

CURRICULUM VITAE

A. Personal Details

1. **Name** : Assoc. Prof. Dr. Norrizah binti Jaafar Sidik
2. **Department** : School of Biology
3. **Faculty** : Faculty of Applied Sciences
4. **Tel. No. (Off/Hp)** : 03-5544 4561, 013-2626737
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7. **Address** : School of Biology, Faculty of Applied Sciences,
Universiti Teknologi MARA (UiTM), 40450, Shah Alam, Selangor,
MALAYSIA
8. **Current Position:** Head, School of Biology, Faculty of Applied Sciences,
Universiti Teknologi MARA, S.Alam

B. Academic Qualification

No.	Qualification	Year	Institution
1.	PhD (Plant Biotechnology)	2008	Universiti Putra Malaysia (UPM)
2.	MSc (Ecophysiology)	1995	Universiti Malaya (UM)
3.	BSc. (Botany)	1989	Universiti Malaya (UM)

C. Professional Memberships

No.	Institution
1.	International Society of Horticulture Science (ISHS) (International)
2.	Malaysian Society of Plant Physiology (MSPP)
3.	Asian Federation of Biotechnology (AFOB)

D Field of Research/Expertise

1.	Plant Biotechnology
2.	Plant Tissue Culture
3.	Plant Physiology
4.	Cytotoxicity, Anti-inflammatory, Anti-tyrosinase, Anti-Elastase Antioxidant Activities
5.	Enhancement of Secondary Metabolites Production in Plant Cell Cultures

CONFERENCES AND TRAINING

NO.	CONFERENCES/TRAINING	VENUE	YEAR
1.	Seminar Biokeselamatan Kebangsaan 2017	9 Mei, 2017	Hotel Le Meridien, Putrajaya, Malaysia
2.	Workshop on Planning and Management of Micro Smart Grid (SG) System	28-29 Ogos, 2017	Asia Hotel Bangkok, Bangkok, Thailand
3.	UI-UiTM Renewable Energy Workshop 2017	9-10 Mac, 2017 (Keynote Speaker)	Chevron Room, Faculty of Engineering Universitas Indonesia Campus
4.	Seminar Biokeselamatan Kebangsaan 2017	9 Mei, 2017	Hotel Le Meridien, Putrajaya, Malaysia
5.	International Conference on "Engineering and Technology, Computer, Basic & Applied Science"	18-19 Jan 2016 (Oral Presentation)	Kuala Lumpur
6.	International Conference on Knowledge Transfer (ICKT) Knowledge transfer on Plant tissue culture technique to Budayatama Sdn. Bhd.	30 – 1 Dec 2016 (Oral Presentation)	Olive Tree Hotel, Penang
7.	Persidangan Kebangsaan Mengenai Akses kepada Sumber Biologi dan Perkongsian Faedah (ABS)	30 Ogos 2016	Kuala Lumpur
8.	Asean Bamboo Symposium 2016 (ABS2016)	27-29 Sept 2016	Kuala Lumpur
9.	ASEAN SMART GRID CONGRESS 2 2016 (ASGC2)	8-9 Nov 2016	Shah Alam

