



### NURDIANA BINTI SAMSULRIZAL

Institution	Universiti Teknologi MARA, Malaysia
Grade of Position	Senior lecturer
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### EDUCATION BACKGROUND

Doctor of Philosophy	<b>Doctor of Philosophy (Animal Physiology)</b> <b>Universiti Putra Malaysia</b> , 43400 UPM Serdang Selangor. Dissertation: Effects of <i>Ficus deltoidea</i> on pancreas, brain, kidney and bone of streptozotocin-induced diabetic rats. Supervisor : Assoc. Prof. Dr. Goh Yong Meng Co-supervisor : Assoc. Prof. Dr. Sulaiman bin Md Dom Dr Hafandi bin Ahmad
Master	<b>Master in Science (Physiology)</b> <b>Universiti Teknologi MARA</b> , 40450, Shah Alam, Selangor. Dissertation: Effect of <i>Ficus deltoidea</i> leaves on glucose and glycogen metabolism in liver of normal and streptozotocin-induced diabetic rats. Supervisor : Assoc. Prof. Dr. Harita Hashim Co-supervisor : Assoc. Prof. Dr. Farida Zuraina Mohd Yusof
Degree	<b>Bachelor of Science (Hons) in Biochemistry</b> <b>Universiti Kebangsaan Malaysia</b> , 43600, Bangi, Selangor. Dissertation: Effect of obesity and diabetes on sperm quality and LDH-C4 activity in normal and streptozotocin-induced diabetic rats. Supervisor : Dr. Mahanem Mat Noor Co-supervisor : Assoc. Prof. Dr. Halimah Abdullah Sani

## RESEARCH FUNDINGS

### NATIONAL LEVEL ACTIVE RESEARCH FUNDING

	Research Project	Source	Total Funds (MYR)	Begin Year	End Year
1.	<b>Head of Project</b> Neuroprotective Activity of Vitexin in the Hippocampus of Streptozotocin-Induced Diabetic Rats	eScience Fund  FRGS  ERGS  FRGS	144,200	2015	2017
	Mechanistic Studies on the Antidiabetic Activity of Azadirachtin From <i>Azadirachta excelsa</i>		80,000	2013	2015
	Anti-infertility Activities of <i>Ficus deltoidea</i> Leaves Extract on Female Rat with Polycystic Ovarian Syndrome.		110,000	2013	2015
	Neuroprotection and Antidiabetic Activities of Four Varieties of <i>Ficus deltoidea</i> .		67,000	2010	2012
1.	<b>Member of Project</b> Male Mice Reproductive Performance Following <i>Cosmos caudatus</i> Consumption.	FRGS  FRGS  FRGS  RAGS	90,500	2013	2015
	Effect of <i>Ficus deltoidea</i> leaves on glucose and glycogen metabolism in liver of normal and streptozotocin-induced diabetic rats.		51,000	2007	2009
	Histological Study Anti-Ulcer and wound Healing by Dithiocarbazate Schiff-Bases Derivatives on Normal and Diabetic Rats.		56,000	2010	2012
	Role of <i>Cosmos caudatus</i> Consumption on Male Fertility		80,000	2012	2014

## AWARDS

### Gold Medal

**Nurdiana Samsulrizal**, Goh Yong Meng, Hafandi Ahmad, Nur Syimal'ain Azmi, Noor Syaffinaz Noor Mohamad Zin. *Ficus deltoidea*: A regenerative medicine for the treatment of diabetes. Invention, Innovation & Design Exposition (IIDEX) 2018, 24-28 September 2018, DATC UiTM Shah Alam.

### Gold Medal

Noor Syaffinaz Noor Mohamad Zin, Nur Syimal'ain Azmi, **Nurdiana Samsulrizal**, Nooraain Hashim, Muhammad Aliff Haslan. *Azadirachta excelsa*: A remedy for hyperglycemia, ostopenis and diabetes-

associated cognitive decline (DASC) in diabetic rats. Invention, Innovation and Design (IID) 2017, 9 March 2017, Amansari Residence Resort, Johor Bahru.

