

DAFTAR PUSTAKA

- Ab Rahman, N.S., Abdul Majid, F.A., Abd Wahid, M.E., Ismail, H.F., Tap, F.M., Zainudin, A.N., dkk., 2020. Molecular docking analysis and anti-hyperglycaemic activity of SynacinnTM in streptozotocin-induced rats. *RSC Advances*, **10**: 34581–34594.
- Abdulabbas, H. dan Abdulameer, 2015. Andrographolide cause retardation of insulin resistance changes in pancreatic and adipose tissues of male mice: Immunological and biochemical study. *International Journal of Pharmaceutical and Clinical Research*, **7**: 406–419.
- Abu, M.N., Hassan, H.F., Yusoff, R., dan Ismail, W.I.W., 2018. *Tinospora crispa* methanolic crude extract activates apoptotic pathway of insulin resistant-HepG2 cell lines by improving the insulin sensitivity. *Malaysian Applied Biology*, **46**: 145–152.
- Abu, M.N., Ismail, W.I.W., Wan Yusoff, W.S.Y., Mustapha, M.H., Peter, R.P., Lokman, N., dkk., 2014. Mechanism of apoptosis induced in hepatoma G2 (HepG2) cell lines by *Tinospora crispa*: targeting signalling of the insulin-like growth factor (IGF) system and the insulin signalling (IS) pathway. *Asian Pacific Journal of Tropical Disease*, **4**: 237.
- Abu, M.N., Samat, S., Kamarapani, N., Nor Hussein, F., Wan Ismail, W.I., dan Hassan, H.F., 2015. *Tinospora crispa* Ameliorates Insulin Resistance Induced by High Fat Diet in Wistar Rats. *Evidence-Based Complementary and Alternative Medicine*, **2015**: 1–6.
- Achten, E., Schütz, D., Fischer, M., Fahl-Hassek, C., Riedl, J., dan Horn, B., 2019. Classification of Grain Maize (*Zea mays* L.) from Different Geographical Origins with FTIR Spectroscopy—a Suitable Analytical Tool for Feed Authentication? *Food Analytical Methods*, **12**: 2172–2184.
- Adewoye, E.O., Oguntola, M.A., dan Ige, A.O., 2016. Anti-oxidative and restorative effects of *Physalis angulata* (whole plant extract) in alloxan-induced diabetic male Wistar rats. *African Journal of Medicine and Medical Sciences*, **45**: 99–108.
- Adnan, A.Z., Taher, M., Fauzana, A., Afriani, T., Imelda Roesma, D., dan Putra, A.E., 2018. Antihyperglycemic activity of tinocrisposide by stimulating 3T3-L1 adipocyte cell differentiation. *Asian Journal of Pharmaceutical and Clinical Research*, **11**: 494–498.
- Aeberli, I., Hochuli, M., Gerber, P.A., Sze, L., Murer, S.B., Tappy, L., dkk., 2013. Moderate Amounts of Fructose Consumption Impair Insulin Sensitivity in Healthy Young Men. *Diabetes Care*, **36**: 150–156.
- Affandi, O. dan Batubara, R., 2019. Study of medicinal plant used by the ethnic community of Karo around Lau Debuk-Debuk Tourism Park, Indonesia. *IOP Conference Series: Earth and Environmental Science*, **374**: 012055.
- Agarwal, R., Sulaiman, S.A., dan Mohamed, M., 2005. Open label clinical trial to study adverse effects and tolerance to dry powder of the aerial part of *Andrographis paniculata* in patients type 2 with diabetes mellitus. *Malaysian Journal of Medical Sciences*, **12**: 13–19.

- Ahmad, M., Qureshi, R., Arshad, M., Khan, M.A., dan Zafar, M., 2009. Traditional herbal remedies used for the treatment of diabetes frim district Attock (Pakistan). *Pakistan Journal of Botany*, **41**: 2777–2782.
- Ahmad, N., Kazmi, M.H., dan Fatima, S.H., 2021. Evaluation of efficacy and safety of a polyherbal Unani formulation in diabetes mellitus type 2 (Zayābītus Sukkari Qism Sāni) - a randomised controlled clinical study. *Indian Journal of Traditional Knowledge*, **20**: 15–20.
- Akbarini, D., Iskandar, J., dan Partasasmita, R., 2017. Collaborative planning for development of the Pelawan Biodiversity Park in Bangka, Indonesia. *Biodiversitas Journal of Biological Diversity*, **18**: 1602–1610.
- Akowiuh, G.A., Zhari, I., Norhayati, I., dan Mariam, A., 2006a. HPLC and HPTLC densitometric determination of andrographolides and antioxidant potential of *Andrographis paniculata*. *Journal of Food Composition and Analysis*, **19**: 118–126.
- Akowiuh, G.A., Zhari, I., Sadikun, A., dan Norhayati, I., 2006b. HPTLC Densitometric Analysis of *Orthosiphon stamineus* . Leaf Extracts and Inhibitory Effect on Xanthine Oxidase Activity. *Pharmaceutical Biology*, **44**: 65–70.
- Al-Dulaimi, D.W., Shah Abdul Majid, A., M. Baharetha, H., Ahamed, M.B.K., Faisal, S.F., Al Zarzour, R.H., dkk., 2022. Anticlastogenic, antimutagenic, and cytoprotective properties of *Orthosiphon stamineus* ethanolic leaves extract. *Drug and Chemical Toxicology*, **45**: 641–650.
- Algenstaedt, P., Stumpenhagen, A., dan Westendorf, J., 2018. The Effect of *Morinda citrifolia* L. Fruit Juice on the Blood Sugar Level and Other Serum Parameters in Patients with Diabetes Type 2. *Evidence-Based Complementary and Alternative Medicine*, **2018**: 1–10.
- Ali, L., Khan, S., Nazir, M., Raiz, N., Naz, S., Zengin, G., dkk., 2021. Chemical profiling, in vitro biological activities and Pearson correlation between phenolic contents and antioxidant activities of *Caragana brachyantha* Rech.f. *South African Journal of Botany*, **140**: 189–193.
- Alkreathy, H.M. dan Ahmad, A., 2020. *Catharanthus roseus* Combined with Ursolic Acid Attenuates Streptozotocin-Induced Diabetes through Insulin Secretion and Glycogen Storage. *Oxidative Medicine and Cellular Longevity*, **2020**: 1–8.
- Al-Shaqha, W.M., Khan, M., Salam, N., Azzi, A., dan Chaudhary, A.A., 2015. Anti-diabetic potential of *Catharanthus roseus* Linn. and its effect on the glucose transport gene (GLUT-2 and GLUT-4) in streptozotocin induced diabetic wistar rats. *BMC Complementary and Alternative Medicine*, **15**: 379.
- American Diabetes Association, 2004. Gestational diabetes mellitus. *Diabetes Care*, **27**: 88–90.
- Anggraini, S., 2016. Kajian etnobotani tumbuhan berkhasiat obat suku Tialo Di Desa Taopa Kecamatan Taopa Kabupaten Parigi Moutong **10**: 11.
- Anyanwu, G.O., Iqbal, J., Khan, S.U., Zaib, S., Rauf, K., Onyeneke, C.E., dkk., 2019. Antidiabetic activities of chloroform fraction of *Anthocleista vogelii*

- Planch root bark in rats with diet- and alloxan-induced obesity-diabetes. *Journal of Ethnopharmacology*, **229**: 293–302.
- Anzanello, M.J., Ortiz, R.S., Limberger, R., dan Mariotti, K., 2014. Performance of some supervised and unsupervised multivariate techniques for grouping authentic and unauthentic Viagra and Cialis. *Egyptian Journal of Forensic Sciences*, **4**: 83–89.
- Apovian, C.M., Okemah, J., dan O’Neil, P.M., 2019. Body Weight Considerations in the Management of Type 2 Diabetes. *Adv Ther*, 44–58.
- Arasti, 2021. *Studi Etnobotani Tumbuhan Obat Pada Masyarakat Lokal Kabupaten Bima Sebagai Sumber Belajar Hayati*. Universitas Muhammadiyah Malang, Malang.
- Arha, D., Pandeti, S., Mishra, A., Srivastava, S.P., Srivastava, A.K., Narender, T., dkk., 2015. Deoxyandrographolide promotes glucose uptake through glucose transporter-4 translocation to plasma membrane in L6 myotubes and exerts antihyperglycemic effect *in vivo*. *European Journal of Pharmacology*, **768**: 207–216.
- Arham, S., Khumaidi, A., dan Pitopang, R., 2016. Keanekaragaman jenis tumbuhan obat tradisional dan pemanfaatannya pada suku Kulawi di desa Mataue Kawasan Taman Nasional Lore Lindu. *Biocelbes*, **10**: 1–16.
- Ariastuti, R., Fitrawan, L.O.M., Nugroho, A.E., dan Pramono, S., 2020. Antidiabetes of combination of fractionated-extracts of *Andrographis paniculata* and *Centella asiatica* in neonatal streptozotocin-induced diabetic rats. *Indonesian Journal of Pharmacy*, **31**: 312–322.
- Arifianti, L., Sukardiman, S., Indriyanti, N., dan Widyowati, R., 2020. Anticancer Property of *Orthosiphon stamineus* Benth. Extracts in Different Solvent Systems against T47D Human Breast Cancer Cell Lines. *Fabad Journal of Pharmaceutical Sciences*, **4**: 187–194.
- Arundina, I., Diyatri, I., Budhy, T.I., dan Jit, F.Y., 2017. The effect of Brotowali stem extract (*Tinospora crispa*) towards increasing number of lymphocytes in the healing process of traumatic ulcer on diabetic Wistar Rat. *Journal of International Dental and Medical Research*, **10**: 975–980.
- Aththorick, T.A. dan Berutu, L., 2018. Ethnobotanical study and phytochemical screening of medicinal plants on Karonese people from North Sumatra, Indonesia. *Journal of Physics: Conference Series*, **1116**: 052008.
- Au, D.T., Wu, J., Jiang, Z., Chen, H., Lu, G., dan Zhao, Z., 2008. Ethnobotanical study of medicinal plants used by Hakka in Guangdong, China. *Journal of Ethnopharmacology*, **107**: 41–50.
- Awaliyah, N.R., 2018. *Etnobotani Tanaman Obat Dan Pemanfaatannya Di Kecamatan Banyuasin III Serta Sumbangsihnya Pada Pelajaran Biologi Materi Plantae SMA Kelas X*. Universitas Islam Negeri Raden Fatah, Palembang.
- Azahari, N., Khattak, M.M.A.K., Taher, M., dan Ichwan, S.J.A., 2015. Herbal extracts exhibit anti-diabetic activities in 3T3-L1 adipocytes model. *Progress in Nutrition*, **17**: 301–310.
- Azam, A.A., Pariyani, R., Ismail, I.S., Ismail, A., Khatib, A., Abas, F., dkk., 2017. Urinary metabolomics study on the protective role of *Orthosiphon*