	Student's Name (Postgraduate)	MSc/PhD	Main Supervisor/Co- Supervisor	Graduated/On Going
1	Yasser Suhaimi Mohamad	MSc	Main Supervisor	Graduated
2	Wan Hidayah Wan Ahmad	MSc	Main Supervisor	Graduated
3	Haliza Dahlia Abdul Halim	MSc	Main Supervisor	Graduated
4	Saiyidah Nafisah Hashim	MSc	Main Supervisor	Graduated
5	Ellia Kartini Mujar	MSc	Main Supervisor	Graduated
6	Zati Hanani Termizi	MSc	Main Supervisor	Graduated
7	Fakharul Razin Hasan	MSc	Main Supervisor	Graduated
8	Nor Yasmin Mohamad Fauzi	MSc	Main Supervisor	Graduated
9	Nursuria Setamam	MSc	Main Supervisor	Graduated
10	Ainan Tasneem Redzuan	MSc	Main Supervisor	Graduated
11	Anis Athirah Zakaria	MSc	Co-Supervisor	Graduated
12	Nur Athirah Mohd Adam	MSc	Main Supervisor	On Going
13	Nur Inani Rezali	MSc	Main Supervisor	Graduated
14	Dayang Nur Atiqah Awang Khalid	MSc	Main Supervisor	On Going
15	Diyana Sakinah Mohamed Soder	MSc	Main Supervisor	On Going
16	Nurul Huda Che Isa	MSc	Co-Supervisor	On Going
17	Afifah Khamis	MSc	Co-Supervisor	On Going
18	Izzati Nasuha Ismail	MSc	Co-Supervisor	On Going
19	Nor Dayana Athirah	MSc	Main Supervisor	On Going
20	Nurul Hanani Kamarudin	MSc	Co-Supervisor	Graduated
21	Salehuddin Asyraf Mohd Najib	MSc	Co-Supervisor	On Going
22	Norina Abdul Rahim	MSc	Co-Supervisor	On Going
23	Amira Nabilah Mohd Nizam	MSc	Main Supervisor	On Going
24	Nurul Amirah Arina Elfian	MSc	Main Supervisor	On Going
25	Nurul Izzati Osman	PhD	Main Supervisor	Graduated
26	Sheikh Ahmad Izaddin Sheikh Mohd Ghazali	PhD	Co-Supervisor	Graduated
27	Nor Yasmin Mohamad Fauzi	PhD	Co-Supervisor	On Going
28	Saiyidah Nafisah Hashim	PhD	Main Supervisor	Graduated

CONFERENCES

1.	Go Green International Summer Camp with University Sussex, United Kingdom.	2016 Deputy Chairman
2.	“TSUNAMI WAVE SCIENCE”: MEANINGFUL ACADEMIC VISIT TO BANDA ACEH with Universitas Syiah, Indonesia	6-16 Dis 2016 Deputy Chairman
3.	ASEAN GRID CONGRESS 2 2016 (ASGC 2) (International Congress)	8-10 Nov 2016 Head of Registration and Gift Committee
4.	ASEAN BAMBOO SYMPOSIUM 2016	27-29 Sept 2016 Sponsorship Committee

Project with the Industry/Company

Knowledge transfer on plant tissue culture technique to Budayatama Sdn Bhd.	Knowledge Transfer Programme (KTP)	100%	Project Leader 01-09-2014 31-08-2016
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Projects with the other Universities

Penghasilan Metabolit Sekunder melalui system <i>in vitro</i> tumbuhan herba yang berpotensi sebagai pengawet semulajadi	Universiti Pendidikan Sultan Idris (UPSI)	100%	April 2016 – April 2017
Understanding the relationship between elevated carbon dioxide (CO ₂) and the dynamics of terrestrial microalgae in monoculture and mixed culture	Geran Penyelidikan Kursi Perubahan Iklim UKM-YSD	100%	2015-2017

AWARDS

No	Event	Medal	Place	Year
1.	24th International Invention, Innovation & Technology Exhibition 2013 (ITEX 2013)	Gold Medal.	KLCC	9-11 Mei 2013.
2.	Malaysian Agricultural Innovation Challenge (MAGIC) 2014	Silver Medal	Malaysia Agro Exposition Park Serdang (MAEPS)	6-8 Nov 2014
3.	International Conference on Applied Sciences and Industrial Technology (ICASIT 2015)	Best Paper (Biology and Life Science)	Grand Lexis Port Dickson	25-26 Feb 2015