**Silver Medal**

**Nurdiana Samsulrizal**, Nurul `Izzati Shafie, Nur Zulaikha Mohd Saadon, Elizabeth Anak Jega. Repopulation of the atrophied uterine by *Azadirachta excelsa* leaves extract. Invention, Innovation & Design Exposition (IIDEX) 2013, 15-17 March 2013, DATC UiTM Shah Alam.

**Bronze Medal**

Siti Khairiyah Mohd Hatta, Mohd Hanysyam Mohd Nordin, Norazliza Rosli, **Nurdiana Samsulrizal**, Norashirene Mohd Jamil. Species Composition and Habitat Preference of Bagworm's Parasioids in FELDA Besout 6 Oil Palm Plantations. International Innovation, Design and Articulation (i-IDEA 2013), 28-30 May 2013, Universiti Teknologi MARA Perlis.

## PUBLICATIONS

	All	Since 2012
Citations	75	75
h-index	6	6

### **Publications (Journals)**

1. **Nurdiana, S.**, Goh, Y. M., Hafandi, A., Dom, S. M., Nur Syimal'ain, A., Noor Syaffinaz, N. M., & Ebrahimi, M. (2018). Improvement of spatial learning and memory, cortical gyration patterns and brain oxidative stress markers in diabetic rats treated with *Ficus deltoidea* leaf extract and vitexin. *Journal of Traditional and Complementary Medicine*. doi: 10.1016/j.jtcme.2017.05.006
2. **Nurdiana, S.**, Goh, Y. M., Ahmad, H., Dom, S. M., Syimal'ain Azmi, N., Noor Mohamad Zin, N. S. and Ebrahimi, M. (2017). Changes in pancreatic histology, insulin secretion and oxidative status in diabetic rats following treatment with *Ficus deltoidea* and vitexin. *BMC Complement Altern Med.*, 17(1): 290. doi: 10.1186/s12906-017-1762-8.
3. Noor Syaffinaz N.M.Z., Nooraain H., **Nurdiana S.** and Nur Syimal'ain A., (2018). The protective effect of *Azadirachta excelsa* leaves extract and quercetin treatment on the learning and memory impairments in relation with insulin and amylin levels in the brain of streptozotocin-induced diabetic rats. *Journal of King Saud University – Science*, In Press. doi: 10.1016/j.jksus.2018.05.017
4. Nur Syimal'ain A., Nooraain H., **Nurdiana S.**, Noor Syaffinaz N.M.Z. (2017). Antioxidant potential of ethanolic extract of *Azadirachta excelsa* in streptozotocin induced diabetic rats. *Int. J. Pharm. Sci. Rev. Res.*, 43(2): 135-138.
5. Nur Ajeerah, S., Nooraain, H. and **Nurdiana, S.** (2017). *Ficus deltoidea* ethanolic leaves extract improves hormonal balance among letrozole induced polycystic ovarian syndrome (PCOS) rats. *Malaysian Applied Biology*, 46(1), 147-152.
6. Nur Syimal'ain A., Nooraain H., **Nurdiana S.**, Noor Syaffinaz N.M.Z. (2017). Effect of *Azadirachta excelsa* and quercetin on the endocrine pancreas of the experimental induced diabetic rats: A histological and insulin secretion. *Advances in Natural and Applied Science*. In press.
7. Nur Ajeerah, S., Nooraain, H. and **Nurdiana, S.** (2016). Effects of *Ficus deltoidea* Ethanolic leaves extract on female reproductive organs among Letrozole- induced polycystic ovarian syndrome rats. *Journal of Scientific Research and Development*, 3(4): 8-14.
8. Nur Farhana, A. S., Nurul `Izzati, S., **Nurdiana, S.**, Mohamed Ali, R., Goh, Y. M., Mohd Mokrish, M. A. and Hafandi, A. (2016). Antioxidant and antihypertensive effects of *Azadirachta excelsa* leaf extracts in Spontaneously Hypertensive Rat (SHR) model. *Journal of Alternative, Complementary and Integrative Medicine*, 2: 013. doi: 10.24966/ACIM-7562/100013

