

DAFTAR PUSTAKA

- Abdelhafez, H. M., Amara, T. M. M. A. and El-Debsi, S. M. (2015) 'Evaluation of Role of Glibenclamide and Aphanizomenon Flos-Aquae Extract on Lymph Node and Spleen of Diabetic Rats', *The Egyptian Journal of Hospital Medicine*, 61, pp. 700–720. doi: 10.12816/0018771.
- Adaobi, O. *et al.* (2021) 'On The Analysis of Blood Glucose Levels of Diabetic Patients', *Fortune Journal of Health Sciences*, 04(01), pp. 257–283. doi: 10.26502/fjhs021.
- Adiputra, R. (2023) 'Efek samping penggunaan obat anti diabetes jangka panjang : sebuah meta analisis', *Jurnal Kesehatan Tambusai*, 4(3), pp. 3951–3959.
- Adjei, D.-G. G. *et al.* (2022) 'Antidiabetic properties of an Ethanolic leaf extract of *Launaea taraxacifolia* (Willd.) Amin ex C. Jeffrey (Asteraceae) in SD rats', *Clinical Phytoscience*, 8(1).
- Al-Awar, A. *et al.* (2016) 'Experimental Diabetes Mellitus in Different Animal Models', *Journal of Diabetes Research*, 2016. doi: 10.1155/2016/9051426.
- Alam, M. N., Bristi, N. J. and Rafiquzzaman, M. (2013) 'Review on in vivo and in vitro methods evaluation of antioxidant activity', *Saudi Pharmaceutical Journal*, 21(2), pp. 143–152. doi: 10.1016/j.jsps.2012.05.002.
- Anastasiou, I.A., Eleftheriadou, I., Tentolouris, A., Koliaki, C., Kosta, O.A., Tentolouris, N. (2021). *The Effect of Oxidative Stress and Antioxidant Therapies on Pancreatic β -cell Dysfunction: Results from In Vitro and In Vivo Studies*. *Current Medicinal Chemistry*, 28(7), 1328-1346.
- Asril, N. M. *et al.* (2020) 'Predicting Healthy Lifestyle Behaviours Among Patients With Type 2 Diabetes in Rural Bali, Indonesia', *Clinical Medicine Insights: Endocrinology and Diabetes*, 13.
- Balakrishnan, B. B. *et al.* (2019) 'Moringa concanensis Nimmo extracts ameliorates hyperglycemia-mediated oxidative stress and upregulates PPAR γ and GLUT4 gene expression in liver and pancreas of streptozotocin-nicotinamide induced diabetic rats', *Biomedicine and Pharmacotherapy*, 112(December 2018). doi: 10.1016/j.biopha.2019.108688.
- Bartolome, A. (2023) 'The Pancreatic Beta Cell: Editorial', *Biomolecules*, 13(3), pp. 10–12. doi: 10.3390/biom13030495.
- Basy, L. La, Lestari, 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. doi: 10.19106/jmedsci004702201501.
- Baynest, H. W. (2015) 'Classification, Pathophysiology, Diagnosis and Management of Diabetes Mellitus', *Journal of Diabetes & Metabolism*,

06(05). doi: 10.4172/2155-6156.1000541.

Berbudi, A. *et al.* (2019) 'Type 2 Diabetes and its Impact on the Immune System', *Current Diabetes Reviews*, 16(5), pp. 442–449. doi: 10.2174/1573399815666191024085838.

BKPK (2023) *Survei Kesehatan Indonesia (SKI)*, Kementerian Kesehatan Republik Indonesia. Jakarta.

Cervino, G. *et al.* (2019) 'Diabetes: Oral health related quality of life and oral alterations', *BioMed Research International*, 2019. doi: 10.1155/2019/5907195.

Charan, J. and Kantharia, N. (2013) 'How to calculate sample size in animal studies?', *Journal of Pharmacology and Pharmacotherapeutics*, 4(4), pp. 303–306. doi: 10.4103/0976-500X.119726.

