

DAFTAR PUSTAKA

1. Abbafati C, Abbas KM, Abbasi-Kangevari M, Abd-Allah F, Abdelalim A, Abdollahi M, et al. Global burden of 87 risk factors in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *Lancet*. 2020;396(10258):1223–49.
2. World Health Organization. New report shows progress and missed opportunities in the control of NCDs at the national level. Departmental news [Internet]. 2022; Available from: <https://www.who.int/news/item/12-05-2022-new-report-shows-progress-and-missed-opportunities-in-the-control-of-ncds-at-the-national-level>
3. World Health Organization. Diabetes. World Health Organization. 2022.
4. International Diabetes Federation. IDF Diabetes Atlas. Vol. 102, Diabetes Research and Clinical Practice. 2021. 0–141 p.
5. Dinas Kesehatan Sumatera Barat. Riset Kesehatan Dasar Provinsi Sumatera Barat Tahun 2018. Laporan Riskedas Nasional 2018. 2019. 1–478 p.
6. Centers for Disease Control and Prevention. What Is Type 1 Diabetes ? What Causes Type 1 Diabetes ? Symptoms and Risk Factors Hypoglycemia and Diabetic Ketoacidosis. CDC - Type 1 Diabetes. 2022;2–4.
7. Centers for Disease Control and Prevention. What Causes Type 2 Diabetes? Symptoms and Risk Factors Testing for Type 2 Diabetes Type 2 Diabetes in Children and Teens. CDC - Type 2 Diabetes. 2021;2.
8. Modzelewski R, Stefanowicz-Rutkowska MM, Matuszewski W, Bandurska-Stankiewicz M. Gestational Diabetes Mellitus-Recent Literature Review. *J Clin Med*. 2022;11(5736).
9. Zajec A, Podkrajšek KT, Tesovnik T, Šket R, Čugalj Kern B, Jenko Bizjan B, et al. Pathogenesis of Type 1 Diabetes: Established Facts and New Insights. *Genes (Basel)*. 2022;13(4).
10. Paschou SA, Papadopoulou-Marketou N, Chrousos GP, Christina KG. On type 1 diabetes mellitus pathogenesis. *Endocr Connect*. 2018;7(1):R38–46.
11. Lovic D, Piperidou A, Zografou I, Grassos H, Pittaras A, Manolis A. The Growing Epidemic of Diabetes Mellitus. *Curr Vasc Pharmacol*. 2019;18(2):104–9.
12. Vergès B. Dyslipidemia in Type 1 Diabetes: A Masked Danger. *Trends Endocrinol Metab* [Internet]. 2020;31(6):422–34. Available from: <https://doi.org/10.1016/j.tem.2020.01.015>
13. Oliveira MLM, da Cunha AL, de Lima WG, Caetano CF, Caldeira CD. Silymarin Attenuates Hepatic and Pancreatic Redox Imbalance Independent of Glycemic Regulation in the Alloxan-induced Diabetic Rat Model. *Biomed Environ Sci*. 2020;33(9):690–700.
14. Chiesa ST, Charakida M. High-Density Lipoprotein Function and