9. Marysia J. B., Nooraain, H., Nur Hilwani, I., Dzulsuhaimi, D., **Nurdiana, S.** and Yahya, M. F. Z. R. (2015) Effects of *Cosmos caudatus* on sperm quality of mice, *Mus musculus*. *Malaysian Applied Biology*, 44 (1): 89-93. ISSN 0126-8643.
10. Nurul "Izzati, S., **Nurdiana, S.**, Nur Farhana, A. S., Mohamed Ali, R., Goh, Y. M., Mohd Mokrish, M. A. and Hafandi, A. (2016). Qualitative phytochemical screening and GS-MS profiling of *Azadirachta excelsa* leaf extracts. *Malaysian Applied Biology*, 44 (3): 87-92. ISSN 0126-8643
11. Wan Rozianoor, M. H., Nurul Nadia, K., & **Nurdiana, S.** (2014). Stachytarpheta jamaicensis ethanolic leaf extracts as wound healer on alloxan-induced diabetic Sprague Dawley rats. *BioTechnology: An Indian Journal*, 9(11), 460-466.
12. Al Muqarrabun, L. M., Ahmat, N., Aris, S. R., Norizan, N., **Samsulrizal, N.**, Yusof, F. Z., Suratman, M. N., Yusof, M. I. and Salim, F. (2014). A new triterpenoid from *Sapium baccatum* (Euphorbiaceae). *Nat Prod Res.*, 28(13): 1003-9. doi: 10.1080/14786419.2014.903396.
13. Marysia, J. B., Nooraain, H., Nur Hilwani, I., Dzulsuhaimi, D., **Nurdiana, S.** and Yahya, M. F. Z. R. (2014). Health benefits and effects of selected herbal plants on mammalian reproductive system: A Review. *Science Letters*, 8(2): 10.
14. **Nurdiana, S.\***, Harita, H. and Farida Zuraina, M.Y. (2009). Effect of *Ficus deltoidea* leaves on glycolytic enzymes in liver of normal and streptozotocin-induced diabetic rats. *Natural Products: An Indian Journal*, 5(4), 162-166.
15. **Nurdiana S\***., Mohd Idzham, A.Z., Zanariah A., and Mohd Luqman Hakim M.N. (2012). Effect of *Ficus deltoidea* leaves extracts on blood clotting, sperm quality and testosterone level in alloxan-induced male diabetic rats. *International Journal of Pharmaceutical Sciences Review and Research*, 13(1), 111-114.
16. **Nurdiana S.\***, Marziana, N. (2013). Wound Healing Activities of *Melastoma malabathricum* Leaves Extract in Sprague Dawley Rats. *International Journal of Pharmaceutical Sciences Review and Research*, 20(2), 20-23.
17. \***S. Nurdiana**, K. Mohamad Shukri, J. Elizabeth Jega, S. Nurul 'Izzati. (2013). Lowering blood glucose effect of *Azadirachta excelsa* leaves extract. *Natural Products: An Indian Journal*, 9(9), 363-366.
18. \***S. Nurdiana**, M.S. Nur Zulaikha, M.I. Syamimi Wahida, J. Elizabeth Jega, S. Nurul 'Izzati. (2013). Effect of *Azadirachta excelsa* leaves extract on uterine histology and testosterone level in alloxan induced diabetic rats. *Natural Products: An Indian Journal*, 9(10), 375-378.
19. W.H. Wan Nurhayati, T. Norli Arlizan, **S. Nurdiana**. (2013). Effect of *Mikania micrantha* leaf extract on the level of blood glucose and hepatic glycogen in the normal and alloxan-induced diabetic rats. *Natural Products: An Indian Journal*, 9(10), 398-402
20. **Nurdiana Samsulrizal**, Nur Ajeerah Suhami, Nur Farhana Ahmad Sopian, Siti Khairiyah Mohd Hatta, and Norashirene Mohd Jamil. (2013). Hypoglycemic, antioxidant and wound healing activities of *Mikania micrantha* leaves extract in normal and alloxan-induced diabetic rats. *Science Letter*, 7(2), 6-10.