- stamineus* in streptozotocin induced diabetes mellitus in rats via ¹H NMR spectroscopy. *BMC Complementary and Alternative Medicine*, **17**: 278.
- Azam, M., Saerang, C.O., Rahayu, S.R., Indrawati, F., Budiono, I., Fibriana, A.I., dkk., 2016. A Doubled-Blind, Crossover-RCT in T2DM for Evaluating Hypoglycemic Effect of *P. indicus*, *M. charantia*, *P. vulgaris* and *A. paniculata* in Central Java. *Journal of Natural Remedies*, **16**: 108.
- Azemin, A., Dharmaraj, S., Hamdan, M.R., Mat, N., Ismail, Z., dan Mohd, K.S., 2014. Discriminating *Ficus deltoidea* var. *bornensis* from Different Localities by HPTLC and FTIR Fingerprinting. *Journal of Applied Pharmaceutical Science*, **4**: 69–75.
- Babu, S., Krishnan, M., Rajagopal, P., Periyasamy, V., Veeraraghavan, V., Govindan, R., dkk., 2020. Beta-sitosterol attenuates insulin resistance in adipose tissue via IRS-1/Akt mediated insulin signaling in high fat diet and sucrose induced type-2 diabetic rats. *European Journal of Pharmacology*, **873**: 173004.
- Badan Pengawas Obat dan Makanan RI, 2014. *Peraturan Kepala Badan Pengawas Obat Dan Makanan Republik Indonesia Nomor 12 Tahun 2014 Tentang Persyaratan Mutu Obat Tradisional*. Badan Pengawas Obat dan Makanan Republik Indonesia, Jakarta.
- Baena, M., Sangüesa, G., Dávalos, A., Latasa, M.-J., Sala-Vila, A., Sánchez, R.M., dkk., 2016. Fructose, but not glucose, impairs insulin signaling in the three major insulin-sensitive tissues. *Scientific Reports*, **6**: 26149.
- Bahmani, M., Zargaran, A., Rafieian-Kopaei, M., dan Saki, K., 2014. Ethnobotanical study of medicinal plants used in the management of diabetes mellitus in the Urmia, Northwest Iran. *Asian Pacific Journal of Tropical Medicine*, **7**: S348–S354.
- Balan, S.S., Manokaram, P., Maya, S., Bahari, H., Uzid, M.M., Muhammad Danial, M.D., dkk., 2022. Evaluation an Aqueous Extract of Irradiated and Non Irradiated of *Orthosiphon aristatus* on Zebrafish Embryo (Danio Rerio) through Acute Toxicity Assay. *Trends in Sciences*, **19**: 4980.
- Balci, M., 2005. *Basic ¹H- and ¹³C-NMR Spectroscopy*, 1st ed. ed. Elsevier, Amsterdam.
- Bamel, U.K., Pandey, R., dan Gupta, A., 2020. Safety climate: Systematic literature network analysis of 38 years (1980-2018) of research. *Accident Analysis & Prevention*, **135**: 105387.
- Bardsley, J.K. dan Resnick, H.E., 2008. Diabetes Mellitus, Epidemiology, dalam: *International Encyclopedia of Public Health*. Elsevier, Amsterdam, hal. 161–168.
- Barkaoui, M., Katiri, A., Boubaker, H., dan Msanda, F., 2017. Ethnobotanical survey of medicinal plants used in the traditional treatment of diabetes in Chtouka Ait Baha and Tiznit (Western Anti-Atlas), Morocco. *Journal of Ethnopharmacology*, **198**: 338–350.
- Batoro, J. dan Siswanto, D., 2017. Ethnomedicinal survey of plants used by local society in Poncokusumo district, Malang, East Java Province, Indonesia. *Asian Journal of Medical and Biological Research*, **3**: 158–167.

- Bazargani, M.M., Falahati-Anbaran, M., dan Rohloff, J., 2021. Comparative Analyses of Phytochemical Variation Within and Between Congeneric Species of Willow Herb, *Epilobium hirsutum* and *E. parviflorum*: Contribution of Environmental Factors. *Frontiers in Plant Science*, **11**: 595190.
- Belcaro, G., Cesarone, M., Silvia, E., Ledda, A., Stuard, S., G, V., dkk., 2009. Daily consumption of Reliv Gluaffected™ for 8 weeks significantly lowered blood glucose and body weight in 50 subjects. *Phytotherapy Research*, **23**: 1673–1677.
- Bhan, M.K., Dhar, A.K., Khan, S., Lattoo, S.K., Gupta, K.K., dan Choudhary, D.K., 2006. Screening and optimization of *Andrographis paniculata* (Burm.f.) Nees for total andrographolide content, yield and its components. *Scientia Horticulturae*, **107**: 386–391.
- Bhargava, A., Shrivastava, P., dan Tilwari, A., 2021. HPTLC analysis of *Fumaria parviflora* (Lam.) methanolic extract of whole plant. *Future Journal of Pharmaceutical Sciences*, **7**: 1.
- Bopp, A., De Bona, K.S., Bellé, L.P., Moresco, R.N., dan Moretto, M.B., 2009. *Syzygium cumini* inhibits adenosine deaminase activity and reduces glucose levels in hyperglycemic patients. *Fundamental & Clinical Pharmacology*, **23**: 501–507.
- Borhanuddin, M., Shamsuzzoha, M., dan Hussain, A.H., 1994. Hypoglycaemic effects of *Andrographis paniculata* Nees on non-diabetic rabbits. *Bangladesh Medical Research Council bulletin*, **20**: 24–26.
- BPOM, 2019. *Bahan Yang Dilarang Untuk Digunakan Dalam Obat Tradisional*. Direktorat Registrasi Obat Tradisional, Suplemen Kesehatan, dan Kosmetik, BPOM, Jakarta.
- Brereton, R.G., 2003. *Chemometrics: Data Analysis for the Laboratory and Chemical Plant*. John Wiley & Sons Ltd, West Sussex, UK.
- Brereton, R.G., 2017. Chemometrics in analytical chemistry—part I: history, experimental design and data analysis tools. *Analytical and Bioanalytical Chemistry*, **409**: 5891–5899.
- Brigante, F.I., Lucini Mas, A., Pigni, N.B., Wunderlin, D.A., dan Baroni, M.V., 2020. Targeted metabolomics to assess the authenticity of bakery products containing chia, sesame and flax seeds. *Food Chemistry*, **312**: 126059.
- Burghardt, K.J., Howlett, B.H., Fern, S.M., dan Burghardt, P.R., 2020. A bibliometric analysis of the Top 50 NIH-funded colleges of pharmacy using two databases. *Research in Social and Administrative Pharmacy*, **16**: 941–948.
- Burgos, R.A., Caballero, E.E., Sánchez, N.S., Schroeder, R.A., Wikman, G.K., dan Hancke, J.L., 1997a. Testicular toxicity assesment of *Andrographis paniculata* dried extract in rats. *Journal of Ethnopharmacology*, **58**: 219–224.
- Burgos, R.A., Caballero, E.E., Sánchez, N.S., Schroeder, R.A., Wikman, G.K., dan Hancke, J.L., 1997b. Testicular toxicity assesment of *Andrographis paniculata* dried extract in rats. *Journal of Ethnopharmacology*, **58**: 219–224.

