

Publications 2014

Journals

1. A Rahman, N.F., Md Aman, R., Mat Yunus, AM., Ayob, N.H., Omar, A.R., Ghulam Kadir, A.P. & Ismail, I. 2014. Molecular analysis of transgenic oil palm to detect the presence of transgene. *Journal of Oil Palm Research* 2(6): 96-103.
2. Ahmad, N., Amin, M.C., Mahali, S.M., Ismail, I. & Chuang, V.T. 2014. Biocompatible and mucoadhesive bacterial cellulose-g-poly(acrylic acid) hydrogels for oral protein delivery. *Molecular Pharmaceutics* 11: 4130-4142.
3. Ahmad, R., Baharum, S.N., Bunawan, H., Lee, M., Normah, M.N., Rohani, E.R., Ilias, N. & Zin, N.M. 2014. Volatile profiling of aromatic traditional medicinal plant, *Polygonum minus* in different tissues and its biological activities. *Molecules* 19: 19220-19242.
4. Al Muqarrabun, L.M.R., Ahmat, N., Ruzaina, S., Aris, S., Shamsulrijal, N., Baharum, S.N., Ahmad, R., Rosandy, A.R., Suratnam, M.N., Takayama, H. 2014. A new sesquiterpenoid from *Scaphium macropodium* (Miq.) Beumee. *Natural Product Research* 28(9):597-605.
5. Amjad, M. W., Mohd Amin, M.C.I., Mahali, S.M., Katas, H., Ismail, I., Hassan, M.N. & Chuang, V.T. G. 2014. Nanoscale diblock copolymer micelles: Characterizations and estimation of the effective diffusion coefficients of biomolecules. *PLOS One* 9(8):e105234.
6. Ashraf, M.F.,Aziz, M.A., Kemat, N. & Ismail, I. 2014. Effect of cytokinin types, concentrations and their interaction on in vitro shoot regeneration of *Chlorophytum borivillianum* Sant & Fernandez. *Electronic Journal of Biotechnology* 17: 275-279.
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8. Bunawan, H., Amin, N.M., Bunawan, S.N., Baharum, S.N. & Normah, M.N. 2014. *Ficus deltoidea* Jack: A review on its phytochemical and pharmacological importance. *Evidence-Based Complementary and Alternative Medicine* ID 902734.
9. Chan, P.-L., Rose, R.J., Abdul Murad, A.M., Zainal, Z., Leslie Low, E.-T., Ooi, L.C.-L., Ooi, S.-E., Yahya, S. & Singh, R. 2014. Evaluation of reference genes for quantitative real-time PCR in oil palm elite planting materials propagated by tissue culture. *PLoS ONE* 9:6 (e99774).
10. Cheng, A., Ismail, I., Osman, M. & Hashim, H. 2014. Mapping of quantitative trait loci for aroma, amylose content and cooked grain elongation traits in rice. *Plant Omics* 7(3):152-157.
11. Ee, S.F., Khairunnisa, M.B., Mohamed-Hussein, Z.A., Noor Azmi, S. & Zainal, Z. 2014. Effective hygromycin concentration for selection of *Agrobacterium*-mediated transgenic *Arabidopsis thaliana*. *Malaysian Applied Biology* 43(1): 119-123.
12. Ee, S.F., Mohamed-Hussein Z.A., Othman, R., Shaharuddin, N.A., Ismail, I. & Zainal, Z. 2014. Functional characterization of sesquiterpene synthase from *Polygonum minus*. *The Scientific World Journal* Article ID 840592.
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18. Loenarz, C., Sekirnik, R., Thalhammer, A., Ge, W., Spivakovsky, E., Mackeen, M.M., McDonough, M.A., Cockman, M.E., Kessler, B.M., Ratcliffe, P.J., Wolf, A. & Schofield, C.J. 2014. Hydroxylation of the eukaryotic ribosomal decoding center affects translational accuracy. *Proceedings of The National Academy of Sciences of The United States of America* 111(11):4019-24.
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20. Nawawi, M.F., Sahrani, F.K., Azizan, K.A., Ali, M.M., Ahmad, A., Usup, G. 2014. Sulfate-reducing bacteria metabolite detection using GC-MS. *Malaysian Applied Biology* 43 (1): 41-51.
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23. Refaei, J., Mohamed-Hussein, Z.A & Santhanam, J. 2014 . Diversity of type I polyketide synthase genes in a bioactive *Phoma* sp. endophytic fungus isolated from *Cinnamomum mollissimum* in Malaysia. *Journal of Pure & Applied Microbiology* 8(2): 1173-1182.
24. S.L. Pang, S.S. Ong, H.H. Lee, Z. Zamri, K.I. Kandasamy, C.Y. Choong & R. Wickneswari. 2014. Isolation and characterization of CCoAOMT in interspecific hybrid of *Acacia auriculiformis* x *Acacia mangium* - a key gene in lignin biosynthesis. *Genetics and Molecular Research* 13 (3): 7217-7238.
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26. Shaibullah, S., Mohd-Sharif, N., Ho, K.L., Raih, M.F., Nathan, S., Mohamed, R. & Ng, C.L. 2014. Crystallization and preliminary crystallographic studies of the hypothetical protein BPSL1038 from *Burkholderia pseudomallei*. *Acta Crystallographica Section F Structural Biology Communications* F70: 1697–1700.
27. Song, A.A., Abdullah, J.O., Abdullah, M.P., Shafee, N., Othman, R., Noor, N.M. & Rahim, R.A. 2014. Engineering the lactococcal mevalonate pathway for increased sesquiterpene production. *FEMS Microbiology Letters*. 355(2):177-84.
28. Wan M. Aizat, Daniel A. Dias, James C.R. Stangoulis, Jason A. Able, Ute Roessner, Amanda J. Able. 2014. Metabolomics of capsicum ripening reveals modification of the ethylene related-pathway and carbon metabolism. *Postharvest Biology and Technology* 89: 19–31.
29. Wan Seman, W.M.K., Bakar, S.A., Bukhari, N.A., Gaspar, S.M., Othman, R., Nathan, S., Mahadi, N.M., Jahim, J., Murad, A.M.A. & Abu Bakar, F.D. 2014. High level expression of *Glomerella cingulata* cutinase in dense cultures of *Pichia pastoris* grown under fed-batch conditions. *Journal of Biotechnology* 184: 219–228.
30. Zulkifli, Y. Rajinder, S., Mohd Din, A., Ting, N.C., Rajanaidu, N., Kushairi, A., Musa, B., Mohamad, O. & Ismanizan, I. 2014. Inheritance of SSR and SNP loci in an oil palm interspecific hybrid backcross (BC2) population Inheritance of SSR and SNP loci in an oil palm interspecific hybrid backcross (BC2) population. *Journal of Oil Palm Research* 26 (3): 203-213.

