



DAFTAR PUSTAKA

- Abubakar, M.G., Yerima, M.B., Zahriya, A.G., & Ukwuani, A.N. (2010). Acute toxicity and antifungal studies of ethanolic leaves, stem and pulp extract of *Tamarindus indica*. *Res. J. Pharm. Biol. Chem. Sci.* 1 : 104–111.
- Abukakar, M.G., Ukwuani, A.N., & Shehu, R.A. (2008). Phytochemical Screening and Antibacterial Activity of *Tamarindus Indica* Pulp Extract. *Asian J. Biochem.* 3 : 134–138.
- Adriawan, I.R., Andrie, M., Susilowati, R., Pramono, S., & Nugroho, A.E. (2014). HOMA-IR Index Evaluation on Antidiabetes Mellitus Effect of *Andrographis paniculata* (Burm. f.) Nees Purified Extract and Andrographolide. *Trad Med J* 19 : 19–23.
- Agrawal, S., Zaritsky, J.J., Fornoni, A., & Smoyer, W.E. (2018). Dyslipidaemia in nephrotic syndrome: mechanisms and treatment. *Nat. Rev. Nephrol.* 14 : 57–70.
- Ahmed, W.S., Abdel-Lateef, E.E.-S., El-Wakil, E.A., & Abdel-Hameed, E.-S.S. (2019). In Vitro Antioxidant and Antimicrobial Properties of *Murraya Paniculata* L. Extracts as well as Identification of Their Active Secondary Metabolites by HPLC-ESI-MS. *Pharma Chem.* 11 : 1–7.
- Al-Mahmood, A., Afrin, S., & Hoque, N. (2014). Dyslipidemia in Insulin Resistance: Cause or Effect. *Bangladesh J. Med. Biochem.* 7 : 27–31.
- Amado, J.R.R., Prada, A.L., Arranz, J.C.E., Rosés, R.P., Quevedo, H.M., Keita, H., et al. (2016). Antioxidant and Hepatoprotective Activity of a New Tablets Formulation from *Tamarindus indica* L. *Evid. Based Complement. Alternat. Med.* 2016 : 1–7.
- Amarnath, A., Lenin, V., & Archunan, G. (2013). Evaluation of the hypolipidemic activity of 6,7-dimethoxycoumarin on placental tissue factor {mRNA} expression in experimental anti-phospholipid syndrome. *Pharmacogn. Mag.* 9 : 264–270.
- Aprilia, C.A., Ninditasari, G., & Walujo, D. (2017). Hypolipidemic Effect and Antioxidant Activity of Tamarind Leaves Extract in Hypercholesterol-Fed Rats. *Indones. J. Cardiol.* 38 : 72–80.
- Assagaf, K.K., Bodhi, W., & Yamlean, P.V.Y. (2015). Uji Efektivitas Ekstrak Etanol Daun Asam Jawa (*Tamarindus indica* Linn.) terhadap Penurunan Kadar Kolesterol Darah Tikus Putih Jantan Galur Wistar (*Rattus norvegicus*). *Pharmacon J. Ilm. Farm. UNSRAT* 4 : 58–63.
- Azad, S. (2018). Tamarindo — *Tamarindus indica*, in: *Exotic Fruits*. pp. 403–412, Elsevier.
- Bays, H.E., Toth, P.P., Kris-Etherton, P.M., Abate, N., Aronne, L.J., Brown, W.V., et al. (2013). Obesity, adiposity, and dyslipidemia: A consensus statement from the National Lipid Association. *J. Clin. Lipidol.* 7 : 304–383.
- Beg, S., & Swain, S. (2021). Introduction to the Application of Experimental Designs in Pharmaceutical Product Development, in: Beg, S. (Ed.), *Design of Experiments for Pharmaceutical Product Development*. pp. 1–17, Singapore : Springer Singapore.
- Bergen, W.G., & Mersmann, H.J. (2005). Comparative Aspects of Lipid Metabolism: Impact on Contemporary Research and Use of Animal Models. *J. Nutr.* 135 : 2499–2502.
- Berim, A., & Gang, D.R. (2016). Methoxylated flavones: occurrence, importance, biosynthesis. *Phytochem. Rev.* 15 : 363–390.



- Bessone, F., Razori, M.V., & Roma, M.G. (2019). Molecular pathways of nonalcoholic fatty liver disease development and progression. *Cell. Mol. Life Sci.* 76 : 99–128.