- Cachet, X., Langrand, J., Riffault-Valois, L., Bouzidi, C., Colas, C., Dugay, A., dkk., 2018. Clerodane furanoditerpenoids as the probable cause of toxic hepatitis induced by *Tinospora crispa*. *Scientific Reports*, **8**: 13520.
- Cabrero, G., Sanhueza, O., Pezoa, M., Báez, M.E., Martínez, J., Báez, M., dkk., 2020. Relationship among the minor constituents, antibacterial activity and geographical origin of honey: A multifactor perspective. *Food Chemistry*, **315**: 126296.
- Centers for Disease Control and Prevention, 2021. Diabetes Tests. *Diabetes Tests*, .
- Ceuterick, M., Vandebroek, I., Torry, B., dan Pieroni, A., 2008. Cross-cultural adaptation in urban ethnobotany: The Colombian folk pharmacopoeia in London. *Journal of Ethnopharmacology*, **120**: 342–359.
- Chakraborty, M., Singh, P., Dsouza, J.P., Pethusamy, K., dan Thatkar, P., 2020. Fasting and postprandial lipid parameters: A comparative evaluation of cardiovascular risk assessment in prediabetes and diabetes. *Journal of Family Medicine and Primary Care*, **9**: 287–292.
- Chandrasekaran, C.V., Thiagarajan, P., Sundarajan, K., Goudar, K.S., Deepak, M., Murali, B., dkk., 2009. Evaluation of the genotoxic potential and acute oral toxicity of standardized extract of *Andrographis paniculata*(KalmCold™). *Food and Chemical Toxicology*, **47**: 1892–1902.
- Chassagne, F., Haddad, M., Amiel, A., Phakeovilay, C., Manithip, C., Bourdy, G., dkk., 2018. A metabolomic approach to identify anti-hepatocarcinogenic compounds from plants used traditionally in the treatment of liver diseases. *Fitoterapia*, **127**: 226–236.
- Chavalittumrong, P., Attawish, A., Chuthaputti, A., dan Chuntapet, P., 1997. Toxicological Study of Crude Extract of *Tinospora crispa* Mier ex Hook F. & Thoms. *Thai Journal of Pharmaceutical Sciences*, **21**: 199–210.
- Chayarop, K., Peungvicha, P., Temsiririkkul, R., Wongkrajang, Y., Chuakul, W., dan Rojsanga, P., 2017. Hypoglycaemic activity of Mathurameha, a Thai traditional herbal formula aqueous extract, and its effect on biochemical profiles of streptozotocin-nicotinamide-induced diabetic rats. *BMC Complementary and Alternative Medicine*, **17**: 343.
- Che, C.-T., Wang, Z., Chow, M., dan Lam, C., 2013. Herb-Herb Combination for Therapeutic Enhancement and Advancement: Theory, Practice and Future Perspectives. *Molecules*, **18**: 5125–5141.
- Chen, C.-C., Lii, C.-K., Lin, Y.-H., Shie, P.-H., Yang, Y.-C., Huang, C.-S., dkk., 2020. *Andrographis paniculata* Improves Insulin Resistance in High-Fat Diet-Induced Obese Mice and TNF α -Treated 3T3-L1 Adipocytes. *American Journal of Chinese Medicine*, **48**: 1073–1090.
- Cho, N.H., Shaw, J.E., Karuranga, S., Huang, Y., da Rocha Fernandes, J.D., Ohlrogge, A.W., dkk., 2018. IDF Diabetes Atlas: Global estimates of diabetes prevalence for 2017 and projections for 2045. *Diabetes Research and Clinical Practice*, **138**: 271–281.
- Choudhury, A., Singh, P.A., Bajwa, N., Dash, S., dan Bisht, P., 2023. Pharmacovigilance of herbal medicines: Concerns and future prospects. *Journal of Ethnopharmacology*, **309**: 116383.

- Chung, J.K.-O., Xue, H., Pang, E.W.-H., dan Tam, D.C.-C., 2017. Accuracy of fasting plasma glucose and hemoglobin A1c testing for the early detection of diabetes: A pilot study. *Frontiers in Laboratory Medicine*, **1**: 76–81.
- Cock, I.E., Ndlovu, N., dan Van Vuuren, S.F., 2021. The use of South African botanical species for the control of blood sugar. *Journal of Ethnopharmacology*, **264**: 113234.
- Cock, I.E. dan Van Vuuren, S.F., 2020. The traditional use of southern African medicinal plants for the treatment of bacterial respiratory diseases: A review of the ethnobotany and scientific evaluations. *Journal of Ethnopharmacology*, **263**: 113204.
- Commisso, M., Strazzer, P., Toffali, K., Stocchero, M., dan Guzzo, F., 2013. Untargeted metabolomics: an emerging approach to determine the composition of herbal products. *Computational and Structural Biotechnology Journal*, **4**: e201301007.
- Cornejo-Báez, A.A., Peña-Rodríguez, L.M., Álvarez-Zapata, R., Vázquez-Hernández, M., dan Sánchez-Medina, A., 2020. Chemometrics: a complementary tool to guide the isolation of pharmacologically active natural products. *Drug Discovery Today*, **25**: 27–37.
- Cuadros-Rodríguez, L., Ruiz-Samblás, C., Valverde-Som, L., Pérez-Castaño, E., dan González-Casado, A., 2016. Chromatographic fingerprinting: An innovative approach for food “identification” and food authentication – A tutorial. *Analytica Chimica Acta*, **909**: 9–23.
- Cui, C., Xu, Y., Jin, G., Zong, J., Peng, C., Cai, H., dkk., 2023. Machine learning applications for identify the geographical origin, variety and processing of black tea using ¹H NMR chemical fingerprinting. *Food Control*, **148**: 109686.
- da Silva, A., Caldas, A.P.S., Rocha, D.M.U.P., dan Bressan, J., 2020. Triglyceride-glucose index predicts independently type 2 diabetes mellitus risk: A systematic review and meta-analysis of cohort studies. *Primary Care Diabetes*, **14**: 584–593.
- Dallas, M.S.J., 1965. Reproducible RF values in thin-layer adsorption chromatography. *Journal of Chromatography A*, **17**: 267–277.
- Damsud, T., Grace, M.H., Adisakwattana, S., dan Phuwapraisirisan, P., 2014. Orthosiphon A from the aerial parts of *Orthosiphon aristatus* is putatively responsible for hypoglycemic effect via α -glucosidase inhibition. *Natural Product Communications*, **9**: 1934578X1400900.
- Dandu, A.M. dan Inamdar, N.M., 2008. Protective effects of *Andrographis paniculata* against endothelial dysfunction in diabetic wistar rats. *Journal of Pharmacology and Toxicology*, **3**: 311–317.
- Dandu, A.M. dan Inamdar, N.M., 2009. Evaluation of beneficial effects of antioxidant properties of aqueous leaf extract of *Andrographis paniculata* in STZ-induced diabetes. *Pakistan Journal of Pharmaceutical Sciences*, **22**: 49–52.
- Daneman, D., 2006. Type 1 diabetes. *The Lancet*, **367**: 847–858.
- Danilova, I.G., Bulavintceva, T.S., Gette, I.F., Medvedeva, S.Y., Emelyanov, V.V., dan Abidov, M.T., 2017. Partial recovery from alloxan-induced diabetes by

- sodium phthalhydrazide in rats. *Biomedicine & Pharmacotherapy*, **95**: 103–110.
- Dauncey, E.A., Irving, J., Allkin, R., dan Robinson, N., 2016. Common mistakes when using plant names and how to avoid them. *European Journal of Integrative Medicine*, **8**: 597–601.
- De Bona, K.S., Bellé, L.P., Bittencourt, P.E.R., Bonfanti, G., Cargnelluti, L.O., Pimentel, V.C., dkk., 2011. Erythrocytic enzymes and antioxidant status in people with type 2 diabetes: Beneficial effect of *Syzygium cumini* leaf extract in vitro. *Diabetes Research and Clinical Practice*, **94**: 84–90.
- De Bona, K.S., Bellé, L.P., Sari, M.H., Thomé, G., Schetinger, M.R.C., Morsch, V.M., dkk., 2010. *Syzygium cumini* Extract Decrease Adenosine Deaminase, 5'Nucleotidase Activities and Oxidative Damage in Platelets of Diabetic Patients. *Cellular Physiology and Biochemistry*, **26**: 729–738.
- De Bona, K.S., Bonfanti, G., Bitencourt, P.E.R., Cargnelutti, L.O., da Silva, P.S., da Silva, T.P., dkk., 2014. *Syzygium cumini* is more effective in preventing the increase of erythrocytic ADA activity than phenolic compounds under hyperglycemic conditions in vitro. *Journal of Physiology and Biochemistry*, **70**: 321–330.
- de Falco, B., Incerti, G., Pepe, R., Amato, M., dan Lanzotti, V., 2016. Metabolomic Fingerprinting of Romaneschi Globe Artichokes by NMR Spectroscopy and Multivariate Data Analysis: Metabolomics of Artichokes by NMR and Chemometrics. *Phytochemical Analysis*, **27**: 304–314.
- De Luca, M., Terouzi, W., Ioele, G., Kzaiber, F., Oussama, A., Oliverio, F., dkk., 2011. Derivative FTIR spectroscopy for cluster analysis and classification of morocco olive oils. *Food Chemistry*, **124**: 1113–1118.
- Debenedetti, S., 2009. TLC and PC, dalam: *Isolation, Identification and Characterization of Allelochemicals*. Taylor & Francis.
- Delyani, R., Kurniawati, A., Melati, M., dan Nur Faridah, D., 2020. Biomass, sinensetin content, and α -glucosidase inhibition activity of *Orthosiphon aristatus* were influenced by fertilization and harvest. *IOP Conference Series: Earth and Environmental Science*, **484**: 012025.
- Denis, G., Gérard, Y., Sahpaz, S., Laporte, R., Viget, N., Ajana, F., dkk., 2007. Prophylaxie antipaludéenne par plantes médicinales : hépatite toxique à *Tinospora crispa*. *Therapies*, **62**: 271–272.
- Departemen Kesehatan RI, 1979. *Materia Medika Indonesia*, Jilid III. ed. Departemen Kesehatan RI, Jakarta.
- Departemen Kesehatan RI, 1980. *Materia Medika Indonesia*, Jilid IV. ed. Departemen Kesehatan RI, Jakarta.
- Departemen Kesehatan RI, 1986. *Sediaan Galenik*. Departemen Kesehatan RI, Jakarta.
- Departemen Kesehatan RI, 2008. *Farmakope Herbal Indonesia*, Edisi I. ed. Departemen Kesehatan RI, Jakarta.
- Destryana, R.A. dan Ismawati, 2019. Etnobotani dan penggunaan tumbuhan liar sebagai obat tradisional oleh masyarakat suku Madura (studi di Kecamatan Lenteng, Guluk-Guluk, dan Bluto). *Journal of Food Technology and Agroindustry*, **1**: 1–8.