Indexed proceedings

1. G.P.S. Elcy, Y.J. Park, M.C. Mahani, M.N. Normah. 2014. Simple sequence repeats (SSR) profiling of cultivated 'limau purut' in Malaysia. *ISHS Acta Horticulturae 1024: International Symposium on Tropical and Subtropical Fruits*. pg. 77-84.
2. Normah, M.N. 2014. Using Systems Biology to solve the riddle of recalcitrant tropical plants. *ISHS Acta Horticulturae 1039: II International Symposium on Plant Cryopreservation*. pg. 211-218.

Books

1. Normah, M.N. (ed.) 2014. *Bioinformatics in Systems Biology & Cryopreservation in Agrobiodiversity*. Penerbit Universiti Kebangsaan Malaysia, ISBN 9789674122478.

Monograph

1. Yam Wai Keat, Christopher Voo Lok Yung, Afnizanfaizal Abdullah, Mohd Firdaus Mohd Raih, Rabiatal Adawiah Zainal Abidin, Shahir Shamsir Omar, Laurence Croft & Zeti Azura Mohamed Hussein. 2014. *Bioinformatics Establishment in National Biotechnology Research*. INBIOSIS, ISBN 978-983-44317-5-4.

Other publications

1. Ahmad, R., Baharum, S.N. & Normah, M.N. 2014. Direct discrimination of different tissue of *Polygonum minus* by Fourier Transform Infrared Spectroscopy. *International Conference on Natural Products 2014*. 18-19 Mac 2014, Palm Garden Hotel, Putrajaya, Malaysia. pg. 139.
2. Azizan, K.A., Normah, M.N., Resson, H.W. & Baharum, S.N. 2014. Metabolic flux analysis (MFA) of *L. lactis* grown at different conditions using ¹³C-labelling experiments and gas chromatography-mass spectrometry (GC-MS). *The 13th Symposium Malaysian Society of Applied Biology. Applied biology: The new age*. 8-10 June 2014, The Legend Resort, Cherating, Pahang, Malaysia. pg. 97.
3. Azizan, K.A., Normah, M.N., Resson, H.W. & Baharum, S.N. 2014. Metabolomics and ¹³C labeling fluxomics for systematic analysis of *Lactococcus lactis* at different growth conditions. *10th European Symposium on Biochemical Engineering Sciences and 6th International Forum on Industrial Bioprocess*. 7-10 September 2014, France. pg. 63.
4. Bakar, S.A., Azlan, N.D.K., Goh, H.H., Zainal, Z. & Normah, M.N. 2014. Time-course transcriptome analysis of *Garcinia mangostana* L. seed germination. *Plant Genomics Congress Asia*. 24-25 Feb 2014, Kuala Lumpur.
5. Bakar, S.A., Azlan, N.D.K., Goh, H.H., Zainal, Z. & Normah, M.N. 2014. Transcriptome of *Garcinia mangostana* L. (mangosteen) seed germination. *The 2nd International Symposium and Workshop on Functional Genomics and Structural Biology*. 21-24 January 2014, Mines Wellness Hotel, Malaysia. pg. 37.
6. Ghani, N.R.N.A. & Hassan, M. 2014. Partial purification and characterization of novel monoterpene dehydrogenase from plant. *The 2014 Annual Meeting of Japan Society for Bioscience, Biotechnology and Agrochemistry*. 28 - 30 March 2014, Japan.
7. Hazirah, S.Z., Isa, M.Z.A., Ismanizan, I. & Rajinder, S. 2014. Evaluation of microsatellites for detection of contamination in a selected dura x pisifera (DxP) oil palm (*Elaeis guineensis* JACQ.) population. *The 13th Symposium Malaysian Society of Applied Biology. Applied biology: The new age*. 8-10 June 2014, The Legend Resort, Cherating Pahang, Malaysia. pg. 121.
8. Illias, I.A., Othman, B.A., Baharum, S.N. & Goh, H.-H. 2014. Expansin manipulation effect on the growth and cell wall composition of *Arabidopsis hypocotyl*. *International Conference on Plant Physiology*. 26-28 August 2014. Discovery Kartika Plaza Hotel, Bali, Indonesia. pg. 44-45.
9. Ismanizan, I. 2014. The regulatory activities of micro-RNA's: A dynamic perspective in plant system. *The 13th Symposium Malaysian Society of Applied Biology. Applied biology: The new age*. 8-10 June 2014, The Legend Resort, Cherating Pahang, Malaysia. pg. 59-60.
10. Jamali, S.A.M., Baharum, S.N., Normah, M.N., Azizan, K.A. & Taib, M. 2014. Metabolomics approach to elucidate cadmium response mechanism in mangrove fungus *Trichoderma atroviride*: A preliminary study. *32nd Symposium of the Malaysian Society for Microbiolog*. 6-8 December 2014, Terengganu Equestrian Resort, Terengganu.
11. Mat Yusop, J., Rahaman, S.N.A., Ng, C.L. & Mohamed-Hussein, Z.A. 2014. Function inference of C1ORF123 hypothetical protein through computational analysis. *19th Biological Sciences Graduate Congress*. 12th-14th December 2014, National University of Singapore.

