

## DAFTAR PUSTAKA

- Abeeleh AM, Ismail BZ, Alzaben RK, AbuHalaweh AS, Al-Essa K.M, Abuabeeleh J, E. and Al. (2009) ‘No Title’, *Eur J Sci Res*, 32 (3):(Induction of diabetes mellitus in rats using intraperitoneal streptozotocin: a comparison between 2 strains of rats), pp. 398-402.
- Alipin, K. *et al.*, 2017. Kidney histology in streptozotocin-induced diabetic male wistar rats treated with combined extract of temulawak rhizome and belimbing wuluh fruit. *Nusantara Bioscience*, 9(3), pp. 312–317. Available from: <https://doi.org/10.13057/nusbiosci/n090312>.
- American Diabetes Association. Standards of medical care in diabetes. *Diabetes Care*, 1-74. 2017
- Arulmozhi, D.K., Veeranjanyulu, A. and Bodhankar, S.L., 2004. Neonatal streptozotocin-induced rat model of type 2 diabetes mellitus: A glance. *Indian Journal of Pharmacology*, 36(4), pp. 217–221.
- Auliya, P., Oenzil, F. and Dia Rofinda, Z.D., 2016. Gambaran Kadar Gula Darah pada Mahasiswa Fakultas Kedokteran Universitas Andalas yang Memiliki Berat Badan Berlebih dan Obesitas. *Jurnal Kesehatan Andalas*, 5(3), pp. 528–533. Available from: <https://doi.org/10.25077/jka.v5i3.571>.
- Bačova, Z. *et al.* (2005) ‘Effect of neonatal streptozotocin and thyrotropin-releasing hormone treatments on insulin secretion in adult rats’, *General Physiology and Biophysics*, 24(2), pp. 181–197.
- Badan Pengawas Obat dan Makanan Republik Indonesia (BPOM RI). 2021. Peraturan Badan Pengawas Obat dan Makanan Nomor 18 tahun 2021 tentang Pedoman Uji Farmakodinamik Praktikum Obat Tradisional. Jakarta: Badan Pengawas Obat dan Makanan Republik Indonesia.
- Basy, L. La, Lestari SR, S. and Kadarsih, S. (2015) ‘The effects of the ethanolic extract of mahogany seeds (*Swietenia macrophylla* King) on the renal function of streptozotocin-induced diabetic rats’, *Journal of the Medical Sciences (Berkala Ilmu Kedokteran)*, 47(02), pp. 51–58. Available at: <https://doi.org/10.19106/jmedsci004702201501>.

- Basy, L.L., 2013. Efek Ekstrak Etanol Biji Mahoni (*Swietenia macrophylla* King) Pada Tikus Diabetes yang Diinduksi Streptozotocin Kajian pada Kreatinin Serum, Malondialdehid (Mda), dan Protein Urin. Universitas Gadjah Mada, Yogyakarta.
- Beenen, H.M., 1996. Diabetes Mellitus and Hypertension, General Introduction [dissertation]. Universiteit Van Amsterdam, Netherlands.
- Bonner-Weir, S. *et al.* (1981) 'Limited B cell regeneration in a B cell deficient rat model: Studies with dexamethasone', *Metabolism*, 30(9), pp. 914–918. Available at: [https://doi.org/10.1016/0026-0495\(81\)90071-8](https://doi.org/10.1016/0026-0495(81)90071-8).
- Bonner-Weir, S., Trent, D.F., Honey, R.N., and Weir, G.C., 1981. Responses of Neonatal Rat Islets to Streptozotocin: Limited  $\beta$ -Cell Regeneration and Hyperglycemia. *Diabetes*, 30: 64-69.
- Boran, T. *et al.* (2023) 'Evaluation of Renal Effects of Dapagliflozin in Diabetic Rats With Subacute Exposure', *Hacettepe University Journal of the Faculty of Pharmacy*, 43(3), pp. 232–242. Available at: <https://doi.org/10.52794/hujpharm.1171489>.
- Chakrabarti, S. *et al.*, 2005. Antidiabetic activity of *Caesalpinia bonducella* F. in chronic type 2 diabetic model in Long-Evans rats and evaluation of insulin secretagogue property of its fractions on isolated islets. *Journal of Ethnopharmacology*, 97(1), pp: 117–122. Available from: <https://doi.org/10.1016/j.jep.2004.10.025>.
- Chao EC, Henry RR. SGLT2 inhibition: A novel strategy for diabetes treatment. *Nat Rev Drug Discov.* 2010;9:551-9.
- Cheta, D., 1998, Animal models of type I (insulin-dependent) diabetes mellitus, *Journal of Pediatric Endocrinology & Metabolism*, 11(1):11-19