RESEARCH PROJECTS OVER THE LAST 5 YEARS ONLY

	PROJECT TITLE	START DATE	COMPLETED DATE	ROLE
1	PLANT TISSUE CULTURE SYSTEM FOR PHYTOCHEMICAL STUDIES SEVERAL SELECTED MEDICINAL PLANTS SPECIES *	01-01-2007	23-09-2013	Project Leader
2	PHYTOCHEMICAL AND MOLECULAR STUDIES OF POGOSTEMON CABLIN NATURAL PLANT AND IN VITRO CULTURES	01-01-2010	20-05-2013	Project Leader
3	MASS PRODUCTION OF WATERMELON SEEDLINGS (CITRULLUS LANATUS)	01-01-2010	20-05-2013	Project Leader
4	ASSESSMENT OF SECONDARY METABOLITES IN DIFFERENT CELL SUSPENSION CLONE CULTURES OF OIL PALM (ELAEIS GUINEENSIS)	27-12-2010	01-02-2013	Member
5	BIO-ORGANIC TISSUE CULTURE MEDIA FROM AGRICULTURAL WASTE	01-07-2012	31-12-2014	Member
6	SECONDARY METABOLITES PROFILES OF TACCA INTEGRIFOLIA IN VITRO CULTURES	01-09-2012	31-08-2014	Member
7	THE EFFECT OF MACRONUTRIENT CONCENTRATIONS ON THE GROWTH OF STEVIA	01-10-2012	30-09-2014	Project Leader

	PROJECT TITLE	START DATE	COMPLETED DATE	ROLE
	REBAUDIANA SHOOT CULTURE AND STEVIOSIDE AND REBAUDIOSE A PRODUCTIONS			
8	UNDERSTANDING OF METHYL JASMONATE INFLUENCE ON SYNTHESIS OF KINSENOSE IN ANOETECHILUS FORMOSANUS IN VITRO CULTURES	15-09-2013	14-09-2015	Member
9	SHIFT IN DIVERSITY AND ABUNDANCE OF TERRESTRIAL ALGAE ASSEMBLAGES (CHLOROPHYTA, CHROCOCCALES) EXPOSED TO ATMOSPHERIC POLLUTANTS RELEASED FROM MOTOR VEHICLES	15-09-2013	14-03-2016	Member
10	MODIFIED SYNTHESIS OF INTERCALATED FLUFENAMIC ACID AND FENOPROFEN INTO LAYERED DOUBLE HYDROXIDES FOR THE FORMATION OF A NEW CONTROLLED RELEASE ANTI-INFLAMMATORY DRUG	01-07-2014	31-12-2016	Member
11	GALLIC ACID AND BARTOGENIC ACID ENHANCEMENT IN ELICITED CELL SUSPENSION CULTURE AND ANTI-INFLAMMATORY ACTIVITY OF BARRINGTONIA RACEMOSA(PUTAT)	01-07-2014	30-06-2017	Project Leader
12	KNOWLEDGE TRANSFER ON PLANT TISSUE CULTURE TECHNIQUE TO BUDAYATAMA SDN BHD	01-09-2014	31-08-2016	Project Leader
13	IN VITRO MULTIPLICATION, PHYSIOLOGICAL AND ANTIMICROBIAL ACTIVITIES OF ENDANGERED MEDICINAL PLANT (MELASTOMA DECEMFIDUM)	01-12-2014	30-05-2017	Member

