago Starch Hydrogel. *Malaysian Journal of Analytical Sciences* 24(2): 1-11. (SCOPUS-Indexed.)

2019

44. Koko, I., Ai-Lian Song, A., Masarudin, M. J., Abdul Rahim, R. (2019) Engineering integrative vectors based on phage site-specific recombination mechanism for *Lactococcus lactis*. *BMC Biotechnology* 19:82. (JIF=2.303, ISI-Indexed Q2).
45. Kavi Rajan, R., Hussein, M. Z., Fakurazi, S., Yusoff, K., Masarudin, M. J. (2019) Increased ROS Scavenging and Antioxidant Efficiency of Chlorogenic Acid Compound Delivered via a Chitosan Nanoparticulate System for Efficient *In Vitro* Visualization and Accumulation in Human Renal Adenocarcinoma Cells. *International Journal of Molecular Sciences* 20(19):4667. ((JIF= 3.226, ISI-Indexed Q2).
46. Talib, N., Mohamad, N. E., Hussin, Y., Aziz, M. N. M., Yeap, S. K., Masarudin, M. J., Sharifuddin, S. A., Yew, W. H., Ho, C. L., Alitheen, N. B. M. A. (2019). Isolation and Identification of *Lactobacillus* spp. from Kefir Samples in Malaysia. *Molecules* 24:2606 (JIF=2.81, ISI-indexed Q2).
47. Mohd Izham, M. N., Hussin, Y., Aziz, M. N. M., Yeap, S. K., Rahman, H. S., Masarudin, M. J., Mohamad, N. E., Abdullah, R., Alitheen, N. B. M. (2019). Preparation and characterization of self nano-emulsifying drug delivery system loaded with citral and its antiproliferative effect on colorectal cells *in vitro*. *Nanomaterials* 9:1028 (ISI-indexed Q1).
48. Jacob, P. J., Masarudin, M. J., Hussein, M. Z., Abdul Rahim, R. (2019). Optimization of process parameters influencing the sustainable construction of iron oxide nanoparticles by a novel tropical wetlands *Streptomyces* spp. *Journal of Cleaner Production* 232:193-202. (JIF=5.651, ISI-indexed Q1)

49. Nordin, N., Swee Keong, Y., Rahman, H. S., Zamberi, N. R., Abu, N., Mohamad, N. E., How, C. W., Masarudin, M. J., Abdullah, R., Alitheen, N. B. (2019) *In vitro* cytotoxicity and anticancer effects of citral nanostructured lipid carrier on MDA MBA-231 human breast cancer cells. *Scientific Reports* 9:1614. (JIF= 4.122, ISI-Indexed Q1)

2018

50. Hassan, U. A., Hussein, M. Z., Alitheen, N. B. M., Ariff, S. A. Y., Masarudin, M. J. (2018). *In vitro* cellular localization and efficient accumulation of fluorescently-tagged biomaterials from monodispersed chitosan nanoparticles for elucidation of controlled release pathways for drug delivery systems. *International Journal of Nanomedicine* 13:5075-5095. (JIF= 4.3, ISI-Indexed Q1)

51. Othman, N., Masarudin, M. J., Yee Kuen, C., Dasuan, N. A., Abdullah, L. C., Md. Jamil, S. N. A. (2018). Synthesis and Optimization of Chitosan Nanoparticles Loaded with L-Ascorbic Acid and Thymoquinone. *Nanomaterials* 8(11): doi: 10.3390/nano8110920 (ISI-indexed Q1)

52. Saad, F. F. A., Usman, M. S., Hussein, M. Z., Fakurazi, S., Masarudin, M. J. (2018). A bimodal theranostic nanodelivery system based on [graphene oxide-chlorogenic acid-gadolinium/gold] nanoparticles. *PLoS One* 13(7): e0200760. (ISI-Indexed Q1)