- Covington, D.S., Xue, H., Pizzini, R., Lally, K.P., Andrassy, R.J., 1993, Streptozotocin and alloxan are comparable agents in the diabetic model of impaired wound healing, *Diabetes Research.*, 23(2):47-53
- De Debasis., Chatterjee Kausik., Ali Monjur Kazi., Bera K.T., Ghosh Debidas. 2011. Antidiabetic potential of the aqueous-methanolic extract of seed of swietenia mahagoni (L) jacq. In streptozotocin-induced diabetic male albino rat: a correlative and evidence-based approach with antioxidative and antihyperlipidemic activities. *JEBCAM*. p 1-11.
- Deeds MC, Anderson JM, Armstrong AS, Gastineau DA. 2011. Single Dose Streptozotocin Induced Diabetes: Considerations for Study Design in Islet Transplantation Models. *Lab Anim.* 45(3): p131-140.
- Dekkers, C.C.J. *et al.* (2018) 'Effects of the SGLT-2 inhibitor dapagliflozin on glomerular and tubular injury markers', *Diabetes, Obesity and Metabolism*, 20(8), pp. 1988–1993. Available at: <https://doi.org/10.1111/dom.13301>.
- Dia, B. *et al.* (2023) 'SGLT2 Inhibitor—Dapagliflozin Attenuates Diabetes-Induced Renal Injury by Regulating Inflammation through a CYP4A/20-HETE Signaling Mechanism', *Pharmaceutics*, 15(3). Available at: <https://doi.org/10.3390/pharmaceutics15030965>.
- Direktorat Pengawasan Keamanan, Mutu dan Ekspor Impor Obat, N. (2022) 'Badan Pengawas Obat dan Makanan Republik Indonesia', *Bpom Ri*, (1), pp. 1–66.
- Droge W. Free radicals in the physiological control of cell function. *Physiol Review* 2002; 82:47-95.
- Dutta, M. *et al.* (2013) 'Antidiabetic and antioxidant effect of Swietenia macrophylla seeds in experimental type 2 diabetic rats', *International Journal of Diabetes in Developing Countries*, 33(1), pp. 60–65. Available at: <https://doi.org/10.1007/s13410-012-0109-8>.
- Eleazu, C.O. *et al.* (2013) 'Review of the mechanism of cell death resulting from

