REFERENCES

Abdou, H.M., Mohamed, N.A, 2016. Centella Asiatica Ameliorates Diabetic Complications and Oxidative Stress in Streptozotocin-Induced Diabetes Mellitus in Male Rats. *http://globalresearchonline.net/*.

Ablat, A., Halabi, M.F., Mohamad, J., Hasnan, M.H.H., Hazni, H., Teh, S., Awang, K, 2017. Antidiabetic effects of *Brucea javanica* Seeds in Type 2 Diabetic Rats. *BMC Complement. Altern. Med.*, 17(94).

Akbar, D.H., Hagras, M.M., Amin, H.A., Khorshid, O.A, 2012. Comparison between The Effect of Glibenclamide and aptopril on Experimentally Induced Diabetic Nephropathy in Rats. *J. Renin-Angiotensin-Aldosterone Syst,* 14(2), pp.103–115.

Allah, E.S.A., Gomaa, A.M., 2015. Effects of curcumin and captopril on the functions of kidney and nerve in streptozotocin-induced diabetic rats: role of angiotensin converting enzyme 1. *Appl. Physiol. Nutr. Metab.*, 40(10), pp.1061–1067.

AlSaraj, F., 2005. Pathogenesis of Type 2 Diabetes Mellitus. *Treatment of Type 2 Diabetes*, 2015.

Amazonas, R.B., Sanita, R.A., Kawachi, H., Faria, J.B.L., 2007. Prevention of Hypertension with or without Renin-Angiotensin System Inhibition Precludes Nephrin Loss in the Early Stage of Experimental Diabetes Mellitus. *Nephron Physiol*., 107, pp.57-64.

Blanco, S., Bonet, J., López, D., Casas, I., Romero, R., 2005. ACE Inhibitors Improve Nephrin Expression in Zucker Rats with Glomerulosclerosis. *Kidney International*, 67.

Brownlee, M., 2001. Biochemistry and Molecular Cell Biology of Diabetic Complications. *Nature*, 414, pp.813–820.

Cao, Z., Cooper, M.E., 2011. Pathogenesis of Diabetic Nephropathy. *J. Diabetes Investig.*, 2(4), pp.243-247.

Chawla, T., Sharma, D., Singh, A., 2010. Role of The Renin Angiotensin System in Diabetic Nephropathy. *World J. Diabetes*, 1(5), pp.141.

Dailymed.nlm.nih.gov., 2017. *DailyMed - CAPTOPRIL- captopril tablet*. Available at: https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=3051c0c1-745d-4916-994e-a30ffb7c9b11#_DOSAGE_AND_ADMINISTRATION.

Daneman, D., 2017. *Type 1 diabetes*. [online] Lancet. Available at: http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(06)68341-4/fulltext.

Doublier, S., Salvidio, G., Lupia, E., Ruotsalainen, V., Verzola, D., Deferrari, G., & Camussi, G., 2003. Nephrin Expression is Reduced in Human Diabetic Nephropathy: Evidence for a Distinct Role for Glycated Albumin and Angiotensin II. *Diabetes*, 52(4), pp.1023–1030.

Drugs.com. 2017. *Captopril: Uses, Dosage, Side Effects - Drugs.com*. Available at: https://www.drugs.com/captopril.

Emran, T.B., Dutta, M., Uddin, M.M.N., Nath, A.K., Uddin, M.Z., 2016. Antidiabetic Potential of The Leaf Extract of Centella Asiatica in Alloxan-Induced Diabetic Rats. *Jahangirnagar University J. Biol. Sci*, 4(1), pp.51.

Farimani, A.R., Saidijam, M., Goodarzi, M. T., Azari, R.Y., Asadi, S., Zarei, S., Shabab, N., 2015. Effect of Resveratrol Supplementation on The SNARE Proteins Expression in Adipose Tissue of Stroptozotocin-Nicotinamide Induced Type 2 Diabetic Rats. *Iran J. Med. Sci*., 40(3), pp.248–255.

Ghasemi, A., Khalifi, S., Jedi, S., 2014. Streptozotocin-Nicotinamide-Induced Rat Model of Type 2 Diabetes (Review). *Acta Physiol. Hungarica*, 101(4), pp.408–420.

Giribabu, N., Srinivasarao, N., Rekha, S.S., Muniandy, S., Salleh, N., 2017. *Centella asiatica* Attenuates Diabetes Induced Hippocampal Changes in Experimental Diabetic Rats.

Graham, M., Janecek, J., Kittredge, J., Hering, B., Schuurman, H., 2011. The Streptozotocin-Induced Diabetic Nude Mouse Model: Differences between Animals from Different Sources. *J. Am. Assoc. Lab. Anim. Sci.*, 61(4), pp.356-360.

Gross, J.L., deAzevedo, M.J., Silveiro, S.P., Canahi, L.H., Caramori, M.L., Zelmanovitz, T., 2005. Diabetic Nephropathy: Diagnosis, Prevention, and Treatment. *Diabetes Care*, 28(1), pp.164-176

Hamilton, R.A., Kane, M.P., Demers, J., 2003. Angiotensin-Converting Enzyme Inhibitors and Type 2 Diabetic Nephropathy: A Meta-Analysis. *Pharmacotherapy*, 23(7), pp.909–915.