53. Asmawi, A. A., Salim, N., Cheng Loong, N., Ahmad, H., Abdulmalek, E., Masarudin, M. J., Abdul Rahman, M. B. (2018). Excipient selection and aerodynamic characterization of nebulized lipid-based nanoemulsion loaded with docetaxel for lung cancer treatment. *Drug Delivery and Translational Research*. <https://doi.org/10.1007/s13346-018-0526-4>. (JIF= 3.094, ISI-Indexed Q2)

54. Hussin, Y., Aziz, M. N. M., Rahim, N. F. C., Yeap, S. K., Mohamad, N. E., Masarudin, M. J., Nordin, N., Rahman, N. M. A. N. A., Yong, C. H., Akhtar, M. N., Zamrus, S. N. H., Alitheen, N. B. M. (2018). DK1 induces apoptosis via mitochondria-dependent signalling pathway in human colon carcinoma *in vitro*. *International Journal of Molecular Sciences* 19:1151, doi:10.3390/ijms19041151. (JIF= 3.226, ISI-Indexed Q2)

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Book / Book Chapters	<ol style="list-style-type: none"> 1. Gen: Inovasi Kehidupan! (2020). Academy of Sciences Malaysia. 2. Fakurazi, S., Muhammad, S.A., <u>Masarudin, M. J.</u>, and Hussein, M. Z. (2021). Safety Assessment and Nanotoxicology of Nanomaterials in Drug Delivery Systems. <i>Handbook of Research on Nano-Drug Delivery and Tissue Engineering: Guide to Strengthening Healthcare Systems</i>. Apple Academic Press. https://doi.org/10.1201/9781003161196.
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10. Masarudin, M. J., Cutts, S. M., Phillips, D. R., Pigram, P. J. (2015) Increasing the efficacy of anticancer therapies using monodispersed chitosan nanoparticles. Proceedings of Nanotech France 2015, Paris, France.
11. Masarudin, M. J. (2015). Developing a nanoparticle-mediated delivery system to increase doxorubicin efficacy for cancer therapeutics. Proceedings of the Russia-ASEAN Workshop on Nanobiotechnology: Achievements and Scope, Vladivostok, Russia.
12. Yahya Arif, S. A. & Masarudin, M. J. (2015). Encapsulation of miRNA in chitosan nanoparticles as a candidate for an anti-metastatic agent in cancer therapy. Proceedings of the Asian Congress of Biotechnology 2015, Hotel Istana, Malaysia.
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15. Masarudin, M. J. (2014). Development of a size controlled, monodispersed chitosan nanoparticle system for the efficient encapsulation and delivery of drugs and therapeutic biomolecules. Proceedings of the Putra Colloquium on Nanomedicine (PUTRACON) 2014, Universiti Putra Malaysia, Malaysia.
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18. Masarudin, M. J., Hussein, M. Z., Rahim, R. A., Yusoff, K. (2007). Synthesis of bionanohybrids containing plasmid DNA intercalated in layered double hydroxides and its cytotoxic effects on cell lines. Proceedings at the ISESCO International Workshop and Conference on Nanotechnology 2007, Hotel Equatorial Bangi, Selangor.

H. POSTGRADUATE SUPERVISION		
Category	Master	Ph.D
Graduated (As Chairman)	6	2
Graduated (As Member)	13	11
Current (As Chairman)	3	1
Current (As Member)	0	9

I. POSTGRADUATE EXAMINATION		
Category	Master	Ph.D
Chairman (Internal)	7	3
Examiner (Internal)	3	16
Examiner (External)	7	2