- Bhadoriya, S.S., Mishra, V., Raut, S., Ganeshpurkar, A., & Jain, S.K. (2012). Anti-inflammatory and antinociceptive activities of a hydroethanolic extract of *Tamarindus indica* leaves. *Sci. Pharm.* 80 : 685–700.
- Brahm, A., & Hegele, R.A. (2013). Hypertriglyceridemia. *Nutrients* 5 : 981–1001.
- Brown, A.J., & Sharpe, L.J. (2016). Cholesterol Synthesis, in: *Biochemistry of Lipids, Lipoproteins and Membranes: Sixth Edition*. pp. 327–358, Elsevier Inc.
- Brown, A.W. (2011). Mechanisms of decreased cholesterol absorption mediated by phytosterols in the intestinal lumen (Doctoral Thesis). Unites States : University of Nebraska.
- Chandra, S., Khan, S., Avula, B., Lata, H., Yang, M.H., ElSohly, M.A., et al. (2014). Assessment of Total Phenolic and Flavonoid Content, Antioxidant Properties, and Yield of Aeroponically and Conventionally Grown Leafy Vegetables and Fruit Crops: A Comparative Study. *Evid. Based Complement. Alternat. Med.* 2014 : 1–9.
- Chen, Z., Tian, R., She, Z., Cai, J., & Li, H. (2020). Role of oxidative stress in the pathogenesis of nonalcoholic fatty liver disease. *Free Radic. Biol. Med.* 152 : 116–141.
- Dobiásová, M. (2006). AIP--atherogenic index of plasma as a significant predictor of cardiovascular risk: from research to practice. *Vnitr. Lek.* 52 : 64–71.
- Dosoky, N., Satyal, P., Gautam, T., & Setzer, W. (2016). Composition and Biological Activities of *Murraya paniculata* (L.) Jack Essential Oil from Nepal. *Medicines* 3 : 7.
- Eldwin, J. (2019). Formulasi sediaan ekstrak kering jamu sinom dalam bentuk granul effervescent dengan kombinasi asam sitrat dan asam tartrat sebagai sumber asam (Bachelor Thesis). Surabaya : Widya Mandala Catholic University.
- Escalona-Arranz, J.C., Pérez-Rosés, R., Licea Jiménez, I., & Rodríguez-Amado (2010). Chemical Constituents of *Tamarindus indica* L. Leaves. *Rev. Cuba. Quím.* 22 : 65–71.
- Farrell, G.C., McCullough, A.J., & Day, C.P. (2013). What is non-alcoholic fatty liver disease (NAFLD), and why is it important, in: Farrell, G.C., McCullough, A.J., & Day, C.P. (Eds.), *Non-Alcoholic Fatty Liver Disease: A Practical Guide*. pp. 1–16, West Sussex : Wiley-Blackwell.
- Feingold, K. (2020). Triglyceride Lowering Drugs, in: KR, F., B, A., & A, B. (Eds.), *Endotext [Internet]*. South Dartmouth (MA) : MDText.com, Inc.
- Feingold, K.R., & Grunfeld, C. (2000). Introduction to Lipids and Lipoproteins, Endotext. South Dartmouth (MA) : MDText.com, Inc.
- Flannery, C.A., Choe, G.H., Cooke, K.M., Fleming, A.G., Radford, C.C., Kodaman, P.H., et al. (2018). Insulin Regulates Glycogen Synthesis in Human Endometrial Glands Through Increased GYS2. *J. Clin. Endocrinol. Metab.* 103 : 2843–2850.
- Fukuda, I.M., Pinto, C.F.F., Moreira, C.D.S., Saviano, A.M., & Lourenço, F.R. (2018). Design of Experiments (DoE) applied to Pharmaceutical and Analytical Quality by Design (QbD). *Braz. J. Pharm. Sci.* 54.



- Gao, Y., Wang, Y., Ma, Y., Yu, A., Cai, F., Shao, W., et al. (2009). Formulation optimization and in situ absorption in rat intestinal tract of quercetin-loaded microemulsion. *Colloids Surf. B Biointerfaces* 71 : 306–314.
- Gautam, M., Gupta, A., Rao, C.V., & Goel, R.K. (2012a). Antihyperglycemic and antioxidant potential of *Murraya paniculata* linn. Leaves: a preclinical study. *J. Pharm. Res.* 5 : 1334–1337.