- Dhanani, T., Shah, S., Gajbhiye, N.A., dan Kumar, S., 2017. Effect of extraction methods on yield, phytochemical constituents and antioxidant activity of *Withania somnifera*. *Arabian Journal of Chemistry*, **10**: S1193–S1199.
- DiaSys, 2015. *Glucose GOD FS*. DiaSys Diagnostic Systems GmbH, Holzheim.
- DiaSys, 2019. *Triglycerides FS*. DiaSys Diagnostic Systems GmbH, Holzheim.
- Diba, F., Yusro, F., Mariani, Y., dan Ohtani, K., 2013. Inventory and biodiversity of medicinal plants from tropical rain forest based on traditional knowledge by ethnic Dayaknese communities in West Kalimantan Indonesia. *Kuroshio Science*, **7**: 75–80.
- DiMeglio, L.A., Evans-Molina, C., dan Oram, R.A., 2018. Type 1 diabetes. *The Lancet*, **391**: 2449–2462.
- DiPiro, J.T., Talbert, R.L., Yee, G.C., Matzke, G.R., Wells, B.G., dan Posey, L.M., 2008. *Pharmacotherapy: A Pathophysiologic Approach*, 7th ed. McGraw Hill Medical, New York, USA.
- Dixit, S. dan Tiwari, S., 2020. Investigation of anti-diabetic plants used among the ethnic communities of Kanpur division, India. *Journal of Ethnopharmacology*, **253**: 112639.
- Donno, D., Mellano, M.G., Raimondo, E., Cerutti, A.K., Prgomet, Z., dan Beccaro, G.L., 2016. Influence of applied drying methods on phytochemical composition in fresh and dried goji fruits by HPLC fingerprint. *European Food Research and Technology*, **242**: 1961–1974.
- Dound, Y.A., Chaudhary, S., Chaudhary, S.S., Rawat, S., Alqarni, M.H., Ahmad, M.M., dkk., 2021. Mechanistic understanding of PtyroneTM: A plant based natural anti diabetic product. *Journal of King Saud University - Science*, **33**: .
- Drinkwater, J.M., Tsao, R., Liu, R., Defelice, C., dan Wolyn, D.J., 2015. Effects of cooking on rutin and glutathione concentrations and antioxidant activity of green asparagus (*Asparagus officinalis*) spears. *Journal of Functional Foods*, **12**: 342–353.
- Durruty, P., Sanzana, M., dan Sanhueza, L., 2019. Pathogenesis of type 2 diabetes mellitus, dalam: *Type 2 Diabetes - From Pathophysiology to Modern Management*. IntechOpen, London.
- Dwivedi, M.K., Sonter, S., Mishra, S., Singh, P., dan Singh, P.K., 2021. Secondary metabolite profiling and characterization of diterpenes and flavones from the methanolic extract of *Andrographis paniculata* using HPLC-LC-MS/MS. *Future Journal of Pharmaceutical Sciences*, **7**: 184.
- Einax, J.W., 2004. Chemometrics in analytical chemistry. *Analytical and Bioanalytical Chemistry*, **380**: 368–369.
- Elfahmi, Woerdenbag, H.J., dan Kayser, O., 2014. Jamu: Indonesian traditional herbal medicine towards rational phytopharmacological use. *Journal of Herbal Medicine*, **4**: 51–73.
- Elfrida, Tarigan, N.S., dan Suwardi, A.B., 2021. Ethnobotanical study of medicinal plants used by community in Jambur Labu Village, East Aceh, Indonesia. *Biodiversitas*, **22**: 2893–2900.

- Elisha, I.L. dan Viljoen, A., 2021. Trends in rooibos tea (*Aspalathus linearis*) research (1994–2018): A scientometric assessment. *South African Journal of Botany*, **137**: 159–170.
- Ellis, D.I. dan Goodacre, R., 2012. Metabolomics-assisted synthetic biology. *Current Opinion in Biotechnology*, **23**: 22–28.
- El-Seedi, H.R., Khalifa, S.A.M., Yosri, N., Khatib, A., Chen, L., Saeed, A., dkk., 2019. Plants mentioned in the Islamic Scriptures (Holy Qur’ân and Ahadith): Traditional uses and medicinal importance in contemporary times. *Journal of Ethnopharmacology*, **243**: 112007.
- Elya, B., Handayani, R., Sauriasari, R., Azizahwati, Hasyati, U.S., Permana, I.T., dkk., 2015. Antidiabetic Activity and Phytochemical Screening of Extracts from Indonesian Plants by Inhibition of Alpha Amylase, Alpha Glucosidase and Dipeptidyl Peptidase IV. *Pakistan Journal of Biological Sciences*, **18**: 279–284.
- Espejel-Nava, J.A., Vega-Avila, E., Alarcon-Aguilar, F., Contreras-Ramos, A., Díaz-Rosas, G., Trejo-Aguilar, G., dkk., 2018. A Phenolic Fraction from *Catharanthus roseus* L. Stems Decreases Glycemia and Stimulates Insulin Secretion. *Evidence-Based Complementary and Alternative Medicine*, **2018**: 1–9.
- Etkin, N.L., 1993. Anthropological methods in ethnopharmacology. *Journal of Ethnopharmacology*, **38**: 98–104.
- Etkin, N.L., 2001. Perspectives in ethnopharmacology: forging a closer link between bioscience and traditional empirical knowledge. *Journal of Ethnopharmacology*, **76**: 177–182.
- Fachruddin, F., Balumbi, M., dan Dustan, D., 2021. Ethnomedicine of Bajo Tribe Community in Bangko Village, Maginti District, West Muna, Southeast Sulawesi. *BIOLINK (Jurnal Biologi Lingkungan Industri Kesehatan)*, **7**: 215–226.
- Fakhrudin, N., Pramono, S., Wahyuono, S., Purwantini, I., Pratiwi, S.U.T., Gani, A.P., dkk., 2022. *Herbal Untuk Terapi: Pendekatan Empiris Dan Saintifik*. Gadjah Mada University Press, Yogyakarta.
- Farag, M.A., Porzel, A., dan Wessjohann, L.A., 2012. Comparative metabolite profiling and fingerprinting of medicinal licorice roots using a multiplex approach of GC–MS, LC–MS and 1D NMR techniques. *Phytochemistry*, **76**: 60–72.
- Faramayuda, F., Riyanti, S., Pratiwi, A.S., Mariani, T.S., Elfahmi, E., dan Sukrasno, S., 2021. Isolasi Sinensetin dari Kumis Kucing (*Orthosiphon aristatus* Blume miq.) Varietas Putih. *JPSCR: Journal of Pharmaceutical Science and Clinical Research*, **6**: 111–127.
- Farsani, S.F., Brodovicz, K., Soleymanlou, N., Macquard, J., Wissinger, E., dan Maiese, B.A., 2017. Incidence and prevalence of diabetic ketoacidosis (DKA) among adults with type 1 diabetes mellitus (T1D): a systematic literature review. *BMJ Open*, **7**: 1–15.
- Fathurrahman, F., Nursanto, J., Madjid, A., dan Ramadanil, R., 2016. Ethnobotanical study of “Kaili Inde” tribe in Central Sulawesi Indonesia. *Emirates Journal of Food and Agriculture*, **28**: 337–347.