- Dysfunction in Health and Disease. *Cardiovasc Drugs Ther.* 2019;33(2):207–19.
15. Widaryanti B, Khikmah N, Sulistyani N. Efek Rebusan Sereh (*Cymbopogon citratus*) Terhadap Respon Stress Oksidatif Pada Tikus Wistar Jantan (*Rattus norvegicus*) Diabetes. *Life Sci.* 2021;10(2):173–81.
 16. Shah NA, Khan MR. Antidiabetic effect of *Sida cordata* in alloxan induced diabetic rats. *Biomed Res Int.* 2014;2014.
 17. National Library of Medicine. Cholesterol Levels: What you need to know. Vol. 7, NIH Medline Plus the Magazine. 2020. p. 6–7.
 18. Fidyana M, Esfandiari F, Maharyuni E, Nur M. Hubungan Indeks Massa Tubuh dengan kadar HDL pada pasien Diabetes Mellitus tipe 2. *J Ilm Kesehat Sandi Husada.* 2020;11(1):392–6.
 19. Nosrati M, Safari M, Alizadeh A, Ahmadi M, Abdolkarim, Mahrooz. The Atherogenic Index Log (Triglyceride/HDL-Cholesterol) as a Biomarker to Identify Type 2 Diabetes Patients with Poor Glycemic Control. *Int J Prev Med.* 2021;8:1–5.
 20. Xepapadaki E, Zvintzou E, Kalogeropoulou C, Filou S, Kypreos KE. The Antioxidant Function of HDL in Atherosclerosis. *Angiology.* 2020;71(2):112–21.
 21. Yunarto N, Sulistyaningrum N, Kurniatri AA, Elya B. Gambir (*Uncaria gambir* Roxb.) as A Potential Alternative Treatment for Hyperlipidemia. *Media Penelit dan Pengemb Kesehat.* 2021;31(3):183–92.
 22. Hosen N. Balai Pengkajian Teknologi Pertanian, Balitbangtan Sumatera Barat. *J Penelit Pertan Terap.* 2017;17(2):124–31.
 23. Musial C, Kuban-Jankowska A, Gorska-Ponikowska M. Beneficial properties of green tea catechins. *Int J Mol Sci.* 2020;21(5).
 24. Asmira S, Nurhamidah N, Analdi A. Aktivitas Antioksidan Dan Total Fenol Pada Kopi Kawa Daun Yang Berpotensi Sebagai Alternative Pangan Fungsional. *Sci J Farm dan Kesehat.* 2020;10(2):200.
 25. Zulfitra. *Kawa Daun.* Jakarta: Badan Pengembangan dan Pembinaan Bahasa; 2017.
 26. Ismail AS, Rizal Y, Armenia A, Kasim A. Determination of the best method for processing gambier liquid by-product [*Uncaria gambir* (hunter) roxb] as natural antioxidant sources. *J Indones Trop Anim Agric.* 2021;46(2):166–72.
 27. Ansori F Al, Lipoeto NI, Julizar. Pengaruh Pemberian Kawa Daun Gambir terhadap Kadar Malondialdehid Jaringan Hati Mencit Diabetes yang Diinduksi Aloksan. *J Ilmu Kesehat Indones.* 2020;1(1):1–6.
 28. World Health Organization. Classification of diabetes mellitus 2019. Vol. 21, *Clinics in Laboratory Medicine.* 2019. 1–13 p.
 29. American Diabetes Association Professional Practice Committee.

Classification and Diagnosis of Diabetes : Standards of Medical Care in Diabetes — 2022. *Diabetes Care*. 2022;45(Suppl):17–38.

30. Abdosh T, Weldegebreal F, Teklemariam Z, Mitiku H. Cardiovascular diseases risk factors among adult diabetic patients in eastern Ethiopia. *JRSM Cardiovasc Dis*. 2019;8:204800401987498.
31. Carty D. *Clinical Guidelines Diabetes Mellitus, Diagnosis*. NHS, Gt Glas Clyde. 2021;
32. Centers for Disease Control and Prevention. *Diabetes Risk Factors* [Internet]. Centers for Disease Control and Prevention. 2022. p. 1–3. Available from: <https://www.cdc.gov/diabetes/basics/risk-factors.html>
33. Galicia-Garcia U, Benito-Vicente A, Jebari S, Larrea-Sebal A, Siddiqi H, Uribe KB, et al. Pathophysiology of type 2 diabetes mellitus. *Int J Mol Sci*. 2020;21(17):1–34.
34. Chen L, Chen XW, Huang X, Song BL, Wang Y, Wang Y. Regulation of glucose and lipid metabolism in health and disease. *Sci China Life Sci*. 2019;62(11):1420–58.
35. Chao HW, Chao SW, Lin H, Ku HC, Cheng CF. Homeostasis of glucose and lipid in non-alcoholic fatty liver disease. *Int J Mol Sci*. 2019;20(2).
36. Castaño C, Kalko S, Novials A, Párrizas M. Obesity-associated exosomal miRNAs modulate glucose and lipid metabolism in mice. *Proc Natl Acad Sci U S A*. 2018;115(48):12158–63.
37. Dickson JL, Hewett JN, Gunn CA, Lynn A, Shaw GM, Chase JG. On the problem of patient-specific endogenous glucose production in neonates on stochastic targeted glycemic control. *J Diabetes Sci Technol*. 2013;7(4):913–27.
38. Tomlinson B, Chan P, Lam CWK. Postprandial hyperlipidemia as a risk factor in patients with type 2 diabetes. *Expert Rev Endocrinol Metab* [Internet]. 2020;15(3):147–57. Available from: <https://doi.org/10.1080/17446651.2020.1750949>
39. World Health Organization. *Diagnosis and Management of Type 2 Diabetes (HEARTS-D)*. *World Heal Organ*. 2020;42(SUPPL. 1):2–8.
40. Elhefnawy ME, Ghadzi SMS, Harun SN. Predictors Associated with Type 2 Diabetes Mellitus Complications over Time: A Literature Review. *J Vasc Dis*. 2022;1(1):13–23.
41. Azzi A. Oxidative Stress: What Is It? Can It Be Measured? Where Is It Located? Can It Be Good or Bad? Can It Be Prevented? Can It Be Cured? *Antioxidants*. 2022;11(8).
42. Asmat U, Abad K, Ismail K. Diabetes mellitus and oxidative stress—A concise review. *Saudi Pharm J* [Internet]. 2016;24(5):547–53. Available from: <http://dx.doi.org/10.1016/j.jsps.2015.03.013>