- Gautam, M., Gupta, A., Vijaykumar, M., Rao, C., & Goel, R. (2012b). Studies on the hypoglycemic effects of *Murraya paniculata* Linn. extract on alloxan-induced oxidative stress in diabetic and non-diabetic models. *Asian Pac. J. Trop. Dis.* 2 : S186–S191.
- Gautam, M., Singh, A., Rao, C.V., & Goel, R.K. (2012c). Toxicological evaluation of *Murraya paniculata* (L.) leaves extract on rodents. *Am. J. Pharmacol. Toxicol.* 7 : 62–67.
- Ghoneim, A.I., & Eldahshan, O.A. (2012). Anti-apoptotic effects of tamarind leaves against ethanol-induced rat liver injury. *J. Pharm. Pharmacol.* 64 : 430–438.
- Ghosh, R., Sil, S., Gupta, P., & Ghosh, T. (2020). Optimization of intracerebroventricular streptozotocin dose for the induction of neuroinflammation and memory impairments in rats. *Metab. Brain Dis.* 35 : 1279–1286.
- Gitawati, R., Widowati, L., & Suharyanto, F. (2015). Penggunaan Jamu pada Pasien Hiperlipidemia Berdasarkan Data Rekam Medik, di Beberapa Fasilitas Pelayanan Kesehatan di Indonesia. *J. Kefarmasian Indones.* 5 : 41–48.
- Gomathinayagam, S., Tewari, B.B., & Rekha, G. (2017). Heavy Metal and Phytochemical Studies of Crude Leaf Extract of Tamarind (*Tamarindus indica*). *Adv. Life Sci.* 2017 71 1-4 7 : 1–4.
- Hasnaeni, H., Sudarsono, S., Nurrochmad, A., & Widyarini, S. (2017). Identification of active anti-inflammatory principles of betabeta wood (*Lunasia amara*) from Siawung Barru- South Sulawesi, Indonesia. *Trop. J. Pharm. Res.* 16 : 161.
- He, M., Min, J.-W., Kong, W.-L., He, X.-H., Li, J.-X., & Peng, B.-W. (2016). A review on the pharmacological effects of vitexin and isovitexin. *Fitoterapia* 115 : 74–85.
- Heyne, K. (1987). Tumbuhan Berguna Indonesia. Jakarta : Yayasan Sarana Warna Jaya.
- Hirano, T. (2018). Pathophysiology of Diabetic Dyslipidemia. *J. Atheroscler. Thromb.* 25 : 771–782.
- Ho, H.M.K., Craig, D.Q.M., & Day, R.M. (2022). Design of Experiment Approach to Modeling the Effects of Formulation and Drug Loading on the Structure and Properties of Therapeutic Nanogels. *Mol. Pharm.* 19 : 602–615.
- Hofmann, A.F., & Borgström, B. (1963). Hydrolysis of long-chain monoglycerides in micellar solution by pancreatic lipase. *Biochim. Biophys. Acta BBA - Spec. Sect. Lipids Relat. Subj.* 70 : 317–331.
- Hong, H.-D., Kim, J.-C., Lim, T.-G., Song, Y.-R., Cho, C.-W., & Jang, M. (2018). Mixing ratio optimization for functional complex extracts of *Rhodiola crenulata*, *Panax quinquefolius*, and *Astragalus membranaceus* using mixture design and verification of immune functional efficacy in animal models. *J. Funct. Foods* 40 : 447–454.



- Iftekhar, A.S.M.M., Rayhan, I., Quadir, M.A., Akhteruzzaman, S., & Hasnat, A. (2006). Effect of *Tamarindus indica* fruits on blood pressure and lipid-profile in human model: an in vivo approach. *Pak. J. Pharm. Sci.* 19 : 125–9.
- Iswantini, D., Silitonga, R.F., Martatiloa, E., & Darusman, L.K. (2011). *Zingiber cassumunar*, *Guazuma ulmifolia*, and *Murraya paniculata* Extracts as Antioesity: In Vitro Inhibitory Effect on Pancreatic Lipase Activity. *HAYATI J. Biosci.* 18 : 6–10.
- Jain, A., Bhadoriya, S., Ganeshpurkar, A., Narwaria, J., & Rai, G. (2011). *Tamarindus indica* : Extent of explored potential. *Pharmacogn. Rev.* 5 : 73.