- Fatmarahmi, D.C., Susidarti, R.A., Swasono, R.T., dan Rohman, A., 2022. A development method of FTIR spectroscopy coupled with chemometrics for detection of synthetic drug adulterants of herbal products in quaternary mixture. *Journal of Applied Pharmaceutical Science*, **12**: 191–201.
- Ferrari, R., 2015. Writing narrative style literature reviews. *Medical Writing*, **24**: 230–235.
- Figuerola-Pérez, M.G., Pérez-Ramírez, I.F., Paredes-López, O., Mondragón-Jacobo, C., dan Reynoso-Camacho, R., 2018. Phytochemical composition and *in vitro* analysis of Nopal (*O. Ficus-Indica*) Cladodes at different stages of maturity. *International Journal of Food Properties*, **21**: 1728–1742.
- Fitrawan, L.O.M., 2017. 'Efek Kombinasi Ekstrak Terpurifikasi *Andrographis paniculata* Burm.F Ness Dan Ekstrak Terpurifikasi *Centella asiatica* L. Urban Terhadap Ekspresi Ppar γ Dan Glut-4 Pada Sel 3t3-L1 Adiposit', . Universitas Gadjah Mada, Yogyakarta.
- Fitrawan, L.O.M., Ariastuti, R., Tjandrawinata, R., Nugroho, A., dan Pramono, S., 2018. Antidiabetic effect of combination of fractionated-extracts of *Andrographis paniculata* and *Centella asiatica*: In vitro study. *Asian Pacific Journal of Tropical Biomedicine*, **8**: 527–532.
- Fitrianti, T. dan Partasasmita, R., 2020. Tanaman obat di masyarakat Desa Cintaratu, Pangandaran, Jawa Barat. *Prosiding Seminar Nasional Masyarakat Biodiversitas Indonesia*, **6**: 625–634.
- Flores, I.S., Martinelli, B.C.B., dan Lião, L.M., 2020. High-resolution magic angle spinning nuclear magnetic resonance (HR-MAS NMR) as a tool in the determination of biomarkers of Passiflora-based herbal medicines. *Fitoterapia*, **142**: 104500.
- Franco, R.R., Ribeiro Zabisky, L.F., Pires de Lima Júnior, J., Mota Alves, V.H., Justino, A.B., Saraiva, A.L., dkk., 2020. Antidiabetic effects of *Syzygium cumini* leaves: A non-hemolytic plant with potential against process of oxidation, glycation, inflammation and digestive enzymes catalysis. *Journal of Ethnopharmacology*, **261**: 113132.
- Frezza, C., Venditti, A., De Vita, D., Sciubba, F., Tomai, P., Franceschin, M., dkk., 2021. Phytochemical Analysis and Biological Activities of the Ethanolic Extract of *Daphne sericea* Vahl Flowering Aerial Parts Collected in Central Italy. *Biomolecules*, **11**: 379.
- Fujianti, H., Lestariningsih, N., dan Nirmalasari, R., 2021. 'The Utilization of Medicinal Plants for Diabetes Mellitus Dayak Ngaju Ethnic at Tumbang Samba in Central Kalimantan:', . Dipresentasikan pada 3rd KOBICONGRESS, International and National Conferences (KOBICINC 2020), Bengkulu, Indonesia, hal. 456–462.
- Furman, B.L., 2015. Streptozotocin-induced diabetic models in mice and rats. *Current Protocols in Pharmacology*, **70**: .
- Fürst, R. dan Zündorf, I., 2015. Evidence-Based Phytotherapy in Europe: Where Do We Stand? *Planta Medica*, **81**: 962–967.
- Gailea, R., Bratawinata, A.A., Pitopang, R., dan Kusuma, I., 2016. The use of various plant types as medicines by local community in the enclave of the

- Lore-Lindu National Park of Central Sulawesi, Indonesia. *Global Journal of Research on Medicinal Plants & Indigenous Medicine*, **5**: 29–40.
- Galal, A.M., Avula, B., dan Khan, I.A., 2015. Utility of thin-layer chromatography in the assessment of the quality of botanicals, dalam: *Instrumental Thin-Layer Chromatography*. Elsevier, Amsterdam, hal. 479–504.
- Gani, A.P., 2016. 'Optimasi Ekstraksi dan Penelusuran Fraksi Aktif Herba Sambiloto (*Andrographis paniculata* Nees.) dan Patikan Kebo (*Euphorbia hirta* L.): Studi In Vitro Efek Fagositosis Makrofag', . Universitas Gadjah Mada, Yogyakarta.
- Gao, F. dan Zheng, Z., 2014. Animal models of diabetic neuropathic pain. *Experimental and Clinical Endocrinology & Diabetes*, **122**: 100–106.
- Garg, G., Patil, A.N., Kumar, R., Bhatia, A., Kasudhan, K.S., dan Pattanaik, S., 2020. Protective role of *Convolvulus pluricaulis* on lipid abnormalities in high-fat diet with low dose streptozotocin-induced experimental rat model. *Journal of Ayurveda and Integrative Medicine*, S097594761930052X.
- Gertsch, J., 2009. How scientific is the science in ethnopharmacology? historical perspectives and epistemological problems. *Journal of Ethnopharmacology*, **122**: 172–183.
- Gheibi, S., Kashfi, K., dan Ghasemi, A., 2017. A practical guide for induction of type-2 diabetes in rat: Incorporating a high-fat diet and streptozotocin. *Biomedicine & Pharmacotherapy*, **95**: 605–613.
- Ghelani, H., Razmovski-Naumovski, V., dan Nammi, S., 2017. Chronic treatment of (R)- α -lipoic acid reduces blood glucose and lipid levels in high-fat diet and low-dose streptozotocin-induced metabolic syndrome and type 2 diabetes in Sprague-Dawley rats. *Pharmacology Research & Perspectives*, **5**: e00306.
- Gherardelli, C., Cisternas, P., Gutiérrez, J., Martinez, M., dan Inestrosa, N.C., 2021. Andrographolide restores glucose uptake in rat hippocampal neurons. *Journal of Neurochemistry*, **157**: 1222–1233.
- Ghisoni, S., Lucini, L., Rocchetti, G., Chiodelli, G., Farinelli, D., Tombesi, S., dkk., 2020. Untargeted metabolomics with multivariate analysis to discriminate hazelnut (*Corylus avellana* L.) cultivars and their geographical origin. *Journal of the Science of Food and Agriculture*, **100**: 500–508.
- Ghorbanpour, M. dan Varma, A. (Editor), 2017. *Medicinal Plants and Environmental Challenges*. Springer International Publishing, Cham.
- Giday, M., Teklehaymanot, T., Anmut, A., dan Mekonnen, Y., 2007. Medicinal plants of the Shinasha, Agew-awi and Amhara peoples in Northwest Ethiopia. *Journal of Ethnopharmacology*, **110**: 516–525.
- Goboza, M., Aboua, Y.G., Chegou, N., dan Oguntibeju, O.O., 2019. Vindoline effectively ameliorated diabetes-induced hepatotoxicity by docking oxidative stress, inflammation and hypertriglyceridemia in type 2 diabetes-induced male Wistar rats. *Biomedicine & Pharmacotherapy*, **112**: 108638.
- Goboza, M., Meyer, M., Aboua, Y.G., dan Oguntibeju, O.O., 2020. In Vitro Antidiabetic and Antioxidant Effects of Different Extracts of *Catharanthus roseus* and Its Indole Alkaloid, Vindoline. *Molecules*, **25**: 5546.

- Göltenboth, F. (Editor), 2006. *Ecology of Insular Southeast Asia: The Indonesian Archipelago*, 1st ed. Elsevier, Amsterdam.
- González-Cortazar, M., Salinas-Sánchez, D.O., Herrera-Ruiz, M., Román-Ramos, D.C., Zamilpa, A., Jiménez-Ferrer, E., dkk., 2022. Eupatorin and Salviandulin-A, with Antimicrobial and Anti-Inflammatory Effects from *Salvia lavanduloides* Kunth Leaves. *Plants*, **11**: 1739.
- Gottfried, J.L., 2013. Chemometric Analysis in LIBS, dalam: *Handbook of Laser-Induced Breakdown Spectroscopy*. John Wiley & Sons Ltd, Oxford, UK, hal. 223–255.
- Goyal, N. dan Howlett, M., 2018. Lessons Learned and Not Learned: Bibliometric Analysis of Policy Learning, dalam: *Learning in Public Policy*. Palgrave Macmillan, London.
- Gregory, A.T. dan Denniss, A.R., 2018. An introduction to writing narrative and systematic reviews — tasks, tips and traps for aspiring authors. *Heart, Lung and Circulation*, **27**: 893–898.
- Gul, S., Nisa, N.T., Shah, T.A., Shah, M.U.A., dan Wani, A.B., 2015. Research output on lavender, 2008–2012. *European Journal of Integrative Medicine*, **7**: 460–466.
- Gunarti, N.S. dan Nurlina, E., 2019. Studi etnobotani dan etnofarmakologi tumbuhan obat di Desa Cigunungsari Kecamatan Tegalwaru Kabupaten Karawang Jawa Barat. *Pharma Xplore: Jurnal Ilmiah Farmasi*, **4**: 260–267.
- Guo, L., Gong, M., Wu, S., Qiu, F., dan Ma, L., 2020. Identification and quantification of the quality markers and anti-migraine active components in Chuanxiong Rhizoma and Cyperi Rhizoma herbal pair based on chemometric analysis between chemical constituents and pharmacological effects. *Journal of Ethnopharmacology*, **246**: 112228.
- Guo, X., Wang, Y., Wang, K., Ji, B., dan Zhou, F., 2018. Stability of a type 2 diabetes rat model induced by high-fat diet feeding with low-dose streptozotocin injection. *Journal of Zhejiang University-SCIENCE B*, **19**: 559–569.
- Gupta, S., Dhankhar, Y., Har, B., Agarwal, S., Singh, S.A., Gupta, A.K., dkk., 2022. Probable Drug-Induced Liver Injury Caused by *Tinospora* species: A Case Report. *Journal of Clinical and Experimental Hepatology*, **12**: 232–234.
- Habibah, S., 2014. *Etnobotani Tumbuhan Obat Oleh Masyarakat Kecamatan Sreseh Kabupaten Sampangan Madura*. Universitas Islam Negeri Maulana Malik Ibrahim, Malang.
- Hadiati, D., Retnoningsih, A., dan Widiatningrum, T., 2021. Development of Medicinal Plants Ethnobotany Study-Based Encyclopedia as Plantae Study Media. *Journal of Innovative Science Education*, .
- Hadijah, S., Hendra, M., dan Hariani, N., 2016. Etnomotani obat tradisional oleh masyarakat Kutai di Kec. Muara Bengkal Kab. Kutai Timur. *Bioprospek*, **11**: 19–24.
- Hamadi, N., Mansour, A., Hassan, M.H., Khalifi-Touhami, F., dan Badary, O., 2012. Ameliorative effects of resveratrol on liver injury in streptozotocin-induced diabetic rats. *Journal of Biochemical and Molecular Toxicology*, **26**: 384–392.