	PROJECT TITLE	START DATE	COMPLETED DATE	ROLE
14	BIOPROCESS FOR THE SECONDARY METABOLITES PRODUCTION IN CALLUS SUSPENSION CULTURES OF CLINACANTHUS NUTANS	01-12-2015	30-11-2017	Member
15	AN EFFICIENT ALTERNATIVE APPROACH FOR PLANT TISSUE CULTURE MEDIA FROM OIL PALM BIOMASS.	01-09-2016	31-08-2018	Member
16	ESTABLISHMENT OF CELL SUSPENSION CULTURES FOR PLANT SECONDARY METABOLITES STUDY IN BARRINGTONIA RACEMOSA L	01-09-2016	31-08-2018	Project Leader
17	ESTABLISHMENT OF CELL SUSPENSION CULTURES FOR SECONDARY METABOLITE PRODUCTION AND ANTI-INFLAMMATORY ACTIVITY OF BARRINGTONIA RACEMOSA L. (PUTAT)	01-09-2016	31-08-2017	Project Leader
19	<i>IN VITRO</i> RESPONSE OF CANARIUM ODONTOPHYLLUM EXPLANTS IN DIFFERENT CONCENTRATIONS OF PLANT HORMONES	2017-07-01	2018-06-30	Project Leader
20	LABELING OF FOREST TREES, TRAILS & INFRASTRUCTURES OF RESEARCH STATION IN KUALA KENIAM	2017-07-01	2017-12-31	Member
21	CONSERVATION VALUES OF LIMESTONE FOREST STANDS IN SELECTED ISLAND ECOSYSTEMS OF LANGKAWI ARCHIPELAGO	2017-07-01	2019-06-30	Member

Project with the Industry/Company

Knowledge transfer on plant tissue culture technique to Budayatama Sdn Bhd.	Knowledge Transfer Programme (KTP)	Project Leader 01-09-2014 31-08-2016
Malaysian Palm Oil Board	Collaboration	2013-2018
Malaysian Agricultural Research and Development Institute (MARDI)	Collaboration	2014-2018

Projects with the other Universities

Penghasilan Metabolit Sekunder melalui system <i>in vitro</i> tumbuhan herba yang berpotensi sebagai pengawet semulajadi	Universiti Pendidikan Sultan Idris (UPSI)	April 2016 – April 2017
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1.	Go Green International Summer Camp with University Sussex, United Kingdom.	2016 (Deputy Chairman)
2.	“TSUNAMI WAVE SCIENCE”: MEANINGFUL ACADEMIC VISIT TO BANDA ACEH with Universitas Syiah, Indonesia	6-16 Dis 2016 (Deputy Chairman)
3.	ASEAN GRID CONGRESS 2 2016 (ASGC 2) (International Congress)	8-10 Nov 2016 (Head of Registration and Gift Committee)
4.	ASEAN BAMBOO SYMPOSIUM 2016	27-29 Sept 2016 (Sponsorship Committee)

No.	Event	Medal	Place	Year
1.	Conference on Scientific and Social Research (CSSR 2008/2009)	Best Research Paper	A'Famosa Resort, Melaka	2009

2.	Inventions, Innovation and Designs Competition Products IID 2009	Silver Medal.	Dewan Sri Budiman, UiTM	2009
3.	Award for Excellence Service by University Technology MARA	Certificate	UiTM Shah Alam.	2010
4.	3 rd International Biotechnology and Biodiversity Conference and Exhibition (BIOJOHOR)	Best Poster.	Johor Bharu,	2012
5.	Invention, Innovation and Design (IID) Exhibition 2012 UiTM Johor	Silver Medal.	UiTM Johor	2012
6.	Invention, Innovation & Design Expo 2013 (iindex2013),	Gold Medal and Diamond Medal	DATC	2013
7.	24th International Invention, Innovation & Technology Exhibition 2013 (ITEX 2013)	Gold Medal.	KLCC	9-11 Mei 2013.
8.	Malaysian Agricultural Innovation Challenge (MAGIC) 2014	Silver Medal	Malaysia Agro Exposition Park Serdang (MAEPS)	6-8 Nov 2014
9.	International Conference on Applied Sciences and Industrial Technology (ICASIT 2015)	Best Paper (Biology and Life Science category)	Grand Lexis Port Dickson	25-26 Feb 2015