Cyntithia, L. G. *et al.* (2024) 'Pengaruh Ekstrak Bawang Putih (*Allium sativum*) terhadap Kadar Glukosa Darah dan Gambaran Histopatologi Pankreas pada Tikus Putih (*Rattus norvegicus*) Galur Sprague-Dawley yang Diinduksi Streptozotocin The Effect Of Garlic Extract (*Allium Sativum*) on ', 14(1), pp. 1101–1108.

Demarsilis, A. *et al.* (2022) 'Pharmacotherapy of type 2 diabetes: An update and future directions', *Metabolism: Clinical and Experimental*, 137(October), p. 155332. doi: 10.1016/j.metabol.2022.155332.

Dewanjee, S. *et al.* (2009) 'Swietenine: A potential oral hypoglycemic from *Swietenia macrophylla* seed', *Fitoterapia*, 80(4), pp. 249–251. doi: 10.1016/j.fitote.2009.02.004.

Dludla, P. V *et al.* (2023) 'Pancreatic β -cell dysfunction in type 2 diabetes: Implications of inflammation and oxidative stress', *World Journal of Diabetes*, 14(3), pp. 130–146. doi: 10.4239/wjd.v14.i3.130.

Dutta, M. *et al.* (2011) 'Role of Diet and Plants on Diabetic Patients -', *Science and Culture*, 77(March-April), pp. 115–122.

Dutta, M. *et al.* (2013) 'Antidiabetic and antioxidant effect of *Swietenia macrophylla* seeds in experimental type 2-main.pdf diabetic rats', *International Journal of Diabetes in Developing Countries*, 33(1), pp. 60–65.

Edagha, I. A. *et al.* (2021) 'Blood glucose concentration, pancreatic histology and insulin-expression following metformin and glibenclamide administration in diabetic rats', *Journal of Morphological Sciences*, 38(2), pp. 38–43. doi: 10.51929/JMS.38.7.2021.

Fauziyah, A. (2018) *Pengembangan Ekstrak Etanol Daun Kembang Bulan *Tithonia Diversifolia* (Hemsley) A. Gray Terstandar Sebagai Obat Herbal Untuk Memperbaiki Fertilitas Pada Hewan Model Diabetes Mellitus*, Universitas Gadjah Mada. Universitas Gadjah Mada.

Fiorenza, M. P. *et al.* (2022) 'Effect of Mahogany (*Swietenia mahagoni* Jacq.)

- Extract on the Islet Cells' Number and Blood Glucose Levels of Alloxan-induced Diabetic Rat', *International Journal of Drug Delivery Technology*, 12(3), pp. 1004–1008. doi: 10.25258/ijddt.12.3.14.
- Furman, B. L. (2021) 'Streptozotocin-Induced Diabetic Models in Mice and Rats', *Current Protocols*, 1(4), pp. 1–21. doi: 10.1002/cpz1.78.
- Ghasemi, A., Khalifi, S. and Jedi, S. (2014) 'Streptozotocin-nicotinamide-induced rat model of type 2 diabetes (review)', *Acta Physiologica Hungarica*, 101(4), pp. 408–420. doi: 10.1556/APhysiol.101.2014.4.2.
- Haeusler, R. A., McGraw, T. E. and Accili, D. (2018) 'Metabolic Signalling: Biochemical and cellular properties of insulin receptor signalling', *Nature Reviews Molecular Cell Biology*, 19(1), pp. 31–44. doi: 10.1038/nrm.2017.89.
- Haruni, K., Maarit, K. and Markku, K. (2011) 'Swietenia macrophylla King: Ecology, silviculture and productivity', *Swietenia macrophylla King: Ecology, silviculture and productivity*. doi: 10.17528/cifor/003395.
- Hosni, A. *et al.* (2022) 'International Journal of Biological Macromolecules Therapeutic significance of thymoquinone-loaded chitosan nanoparticles on streptozotocin / nicotinamide-induced diabetic rats: In vitro and in vivo functional analysis', *International Journal of Biological Macromolecules*, 221(August), pp. 1415–1427. doi: 10.1016/j.ijbiomac.2022.09.048.
- Husna, F. *et al.* (2019) 'Model Hewan Coba pada Penelitian Diabetes Animal Model in Diabetes Research', *Mini Review Article Pharmaceutical Sciences and Research (PSR)*, 6(3), pp. 131–141.
- Hussain, A. *et al.* (2016) 'Glibenclamide-induced profound hypoglycaemic crisis: a case report', *Therapeutic Advances in Endocrinology and Metabolism*, 7(2), pp. 84–87. doi: 10.1177/2042018816632440.
- IDF (2021) *IDF Diabetes Atlas 10TH edition*. Available at: www.diabetesatlas.org.
- Ilyas, M. Y. *et al.* (2024) 'Profil Histologi Pankreas pada Kemanjuran Ekstrak Purifikasi Batang Galing terhadap Diabetes yang Diinduksi Streptozotocin pada Tikus Model Diabetes IKN : Jurnal Informatika dan Kesehatan', *IKN : Jurnal Informatika dan Kesehatan*, 1, pp. 98–106.
- Kajimoto, Y. and Kaneto, H. (2004) 'Role of oxidative stress in pancreatic β -cell dysfunction', *Annals of the New York Academy of Sciences*, 1011, pp. 168–176. doi: 10.1196/annals.1293.017.
- 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. doi: 10.4103/0974-8490.79119.
- Kaur, P. *et al.* (2021) "The pharmacological profile of SGLT2 inhibitors: Focus on mechanistic aspects and pharmacogenomics", *European Journal of*