#### **Proceedings (Oral and poster presentation)**

1. **Nurdiana, S.**, Nooraain, H., Nur Syimal'ain, A., Noor Syaffinaz, N. M. Z., Hafandi, A., Md Dom, S. and Goh, Y. M. (2016). FT-IR Based Serum fingerprinting of streptozotocin-induced diabetic rats treated with *Ficus deltoidea* and vitexin. Paper presented at Symposium of Malaysian Society of Applied Biology (MSAB) on 29-31<sup>st</sup> May, 2016 in Swiss-Garden Hotel & Residences Malacca.
2. Nur Farhana, A. S., Nurul 'Izzati, S., **Nurdiana S.**, Mohamed Ali, R., Goh Y. M., Mohd Mokrish, M. A. and Hafandi, A. (2016). Antioxidant and antihypertensive effects of *Azadirachta excelsa* leaf extract in Spontaneously Hypertensive Rat (SHR) model. Paper presented at Symposium of Malaysian Society of Applied Biology (MSAB) on 29-31<sup>st</sup> May, 2016 in Swiss-Garden Hotel & Residences Malacca.
3. Razin Azizan, R., Nooraain, H., **Nurdiana, S.**, Nur Syimal' Ain, A. and Noor Syaffinaz, N. M. Z. (2016). *Ficus deltoidea* improves sperm parameters and testicular histomorphometrics in streptozotocin induced diabetic rats. Paper presented at Symposium of Malaysian Society of Applied Biology (MSAB) on 29-31<sup>st</sup> May, 2016 in Swiss-Garden Hotel & Residences Malacca.
4. Muhammad Aliff, H., Nooraain, H., **Nurdiana, S.**, Nur Syimal'ain, A. and Noor Syaffinaz, N. M. Z. (2016). Effects of monosodium glutamate (MSG) and coconut water on sperm quality and histology of selected organs in male mice (*Mus musculus*). Paper presented at Symposium of Malaysian Society of Applied Biology (MSAB) on 29-31<sup>st</sup> May, 2016 in Swiss-Garden Hotel & Residences Malacca.
5. Nur Syimal'ain A., Nooraain H., **Nurdiana S.** and Noor Syaffinaz N.M.Z. (2016). Bone protective effects of *Azadirachta excelsa* on streptozotocin-induced diabetic rats. Paper presented at