- Janda, E., Lascala, A., Martino, C., Ragusa, S., Nucera, S., Walker, R., et al. (2016). Molecular mechanisms of lipid- and glucose-lowering activities of bergamot flavonoids. *PharmaNutrition* 4 : S8–S18.
- Ji, X., Shi, S., Liu, B., Shan, M., Tang, D., Zhang, W., et al. (2019). Bioactive compounds from herbal medicines to manage dyslipidemia. *Biomed. Pharmacother.* 118 : 109338.
- Jialal, I., & Singh, G. (2019). Management of diabetic dyslipidemia: An update. *World J. Diabetes* 10 : 280–290.
- Joyeux, M., Mortier, F., & Fleurentin, J. (1995). Screening of antiradical, antilipoperoxidant and hepatoprotective effects of nine plant extracts used in Caribbean folk medicine. *Phytother. Res.* 9 : 228–230.
- Jung, U., Cho, Y.-Y., & Choi, M.-S. (2016). Apigenin Ameliorates Dyslipidemia, Hepatic Steatosis and Insulin Resistance by Modulating Metabolic and Transcriptional Profiles in the Liver of High-Fat Diet-Induced Obese Mice. *Nutrients* 8 : 305.
- Kanuri, G., & Bergheim, I. (2013). In vitro and in vivo models of non-alcoholic fatty liver disease (NAFLD). *Int. J. Mol. Sci.* 14 : 11963–11980.
- Kemenkes-RI (2019). Hasil Utama Riskesdas 2018.
- Kemenkes-RI (2017). Farmakope Herbal Indonesia, ed. II, 2nd ed. Ditjen Kefarmasian dan Alat Kesehatan.
- Kemenkes-RI (2016). Peraturan Menteri Kesehatan Republik Indonesia Nomor 6 Tahun 2016 Tentang Formularium Obat Herbal Asli Indonesia, Kementerian Kesehatan Republik Indonesia.
- Kim, Y.-J., Yoon, D.S., & Jung, U.J. (2021). Efficacy of nobiletin in improving hypercholesterolemia and nonalcoholic fatty liver disease in high-cholesterol diet-fed mice. *Nutr. Res. Pract.* 15 : 431.
- Kiss, L., Für, G., Pisipati, S., Rajalingamgari, P., Ewald, N., Singh, V., et al. (2023). Mechanisms linking hypertriglyceridemia to acute pancreatitis. *Acta Physiol.* 237 : 1–21.
- Křen, V. (2008). Glycoside vs. Aglycon: The Role of Glycosidic Residue in Biological Activity, in: Fraser-Reid, B.O., Tatsuta, K., & Thiem, J. (Eds.), *Glycoscience*. pp. 2589–2644, Berlin, Heidelberg : Springer Berlin Heidelberg.
- Kuddus, S.A., Bhuiyan, M.I., Subhan, N., Shohag, M.H., Rahman, A., Hossain, M.M., et al. (2020). Antioxidant-rich *Tamarindus indica* L. leaf extract reduced high-fat diet-induced obesity in rat through modulation of gene expression. *Clin. Phytoscience* 6 : 68.
- Lahamado, O.T., Sabang, S.M., & Mustapa, K. (2017). Ekstrak Daun Asam Jawa (*Tamarindus Indica* L.) Sebagai Antidiabetes. *J. Akad. Kim.* 6 : 1–6.



- Langlois, M.R., Chapman, M.J., Cobbaert, C., Mora, S., Remaley, A.T., Ros, E., et al. (2018). Quantifying Atherogenic Lipoproteins: Current and Future Challenges in the Era of Personalized Medicine and VLDL Cholesterol. A Consensus Statement from EAS and EFLM. *Clin. Chem.* 64 : 1006–1033.
- Li, L., & Yang, X. (2018). The Essential Element Manganese, Oxidative Stress, and Metabolic Diseases: Links and Interactions. *Oxid. Med. Cell. Longev.* 2018 : 7580707.
- Lim, J.S., Mietus-Snyder, M., Valente, A., Schwarz, J.-M., & Lustig, R.H. (2010). The role of fructose in the pathogenesis of NAFLD and the metabolic syndrome. *Nat. Rev. Gastroenterol. Hepatol.* 7 : 251–264.
- Liman, M., & Atawodi, S. (2015). Hepatoprotective and Nephroprotective Effects of Methanolic Extract of Different Parts of *Tamarindus Indica* Linn in Rats Following Acute and Chronic Carbon Tetrachloride Intoxication. *Annu. Res. Rev. Biol.* 5 : 109–123.