- Pharmacology*, 904(January), p. 174169. doi: 10.1016/j.ejphar.2021.174169.
- Keezhipadathil, J. (2019) 'Evaluation of Suspected Adverse Drug Reactions of Oral Anti-diabetic Drugs in a Tertiary Care Hospital for Type II Diabetes Mellitus', *Indian Journal of Pharmacy Practice*, 12(2), pp. 103–110. doi: 10.5530/ijopp.12.2.23.
- Khani, S. *et al.* (2021) 'Hypoglycemic , hepatoprotective , and hypolipidemic effects of hydroalcoholic extract of *Eryngium billardieri* root on nicotinamide / streptozotocin-induced type II diabetic rats', 16(April), pp. 193–202. doi: 10.4103/1735-5362.310526.
- Khin, P. P., Lee, J. H. and Jun, H. S. (2023) 'Pancreatic Beta-cell Dysfunction in Type 2 Diabetes', *European Journal of Inflammation*, 21, pp. 1–13. doi: 10.1177/1721727X231154152.
- Koodathil, J. (2023) 'In vitro and in vivo antidiabetic activity of bitter honey in streptozotocin-nicotinamide-induced diabetic Wistar rats', (January), pp. 91–100.
- Kooti, W. *et al.* (2016) 'The role of medicinal plants in the treatment of diabetes: a systematic review', *Electronic physician*, 8(1), pp. 1832–1842. doi: 10.19082/1832.
- Kristin, E. (2016) 'Dipeptidyl Peptidase 4 (Dpp-4) Inhibitors for the Treatment of Type 2 Diabetes Mellitus', *Journal of the Medical Sciences (Berkala Ilmu Kedokteran)*, 48(02), pp. 119–130. doi: 10.19106/jmedsci004802201606.
- Maedler, K. *et al.* (2005) 'Sulfonylurea induced β -cell apoptosis in cultured human islets', *Journal of Clinical Endocrinology and Metabolism*, 90(1), pp. 501–506. doi: 10.1210/jc.2004-0699.
- Mag, P., Puttaswamy, N. Y. and Urooj, A. (2019) 'Normalization of Insulin Resistance , Glucose Intolerance , and Lipid Profile by *Swietenia Mahagoni* (L .) Jacq . Leaf Extract in Fructose - Induced Diabetic Rats', pp. 649–657. doi: 10.4103/pm.pm.
- Maideen, N. M. P. (2019) 'Pharmacologically relevant drug interactions of α glucosidase inhibitors', *Journal of Diabetes, Metabolic Disorders & Control*, 6(2), pp. 28–30. doi: 10.15406/jdmdc.2019.06.00178.
- Maiti, A. *et al.* (2008) 'Hypoglycemic effect of *Swietenia macrophylla* seeds against type II diabetes', *International Journal of Green Pharmacy*, 2(4), p. 224. doi: 10.4103/0973-8258.44738.
- Moghadamtousi, S. Z. *et al.* (2013) 'Biological activities and phytochemicals of *Swietenia macrophylla* king', *Molecules*, 18(9), pp. 10465–10483.
- Munawwaroh, S. W., Fitrianiingsih, S. P. and Choesrina, R. C. (2022) 'Studi Literatur Aktivitas Antidiabetes Biji Mahoni (*Swietenia mahagoni* (L.) Jacq.)', *Bandung Conference Series: Pharmacy*, 2(2), pp. 314–320.
- 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. doi: 10.13057/smj.v4i2.