- streptozotocin challenge in experimental animals, its practical use and potential risk to humans’, *Journal of Diabetes and Metabolic Disorders*, 12(1), pp. 1–7. Available at: <https://doi.org/10.1186/2251-6581-12-60>.
- Escriva, F., Serradas, P., Alvarez, C., 2006, Undernutrition does not alter the activation of beta-cell neogenesis and replication in adult rats after partial pancreatectomy, *American Journal Of Physiology* Kerusakan DNA akibat STZ dapat mengaktivasi poli *Endocrinology & Metabolism*, 291(5):E913-21.
- Evans, L.J., Goldfine, D.I., Maddux, A.B., Grodsky, M.G. 2003. Are oxidative stress-activated signaling pathways mediators of insulin resistance and  $\beta$ -cell dysfunction?. *J Diabetes*. 52:1-8.
- Fernandez, E., Martin, M.A., Fajardo, S., Bailbe, D., Gangnerau, M.N., Portha, B., Fioretto, P., Giaccari, A. and Sesti, G. (2015) ‘Efficacy and safety of dapagliflozin, a sodium glucose cotransporter 2 (SGLT2) inhibitor, in diabetes mellitus’, *Cardiovascular Diabetology*, 14(1), pp. 1–13. Available at: <https://doi.org/10.1186/s12933-015-0297-x>.
- Ghosh D., Konishi T., 2007. Anthocyanins and anthocyanin-rich extracts: role in diabetes and eye function. *Asia Pac. J. Clin. Nutr.* 16, 200-208.
- Giacco F, Brownlee M. Oxidative stress and diabetic complications. *J Am Heart Ass* 2010; 107: 1058-70.
- Guo, Xuan, Sun, W., Luo, G., Wu, L., Xu, G., Hou, D., et al., 2019. Panax notoginseng saponins alleviate skeletal muscle insulin resistance by regulating the IRS1–PI3K–AKT signaling pathway and GLUT4 expression. *FEBS Open Bio* 9: 1008–1019. doi:10.1002/2211-5463.12635
- Guyton A.C dan Hall, J. E. 2011. Buku Ajar Fisiologi Kedokteran. Jakarta: ECG.
- Hendrajaya, A. (2021) ‘Terapi penghambat Sodium Glucose Co-Transporters-2 (SGLT-2) dalam pengobatan Diabetes Melitus Tipe-2 (DM-2): tinjauan pustaka’, *Intisari Sains Medis | Intisari Sains Medis*, 12(1), pp. 131–136.

Available at: <https://doi.org/10.15562/ism.v12i1.852>.

Husna, F. *et al.* (2019) 'Model Hewan Coba pada Penelitian Diabetes', *Pharmaceutical Sciences and Research*, 6(3), pp. 131–141. Available at: <https://doi.org/10.7454/psr.v6i3.4531>.

International Diabetes Federation. 2023. *Diabetes Basic-Facts & Figures*. Diakses 26 Juli 2023 dari <https://idf.org/about-diabetes/facts-figures/>.

Ishak, Megawati., Bodhi, Widdhi., Citraningtyas, Gayatri. 2017. Uji Efek Analgetik Ekstrak Etanol Daun Lamtoro (*Leucaena leucocephala* (LAM) de Wit) Pada Mencit Putih Jantan (*Mus musculus*). *Pharmacon Jurnal Ilmiah Farmasi*. 6(4) : 130-138.

Kalaivanan, K. and Pugalendi, K.V. (2011) 'Antihyperglycemic effect of the alcoholic seed extract of *Swietenia macrophylla* on streptozotocin-diabetic rats', *Pharmacognosy Research*, 3(1), pp. 67–71. Available at: <https://doi.org/10.4103/0974-8490.79119>.

Kiberd, B. 2006. The chronic kidney disease epidemic: stepping back and looking forward. *J Am Soc Nephrol*. 17:2967-2973.

Komoroski, B. *et al.* (2009) 'Dapagliflozin, a novel SGLT2 inhibitor, induces dose-dependent glucosuria in healthy subjects', *Clinical Pharmacology and Therapeutics*, 85(5), pp. 520–526. Available at: <https://doi.org/10.1038/clpt.2008.251>.

Krisnawati, H., Varis, E., Kallio, M., & Markku, K., 2011. *Swietenia macrophylla* King.: Ecology, silviculture and productivity. *Cent. Int. For. Res.* 1–12.

Kurniawan and Suryajaya, P.I. (2015) 'Dapagliflozin: Terapi Baru untuk Diabetes Melitus', *Continuing Professional Development*, 42(11), pp. 817–822.

La Basy, L., Lestari, S., Kadarsih, S., 2015. The effects of the ethanolic extract of mahogany seeds (*Swietenia macrophylla* King) on the renal function of streptozotocin induced diabetic rats. *J. Med. Sci.* 47 (2), 51–58.