- Liu, Y.-T., Lu, B.-N., Xu, L.-N., Yin, L.-H., Wang, X.-N., Peng, J.-Y., et al. (2010). The antioxidant activity and hypolipidemic activity of the total flavonoids from the fruit of Rosa laevigata Michx. *Nat. Sci.* 02 : 175–183.
- Lorza-Gil, E., García-Arevalo, M., Favero, B.C., Gomes-Marcondes, M.C.C., & Oliveira, H.C.F. (2019). Diabetogenic effect of pravastatin is associated with insulin resistance and myotoxicity in hypercholesterolemic mice. *J. Transl. Med.* 17 : 1–14.
- Manandhar, S., Song, H., Ju, S., & Choi, D.-H. (2017). Lipid-induced cardiovascular diseases. *J. Cardiol. Cardiovasc. Med.* 2 : 085–094.
- Manubhai, C.H., Rasiklal, M.D., Natvarlal, B.S., Kishorbhai, V.V., & Rajkishor, T.C. (2014). Lipid-lowering activity of Cow urine ark in guinea pigs fed with a high cholesterol diet. *Avicenna J. Phytomedicine* 4 : 354–363.
- Marques, L.R., Diniz, T.A., Antunes, B.M., Rossi, F.E., Caperuto, E.C., Lira, F.S., et al. (2018). Reverse Cholesterol Transport: Molecular Mechanisms and the Non-medical Approach to Enhance HDL Cholesterol. *Front. Physiol.* 9 : 526.
- Martin-Castillo, A., Castells, M.T., Adanez, G., Polo, M.T.S., Perez, B.G., & Ayala, I. (2010). Effect of atorvastatin and diet on non-alcoholic fatty liver disease activity score in hyperlipidemic chickens. *Biomed. Pharmacother. Biomedecine Pharmacother.* 64 : 275–281.
- Materska, M. (2008). Quercetin and Its Derivatives: Chemical Structure and Bioactivity - A review. *Pol. J. Food Nutr. Sci.* 58 : 407–413.
- Mbunde, M., Mdegela, R.H., Laswai, H.S., & Mabiki, F.P. (2018). Quantification of phenolics, flavonoids and antioxidant activity of *Tamarindus indica* from selected areas in Tanzania. *Biofarmasi J. Nat. Prod. Biochem.* 16 : 22–28.
- Miller, T.B., & Larner, J. (1973). Mechanism of Control of Hepatic Glycogenesis by Insulin. *J. Biol. Chem.* 248 : 3483.
- Mulyani, S., Admadi, B., & Satriawan, I.K. (2018). The Stability of Antioxidants Turmeric and Tamarind (*Curcuma domestica* Val. & *Tamarindus indica* L.) Leaves Extract During Storage. *Res. J. Pharm. Biol. Chem. Sci.* 9 : 303.
- Mumtazah, D.F., Busman, H., Kanedi, M., & Pratami, G.D. (2021). A modified high-fat diet and its effect on histopathological features of mice liver as an alternative diet for animal model of liver cell damage. *Biog. J. Ilm. Biol.* 9 : 171.



- Murty, D., Rajesh, E., Raghava, D., Raghavan, T.V., & Surulivel, M.K.M. (2010). Hypolipidemic effect of arborium plus in experimentally induced hypercholestermic rabbits. *Yakugaku Zasshi* 130 : 841–846.
- National Center for Health Statistics (2021). National Vital Statistics System, Mortality 1999-2020 on CDC WONDER Online Database, released in 2021. *Data Are Mult. Cause Death Files 1999-2020*.
- Negi, N., Abou-Dough, A.M., Kurosawa, M., Kitaji, Y., Saito, K., Ochi, A., et al. (2015). Coumarins from *Murraya exotica* Collected in Egypt. *Nat. Prod. Commun.* 10 : 1934578X1501000.
- Nofianti, T., Nurmayasari, S., Priatna, M., Ruswanto, R., & Nurfatwa, M. (2019). The Effect of the Ethanolic Extract of Asam Jawa Leaf (*Tamarindus Indica* L.) in Total Cholesterol, Triglyceride, LDL and HDL Concentration on Male Sprague Dawley Rats. *J. Phys. Conf. Ser.* 1179 : 012175.