Nugraha, A. (2012) *Molecular Docking and Antihyperglycemic Activity of Active Compounds Which Isolated from Methanol Extract of Swietenia macrophylla King Seeds in Diabetic Rats Induced by Streptozotocin (Translate)*. Universitas Gadjah Mada.

Nurcholis, W. *et al.* (2019) 'The α -Glucosidase Inhibitory Activity of Seed Extract of Mahogany (*Swietenia macrophylla* King.)', *Curr. Biochem.* 2019, 6(1), pp. 35–44.

Olokoba, A. B., Obateru, O. A. and Olokoba, L. B. (2012) 'Type 2 diabetes mellitus: A review of current trends', *Oman Medical Journal*, 27(4), pp. 269–273. doi: 10.5001/omj.2012.68.

Pandarekandy, S. T. *et al.* (2017) 'Hypoglycaemic Effect of Glibenclamide: A Critical Study on the Basis of Creatinine and Lipid Peroxidation Status of Streptozotocin-induced Diabetic Rat', *Indian Journal of Pharmaceutical Sciences*, 79(5), pp. 768–777. doi: 10.4172/pharmaceutical-sciences.1000290.

Park, Y. J. and Woo, M. (2019) 'Pancreatic β cells: Gatekeepers of type 2 diabetes', *Journal of Cell Biology*, 218(4), pp. 1094–1095. doi: 10.1083/JCB.201810097.

Patel, D. K. *et al.* (2012) 'Diabetes mellitus: An overview on its pharmacological aspects and reported medicinal plants having antidiabetic activity', *Asian Pacific Journal of Tropical Biomedicine*, 2(5), pp. 411–420.

PERKENI (2015) 'REFRESHING PENATALAKSANAAN DIABETES MELLITUS DIABETES MELLITUS (konsensus Perkeni)', *Refreshing Penatalaksanaan Diabetes Melitus*.

Pham, E. C. *et al.* (2023) 'No Title Formulation development, optimization, in vivo antidiabetic effect and acute toxicity of directly compressible herbal tablets containing *Merremia tridentata* (L.) extract', *Journal of Drug Delivery Science and Technology*.

Prasetyastuti *et al.* (2016) *POTENSI ANTIDIABETIK 7-hidroksi-2-(4-hidroksi-3-metoksi-fenil)-kroman-4-one BIJI MAHONI (Swietenia macrophylla King) PADA MODEL TIKUS DIABETES TIPE 2 : Kajian Ekspresi Gen Glucagon Like peptide-1 (GLP-1), Retinol Binding Protein-4 (RBP-4) dan Phosphoenolp.* Universitas Gadjah Mada.

Puspitasari, P., Pramana, A. and Mahendra, W. (2013) 'Studi Ekstrak Metanol Biji Mahoni terhadap MDA Serum Tikus Putih Pasca Induksi MLD-STZ', *Jurnal biotropika*, 1(6), pp. 242–246.