	<p>External Examiner</p> <ol style="list-style-type: none"> 1. Muhammad Azwan bin Zulkifli (MSc) Analysis of Oil Palm Samples Generated from Screenings of natural haploids and wide hybridization 2. Asma Abobaker A. Shanab (MSc) Impact of salinity on seed germination and antioxidative profiling of tomato (<i>Solanum lycopersicum</i> cv. MT1) 3. Tg. Azia Farahin (MSc) Tissue Culture, Morphological study and antioxidant profiling on <i>Cucumis sativus</i> cv. MT12 4. Samar Jasim Mohammed (MSc) Impact of NaCl, KCl, CaCl and MgSO₄ on seed germination, seedling growth and leaf anatomy of cucumber (<i>Cucumis sativus</i> CV MT12) 5. Ayat Mohammad Mutleq Taneenah (MSc)
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The impact of dead sea water, sea water and NaCl on the germination, anatomical and antioxidant profiling of *Molokhia* (*Corchorus olitorius* L.)

6. Najihah Mohd Najid (MSc)

Analisis Pemprofilan Metabolit dan Corak Pengekspresan Gen Chalcone synthase (fdCHS) dan Chalcone isomerase (fdCHI) terhadap penghasilan naringenin dan vitexin didalam *Ficus deltoidea* var. *deltoidea* dan var. *angustifolia*

7. Muhammad Al Amin Mazlan (MSc)

Plant tissue culture of *Punica granatum* (Pomegranate)

8. Ahsan A.Kadhimi (PhD)

In vitro mutation and induction of local rice varieties MRQ74 and MR269 for drought tolerance and genetic variation assessment by ISSR molecular markers

Internal Examiner

1. Nur Hanis Atikah Mat Yusoff (MSc)

Acclimatization of elite *in vitro* seedling and clonal *Lycium barbarum* L. (Goji).

2. Borhan Abdul Haya@yahya (MSc)

The Effects of oil palms's empty fruit bunch compost, hexaconazole and the combination of both on the growth and yield of vitato grown in sandy soil.

3. Nurul Ain Noor Rahman (MSc)

Assessment of KARas (*Aquilaria malaccensis*) performance in different agroforestry system in Rembau, Negeri Sembilan.

4. Mizan Awab (MSc)

Callus Induction ability of Roselle (*Hibiscus sabdariffa* L.) varieties Terengganu and UKMR-2.

5. Nur Syamimi Mohd Napis (MSc)

Genetic stability of cryopreseved MR 219 Rice variety revealed by Inter-Retrotransposon amplified polymorphism (IRAP).

6. Shafiqah Nabilah Samsul Bahari (MSc)

Propagation of *Labisia pumila* var. *alata* (Clone KF08) through leaf cuttings and tissue culture.

7. Nor Yusliza Kamaruddin (MSc)

The effects of gamma rays on morphology, biochemical and genetic diversity of *Zingiber officinale* Roscoe.

8. Engku Azlin Rahayu Engku Ariff (PhD)

Modelling of carbon sequestration potential in rubber tree (*Hevea brasiliensis*) saplings and plantations in Malaysia.

	<p>9. Nazatul Asikin Muda (Phd) Micropropagation and acclimatization of sugar palm (<i>Arenga pinnata</i>).</p>