Hashim, P., Sidek, H., Helan, M., Sabery, A., Palanisamy, U.D., Ilham, M., 2011. Triterpene Composition and Bioactivities of Centella asiatica. *Molecules*, 16(12), pp.1310–1322.

Hsu, Y.M., Hung, Y.C., Hu, L., Lee, Y.J., Yin, M.C., 2015. Anti-Diabetic Effects of Madecassic Acid and Rotundic Acid. *Nutrients*, 7(12), pp.10065-10075.

Ibrahim, S., Rizk, S., 2008. Nicotinamide: A Cytoprotectant Against Streptozotocin-Induced Diabetic Damage in Wistar Rat Brains. *Afr. J. Biochem. Res.,* 2(8), pp.174-180.

Islam, M.S., and D.T. Loots., 2009. Experimental Rodent Models of Type 2 Diabetes: A Review. *Find. Exp. Clin. Pharmacol.*, 31(4), pp.249.

Jim, B., Ghanta, M., Qipo, A., Fan, Y., Chuang, P.Y., Cohen, H.W., He, J.C., 2012. Dysregulated Nephrin in Diabetic Nephropathy of Type 2 Diabetes: A Cross Sectional Study. *PLoS ONE*, 7(5).

Kabir, A.U., Samad, M.B., D'Costa, N.M., Akhter, F., Ahmed, A., Hannan, J., 2014. Anti-hyperglycemic activity of Centella asiatica is Partly Mediated by Carbohydrase Inhibition and Glucose-Fiber Binding. *BMC Complement. Altern. Med.*, 14.

Kandasamy, Y., Smith, R., Lumbers, E.R., Rudd, D., 2014. Nephrin – A Biomarker of Early Glomerular Injury. *Biomarker Research*, 2(1), pp.21.

Katzung, B.G., Susan B.M., Anthony J.T. *Basic Clin. Pharmacol.* 12th ed. New York: McGraw-Hill Medical. 2012

Kelly, D.J., 2002. Expression of The Slit-Diaphragm Protein, Nephrin, in Experimental Diabetic Nephropathy: Differing Effects of Anti-Proteinuric Therapies. *Nephrol. Dial. Transplant.*, 17(7), pp.1327–1332.

Kim, J.J., Li, J.J., Jung, D., Kwak, S., Ryu, D., Yoo, T., Han, S.H., Choi, H.Y., Kim, H.J., Han, D.S., Kang, S., 2007. Differential Expression of Nephrin According to Glomerular Size in Early Diabetic Kidney Disease. *Clin, J. Am. Soc. Nephro.*, 18(8), pp.2303-2310.

Laurence, D.R., Bacharach, A.L., editors., 1964. *Evaluation of drug activities: pharmacometrics*. 1st ed. London: Academic Press.

Leahy, J.L., 2005. Pathogenesis of Type 2 Diabetes Mellitus. *Arch. Med. Res.*, 36(3), pp.197-209.

López-Carreras, N., Fernández-Vallinas, S., Miguel, M., Aleixandre, A., 2014. Long-Term Effect of an Aqueous *Fraxinus excelsior* L. Seed Extract in Spontaneously Hypertensive Rats. *Int. J. Hypertens.*, pp.1–8.

Mahler, R.J., Michael L.A., 1999. Type 2 Diabetes Mellitus: Update on Diagnosis, Pathophysiology, and Treatment. *J. Clin. Endocrinol. Metab.*, 84(4), pp.1165-1171.

Marín-Peñalver, J.J.C.A., Martín-Timón, I., Sevillano-Collantes, C., Cañizo-Gómez, F.J.D., 2016. Update on The Treatment of Type 2 Diabetes Mellitus. *World J. Diabetes*, 7(17), pp.354.

Maulidiani., Abas, F., Khatib, A., Perumal, V., Suppaiah, V., Ismail, Hamid, M., Shaari, K., Lajis, N., 2016. Metabolic Alteration in Obese Diabetes Rats upon Treatment with *Centella Asiatica* Extract. *J. Ethnopharmacol.,* 180, pp.60-69.

McDonald, J.H., 2014. Standard Error of The Mean. *Handbook of Biological Statistics*, 3, pp.111–114.

Meng, X.M., Zhang, Y., Huang, X.R., Ren G.L., Li, J., Lan, H.Y., 2015 Treatment of Renal Fibrosis by Rebalancing TGF-B/Smad Signaling with The Combination of Asiatic Acid and Naringenin. *Oncotarget*.

Michaud, J., Kennedy, C., 2007. The podocyte in health and disease: insights from the mouse. *Clin. Sci.*, 112(6), pp.325-335.

Nayak, Y., Hillemane, V., Daroji, V.K., Jayashree, B.S., Unnikrishnan, M.K., 2014. Antidiabetic Activity of Benzopyrone Analogues in Nicotinamide-Streptozotocin-Induced Type 2 Diabetes in Rats. *Sci. World J.*, 2014.