J. RESEARCH GRANTS				
Grant Name	Project Title	Role	Year	Value (RM)
Geran Putra Berfokus – Mahmood Merican & Ragayah Eusoff (GPF-MEGA)	Determining the environmental nanosafety and nanotoxicity of oil palm waste biomass-derived carbon quantum dots as nanomaterials for agricultural applications	Principle Researcher	2025-2027	60,000
UPM-IPS Grant Scheme	Development of a non-live feed incorporating solid lipid nanoparticles as a lipid source for larviculture of <i>Pangasius hypophthalmus</i>	Principle Researcher	2025-2027	20,000
Fundamental Research Grant Scheme (FRGS)	Developing a Nanofeed Formulation Derived from Chitosan as a Nutritional Subsistence for Improved Fish Larvae Digestibility and Developmental Quality of the Malaysian Lemon Fin Barb Hybrid (<i>Puntius Gonionotus</i> and <i>Puntius Daruphani</i>) and Seabass (<i>Lates calcarifer</i>)	Principle Researcher	2019-2021	71,500
UPM-GP Grant	Synthesis parameters affecting non-efficacious iron oxide nanoparticles utilising locally isolated bacterial strains as microbial nanofactories	Principle Researcher	2017-2019	40,000
Fundamental Research Grant Scheme (FRGS)	Investigating the Enhanced Functionality of miRNA-Encapsulated Chitosan Nanoparticles as an Anti-Metastatic Agent for Cancer Therapy	Principle Researcher	2013-2015	120,000
UPM-IPM Grant	Development of a nanoparticle-mediated delivery vector system for the enhanced therapeutic delivery of amino acids utilizing chitosan nanoparticles	Principle Researcher	2013-2015	50,000
UPM-IPB Grant	Developing a nanoparticulate-delivery system for increased therapeutic delivery of anticancer drugs using fluorescently labelled chitosan nanoparticles	Principle Researcher	2014-2016	135,000
Prototype Research Grant Scheme (PRGS)	Large Production of Microfeed, Enhanced with Probiotic as Artemia Alternative for Improving Survivability, Growth and Performance of Fish and Shrimp Larvi-culture	Associate Researcher	2020-2022	150,000
Malaysian Young Researchers Grant Scheme (MY-RGS)	Dual-pronged approach to increase production of farmed tilapia using lactococcal based vaccination and enzymiobiotic	Associate Researcher	2020-2022	250,000
Skim Geran Acculturation (SGA-UMS)	Biogenic green synthesis, characterisation and biomedical applications of silver nanoparticles using <i>Swietenia Macrophylla</i>	Associate Researcher	2020-2022	40,000
Fundamental Research Grant Scheme (FRGS)	The elucidation of molecular toxicity of imaging-based metallic nanoparticles contrast media	Principal Researcher	2019-2021	134,200
Fundamental Research Grant Scheme (FRGS)	Elucidating the Ameliorative effect and Mechanism of <i>Lactobacillus paracasei</i> strain HBUAS52231 on Neuroinflammation and Neurodegeneration in D-Galactose-Induced Aging Model	Associate Researcher	2022-2024	166,500
Fundamental Research Grant Scheme (FRGS)	Evaluation of Neuroprotective effect and mechanism of Kefir water in Alzheimer's Disease Model	Associate Researcher	2017-2019	350,000