- Nwodo, U.U., Obiiyeke, G.E., Chigor, V.N., & Okoh, A.I. (2011). Assessment of *Tamarindus indica* Extracts for Antibacterial Activity. *Int. J. Mol. Sci.* 12 : 6385–6396.
- Oh, R.C., & Lanier, J.B. (2007). Management of hypertriglyceridemia. *Am. Fam. Physician* 75 : 1365–1371.
- Palmer, T., & Bonner, P.L. (2011). Enzyme Inhibition, in: *Enzymes*. pp. 126–152, Sawston, United Kingdom : Woodhead Publishing.
- Park, J.-Y., Ha, J., Choi, Y., Chang, P.-S., & Park, K.-M. (2021). Optimization of Spectrophotometric and Fluorometric Assays Using Alternative Substrates for the High-Throughput Screening of Lipase Activity. *J. Chem.* 2021 : 1–10.
- Patil, M., Pimple, B., Kadam, P., Badgujar, N., & Bafna, A. (2007). Protective effect of *Tamarindus indica* linn against paracetamol-induced hepatotoxicity in rats. *Indian J. Pharm. Sci.* 69 : 827.
- PDPERSI (2012). KEMUNING (*Murraya paniculata* [L.] Jack.) [WWW Document]. *Obat Tradis.* URL <http://www.pdpersi.co.id/content/news.php?catid=7&mid=5&nid=804> (accessed 6.29.20).
- Pellizzon, M.A., & Ricci, M.R. (2014). Nutriphenomics in rodent models, in: *Biomarkers in Toxicology*. pp. 629–643, Elsevier.
- PERKENI (2021). Pedoman Pengelolaan Dislipidemia di Indonesia 2019. Jakarta : PB PERKENI.
- PERKI (2017). Panduan Tata Laksana Dislipidemia 2017. Jakarta : Perhimpunan Dokter Spesialis kardiovaskuler Indonesia.
- Pretis, N., Amodio, A., & Frulloni, L. (2018). Hypertriglyceridemic pancreatitis: Epidemiology, pathophysiology and clinical management. *United Eur. Gastroenterol. J.* 6 : 649–655.
- Quraisy, S.R. (2018). Analisa Kadar Sakarin Pada Jamu Sinom yang dijual di Daerah Kawasan Wisata Religi Sunan Ampel Surabaya (Diploma Thesis). Surabaya : Universitas Muhammadiyah Surabaya.
- Ramar, G., & Alagarmalai, J. (2016). Phytochemical Screening, Larvicidal and Pupicidal Activity of *Murraya paniculata* (L.) Jack (Rutaceae) Leaf Extracts against Three Important Vector Mosquitoes (Diptera: Culicidae). *Int. J. Curr. Res. Biosci. Plant Biol.* 3 : 2349–8080.
- Randelović, S., & Bipat, R. (2021). A Review of Coumarins and Coumarin-Related Compounds for Their Potential Antidiabetic Effect. *Clin. Med. Insights Endocrinol. Diabetes* 14 : 117955142110420.



- Razali, N., Mat-Junit, S., Abdul-Muthalib, A.F., Subramaniam, S., & Abdul-Aziz, A. (2012). Effects of various solvents on the extraction of antioxidant phenolics from the leaves, seeds, veins and skins of *Tamarindus indica* L. *Food Chem.* 131 : 441–448.
- Reaven, G.M., Risser, T.R., Chen, Y.D., & Reaven, E.P. (1979). Characterization of a model of dietary-induced hypertriglyceridemia in young, nonobese rats. *J. Lipid Res.* 20 : 371–378.
- Saghir, S.A.M., Revadigar, V., & Murugaiyah, V. (2014). Natural lipid-lowering agents and their effects: an update. *Eur. Food Res. Technol.* 238 : 705–725.
- Salhi, A., Amara, S., Mansuelle, P., Puppo, R., Lebrun, R., Gontero, B., et al. (2020). Characterization of all the lipolytic activities in pancreatic and comparison with porcine and human pancreatic juices. *Biochimie* 169 : 106–120.
- Santoso, B.S.A., Sudarsono, S., Nugroho, A.E., & Murti, Y.B. (2018). Hypoglycemic Activity and Pancreas Protection of Combination Juice of Mengkudu (*Morinda citrifolia* Linn.) Juice and Temulawak (*Curcuma xanthorrhiza* Roxb.) Juice on Streptozotocin-Induced Diabetic Rats. *Indones. J. Pharm.* 29 : 16.