- Symposium of Malaysian Society of Applied Biology (MSAB) on 29-31<sup>st</sup> May, 2016 in Swiss-Garden Hotel & Residences Malacca.
- 6. Noor Syaffinaz, N.M.Z., Nooraain, H., **Nurdiana, S.** and Nur Syimal'ain, A. (2016). Brain tissue oxidative stress and inflammation status of streptozotocin-induced diabetic rats treated with *Azadirachta excelsa*. Paper presented at Symposium of Malaysian Society of Applied Biology (MSAB) on 29-31<sup>st</sup> May, 2016 in Swiss-Garden Hotel & Residences Malacca.
  - 7. Nur Ajeerah, S., Nooraain, H. and **Nurdiana, S.** (2016). Hormonal status of letrozole-induced polycystic ovarian syndrome (PCOS) rats treated with *Ficus deltoidea* ethanolic leaves extract. Paper presented at Symposium of Malaysian Society of Applied Biology (MSAB) on 29-31<sup>st</sup> May, 2016 in Swiss-Garden Hotel & Residences Malacca.
  - 8. Nadeera, N. J., Nooraain, H., Shamsul-Bahrin, G. A. and **Nurdiana, S.** (2016). The effect of ethanolic extract of *Morinda citrifolia* (Noni) fruits on the number of oocysts output in coccidiosis-induced male mice. Paper presented at Symposium of Malaysian Society of Applied Biology (MSAB) on 29-31<sup>st</sup> May, 2016 in Swiss-Garden Hotel & Residences Malacca.
  - 9. Nur Farhana, A. S., Nurul "Izzati, S., **Nurdiana, S.**, Mohamed Ali, R., Goh, Y. M., Mohd Mokrish, M. A. and Hafandi, A. (2016). Oxidative stress status in selected organs of Spontaneously Hypertensive Rat (SHR) Model treated with *Azadirachta excelsa*. Poster presented at Pan Asian Biomedical Conference on 11-12<sup>th</sup> December 2016 at Premiera Hotel, Kuala Lumpur.
  - 10. Nur Farhana, A. S., Nurul "Izzati, S., **Nurdiana, S.**, Mohamed Ali, R., Goh, Y. M., Mohd Mokrish, M. A. and Hafandi, A. (2016). Evaluation on elevated blood pressure and serum analysis of Spontaneously Hypertensive Rat (SHR) Model treated with *Azadirachta excelsa* leaf extract. Paper presented at Scientific Meeting of Malaysian Society of Pharmacology and Physiology (MSPP) on 15-16<sup>th</sup> August, 2016 at Putrajaya Shangri-La Hotel, Malaysia.
  - 11. **Nurdiana, S.**, Razin Azizan, R., Goh, Y M., Hafandi, A., Nur Syimal'ain, A., Noor Syaffinaz, N.M.Z. and Siti Khairiyah, M.H. (2015). Neurobehavioral effects of *Ficus deltoidea* and vitexin on streptozotocin induced diabetic rats. Poster presented at The International Symposium on Fundamental and Applied Sciences on 5-7<sup>th</sup> March, 2015 in International House, Osaka, Japan.
  - 12. **Nurdiana, S.**, Nor Haziqah, A. S., Nur Ezwa Khairunnisa, M. K., Nurul 'Izzati, S., Siti Amna Y., Norashirene, M. J. and Nur Hilwani, I. (2014). Attenuation of pancreatic histology, hematology and biochemical parameters in type 2 diabetic rats treated with *Azadirachta excelsa*. Paper presented at 16th International Conference on Agricultural and Natural Resources Engineering on 26-27<sup>th</sup> September, 2014 in Holiday Inn, London.
  - 13. Nur Hilwani, I., Nasibah, R., **Nurdiana, S.** and Norashirene, M. J. (2014). Gonadotoxic and cytotoxic effect of induced obesity via Monosodium glutamate on *Mus musculus* testis cytoarchitecture and sperm parameter. Paper presented at 16th International Conference on Agricultural and Natural Resources Engineering on 26-27<sup>th</sup> September, 2014 in Holiday Inn, London.
  - 14. **Nurdiana, S.**, Zanariah, A., Mohd Luqman Hakim, M.N. and Mohd Idzham, A.Z.(2011). Effect of *Ficus deltoidea* Leaves Extracts on Sperm Quality, LDH-C4 Activity and Testosterone Level in Alloxan-Induced Male Diabetic Rats. 2011 IEEE Colloquium of Humanities, Science and Engineering Research (CHUSER 2011), Dec 5-6 2011, Penang pp. 888-891.
  - 15. **Nurdiana S.** and Marziana, N. (2012). Wound Healing Activities of *Melastoma malabathricum* Leaves Extract in Sprague Dawley Rats. The 12th Symposium of the Malaysian Society of Applied Biology 2012 (MSAB2012), pp. 36.
  - 16. Siti Khairiyah, M.H., Norashirene, M.J., **Nurdiana, S.** Nurnadiah, M.Y., Norzainih, J.J. and Faezah, P. (2012). Family Composition and Temporal Preference of Rhopalocera (Lepidoptera) at National Botanical. ISBEIA 2013: IEEE Symposium on Business, Engineering and Industrial Applications, pp. 280-285.
  - 17. Afifah Daud, Harita Hashim and **Nurdiana Samsulrizal**. (2013). Anticoagulant Activity of *Averrhoa bilimbi* Linn in Normal and Alloxan Induced Diabetic Rats. International Conference on Natural Product 2013, Shah Alam pp. 92.
  - 18. **Nurdiana S.**, Elizabeth Jega, A.J. and Nurul 'Izzati, S. (2013). Antidiabetic Activity of *Azadirachta excelsa* Extract on Alloxan Induced Diabetic Rats. International Conference on Natural Product 2013, Shah Alam pp.146.
  - 19. M.H Siti Khairiyah, S. Elna Elfira, N. Mohd Hanysyam, **S. Nurdiana**, M.J Norashirene, P. Faezah. (2013). Entomofaunal diversity of diptera at FELDA Besout 6 oil palm plantation. ICANRE 2013, Singapura, pp. 2.
  - 20. M.J.Norashirene, H.Umi Sarah, M.H.Siti Khairiyah, **S.Nurdiana**. (2013). Biochemical characterization and 16S rDNA sequencing of lipolytic thermophiles from Selayang Hot Spring, Malaysia. ICANRE 2013, Singapura, pp. 9.