Putra, R. J., Achmad, A. and Hananditia, R. P. (2017) 'Kejadian Efek Samping Potensial Terapi Obat Anti Diabetes Pada Pasien Diabetes Melitus Berdasarkan Algoritme Naranjo', *Pharmaceutical Journal of Indonesia*, 2(2),

pp. 45–50. doi: 10.21776/ub.pji.2017.002.02.3.

- Rachmatiah, T., Permatasari, D. and Dewi, R. (2015) ‘Antidiabetic potential in the leaves, bark and seeds of Mahogany (*Swietenia macrophylla* King)’, *Sainstech*, 88(2), pp. 1410–7104.
- Ratna, S. *et al.* (2015) ‘Pengaruh Ekstrak Etanol Daun Kelor (*Moringa oleifera*) pada Ekspresi Insulin dan Insulinitis Tikus Diabetes Melitus’, *Revue de l’Institut Francais du Petrole*, 47(2).
- Romeh, G. H. H. *et al.* (2020) ‘Histological structure of pancreas in chronic pancreatitis and the role of pancreatic stellate cells’, *Egyptian Journal of Hospital Medicine*, 81(4), pp. 1835–1839. doi: 10.21608/ejhm.2020.121008.
- Saini, K., Sharma, S. and Khan, Y. (2023) ‘DPP-4 inhibitors for treating T2DM - hype or hope? an analysis based on the current literature’, *Frontiers in Molecular Biosciences*, 10(May), pp. 1–19. doi: 10.3389/fmolb.2023.1130625.
- Sari, N. S. and Mursiti, S. (2016) ‘Isolasi Flavonoid Dari Biji Mahoni (*Swietenia macrophylla*, King) Dan Uji Aktivitasnya Sebagai Antibakteri’, *Indonesian Journal of Chemical Science*, 5(3), pp. 178–183. Available at: <http://journal.unnes.ac.id/sju/index.php/ijcs>.
- Schwartz, S. S. *et al.* (2016) ‘The time is right for a new classification system for diabetes: Rationale and implications of the β -cell-centric classification schema’, *Diabetes Care*, 39(2), pp. 179–186. doi: 10.2337/dc15-1585.
- Shankar, S. and Vuppu, S. (2020) ‘In vitro drug metabolism and pharmacokinetics of a novel thiazolidinedione derivative, a potential anticancer compound’, *Journal of Pharmaceutical and Biomedical Analysis*, 179(xxxx), p. 113000. doi: 10.1016/j.jpba.2019.113000.
- Shiming, Z. *et al.* (2021) ‘Swietenine potentiates the antihyperglycemic and antioxidant activity of Metformin in Streptozotocin induced diabetic rats’, *Biomedicine and Pharmacotherapy*, 139(April), p. 111576. doi: 10.1016/j.biopha.2021.111576.
- Stubbs, D. J., Levy, N. and Dhatariya, K. (2017) ‘Diabetes medication pharmacology’, *BJA Education*, 17(6), pp. 198–207. doi: 10.1093/bjaed/mkw075.
- Sudjarwo, S. A. and Wardani, G. (2019) ‘The Protective effect of *Swietenia macrophylla* Extract Nanoparticles on Pulmonary Damage in Streptozotocin-Induced Diabetic Rats’, *Indian Veterinary Journal*, 12.
- Sukardiman and Ervina, M. (2020) ‘The recent use of *Swietenia mahagoni* (L.) Jacq. as antidiabetes type 2 phytomedicine: A systematic review’, *Heliyon*, 6(3), p. e03536. doi: 10.1016/j.heliyon.2020.e03536.
- Suryani, N. (2013) ‘Effect of Methanolic *Swietenia mahagoni* Seed Extracts to Decreasing Blood Glucose Contant and Repair Pancreatic Tissue Damage of