- Sasidharan, S.R., Joseph, J.A., Anandakumar, S., Venkatesan, V., Ariyattu Madhavan, C.N., & Agarwal, A. (2014). Ameliorative Potential of *Tamarindus indica* on High Fat Diet Induced Nonalcoholic Fatty Liver Disease in Rats. *Sci. World J.* 2014 : 1–10.
- Savage, D.B., Petersen, K.F., & Shulman, G.I. (2007). Disordered lipid metabolism and the pathogenesis of insulin resistance. *Physiol. Rev.* 87 : 507–520.
- Sayar, K. (2014). Pharmacological Properties and Chemical Constituents of *Murraya paniculata* (L.) Jack. *Med. Aromat. Plants* 03.
- Schmitz-Peiffer, C. (2006). Protein Kinase C and Lipid-Induced Insulin Resistance in Skeletal Muscle. *Ann. N. Y. Acad. Sci.* 967 : 146–157.
- Shaw, R., Festing, M.F.W., Peers, I., & Furlong, L. (2002). Use of Factorial Designs to Optimize Animal Experiments and Reduce Animal Use. *ILAR J.* 43 : 223–232.
- Soon, G.S.T., & Torbenson, M. (2023). The Liver and Glycogen: In Sickness and in Health. *Int. J. Mol. Sci.* 24 : 6133.
- Stanhope, K.L., Schwarz, J.M., Keim, N.L., Griffen, S.C., Bremer, A.A., Graham, J.L., et al. (2009). Consuming fructose-sweetened, not glucose-sweetened, beverages increases visceral adiposity and lipids and decreases insulin sensitivity in overweight/obese humans. *J. Clin. Invest.* 119 : 1322–1334.
- Steigerwald, J. (2019). The Science of Biology; in: *Experimenting at the Boundaries of Life*. pp. 323–390, W. H. Freeman.
- Steinhagen-Thiessen, E., Bramlage, P., Löscher, C., Hauner, H., Schunkert, H., Vogt, A., et al. (2008). Dyslipidemia in primary care – prevalence, recognition, treatment and control: data from the German Metabolic and Cardiovascular Risk Project (GEMCAS). *Cardiovasc. Diabetol.* 7 : 31.
- Sutrisna, E., Usdiana, D., Taqwin, R., & Rosyidi, A. (2015). Hypolipidemic effect of *Tamarindus indica* L fruit on Triton X-100-induced hyperlipidemia in Wistar rats. *Natl. J. Physiol. Pharm. Pharmacol.* 5 : 285.



- Taşdemir, E., Atmaca, M., Yıldırım, Y., Bilgin, H.M., Demirtaş, B., Obay, B.D., et al. (2017). Influence of coumarin and some coumarin derivatives on serum lipid profiles in carbontetrachloride-exposed rats. *Hum. Exp. Toxicol.* 36 : 295–301.
- Tayade, P., Ghaisas, M., Jagtap, S., & Dongre, S. (2009). Anti-asthmatic activity of methanolic extract of leaves of *Tamarindus Indica* Linn. *J. Pharm. Res.* 2 : 944–947.
- Tejada, S., Martorell, M., Capo, X., Tur, J., Pons, A., & Sureda, A. (2016). Coumarin and Derivates as Lipid Lowering Agents. *Curr. Top. Med. Chem.* 17 : 391–398.
- Terra, G.D.P., Vinícius De Farias, M., Trevisan, M.G., & Garcia, J.S. (2016). Evaluation of pancreatin stability through enzyme activity determination. *Acta Pharm.* 66 : 423–431.
- Thorbecke, G.J., Old, L.J., Benacerraf, B., & Clarke, D.A. (1961). A Histochemical Study Of Acid And Alkaline Phosphatase In Mouse Livers During Various Conditions Modifying Activity Of The Reticuloendothelial System. *J. Histochem. Cytochem.* 9 : 392–399.
- Tsutsumi, K. (2003). Lipoprotein Lipase and Atherosclerosis. *Curr. Vasc. Pharmacol.* 1 : 11–17.
- Wang, B., Li, L., Fu, J., Yu, P., Gong, D., Zeng, C., et al. (2016). Effects of Long-Chain and Medium-Chain Fatty Acids on Apoptosis and Oxidative Stress in Human Liver Cells with Steatosis. *J. Food Sci.* 81 : H794–H800.