PUBLICATION

1. **Norrizah J.S.**, Yaseer M. S, Rohaya A., and Nik Roslan N.A.R. 2012. Ursolic acid and oleanolic acid productions in elicited cell suspension cultures of *Hedyotis*. *Biotechnology* 11(4):238-242 ISSN 1682-296X DOI : 10.3923/biotech.2012.238.242 (ISI and SCOPUS)
2. **J.S. Norrizah**, S.N. Hashim, F. Siti Fasiha and S.M. Yaseer, 2012. β -carotene and antioxidant analysis of three different rockmelon (*Cucumis melo* L.) Cultivars. *Journal of Applied Sciences*, 12:1846-1852. DOI: [10.3923/jas.2012.1846.1852](https://doi.org/10.3923/jas.2012.1846.1852) (ISI and SCOPUS)
3. Nur Ainaa Atikah M.N., Norizan A., Mashita A. **Norrizah J.S.** and Syed Ahmad Tajudin T.J. 2012. Antioxidant, antimicrobial and cytotoxic activities of resveratrol oligomers of *Shorea macroptera* Dyer. *Australian Journal of Basic and Applied Sciences* 6(8):431-436. (ISI and SCOPUS)
4. Ahmat N., Nik Azmin N.F., Ab Ghani N., Sharipah Ruzaina S.A., **Norrizah J.S.**, Abdullah S., Jasmani H. 2010. Bioactive xanthone from the pericarp of *Garcinia mangostana*. *Middle East J. Sci. Res.* 6(2):123-127 (ISI and SCOPUS)
5. Nurul Izzati Osman, Asmah A., **Norrizah J.S.** and Shamsiah A. 2013. Callus induction and somatic embryogenesis from leaf and nodal explants of *Lycium barbarum* L. (Goji). *Biotechnology* (ISI AND SCOPUS).
6. **Norrizah J.S.**, Norizan A., Sharipah Ruzaina S.A., Dzulsuhaimi D., and Nurul Hidayah M.S. 2011. Cytotoxicity activity and reproductive profiles of male rats treated with methanolic extracts of *Ficus deltoidea*. *Research Journal of Medicinal Plant* 5(1): 79-84. (SCOPUS)
7. A. Awal, N. Fazilah, M.P. Azvin, M. Najwa, A. Shamsiah, **J.S. Norrizah**. 2011. Micropropagation of pineapple (*Ananas comosus* L. Merr Josapine). *Acta Horticulturae* 923: (SCOPUS)
8. Nurul Izzati O., Asmah A., **Norrizah J. S.** and Shamsiah A. 2012. Antioxidant activities of *in vitro* seedlings of *Lycium barbarum* (Goji) by Diphenyl picrylhydrazyl (DPPH) Assay. *International Journal of Pharmacy and Pharmaceutical Sciences.* 4(4): 137-141. ISSN- 0975-1491 (SCOPUS)
9. **Norrizah J.S.**, Norihan M.S., and Shafii K. 2009. *In vitro* culture of *Pereskia bleo*. In: *In vitro* culture and horticultural breeding. *Acta Horticulturae.* 829: 99-104. (SCOPUS)

10. S.H. Sarijo, S.A.I.S.M. Ghazali and **N.J. Sidik**. 2013. Synthesis of nanocomposite 2-methyl-4-chlorophenoxyacetic acid with layered double hydroxide: physicochemical characterization and controlled release properties. 2013. J. Nanopart Res 15:1356. DOI 10.1007/S11051-012-1356-9. (SCOPUS)
11. **Norrizah J.S.**, Saiyidah Nafisah H., Shamsiah A., Yaseer Suhaimi M. 2013. Plant growth yield, morphology and fruit quality of rockmelon (*Cucumis melo*) cultivars planted on soilless culture. Journal of Plant Sciences. (SCOPUS)
12. Nurul Izzati Osman, Asmah A., **Norrizah J.S.** and Shamsiah A. 2013. *In vitro* regeneration and antioxidant properties of *Lycium barbarum*. Jurnal Teknologi (SCOPUS)
13. Ellia Kartini, M. and **Norrizah, J.S.** and Noor Anilizawatima, S. and Siti Safura, J. 2015. *Effect of low gamma radiation on the growth of Vanilla planifolia cultures*. Malaysian Applied Biology, 44 (2). pp. 59-63
14. Nurul Izzati Osman, **Norrizah Jaafar Sidik** & Asmah Awal. (2015). Pharmacological Activities of *Barringtonia racemosa* L. (Putat), a tropical medicinal plant species. Journal of Pharmaceutical Sciences and Research, 7(4), 185-188
15. Yaseer Suhaimi Mohd, Mohamad Abd Manas, **Norrizah Jaafar Sidik**, Rohaya Ahmad and Adzmi Yaacob. 2015. Effects of organic substrates on growth and yield of ginger cultivated using soilless culture. Malays. Appl. Biol. 44(3):63-68
- 16) Nurul Izzati Osman, **Norrizah Jaafar Sidik**, & Asmah Awal (2015). Effects of Variations in Culture Media and Hormonal Treatments Upon Callus Induction Potential in Endosperm Explant of *Barringtonia racemosa* L. Asian Pacific Journal of Tropical Biomedicine.
- 17) Nurul Izzati Osman, **Norrizah Jaafar Sidik**, Asmah Awal. (2016). Effects of variation in culture media and hormonal composition upon callus induction potency in endosperm explant of *Barringtonia racemosa* L. *Asian Pacific Journal of Tropical Biomedicine* 6(2), 143-147.
- 18) Nur Inani Rezali, Norrizah Jaafar Sidik, Azani Saleh, Nurul Izzati Osman, Nurul Athirah Mohd Adam (2016). The effects of different strength of MS media in solid and liquid media on in vitro growth of *Typhonium flagelliforme*. *Asian Pacific Journal of Tropical Biomedicine*, 1-6.
- 19) Nurul Izzati Osman, Norrizah Jaafar Sidik, Asmah Awal. (2016). *In vitro* xanthine oxidase and albumin denaturation inhibition assay of *Barringtonia racemosa* L. and total phenolic content analysis for potential anti-inflammatory use in gouty arthritis. *Journal of Intercultural Ethnopharmacology*, 5(4), 343-349.