- Rat Multiple Low Dose-Streptozotocin (MLD-STZ) Induced', *Jurkessia*, 4.
- Susilawati, E. *et al.* (2023) 'Review of the Case Reports on Metformin, Sulfonylurea, and Thiazolidinedione Therapies in Type 2 Diabetes Mellitus Patients', *Medical sciences (Basel, Switzerland)*, 11(3), pp. 1–12. doi: 10.3390/medsci11030050.
- Swaminathan, S., Abirami, M. J. and Senthilraj, O. (2019) 'Diagnostic Usefulness of HOMA- β and HOMA-IR in Diabetes Mellitus – A Review', *International Journal of Pharmaceutical Research & Allied Sciences*, 10(2), pp. 935–942. doi: 10.26452/ijrps.v10i2.278.
- Szkudelski, T. (2012) 'Streptozotocin-nicotinamide-induced diabetes in the rat. Characteristics of the experimental model', *Experimental Biology and Medicine*, 237(5), pp. 481–490. doi: 10.1258/ebm.2012.011372.
- Telrandhe, U. B. *et al.* (2022) 'Phytochemistry and Pharmacological Activities of *Swietenia macrophylla* King (Meliaceae)', *Scholars Academic Journal of Pharmacy*, 11(1), pp. 6–12. doi: 10.36347/sajp.2022.v11i01.002.
- Thrasher, J. (2017) 'Pharmacologic Management of Type 2 Diabetes Mellitus: Available Therapies', *American Journal of Cardiology*, 120(1), pp. S4–S16.
- Ulfa, M. *et al.* (2020) 'Efek Pati Resisten Singkong (*Manihot esculenta* Crantz) terhadap Indeks HOMA-IR dan HOMA-B Tikus Model Diabetes', *Pustaka Kesehatan*, 7(1), p. 1.
- Utomo, A. W. *et al.* (2022) 'The use of herbal medicines in patients with type-2 diabetes mellitus in Indonesia', *Sains Medika: Jurnal Kedokteran dan Kesehatan*, 13(1), p. 12.
- Wisnu, I. M. *et al.* (2024) 'Journal of Ayurveda and Integrative Medicine Antidiabetic effect of combined extract of *Coccinia grandis* and *Blumea balsamifera* on streptozotocin-nicotinamide induced diabetic rats', *Journal of Ayurveda and Integrative Medicine*, 15(4), p. 101021. doi: 10.1016/j.jaim.2024.101021.
- Wszola, M. *et al.* (2021) 'Streptozotocin-induced diabetes in a mouse model (Balb/c) is not an effective model for research on transplantation procedures in the treatment of type 1 diabetes', *Biomedicines*, 9(12). doi: 10.3390/biomedicines9121790.
- Wu, Y. *et al.* (2014) 'Risk factors contributing to type 2 diabetes and recent advances in the treatment and prevention', *International journal of medical sciences*, 11(11), pp. 1185–1200. doi: 10.7150/ijms.10001.
- Wysham, C. and Shubrook, J. (2020) 'Beta-cell failure in type 2 diabetes: mechanisms, markers, and clinical implications', *Postgraduate Medicine*, 132(8), pp. 676–686. doi: 10.1080/00325481.2020.1771047.
- Yan, L. J. (2022) 'The Nicotinamide/Streptozotocin Rodent Model of Type 2 Diabetes: Renal Pathophysiology and Redox Imbalance Features',

Biomolecules, 12(9). doi: 10.3390/biom12091225.

- Yohanes, D. C. (2020) ‘Penghambat Sodium-Glucose Cotransporter-2’, *Acta Pharmaciae Indonesia: Acta Pharm Indo*, 8(1), p. 26. doi: 10.20884/1.api.2020.8.1.2450.
- 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. doi: 10.3889/oamjms.2021.6972.
- Zhao, X. *et al.* (2023) ‘The crucial role and mechanism of insulin resistance in metabolic disease’, *Frontiers in Endocrinology*, 14(March). doi: 10.3389/fendo.2023.1149239.
- Zhou, Q. and Melton, D. A. (2018) ‘Pancreas regeneration HHS Public Access’, *Nature*, 557(7705), pp. 351–358. doi: 10.1038/s41586-018-0088-0.Pancreas.