- Weyh, C., Krüger, K., Peeling, P., & Castell, L. (2022). The Role of Minerals in the Optimal Functioning of the Immune System. *Nutrients* 14 : 644.
- Wickramasinghe, M., & Weaver, J.U. (2018). Lipid Disorders in Obesity, in: *Practical Guide to Obesity Medicine*. pp. 99–108.
- Wiyono, T., Frediansyah, A., Sholikhah, E.N., & Pratiwi, W.R. (2022). UHPLC-ESI-MS analysis of Javanese *Tamarindus indica* leaves from various tropical zones and their beneficial properties in relation to antiobesity. *J. Appl. Pharm. Sci.* 12 : 137–147.
- Wiyono, T., Nisa, K., Handayani, S., Windarsih, A., Hayati, S.N., Wulanjati, M.P., et al. (2023). Ameliorative Effect of Quercetin on Pancreatic Damage in Rodent: A Meta-analysis. *Egypt. J. Basic Appl. Sci.* 10.
- Wiyono, T., Nurrochmad, A., Widyarini, S., & Fakhrudin, N. (2018). The tannin content and anti platelet-aggregation activity of *Cinnamomum sintoc* extract, in: *Proceeding of the 8th Annual International Conference in Basic Science*. p. 030017, Malang, Indonesia : AIP Conference Proceeding.
- Woreta, T.A., & Alqahtani, S.A. (2014). Evaluation of Abnormal Liver Tests. *Med. Clin. North Am.* 98 : 1–16.
- Wu, L., Li, P., Wang, X., Zhuang, Z., Farzaneh, F., & Xu, R. (2010). Evaluation of anti-inflammatory and antinociceptive activities of *Murraya exotica*. *Pharm. Biol.* 48 : 1344–1353.
- Xu, J.-J., Jia, B.-Y., Zhao, T., Tan, X.-Y., Zhang, D.-G., Song, C.-C., et al. (2023). Influences of five dietary manganese sources on growth, feed utilization, lipid metabolism, antioxidant capacity, inflammatory response and endoplasmic reticulum stress in yellow catfish intestine. *Aquaculture* 566 : 739190.



- Yang, R., Le, G., Li, A., Zheng, J., & Shi, Y. (2006). Effect of antioxidant capacity on blood lipid metabolism and lipoprotein lipase activity of rats fed a high-fat diet. *Nutrition* 22 : 1185–1191.
- Yuk, T., Kim, Y., Yang, J., Sung, J., Jeong, H.S., & Lee, J. (2018). Nobiletin Inhibits Hepatic Lipogenesis via Activation of AMP-Activated Protein Kinase. *Evid. Based Complement. Alternat. Med.* 2018 : 1–8.
- Zhang, D.-M., Jiao, R.-Q., & Kong, L.-D. (2017). High Dietary Fructose: Direct or Indirect Dangerous Factors Disturbing Tissue and Organ Functions. *Nutrients* 9 : 335.
- Zhang, H., Liu, J., Wu, H., & Chen, M. (2018). *Murraya exotica* Protects Atherogenesis in Diet-induced Hypercholesterolemic Rats by Antioxidant and Antihyperlipidemic Activity. *Int. J. Pharmacol.* 14 : 727–732.
- Zhang, L., Wang, Y., Wu, D., Xu, M., & Chen, J. (2011). Microwave-Assisted Extraction of Polyphenols from *Camellia oleifera* Fruit Hull. *Molecules* 16 : 4428–4437.
- Zheng, J., Wu, J., Chen, J., Liu, J., Lu, Y., Huang, C., et al. (2016). Therapeutic effects of quercetin on early inflammation in hypertriglyceridemia-related acute pancreatitis and its mechanism. *Pancreatology* 16 : 200–210.
- Zhou, J., Pan, J., Xiang, Z., Wang, Q., Tong, Q., Fang, J., et al. (2020). Xiaokeyinshui extract combination, a berberine-containing agent, exerts anti-diabetic and renal protective effects on rats in multi-target mechanisms. *J. Ethnopharmacol.* 262 : 113098.
- Zou, J., Yu, X., Qu, S., Li, X., Jin, Y., & Sui, D. (2014). Protective effect of total flavonoids extracted from the leaves of *Murraya paniculata* (L.) Jack on diabetic nephropathy in rats. *Food Chem. Toxicol.* 64 : 231–237.