21. **S. Nurdiana**, S. Nurul 'Izzati, M.H. Siti Khairiyah, M.S. Nur Zulaikha, M.S Kamaruddin, M.J. Norashirene. (2013). Repopulation of the atrophied uterine in diabetic rats by *Azadirachta excelsa* leaves extract. *ICANRE 2013*, Singapura, pp.6.
22. Nurul 'Izzati, S., **Nurdiana, S.**, Hafandi, A., Mohd Zakihalani, A.H., Norashirene M.J. and Siti Khairiyah M.H. (2013). Antioxidant and Hypoglycemic Activities of *Azadirachta excelsa* in Diabetic Rats. *ISBEIA 2013: IEEE Symposium on Business, Engineering and Industrial Applications*, Kuching pp. 63.
23. Norashirene, M.J., Nor Faezah, R., Siti Khairiyah M.H.and **Nurdiana, S.** (2013). Identification of Industrially Important Amylolytic Thermophiles by 16S rDNA Sequence Analysis. *IEEE Symposium on Business, Engineering and Industrial Applications*, Kuching pp.
24. Siti Khairiyah, M.H., Norashirene, M.J., **Nurdiana, S.** Nurnadiah, M.Y., and Faezah, P. (2013). Species Composition and Temporal Preference of Rhopalocera (Lepidoptera) At National Botanical Garden Shah Alam. *ISBEIA 2013: IEEE Symposium on Business, Engineering and Industrial Applications*, Kuching pp. 62.
25. **S. Nurdiana**, S. Nur Ajeerah, A.S. Nur Farhana, M.H. Siti Khairiyah and M.J. Norashirene. (2013). Hypoglycemic, Antioxidant and Wound Healing Activities of *Mikania micrantha* Leaves Extract in Normal and Alloxan-induced Diabetic Rats. *ICSSS 2013*, South Korea, pp.401-406.
26. Siti Khairiyah, M.H., A. Nor Syafiqah Adhana, **S. Nurdiana**, and M.J.Norashirene. (2013). Species Diversity and Abundance of Diptera at Selected Forests in Langkawi Islands, Malaysia. *ICSSS 2013*, South Korea pp. 396-400.