Fundamental Research Grant Scheme (FRGS)	The mechanism of the formation of hydroxyapatite/montmorillonite nanocomposite for bone tissue engineering application	Associate Researcher	2018-2020	65,000
UPM-GPI Grant	The anti-tumor effects of Eucalyptol Loaded with Nanostructured Lipid Carrier (NLC-Eu) towards breast cancer cells in vitro and 4T1-breast cancer challenged mice <i>in vivo</i>	Associate Researcher	2017-2019	98,000
UPM-GP Grant	Analysing the Performance of Age as Determinant of Research Productivity among Various Fields of Studies	Associate Researcher	2016-2018	22,925
UPM-IPS Grant	Effects of Curcumin Analogue DK 1 on the Apoptotic & Metastatic Process of Bone Cancer Cell Lines In Vitro	Associate Researcher	2017-2019	25,000
UPM-IPS Grant	Effects of Curcumin Analogue DK 1 on the Apoptosis & Metastasis of Colon Cancer Cells In Vitro	Associate Researcher	2017-2019	25,000
UPM-IPS Grant	Nanomaterials-Mediated siRNA Delivery for Gene Therapy in Lung Cancer	Associate Researcher	2018-2020	24,912
UPM-IPS Grant	Intercalation and Control Released Study of Curcuma Longa into Zn Layered Double Hydroxide for Wound Healing Application	Associate Researcher	2015-2017	10,000
UPM-IPS Grant	Preparation and Controlled Released Study of ZN-Al-Layered Double Hydroxide- Carvacrol Nanocomposite for the Antibacterial Application	Associate Researcher	2015-2017	10,000
UPM-IPS Grant	Investigating the Mechanism During the Interaction Between Attenuated Pastereulla Multocida B:2 And Bovine Cells	Associate Researcher	2014-2016	15,000
UPM-IPS Grant	L-Ascorbic Acid and Thymoquinone as Biomolecular Compounds in Chitosan Nanoparticles for Transdermal Delivery Route	Associate Researcher	2017-2019	20,000
UPM-IPM Grant	Lactic Acid Bacteria as a bactofection model system for DNA vaccine delivery	Associate Researcher	2013-2015	50,000
Fundamental Research Grant Scheme (FRGS)	Identification and functional characterization of vacuolar processing enzyme (VPE) in banana during the invasion of Fusarium wilt	Associate Researcher	2015-2018	152,800
Fundamental Research Grant Scheme (FRGS)	Toxicological analysis of functionalised surface modified graphene oxide conjugated with biopolymers for efficient nano drug delivery system	Associate Researcher	2015-2017	78,000
Fundamental Research Grant Scheme (FRGS)	Investigating Interactions, Uptake, And Release Properties of Cinnamaldehyde In Layered Materials for Mosquito Control	Associate Researcher	2014-2016	60,000
Fundamental Research Grant Scheme (FRGS)	Mechanism of methicillin resistant Staphylococcus aureus biofilms degradation by phage therapy	Associate Researcher	2014-2016	155,000
Transdisciplinary Research Grant Scheme (FRGS)	Formulation and evaluation of Newcastle disease virus (NDV) vaccines encapsulated with biodegradable carriers for effective mass vaccination approach in chickens	Associate Researcher	2015-2017	406,000
TOTAL				2,724,837

K. PROFESSIONAL ACTIVITIES			
<i>Event</i>	<i>Role</i>	<i>Year</i>	<i>Level</i>
International Symposium for Advanced Materials and Nanotechnology 2025 (iSAMN2025)	Chairperson	2025	International
Consultancy Services Petrosains Facilitator 2025 - IBSE	Consultant	2025	National
National Science Challenge 2023	State Level Chairperson	2024	National
Malaysia-Japan International Conference on Nanoscience, Nanotechnology, and Nanoengineering 2023 (MJIC 2023)	Invited Speaker	2023	International
Workshop on Development of Self-Instructional Materials (SIM) for Teaching Pedagogy	Speaker	2023	National
National Science Challenge 2023	Lead Question Developer	2023	National
Symposium of the Malaysian Society for Microbiology 2023	Chair	2023	National
Kembara Sains Borneo 2023	Content Developer	2023	National
	Committee		
Development of National Research, Development, Innovation, Commercialisation, and Economy (RDICE) Roadmap	Writer	2022	National
International Putra InnoCreative Carnival in Teaching and Learning (i-PicTL) 2022	Judge	2022	International
	Committee		
National Science Challenge 2022	Question Developer	2022	National
MY-CRS Drug Delivery Seminar 01/2022 Nanomedicine in Oncology	Invited Speaker	2022	International
Malaysian Society for Molecular Biology And Biotechnology Best Scientist Award	Panel Evaluator	2022	National
Workshop on Development of MC Course for YSN-ASM IBSE Module	Module Developer	2022	National
6 th International Symposium on Advanced Materials and Nanotechnology (i-SAMN) 2022	Session Chairperson	2022	International
International Conference on Functional Genomics and Structure Biology (FGSB) 2022	Secretariat Committee	2022	International
Anugerah Fellowship Naib Canselor UPM 2022	Judge	2022	National
Symposium of the Malaysian Society for Microbiology 2022	Committee	2022	National
"Educational Trends and Challenges in the New Normal" Webinar by SHURE and Concept Audio	Panelist	2021	International
Malaysian Society for Microbiology National Postgraduate Symposium 2021	Scientific Committee	2021	National
Putra Cancer Symposium 2021	Lead, Scientific Committee	2021	National
International Symposium of the Malaysian Society for Microbiology 2021	Scientific Committee	2021	International
Joint Academic Microbiology Seminar Singapore Chapter	Speaker Panelist	2021	International
Malaysian Society for Molecular Biology and Biotechnology Awards	Panel Evaluator	2021	National
Virtual workshop on Analyzing the Advancing Biotechnology Landscape in Malaysia and Managing the Associated Risks	Panel	2021	International
National Science Challenge 2021 Semi Finals	Judging Panel	2021	National
ASEAN YSN Leadership Webinar	Secretariat	2020	International
JAMSKL-MSM Science Webinar Series	Lead Co-Organiser	2020	National
AdiWira Nano 2020	Judging Panel	2020	National
IBSE Biology STEM Module	Module Developer	2019-2020	National