- Lenzen, S. (2008) 'The mechanisms of alloxan- and streptozotocin-induced diabetes', *Diabetologia*, 51(2), pp. 216–226. Available at: <https://doi.org/10.1007/s00125-007-0886-7>.
- Lodish H, Baltimore D, Berk A Zipursky SL, Matsudaira P, Darnell J. Molecular cell biology. 6<sup>th</sup> ed. New York: Scientific American Books, Inc. 2000: 886-98.
- Luman, A. (2015) 'Peran Inhibitor Sodium pada Terapi Diabetes Melitus', *Cermin Dunia Kedokteran (CDK)*, 42(7), pp. 498–503.
- Luo, Q. H. et al. (2016) 'Evaluation of KIM-1 and NGAL as Early Indicators for Assesment of Gentamycin-Induced Nephrotoxicity in Vivo and in Vitro'. *Kidney and Blood Pressure Research*. S. Karger AG, 41(6), HAL. 911-918. doi: 10.1159/000452592.
- Made, P. and Dharma Pathni, S. (2019) 'Terapi diabetes dengan SGLT-2 inhibitor', *Cermin Dunia Kedokteran*, 46(6), pp. 452–456. Available at: <http://www.cdkjournal.com/index.php/CDK/article/view/471>.
- Marieb, E. N. 2001. Human Anatomy and Physiology Fifth Edition. Benjamin Cummings.
- Marraffino, B., 1950, Total pancreatectomy for adenocarcinoma of the pancreas, *New York State Journal of Medicine*, 50(9):1124-7.
- Mursiti, S. 2004. Identifikasi senyawa alkaloid dalam biji mahoni bebas minyak (*swietenia mecrophylla king*) dan efek biji mahoni terhadap penurunan kadar glukosa darah tikus (*Rattus novergicus*) [Tesis]. Universitas Gadjah Mada. Yogyakarta.
- Muthmainah *et al.* (2021) 'Isolat Biji Mahoni (*Swietenia macrophylla* King) Memperbaiki Gambaran Histopatologi Hepar Tikus Model DM Tipe 2', *Smart Medical Journal*, 4(2), pp. 73–82. Available at: <https://doi.org/10.13057/smj.v4i2>.

- Nakai, K. *et al.* (2023) ‘Streptozotocin induces renal proximal tubular injury through p53 signaling activation’, *Scientific Reports*, 13(1), pp. 1–14. Available at: <https://doi.org/10.1038/s41598-023-35850-w>.
- Nengah Tegar Saputra, I. N. (2018). (DIABETAGONIK AGENT STREPTOZOCIN TO MAKE. Buletin Veteriner Udayana.
- Nugroho, A.E. (2006) ‘Review : Animal Models Of Diabetes Mellitus : Pathology And Mechanism Of Some Diabetogenics’, *Biodiversitas Journal of Biological Diversity*, 7(4), pp. 378–382. Available at: <https://doi.org/10.13057/biodiv/d070415>.
- Nurcholis, W., *et al.* (2019) ‘The  $\alpha$ -Glucosidase Inhibitory Activity of Seed Extract of Mahogany (*Swietenia macrophylla* King.)’, *Current Biochemistry*.
- Nursakinah, N. (2017) Uji Efektivitas Antidiabetes Fraksi Etil Asetat Daun Mahoni (*Swietenia macrophylla* King) Terhadap Tikus Jantan Yang Diinduksi Glukosa. Universitas Muhammadiyah Purwokerto.
- Osorio, H. *et al.* (2010) ‘Effect of phlorizin on SGLT2 expression in the kidney of diabetic rats’, *Journal of Nephrology*, 23(5), pp. 541–546.
- Patil, M.A. *et al.* (2014) ‘Evaluation of neonatal streptozotocin induced diabetic rat model for the development of cataract’, *Oxidative Medicine and Cellular Longevity*, 2014. Available at: <https://doi.org/10.1155/2014/463264>.
- Permutt, M.A. *et al.* (1984) ‘An in vivo analysis of pancreatic protein and insulin biosynthesis in a rat model for non-insulin-dependent diabetes’, *Journal of Clinical Investigation*, 73(5), pp. 1344–1350. Available at: <https://doi.org/10.1172/JCI111337>.
- Pieters, T. T. *et al.* (2019) ‘Histological characteristics of Acute Tubular Injury during Delayed Graft Function predict renal function after renal transplantation’, *Physiological Reports*. American Physiological Society 7(5). doi: 10.14814/phhy2.14000.