Orhan, I.E., 2012. *Centella asiatica* (L.) Urban: From Traditional Medicine to Modern Medicine with Neuroprotective Potential. *J. Evid. Based Complementary Altern. Med.*, 2012, pp.1-8.

Departemen Kesehatan RI., 2000. Parameter Standar Umum Ekstrak Tumbuhan Obat, pp.13 - 37. Available at: https://kupdf.com/download/parameter-standar-umum-ekstrak-tumbuhan-obat_58ad11736454a73b15b1e99f_pdf#

Pramono, S., Ajiastuti, D., 2004. Standardisasi Ekstrak Herba Pegagan (*Centella Asiatica* (L.) Urban) Berdasarkan Kadar Asiatikosida Secara KLT-Densitometri. *Majalah Farmasi Indonesia*, 15(3), pp.118–123.

Rahman, S., Jamal, M.A.H.M., Parvin, A., Mahfuz-Al-Mamun, Md., Islam, M.R., 2012. Antidiabetic Activity of *Centella Asiatica* (L.) Urbana In Alloxan Induced Type 1 Diabetic Model Rats. *J. Biosci.*, 19.

Ramachandran, V., Saravanan, R., 2013. Efficacy of Asiatic Acid, A Pentacyclic Triterpene on Attenuating The Key Enzymes Activities of Carbohydrate Metabolism in Streptozotocin-Induced Diabetic Rats.

Rao, S.S., Disraeli, P., McGregor, T., 2004. Impaired Glucose Tolerance and Impaired Fasting Glucose. AFP, 69(8), pp.1961–1968. Retrieved from http://www.aafp.org/afp/2004/0415/p1961.html

Schena, F.P., 2005. Pathogenetic Mechanisms of Diabetic Nephropathy. *J. Am. Soc. Nephrol*, 16(3), pp.30-33.

Sharma, R., Sharma, M., Reddy, S., Savin, V.J., Nagaria, A.M., Wiemann, T.B., 2006. Chronically Increased Intrarenal Angiotensin II Causes Nephropathy in An Animal Model of Type 2 Diabetes. *Front. Biosci*., 11, pp.968-976.

Shieh, J., Carter, M., 2015. Guide to Research Techniques in Neuroscience - (Second Edition). *Molecular Cloning and Recombinant DNA Technology,* pp.219-237. Available from: https://www.sciencedirect.com/science/book/9780128005118

Shlipak, M., 2009. Diabetic Nephropathy. *BMJ Clinical Evidence*, 2009. Available from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2907799/#

Southeast Texas Medical Associates, LLP., 2017. *SETMA.com*. [online] Available at: http://www.setma.com/Letters/ama-pre-diabetes-program-with-cdc-and-ada-karen-kmetik [Accessed 20 Dec. 2017].

Szkudelski, T., 2012. Streptozotocin–Nicotinamide-Induced Diabetes in The Rat. Characteristics of The Experimental Model. *Exp. Biol. Med.*, 237(5), pp.481-490.

Tojo, A., Kinugasa, S., Fujita, T., Wilcox, C., 2016. A Local Renal Renin & Angiotensin System Activation via Renal Uptake of Prorenin and Angiotensinogen in Diabetic Rats. *Diabetes, Metab. Syndr. Obes.*, 1.

Toth-Manikowski, S., Atta, M.G., 2015. Diabetic Kidney Disease: Pathophysiology and Therapeutic Targets. *J Diabetes Res*, pp.1–16.

Wada, J., & Makino, H., 2013. Inflammation and The Pathogenesis of Diabetic Nephropathy. *Clin. Sci.*, 124(3), pp.139–152.

World Health Organization. 2017. *Global report on diabetes.*. France: World Health Organization, p.31. Available at: http://apps.who.int/iris/bitstream/10665/204871/1/9789241565257_eng.pdf.

Wang, Z., Liu, J., Sun, W., 2013. Effects of Asiaticoside on Levels of Podocyte Cytoskeletal Proteins and Renal Slit Diaphragm Proteins in Adriamycin-Induced Rat Nephropathy. *Life Sci.*, 93(8), pp.352–358.

Wang, X., Lu, Q., Yu, D., Chen, Y., Shang, J., Zhang, L., Sun, H. Liu, J., 2015. Asiatic Acid Mitigates Hyperglycemia and Reduces Islet Fibrosis in Goto-Kakizaki Rat, A Spontaneous Type 2 Diabetic Animal Model. *Chin. J. Nat. Med.*, 13(7), pp.529-534.

You, H., Gao, T., Cooper, T.K., Morris, S.M., Awad, A.S., 2015. Arginase inhibition: A New Treatment for Preventing Progression of Established Diabetic Nephropathy. *Am. J. Physiol. Renal Physiol.*, 309(5).

Zhang, M.Z., Wang, S., Yang, S., Yang, H., Fan, X., Takahashi, T., Harris, R.C., 2011. Role of Blood Pressure and The Renin-Angiotensin System in Development of Diabetic Nephropathy (DN) in eNOS-/- db/db Mice. *Am. J. Physiol. Renal Physiol.*, 302(4).