43. Zhang Z, Dalan R, Hu Z, Wang JW, Chew NWS, Poh KK, et al. Reactive Oxygen Species Scavenging Nanomedicine for the Treatment of Ischemic Heart Disease. *Adv Mater.* 2022;34(35).
44. Volpe CMO, Villar-Delfino PH, Dos Anjos PMF, Nogueira-Machado JA. Cellular death, reactive oxygen species (ROS) and diabetic complications review-Article. *Cell Death Dis.* 2018;9(2).
45. Zhao RZ, Jiang S, Zhang L, Yu ZB. Mitochondrial electron transport chain, ROS generation and uncoupling. *Int J Mol Med.* 2019;44(1):3–15.
46. Shen CY, Lu CH, Wu CH, Li KJ, Kuo YM, Hsieh SC, et al. The development of maillard reaction, and advanced glycation end product (Age)-receptor for age (rage) signaling inhibitors as novel therapeutic strategies for patients with age-related diseases. *Molecules.* 2020;25(23).
47. Chew H, Solomon VA, Fonteh AN. Involvement of Lipids in Alzheimer's Disease Pathology and Potential Therapies. *Front Physiol.* 2020;11(June):1–28.
48. Lin J. Low-Density Lipoprotein: Biochemical and Metabolic Characteristics and Its Pathogenic Mechanism. *Apolipoproteins, Triglycerides Cholest.* 2020;
49. Venugopal SK, Anoruo M, Jialal I. *Biochemistry , Low Density Lipoprotein.* 2022;2–4. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK500010/#:~:text=LDL carries cholesterol to various,described by Goldstein and Brown.>
50. Freeman MW, Walford GA. *Lipoprotein Metabolism and the Treatment of Lipid Disorders [Internet]. Seventh Ed. Vols. 1–2, Endocrinology: Adult and Pediatric.* Elsevier Inc.; 2016. 715-736.e7 p. Available from: <http://dx.doi.org/10.1016/B978-0-323-18907-1.00041-X>
51. Fanni G, Rosato R, Gentile L, Anselmino M, Frea S, Ponzio V, et al. Is HDL cholesterol protective in patients with type 2 diabetes? A retrospective population-based cohort study. *J Transl Med [Internet].* 2020;18(1):1–9. Available from: <https://doi.org/10.1186/s12967-020-02357-1>
52. Lee Y, Siddiqui WJ. *Cholesterol Levels.* StatPearls Publishing. 2022.
53. Pirahanchi Y, Huecker MR. *Biochemistry , LDL Cholesterol Issues of Concern.* 2022;7–10.
54. Macdonald O, Mohammed A, Akinloye OA. Alloxan-Induced Diabetes, a Common Model For Evaluating The Glycemic-Control. *Medicina (B Aires).* 2018;53:365–74.
55. Bingham JT, Etz BD, DuClos JM, Vyas S. Structure and Reactivity of Alloxan Monohydrate in the Liquid Phase. *J Org Chem.* 2021 Nov;86(21):14553–62.
56. Arshad N, Ishtiaq S, Kamran SH, Rehman MS ur, Akbar S, Rehman S, et al. Evaluation of the Antihyperglycemic and Antihyperlipidemic Activity of

Saussurea hypoleuca Root in Alloxan-Induced Diabetes in Rat Model and Correlation to Its Major Secondary Metabolites. *Life*. 2022;12(9).