- Hamid, H.A., Yusoff, M.M., Liu, M., dan Karim, M.R., 2015. α -Glucosidase and α -amylase inhibitory constituents of *Tinospora crispa*: isolation and chemical profile confirmation by ultra-high performance liquid chromatography-quadrupole time-of-flight/mass spectrometry. *Journal of Functional Foods*, **16**: 74–80.
- Hamid, Muhajir, Bohari, S.P.M., Bastami, M.S., Ali, A.M., Mustapa, N.M., dan Shari, K., 2008a. Evaluation of the Insulinotrophic Activity of Malaysian Traditional Plants Extract. *Journal of Biological Sciences*, **8**: 201–204.
- Hamid, M., Bohari, S.P.M., Bastami, M.S., Ali, A.M., Mustapha, N.M., dan Shari, K., 2008b. Evaluation of the insulinotrophic activity of Malaysian traditional plants extract. *Journal of Biological Sciences*, **8**: 201–204.
- Hamza, N., Berke, B., Umar, A., Cheze, C., Gin, H., dan Moore, N., 2019. A review of Algerian medicinal plants used in the treatment of diabetes. *Journal of Ethnopharmacology*, **238**: 111841.
- Handayani, S., Lukitasari, M., dan Widiyanto, J., 2018. 'Studi etnobotani tumbuhan berkehasiat obat (Ordo: *Rutales*, *Myrtales*, dan *Euforbiales*) di Kecamatan Plaosan', dalam: *Prosiding Seminar Nasional SIMBIOSIS III*. Universitas PGRI Madiun, Madiun, hal. 95–107.
- Hariyadi, B. dan Ticktin, T., 2012. Uras: medicinal and ritual plants of Serampas, Jambi Indonesia. *Ethnobotany Research and Applications*, **10**: 133–150.
- Hartianti, D. dan Budipramana, K., 2020. Traditional antidiabetic plants from Indonesia. *Ethnobotany Research and Applications*, **19**: 1–24.
- Haryoso, A., Amzu, E., Hikmat, A., Sunkar, A., dan Darusman, D., 2019. Ethnobotany of sugar palm (*Arenga pinnata*) in the Sasak Community, Kekait Village, West Nusa Tenggara, Indonesia. *Biodiversitas*, **21**: 117–128.
- Hashim, S., Beh, H., Hamil, M.R., Ismail, Z., dan Majid, A.S.A., 2016. High-performance thin-layer chromatography method development, validation, and simultaneous quantification of four compounds identified in standardized extracts of *Orthosiphon stamineus*. *Pharmacognosy Research*, **8**: 238.
- Hashimoto, Y., Yusro, F., Mariani, Y., Diba, F., dan Ohtani, K., 2019. Ethnopharmacological Study on Traditional Knowledge of Medicinal Plant Used from Secondary Forest in Community at Sekabuk Village, Mempawah District, West Kalimantan, Indonesia. *Wood Research Journal*, **10**: 61–70.
- Haziki, H. dan Syamswisna, 2021. Studi etnobotani tumbuhan obat tradisional oleh masyarakat di Kelurahan Setapak Kecil Singkawang. *Biocелеbes*, **15**: 76–86.
- Heinrich, M., 2015. Ethnopharmacology: A Short History of a Multidisciplinary Field of Research, dalam: *Ethnopharmacology*. John Wiley & Sons, Ltd., Oxford, UK, hal. 3–9.
- Heinrich, M., Barnes, J., Gibbons, S., dan Williamson, E.M., 2012. *Fundamentals of Pharmacognosy and Phytotherapy*, 2nd ed. Churchill Livingstone (Elsevier), Edinburg.

- Heinrich, M., Edwards, S., Moerman, D.E., dan Leonti, M., 2009. Ethnopharmacological field studies: A critical assessment of their conceptual basis and methods. *Journal of Ethnopharmacology*, **124**: 1–17.
- Herawati, L. dan Yuniati, E., 2014. Kajian etnobotani tumbuhan obat masyarakat etnik Lauje di Desa Tomini Kecamatan Tomini Parigi Mautong Sulawesi Tengah. *Biocelbes*, **8**: 26–30.
- Herianto, H., Kusuma, Z., Nihayati, E., dan Prayogo, C., 2018. The Plant Wisdom of Dayak Ot Danum, Central Kalimantan. *Journal of Tropical Life Science*, **8**: 130–143.
- Herlina, R., Rahayuningsih, M., dan Iswari, R.S., 2019. Species Richness of Medicinal Plants in the Dieng Plateau. *Journal of Innovative Science Education*, **8**: 116–122.
- Hernández-García, E., García, A., Avalos-Alanís, F.G., Rivas-Galindo, V.M., Delgadillo-Puga, C., dan Camacho-Corona, M. del R., 2019. Nuclear magnetic resonance spectroscopy data of isolated compounds from *Acacia farnesiana* (L) Willd fruits and two esterified derivatives. *Data in Brief*, **22**: 255–268.
- Hidayat, R.S. dan Cahyaningsih, R., 2017. 'Useful plants from Wolomeze Protected Forest, Ngada District, Florest, East Nusa Tenggara', .
- Hidayat, S., 2017. The use by local communities of plants from Sesaot Protected Forest, West Nusa Tenggara, Indonesia. *Biodiversitas*, **18**: 238–247.
- Hidayat, S., Zuhud, E.A.M., dan Widyatmoko, D., 2020. Medicinal plants of the Lesser Sunda Islands. *IOP Conference Series: Earth and Environmental Science*, **528**: 012017.
- Hidayat, S., Zuhud, E.A.M., Widyatmoko, D., Bahruni, dan Batubara, I., 2021. The commercial potential of forest trees as medicinal and health ingredients. *Biodiversitas*, **22**: 2795–2804.
- Hidayat, Z., Febriyani, W., dan Tayubi, Z., 2018. Pengetahuan Etnobotani Tumbuhan Obat Pada Masyarakat Adat Cigugur, Desa Cigugur, Kecamatan Cigugur, Kabupaten Kuningan. *Ethnobotany Research and Applications*, .
- Hidayatullah, M., Yuwono, M., dan Primaharinastiti, R., 2022. Optimization Method and Stability Test to Determinate Luteolin, Quercetin, Apigenin, and Sinensetin Levels in Herbal Medicines Using TLC-Densitometry. *Jurnal Farmasi dan Ilmu Kefarmasian Indonesia*, **9**: 235–241.
- Hijrah, Nugrahani, A.W., dan Ramadanil, 2019. Studi etnobotani tumbuhan berkhasiat obat pada Suku Taa Wana di Desa Bulan Jaya Kecamatan Ampana Tete, Kabupaten Tojo Una Una, Provinsi Sulawesi Tengah. *Biocelbes*, **13**: 76–86.
- Hoa, H.T., Thu, N.T., Dong, N.T., Oanh, T.T., Hien, T.T., dan Ha, D.T., 2020. Effects of Compounds from *Physalis angulata* on Fatty Acid Synthesis and Glucose Metabolism in HepG2 Cells via the AMP-activated Protein Kinase Pathway. *Natural Product Sciences*, **26**: 200–206.
- Hossain, M.A. dan Ismail, Z., 2016. Quantification and enrichment of sinensetin in the leaves of *Orthosiphon stamineus*. *Arabian Journal of Chemistry*, **9**: S1338–S1341.

- Hsu, C.-Y., Lin, G.-M., dan Chang, S.-T., 2020. Hypoglycemic activity of extracts of *Chamaecyparis obtusa* var. *formosana* leaf in rats with hyperglycemia induced by high-fat diets and streptozotocin. *Journal of Traditional and Complementary Medicine*, **10**: 389–395.
- Hsu, J.-H., Liou, S.-S., Yu, B.-C., Cheng, J.-T., dan Wu, Y.-C., 2004. Activation of α 1A-adrenoceptor by andrographolide to increase glucose uptake in cultured myoblast C2C12 cells. *Planta Medica*, **70**: 1230–1233.
- Huang, P.-L., Chi, C.-W., dan Liu, T.-Y., 2013. Areca nut procyanidins ameliorate streptozocin-induced hyperglycemia by regulating gluconeogenesis. *Food and Chemical Toxicology*, **55**: 137–143.
- Huang, W.-T., Tu, C.-Y., Wang, F.-Y., dan Huang, S.-T., 2019. Literature review of liver injury induced by *Tinospora crispa* associated with two cases of acute fulminant hepatitis. *Complementary Therapies in Medicine*, **42**: 286–291.
- Hunaefi, D., Yuliana, N.D., Smetanska, I., dan Gruda, N., 2018. Effect of ultraviolet and ultrasonic on potential antidiabetic activity of in vitro shoot cultures of *Orthosiphon aristatus*. *IOP Conference Series: Earth and Environmental Science*, **207**: 012008.
- Husain, F., Fajar, Sary, D.P., dan Yuniati, E., 2019a. 'The study of Jamu plants ethnobotany in homegarden and its implications to medicinal plant conservation in Semarang', , dalam: *Proceedings of the Proceedings of the 1st International Conference on Environment and Sustainability Issues, ICESI 2019, 18-19 July 2019, Semarang, Central Java, Indonesia*. Dipresentasikan pada Proceedings of the 1st International Conference on Environment and Sustainability Issues, ICESI 2019, 18-19 July 2019, Semarang, Central Java, Indonesia, EAI, Semarang, Indonesia.
- Husain, F., Wahidah, B., Prasetyo, K., dan Massholeh, M., 2019b. 'Traditional knowledge of medicinal plants among sellers of Jamu Gendong in Wonolopo, Indonesia.', , dalam: *Proceedings of the First International Conference on Advances in Education, Humanities, and Language, ICEL 2019, Malang, Indonesia, 23-24 March 2019*. Dipresentasikan pada First International Conference on Advances in Education, Humanities, and Language, ICEL 2019, Malang, Indonesia, 23-24 March 2019, EAI, Malang, Indonesia.
- Husain, F., Sary, D.P., Fajar, Iswari, R., dan Wahidah, B.F., 2020. Ethnobotanical Knowledge of Plant Ingredients Among Sellers of Jamu Ngadirgo Semarang. *Komunitas: International Journal of Indonesian Society and Culture*, **12**: 150–162.
- Hussain, S., Hamid, A., Ahmad, K.S., Mehmood, A., Nawaz, F., dan Ahmed, H., 2019. Quantitative ethnopharmacological profiling of medicinal shrubs used by indigenous communities of Rawalakot, District Poonch, Azad Jammu and Kashmir, Pakistan. *Revista Brasileira de Farmacognosia*, **29**: 665–676.
- Hussein, R.A. dan El-Anssary, A.A., 2019. Plants Secondary Metabolites: The Key Drivers of the Pharmacological Actions of Medicinal Plants, dalam: F. Builders, P. (Editor), *Herbal Medicine*. IntechOpen.