Pure and Applied Biology Colloquium (PABC 2019)	Plenary Speaker	2019	National
NanoMiTe Symposium & Nanotechnology Malaysia Symposium (NanoSym 2019)	Invited Speaker	2019	National
AFOB-MC International Symposium 2019	Event Committee	2019	International
International Symposium of the Malaysian Society for Microbiology 2019	Lead Secretariat	2019	International
IBSE Module for School Teachers	Module Developer	2019	National
7th ASEAN+3 Junior Science Odyssey	Module Lead Developer	2018	International
The 3rd International Conference and Workshop on Functional Genomics and Structural Biology 2018	Secretariat	2018	International
International Conference on Biochemistry, Molecular Biology and Biotechnology 2018	Panelist	2018	International
Workshop on Biosynthesis of Nanoparticles for Biotechnology Applications 2018	Invited Speaker	2018	National
International Conference of The Malaysian Society for Microbiology 2017 (ICMSM2017)	Secretariat	2017	International
UPM Cancer Research Symposium 2017	Panelist	2017	National
Workshop on Recombinant DNA Technology	Facilitator / Speaker	2017	National
National Science Challenge 2017	Panel Judge	2017	National
Malaysian Educational Institute of Responsible Conduct of Research (RCR) Workshop	Panelist	2016	National
National Science Challenge 2016	Panel Judge	2016	National
Symposium for the Malaysian Society for Microbiology	Secretariat Chairperson	2016	National
ASIAN Congress on Biotechnology 2015 (ACB2015)	Protocol Committee	2015	International
APEC-ASM Young Scientist Workshop on Effective Science Communication in the 21 st Century	Facilitator	2015	International
Russia-ASEAN Workshop on Nanobiotechnology: Achievements and Scope	Panelist	2015	International
ASM Duta Science Workshop 2015	Facilitator	2015-2016	National
FGSB Workshop on Molecular Biology and Protein Expression Techniques 2015	Vice Chairman	2015	National
	Facilitator		
MSM National Postgraduate Seminar 2014	Secretary	2014	National
	Scientific Committee		
Putra Colloquium on Nanomedicine 2014	Session Chairperson	2014	UPM
International Symposium and Workshop on Functional Genomics and Structural Biology (FGSB) 2014	Secretariat Committee	2014	International
Bengkel Pelan Startegik Peningkatan Peratus Jurnal Q1/Q2	Moderator	2014	UPM
International Congress of the Malaysian Society for Microbiology (ICMSM) 2013	Scientific Committee	2013	International
Workshop on Demand-Driven Collaborative Research Initiative	Committee Member	2013	International