- Plowman, P.N. 1987. *Endocrinology and Metabolic Disease*. Toronto: John Wiley and Sons.
- Pranoto, A. (2016) 'Understanding The Role Kidney'.
- Rakieten, N., Rakieten, M. L., & Nadkarni, M. V. (1963). Studies on the diabetogenic action of streptozotocin (NSC-37917). *Cancer Chemotherapy Reports*, 29, 91–98.
- Rifiani, A. et al. (2016) 'Pengaruh Pemberian Flavonoid Biji Mahoni Terhadap Indeks Aterogenik Pada Model Tikus Dm Tipe 2. Universitas Gadjah Mada.
- Sahgal, G. *et al.* (2009) 'Phytochemical and antimicrobial activity of *Swietenia mahagoni* crude methanolic seed extract', *Tropical Biomedicine*, 26(3), pp. 274–279.
- Santer R, Kinner M, Lassen CL, Schneppenheim R, Eggert P, Bald M, et al. Molecular analysis of the SGLT2 gene in patients with renal glucosuria. *J Am Soc Nephrol*. 2003;14:2873-82.
- Saputra, N.T., Suartha, I.N. and Dharmayudha, A.A.G.O. (2018) 'Agen Diabetagonik Streptozotocin untuk Membuat Tikus Putih Jantan Diabetes Mellitus', *Buletin Veteriner Udayana*, 10(2), p. 116. Available at: <https://doi.org/10.24843/bulvet.2018.v10.i02.p02>.
- Sovia, E. *et al.* (2011) 'Aktivitas Inhibisi Ekstrak Bawang Putih dan S-metil sistein terhadap Reaksi Glikasi Albumin secara In Vitro Inhibition Activity of Garlic Extract and S-methyl Cysteine against the Reaction of the In Vitro Albumin Glication', *Jurnal Kedokteran Maranatha*, 10(2), pp. 98–109.
- Schwartz SS, *et al.* The time is right for a new classification system for diabetes rationale and implications of the  $\beta$ -cell-centric classification schema. *Diabetes Care*. 2016;39:179-86
- Shafir, E., Ziv, E. and Mosthaf, L., 1999, Nutritionally Induced Insulin Resistance and Receptor Defect Leading to  $\beta$ -Cell Failure in Animal Models, *Annals of The New York Academy of Sciences*, 892 : 223-46.

- Simatupang, A. (2019) *Monografi. Farmakologi klinik obat-obat Diabetes Mellitus Tipe 2, Fk Uki.*
- Slomianka L. 2009. Blue-histologi urinary system School of anatomy and human Biology. Australia.
- Soelistijo, S. (2021) 'Pedoman Pengelolaan dan Pencegahan Diabetes Melitus Tipe 2 Dewasa di Indonesia 2021', *Global Initiative for Asthma*, p. 46. Available at: [www.ginasthma.org](http://www.ginasthma.org).
- Suhono, B., & Wulan, Y., 2012. Ensiklopedia biologi dunia tumbuhan. PT Lentera Abadi, Jakarta
- Sumekar, D.W. and Fauzia, S. (2016) 'Efektivitas Biji Mahoni ( *Swietenia mahagoni* ) sebagai Pengobatan Diabetes Melitus The Effectivity Of Mahogany Seed ( *Swietenia Mahagoni* ) as A Treatment Of Diabetes Mellitus'
- Suyono S. 2005. Patofisiologi Diabetes Mellitus dalam Penatalaksanaan Diabetes Mellitus Terpadu: Pusat Diabetes dan Lipid RSUP Nasional Dr. Cipto Mangunkusumo. Fakultas Kedokteran Universitas Indonesia. Jakarta.
- Szkudelski, T., 2001, The Mechanism Of Alloxan And Streptozotocin Action In  $\beta$  Cells Of The Rat Pancreas, *Physiology Research*, 50: 536-54.
- Tana, S., Shivaluhung, M.N. and Teguh Suprihatin (2022) 'Buletin Anatomi dan Fisiologi Volume 7 Nomor 2 Agustus 2022 Gambaran Histologi Ren Tikus Putih (*Rattus norvegicus* L.) yang Diinduksi Insulin Histological Overview of White Rat Kidneys (*Rattus norvegicus* L.) Induced by Insulin', *Anatomi dan Fisiologi*, 7(2), pp. N22527-6751.
- Tea-sun Ha, *et al.* 2011. Gingseng total saponin improves products hyperpermeability induced by high glucose and advanced glycosylation endproducts. *J Korean Med Sci.* 26:1316-1321
- Triplitt, C.L. (2012) 'Understanding the kidneys' role in blood glucose regulation.', *The American journal of managed care*, 18(1 Suppl), pp. 1–17.