- Ifandi, S., Jumari, J., dan Suedy, S.W.A., 2016. Knowledge understanding and utilization of medicinal plants by local community Tompu District of Kaili, Sigi Biromaru, Central Sulawesi. *Biosaintifika: Journal of Biology & Biology Education*, **8**: 1–11.
- Ighodaro, O.M., 2018. Molecular pathways associated with oxidative stress in diabetes mellitus. *Biomedicine & Pharmacotherapy*, **108**: 656–662.
- Ighodaro, O.M., Adeosun, A.M., dan Akinloye, O.A., 2017. Alloxan-induced diabetes, a common model for evaluating the glycemic-control potential of therapeutic compounds and plants extracts in experimental studies. *Medicina*, **53**: 365–374.
- Inada, A.C., Silva, G.T., Silva, L.P.R. da, Alves, F.M., Filiú, W.F. de O., Asato, M.A., dkk., 2020. Therapeutic Effects of *Morinda citrifolia* Linn. (Noni) Aqueous Fruit Extract on the Glucose and Lipid Metabolism in High-Fat/High-Fructose-Fed Swiss Mice. *Nutrients*, **12**: 3439.
- Indariani, S., Wijaya, H., Rahminiwati, M., dan Winarno, W., 2014. Antihyperglycemic activity of functional drinks based on Java Tea (*Orthosiphon aristatus*) in streptozotocin induced diabetic mice. *International Food Research Journal*, **21**: 349–355.
- International Diabetes Federation, 2021. *IDF Diabetes Atlas*, 10th ed. International Diabetes Federation, Brussels.
- Ischak, N.I. dan Botutihe, D.N., 2020. Preliminary Study of Clinical Antidiabetic Activity of Salam Leaves (*Eugenia Polyantha*) and Sambiloto Leaves (*Andrographis Paniculata*) In Type 2 Diabetic Patients. *IOP Conference Series: Earth and Environmental Science*, **589**: 012034.
- Iskandar, B.S., Iskandar, J., Partasasmita, R., dan Irawan, B., 2020. Various medicinal plants traded in the village market of Karangwangi Village, Southern Cianjur, West Java, Indonesia. *Biodiversitas Journal of Biological Diversity*, **21**: 4440–4456.
- Islami, M.Y., Ibrahim, N., dan Nugrahani, A.W., 2017. Studi etnofarmasi suku Kaili Moma Di Kecamatan Kulawi, Kabupaten Sigi, Provinsi Sulawesi Tengah. *Jurnal Farmasi Galenika*, **3**: 27–33.
- Ismail, H.F., Hashim, Z., Soon, W.T., Rahman, N.S.A., Zainudin, A.N., dan Majid, F.A.A., 2017. Comparative study of herbal plants on the phenolic and flavonoid content, antioxidant activities and toxicity on cells and zebrafish embryo. *Journal of Traditional and Complementary Medicine*, **7**: 452–465.
- Ismail, R., Lubis, S., Manurung, R., Sihotang, D., dan Simanjuntak, J., 2019. Namalo - Traditional Healer In Batak Toba: Community Knowledge And Herbs For Medicine. *International Journal of Scientific & Technology Research*, **8**: 1290–1295.
- Ito, M.F., 2017. *Kajian Etnofarmakologi Penggunaan Tanaman Obat Oleh Masyarakat Di Kecamatan Soa Kabupaten Ngada*. Politeknik Kesehatan Kemenkes Kupang, Kupang.
- Jain, Punit K., Ravichandran, V., Jain, Prateek K., dan Agrawal, R.K., 2010. High-performance thin layer chromatography method for estimation of andrographolide in herbal extract and polyherbal formulations. *Journal of Saudi Chemical Society*, **14**: 383–389.

- Jaishree, V. dan Narsimha, S., 2020. Swertiamarin and quercetin combination ameliorates hyperglycemia, hyperlipidemia and oxidative stress in streptozotocin-induced type 2 diabetes mellitus in wistar rats. *Biomedicine & Pharmacotherapy*, **130**: 110561.
- Jaiyesimi, K.F., Agunbiade, O.S., Ajiboye, B.O., dan Afolabi, O.B., 2020. Polyphenolic-rich extracts of *Andrographis paniculata* mitigate hyperglycemia via attenuating β -cell dysfunction, pro-inflammatory cytokines and oxidative stress in alloxan-induced diabetic Wistar albino rat. *Journal of Diabetes and Metabolic Disorders*, **19**: 1543–1556.
- Jamun, R., Hendra, M., dan Hariani, N., 2020. Keanekaragaman Tumbuhan Obat di Suku Manggarai Kecamatan Ndoso Kabupaten Manggarai Barat Nusa Tenggara Timur (NTT). *Jurnal Pendidikan Matematika dan IPA*, **11**: 285–299.
- Jana, K., Bera, T.K., dan Ghosh, D., 2015. Antidiabetic effects of *Eugenia jambolana* in the streptozotocin-induced diabetic male albino rat. *Biomarkers and Genomic Medicine*, **7**: 116–124.
- Jana, S.N. dan Mazumder, P.M., 2018. Pre-clinical studies on diabetes mellitus using partial pancreatectomy in Swiss albino. *International Journal of Pharmacy and Pharmaceutical Sciences*, **10**: 71.
- Jariyapongskul, A., Areebambud, C., Suksamrarn, S., dan Mekseepralard, C., 2015. Alpha-Mangostin Attenuation of Hyperglycemia-Induced Ocular Hypoperfusion and Blood Retinal Barrier Leakage in the Early Stage of Type 2 Diabetes Rats. *BioMed Research International*, **2015**: 1–10.
- Jaya, A.M., Musa, Y., Iswoyo, H., Asmi, N., dan Siregar, L.F., 2019. Ethnobotanical study and identification of medicinal plants based on local knowledge. *IOP Conference Series: Earth and Environmental Science*, **343**: 012028.
- Jenie, U.A., Kardono, L.B.S., Hanafi, M., Rumampuk, R.J., dan Darmawan, A., 2014. *Teknik Modern Spektroskopi NMR: Teori Dan Aplikasi Dalam Elusidasi Struktur Molekul Organik*. LIPI Press, Jakarta.
- Ji, X., Li, C., Ou, Y., Li, N., Yuan, K., Yang, G., dkk., 2016. Andrographolide ameliorates diabetic nephropathy by attenuating hyperglycemia-mediated renal oxidative stress and inflammation via Akt/NF- κ B pathway. *Molecular and Cellular Endocrinology*, **437**: 268–279.
- Ji, Y., Li, X., Wang, Z., Xiao, W., He, Z., Xiong, Z., dkk., 2020. Extraction optimization of accelerated solvent extraction for eight active compounds from Yaobitong capsule using response surface methodology: Comparison with ultrasonic and reflux extraction. *Journal of Chromatography A*, **1620**: 460984.
- Jin, L., Shi, G., Ning, G., Li, X., dan Zhang, Z., 2011. Andrographolide attenuates tumor necrosis factor- α -induced insulin resistance in 3T3-L1 adipocytes. *Molecular and Cellular Endocrinology*, **332**: 134–139.
- Kahn, S.E., Cooper, M.E., dan Del Prato, S., 2014. Pathophysiology and treatment of type 2 diabetes: perspectives on the past, present, and future. *The Lancet*, **383**: 1068–1083.