57. Kumar PS, Kannan ND. A system-level approach to investigate alloxan-induced toxicity in microtubule-binding protein to lead type 2 diabetes mellitus. *Mol Divers* [Internet]. 2021;25(2):911–24. Available from: <https://doi.org/10.1007/s11030-020-10075-5>
58. Kasim A, Asben A, Mutiar S. Kajian Kualitas Gambir dan Hubungannya dengan Karakteristik Kulit Tersamak. *Maj Kulit, Karet, dan Plast*. 2015;31(1995):55–64.
59. Setyowati H. Gambir (*Uncaria gambir* Roxb) as Natural Cosmeceutical Agent. *Cermin Dalam Kedokt*. 2017;44(3):2017.
60. Munggar IP, Kurnia D, Deawati Y, Julaha E. Current Research of Phytochemical, Medicinal and Non-Medicinal Uses of *Uncaria gambir* Roxb.: A Review. *Molecules*. 2022;27(19).
61. Zebua EA, Silalahi J, Julianti E. Hypoglycemic activity of gambier (*Uncaria gambir* roxb.) drinks in alloxan-induced mice. *IOP Conf Ser Earth Environ Sci*. 2018;122(1).
62. Arundita S, Ismed F, Rita RS, Putra DP. (+)-Catechin & proanthocyanidin fraction of *uncaria gambir roxb*. Improve adipocytes differentiation & glucose uptake of 3t3-l1 cells via sirtuin-1, peroxisome proliferator-activated receptor γ (PPAR γ), glucose transporter type 4 (GLUT-4) expressions. *Adv Pharm Bull* [Internet]. 2020;10(4):602–9. Available from: <https://doi.org/10.34172/apb.2020.072>
63. Yastori, Chairul, Solfiyeni. Analisis Vegetasi Gulma Pada Perkebunan Gambir (*Uncaria gambir* (HUNTER) Roxb) Di Kampung Penurunan Nagari Kayu Gadang, Kecamatan Sutera, Kabupaten Pesisir Selatan. *J Biol Univ Andalas*. 2014;3(September):254–9.
64. Saad MFM, Goh HH, Rajikan R, Yusof TRT, Baharum SN, Bunawan H. From phytochemical composition to pharmacological importance. *Trop J Pharm Res*. 2020;19(8):1767–73.
65. Yunarto N, Aini N. Effect of purified gambir leaves extract to prevent atherosclerosis in rats. *Heal Sci J Indones*. 2016;6(2):105–10.
66. Mostafa UES. Effect of green tea and green tea rich with catechin on blood glucose levels, serum lipid profile and liver and kidney functions in diabetic rats. *Jordan J Biol Sci*. 2014;7(1):7–12.
67. Rismana E, Ningsih S, Fachrudin F. In vitro study of xanthine oxidase inhibitory of gambir (*Uncaria gambir*) hunter roxb extracts. *Pharmacogn J*. 2017;9(6):862–5.
68. Apea-Bah FB, Hanafi M, Dewi RT, Fajriah S, Darwaman A, Artanti N, et al. Assessment of the DPPH and α -glucosidase inhibitory potential of gambier and qualitative identification of major bioactive compound. *J Med*

- Plant Res. 2009;3:736–757.
69. Lau KK, Tancredi DJ, Perez R V, Butani L. Unusual pattern of dyslipidemia in children receiving steroid minimization immunosuppression after renal transplantation. *Clin J Am Soc Nephrol*. 2010 Aug;5(8):1506–12.
 70. Atik N, Hayati RU, Hamijoyo L. Correlation Between Steroid Therapy and Lipid Profile in Systemic Lupus Erythematosus Patients. *Rheumatol Res Rev*. 2020;12:41–6.
 71. Bako HY, Mohammad JS, Waziri PM, Bulus T, Gwarzo MY, Zubairu MM. Lipid profile of alloxan-induced diabetic wistar rats treated with methanolic extract of *Adansonia digitata* fruit pulp. *Sci World J [Internet]*. 2014;9(2):19–24. Available from: <https://www.ajol.info/index.php/swj/article/view/108576>
 72. Jomard A, Osto E. High Density Lipoproteins: Metabolism, Function, and Therapeutic Potential. *Front Cardiovasc Med*. 2020;7(March):1–12.
 73. World Health Organization. *General Guidelines for Methodologies on Research and Evaluation of Traditional Medicine* World Health Organization. 2000;1–73.
 74. Simorangkir M, Sinaga E, Pasaribu R, Silaban S. Antidiabetic Activity of Leaf Extract of *Clerodendrum fragrans* Vent Willd in *Rattus Novergicus* Induced by Alloxan. *J Biotekol Biosains Indones*. 2022;9(1):119–25.
 75. Laurence D, Bacharach A. *Text book of evaluation of drug activities*. New York: Academic Press; 1964.
 76. Islam SMT, Osa-Andrews B, Jones PM, Muthukumar AR, Hashim I, Cao J. Methods of low-density lipoprotein-cholesterol measurement: analytical and clinical applications. *Electron J Int Fed Clin Chem Lab Med*. 2022;33(4):282–94.
 77. Rahimi-Madiseh M, Heidarian E, Kheiri S, Rafieian-Kopaei M. Effect of hydroalcoholic *Allium ampeloprasum* extract on oxidative stress, diabetes mellitus and dyslipidemia in alloxan-induced diabetic rats. *Biomed Pharmacother*. 2017;86:363–7.