- Ueno Y, Kizaki M, Nakagiri R, Kamiya T, Sumi H, Osawa T. 2—2. Dietary glutathione protects rats from diabetic nephropathy and neuropathy. *J Nutri* 2002;132:897-900.
- Unger, R.H. and Foster, D.W., 1992, Diabetes Mellitus, In Wilson, J.D. and Foster, D.W., *Endocrinology*, 1255-1317, W.B. Saunders Company, A Akpan, J.O., Wright, P.H., Dulin, W.E., 1987, A comparison of the effects of Division of Harcourt Brace and Company, London
- Vigneshwaran, L. V. and Lalitha, K.G. (2017) 'In silico evaluation of antidiabetic molecules of the seeds of *Swietenia mahagoni* Jacq', *International Journal of Pharmaceutical and Phytopharmacological Research*, 6(1), p. 41. Available at: <https://doi.org/10.24896/eijppr.2016617>.
- Wilson GL. 1988. Mechanism of nitroroure induced beta cell damage. activation of poly (adp-ribose) syntase and cellular distribution. *Diabetes*. 37: 213-216
- Wright EM, Hirayama BA, Loo DF. Active sugar transport in health and disease. *J Intern Med*.2007;261:32-43
- Wu, J. and Yan, L.J. (2015) 'Streptozotocin-induced type 1 diabetes in rodents as a model for studying mitochondrial mechanisms of diabetic  $\beta$  cell glucotoxicity', *Diabetes, Metabolic Syndrome and Obesity*, 8, pp. 181–188. Available at: <https://doi.org/10.2147/DMSO.S82272>.
- Yohanes, D.C. (2020) 'Penghambat Sodium-Glucose Cotransporter-2', *Acta Pharmaciae Indonesia : Acta Pharm Indo*, 8(1), p. 26. Available at: <https://doi.org/10.20884/1.api.2020.8.1.2450>.
- Yuan,X. *et al.* (2019) 'Enteromorpha prolifera oligomers relieve pancreatic injury in streptozotocin (STZ)-induced diabetic mice', *Carbohydrate Polymers*, 206(October 2018), pp. 403–411. Available at: <https://doi.org/10.1016/j.carbpol.2018.11.019>

Yudhani, R.D. *et al.* (2021) ‘The molecular mechanisms of hypoglycemic properties and safety profiles of swietenia macrophylla seeds extract: A review’, *Open Access Macedonian Journal of Medical Sciences*, 9, pp. 370–388. Available at: <https://doi.org/10.3889/oamjms.2021.6972>.

Yuliantika NMR, Gelgel KTP, Kardena IM. 2013. Efek Toksisitas Ekstrak Daun Sirih Merah Terhadap Gambaran Mikroskopis Ginjal Tikus Putih Diabetik Yang Diinduksi Aloksan. *Bul.Vet. Udayana*. 5(2): 114-121.