12. Mohammad Sidik, A., Ng, C.L., Raih, M.F. & Sulaiman, N. 2014. Initial characterization of the *Pteroptyx tener* firefly transcriptome. *19th Biological Sciences Graduate Congress*. 12th-14th December 2014, National University of Singapore.
13. Murthy, S. & Othman, R. 2014. Functional analysis of *Euchema denticulatum* gene involved in phytoremediation. *International Conference on Plant Physiology*. 26-28 August 2014, Discovery Kartika Plaza Hotel, Bali, Indonesia. pg. 37-38.
14. Murthy, S. & Othman, R. 2014. Functional analysis of phytochelatin synthase with phytoremediation potentials. *AFOB Regional Symposium 2014 (ARS2014)*. 9–11 February 2014, Kuala Lumpur, Malaysia.
15. Murugan, N., Madon, M., Goh, H.H. & Normah, M.N. 2014. Cytogenetic characterisation and bioinformatics analysis of mangosteen (*Garcinia mangostana* L.) genome. *Plant Genomics Congress Asia*. 24-25 February 2014, Kuala Lumpur.
16. Noor Farhan, O., Sze Lei, P., Muhammad Safwan R., Kumaran S., Ee Fun T., Maizom H., Roohaida O. & Ng, C.L. 2014. Cloning, expression and purification of recombinant *Polygonum minus* α -farnesene synthase. *International Conference on Advance in Plant Biochemistry and Biotechnology*. 9-10 December 2014, Universiti Putra Malaysia. pg. 98.
17. Normah, M.N., Sulong, N., Yap, L.V., Ahmad Fadzil, N., Ibrahim, S. & Shahabudin, N.F. 2014. Development of cryopreservation protocols for the conservation of tropical recalcitrant seeded garcinia species. *8th National Seed Symposium 2014*. 29-30 April 2014, Malaysia.
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19. Pang, S.L., Chew, F.T., Ho, K.L., The, A.H. & Ng, C.L. 2014. Structural and allergenicity studies of group 21 allergens from house dust mites. *Annual Conference of the Malaysian Society for Biochemistry & Molecular Biology*. 25-26 June 2014, Sama-Sama Hotel, KLIA, Sepang, Malaysia.
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 29. Sheik Abd Rahim, S.M.A., Zainal, Z. & Md. Isa, N. 2014. Identification of downregulated genes in *Oryza sativa* var. kuku belang using RNA-SEQ. *The 13th Symposium Malaysian Society of Applied Biology. Applied biology: The new age*. 8-10 June 2014, The Legend Resort, Cherating Pahang, Malaysia. pg. 135.
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 32. Zakaria, N.F., Soon, L.L., Kevin Kit, S.N., Lee, H.T., Chin, H.N., Chai, T.L., Naoki, T., Bibian, D., Lucy, C., Even, K. & Ismail, I. 2014. Genetics conservation of vulnerable peat swamp *Gonystylus bancanus* (Thymelaeaceae). *The 13th Symposium Malaysian Society of Applied Biology. Applied biology: The new age*. 8-10 June 2014, The Legend Resort, Cherating, Pahang, Malaysia. pg. 108-109.