- 20) Nor Yasmin Mohamad Fauzi, Norrizah Jaafar Sidik, Azani Saleh. (2016) Effects of different plant growth hormones on *in vitro* regeneration of a new Malaysian rice variety (*Oryza sativa* L. var. MR1A 1) from stem explants. *Journal of Advances in Technology and Engineering Research*, 2(4), 125-133.
- 21) Nurul Athirah Mohamad Adam, Norrizah Jaafar Sidik, Nurul Izzati Osman, Wan Razarinah Wan Abdul Razak. (2016). *In vitro* regeneration and phytochemical profile of medicinal plant *Melastoma decemfidum*. *International Journal of Pharmaceutical Sciences Review and Research*, 37(1), 36-41.
- 22) Yaseer Suhaimi Mohd, Adzemi Mat Arshad, Nur Farah Hani Muhamad, Norrizah Jaafar Sidik. (2016). Potential and Viability of Chilli Cultivation Using Fertigation Technology in Malaysia. *International Journal of Innovation and Applied Studies*, 17(4), 1114-1119
- 23) Wan Razarinah Wan Abdul Razak, Izzati Nasuha Ismail, Nurul Huda Che Isa, Norrizah Jaafar Sidik, Siti Saizah Said. (2017). Antimicrobial Activity of *Melastoma decemfidum* Leave Extract against Human Pathogen. *International Journal of Life Sciences Biotechnology and Pharma Research*, 6(1), 22-25. (SCOPUS)
- 24) Izzati Nasuha Ismail, Wan Razarina Wan Abdul Razak, Norrizah Binti Jaafar Sidik, Siti Saizah Mohd Said. (2017). Antibacterial Activity of Flower, Leave and Stem Extract of *Melastoma decemfidum*. *International Journal of Life Sciences Biotechnology and Pharma Research*, 6(1), 13-17. (SCOPUS)
- 25) Nursuria Md Setamam, Norrizah Jaafar Sidik. (2017). Combination of Hairy Roots Explants and 6-Benzylaminopurine (BA) as an Alternative Improvement for *In-Vitro* Plant Regeneration of *Capsicum spp.* *Journal of Botanical Sciences*, 6(1), 1-8. (SCOPUS)
- 26) Nur Inani Rezali, Norrizah Jaafar Sidik, Azani Saleh, Nurul Izzati Osman, Nurul Athirah Mohd Adam. (2017). The effects of different strength of MS media in solid and liquid media on *in vitro* growth of *Typhonium flagelliforme*. *Asian Pasific Journal of Tropical Biomedicine*, 7(2), 151-156.