- Kajaria, D., Department of Kayachikitsa, C. B. P. A. C. S, Khera Dabar, Delhi - 110073, New Delhi, India, Gupta, A., Department of Panchakarma, C. B. P. A. C. S, Delhi - 110073, New Delhi, India, Chandola, H.M., dan Ch. Brahm Prakash Ayurveda Charaka Samsthana, Delhi - 110073, New Delhi, India, 2017. Evaluating Role of Cholagogue and Choleretic Drugs in the Management of NIDDM Related to Post Cholecystectomy - A Pilot Clinical Trial. *Journal of Natural Remedies*, **17**: 13–19.
- Kalász, H. dan Báthori, M., 2020. Basis and pharmaceutical applications of thin-layer chromatography, dalam: *Handbook of Analytical Separations*. Elsevier, Amsterdam, hal. 439–501.
- Kandowanko, N.Y., Latief, M., dan Yusuf, R., 2018. Inventory of traditional medicinal plants and their uses from Atinggola, North Gorontalo District, Gorontalo Province, Indonesia. *Biodiversitas*, **19**: 2294–2301.
- Karousou, R., Balta, M., Hanlidou, E., dan Kokkini, S., 2007. “Mints”, smells and traditional uses in Thessaloniki (Greece) and other Mediterranean countries. *Journal of Ethnopharmacology*, **109**: 248–257.
- Kartini, K., Dewi, E.R., Achmad, F., Eka Jayani, N.I., Arbi Hadiyat, M., dan Avanti, C., 2020. Thin Layer Chromatography Fingerprinting and Clustering of *Orthosiphon stamineus* Benth. from Different Origins. *Pharmacognosy Journal*, **12**: 79–87.
- Kartini, K., Putri, R.E., dan Budiono, R., 2022. Quantification of sinensetin in *Orthosiphon stamineus* from various phytogeographical zones in Indonesia. *Journal of Applied Pharmaceutical Science*, .
- Kasrina, Irawati, S., dan Desmaniar, 2015. Ethnobotanical study of medicinal plants by people of Mukomuko Ethnic in Bengkulu. *International Seminar on Promoting Local Resources for Food and Health*, 127–132.
- Kasrina dan Veriana, T., 2014. Studi etnobotani tumbuhan obat yang dimanfaatkan oleh masyarakat di Kecamatan Sindang Kelingi Kabupaten Rejang Lebong Bengkulu. *Proceeding Biology Education Conference*, **11**: 354–359.
- Kasuga, M., 2006. Insulin resistance and pancreatic beta cell failure. *Journal of Clinical Investigation*, **116**: 1756–1760.
- Kealey, D. dan Haines, P.J., 2002. *Analytical Chemistry*. BIOS Scientific Publishers Ltd, Oxford.
- Kementerian Kesehatan Republik Indonesia, 2013. 'RISTOJA 2012 (Riset Tumbuhan Obat dan Jamu) 2012: Eksplorasi Pengetahuan Lokal Etnomedisin dan Tumbuhan Obat di Indonesia Berbasis Komunitas', . Kementerian Kesehatan Republik Indonesia, Jakarta.
- Kementerian Kesehatan Republik Indonesia, 2015. 'Eksplorasi Pengetahuan Lokal Etnomedisin dan Tumbuhan Obat Berbasis Komunitas di Indonesia', . Kementerian Kesehatan Republik Indonesia, Jakarta.
- Kew Royal Botanic Garden, 2022a. *Orthosiphon aristatus* (Blume) Miq.
- Kew Royal Botanic Garden, 2022b. *Andrographis paniculata* (Burm.f.) Wall. ex Nees.
- Khamis, M., Talib, F., Rosli, N.S., Dharmaraj, S., Mohd, K.S., Srenivasan, S., dkk., 2015. In vitro α -amylase and α -glucosidase inhibition and increased glucose

- uptake of *Morinda citrifolia* fruit and scopoletin. *Research Journal of Pharmacy and Technology*, **8**: 189–193.
- Kharbach, M., Marmouzi, I., El Jemli, M., Bouklouze, A., dan Vander Heyden, Y., 2020. Recent advances in untargeted and targeted approaches applied in herbal-extracts and essential-oils fingerprinting - A review. *Journal of Pharmaceutical and Biomedical Analysis*, **177**: 112849.
- Khoomrung, S., Wanichthanarak, K., Nookaew, I., Thamsermsang, O., Seubnooch, P., Laohapand, T., dkk., 2017. Metabolomics and integrative omics for the development of Thai traditional medicine. *Frontiers in Pharmacology*, **8**: .
- Khusna, U.N., 2019. *Studi Etnobotani Pemanfaatan Suku Zingiberaceae Di Desa Colo Kecamatan Dawe Kabupaten Kudus Provinsi Jawa Tengah*. Universitas Islam Negeri Walisongo, Semarang.
- Kiat, F.A., Puttileihalat, M.M.S., dan Sahusilawane, J.F., 2019. Etnobotani tumbuhan obat tradisional di Desa Piliana dan Desa Hatu Kecamatan Tehoru Kabupaten Maluku Tengah. *Jurnal Makila*, **13**: 100–115.
- King, A.J., 2012. The use of animal models in diabetes research: Animal models of diabetes. *British Journal of Pharmacology*, **166**: 877–894.
- Kissinger, K., Yamani, A., Thamrin, G.A., dan Muhayyah, R., 2016. Bioprospecting of Kerangas Forest as natural medicine material sources: Screening phytochemistry compound of Kerangas Forest tree species. *Journal of Wetlands Environmental Management*, **4**: 13–19.
- Klangjareonchai, T. dan Roongpisuthipong, C., 2012. The effect of *Tinospora crispa* on serum glucose and insulin levels in patients with type 2 diabetes mellitus. *Journal of Biomedicine and Biotechnology*, **2012**: 1–4.
- Kodir, R.A., Mw, M., dan Iskandar, Y., 2017. Etnofarmasi dan ulasan bioprospektif tumbuhan obat liar dalam pengobatan tradisional kampung adat Cikondang, Kecamatan Pangalengan, Kabupaten Bandung, Jawa Barat. *Farmaka*, **15**: 26–44.
- Kong, W., Wang, J., Xiao, X., Zang, Q., Zhao, Y., Wei, J., dkk., 2012. Assessment of the toxicity of two Aconitum herbal medicines by microcalorimetry and chemometrics. *Food Chemistry*, **132**: 2054–2059.
- Koulis, C., Watson, A.M.D., Gray, S.P., dan Jandeleit-Dahm, K.A., 2015. Linking RAGE and Nox in diabetic micro- and macrovascular complications. *Diabetes & Metabolism*, **41**: 272–281.
- Krithika, R., Verma, R., dan Shrivastav, P., 2013. Antioxidative and cytoprotective effects of andrographolide against CCl₄ -induced hepatotoxicity in HepG2 cells. *Human & Experimental Toxicology*, **32**: 530–543.
- Kumar, M., Guleria, S., Chawla, P., Khan, A., Modi, V.K., Kumar, N., dkk., 2020a. Anti-obesity efficacy of the selected high altitude Himalayan herbs: in vitro studies. *Journal of Food Science and Technology*, **57**: 3081–3090.
- Kumar, M.P., Mamidala, E., Al-Ghanim, K.A., Al-Misned, F., dan Mahboob, S., 2020b. Evaluation of the andrographolides role and its indoleamine 2,3-dioxygenase inhibitory potential and attendant molecular mechanism against STZ-induced diabetic rats. *Saudi Journal of Biological Sciences*, **27**: 713–719.

- Kumar, N., Bansal, A., Sarma, G.S., dan Rawal, R.K., 2014. Chemometrics tools used in analytical chemistry: An overview. *Talanta*, **123**: 186–199.
- Kumar, S., Singh, B., dan Bajpai, V., 2021. *Andrographis paniculata* (Burm.f.) Nees: Traditional uses, phytochemistry, pharmacological properties and quality control/quality assurance. *Journal of Ethnopharmacology*, **275**: 114054.
- Kuppusamy, U.R., Arumugam, B., Azaman, N., dan Jen Wai, C., 2014. *Leucaena leucocephala* Fruit Aqueous Extract Stimulates Adipogenesis, Lipolysis, and Glucose Uptake in Primary Rat Adipocytes. *The Scientific World Journal*, **2014**: 1–8.
- Kuswanto, L., Krisantini, dan Sopade, P., 2015. Status of traditional herb *Tetragastium glabratum* (Blume). Planch in Mt Prau, Central Java, Indonesia. *Journal of Pharmacognosy and Phytochemistry*, **4**: 179–184.
- Lam, S.-H., Ruan, C.-T., Hsieh, P.-H., Su, M.-J., dan Lee, S.-S., 2012. Hypoglycemic Diterpenoids from *Tinospora crispa*. *Journal of Natural Products*, **75**: 153–159.
- Lan, T., Wu, T., Gou, H., Zhang, Q., Li, J., Qi, C., dkk., 2013. Andrographolide suppresses high glucose-induced fibronectin expression in mesangial cells via inhibiting the AP-1 pathway. *Journal of Cellular Biochemistry*, **114**: 2562–2568.
- Langrand, J., Regnault, H., Cachet, X., Bouzidi, C., Villa, A.F., Serfaty, L., dkk., 2014. Toxic hepatitis induced by a herbal medicine: *Tinospora crispa*. *Phytomedicine*, **21**: 1120–1123.
- Larasati, A., Maini, M., dan Kartika, T., 2019. Inventarisasi tumbuhan berkhasiat obat di sekitar pekarangan di Kelurahan Sentosa. *Indobiosains*, **1**: 76–87.
- Leahy, J.L., 2005. Pathogenesis of type 2 diabetes mellitus. *Archives of Medical Research*, **36**: 197–209.
- Lee, H.-J., Choi, Y.-J., Park, S.-Y., Kim, J.-Y., Won, K.-C., Son, J.-K., dkk., 2015. Hexane Extract of *Orthosiphon stamineus* Induces Insulin Expression and Prevents Glucotoxicity in INS-1 Cells. *Diabetes & Metabolism Journal*, **39**: 51–58.
- Lee, M.-J., Rao, Y.K., Chen, K., Lee, Y.-C., Chung, Y.-S., dan Tzeng, Y.-M., 2010. Andrographolide and 14-deoxy-11,12-didehydroandrographolide from *Andrographis paniculata* attenuate high glucose-induced fibrosis and apoptosis in murine renal mesangial cell lines. *Journal of Ethnopharmacology*, **132**: 497–505.
- Leite, P.M., Camargos, L.M., dan Castilho, R.O., 2021. Recent progress in phytotherapy: A Brazilian perspective. *European Journal of Integrative Medicine*, **41**: 101270.
- Leksikowati, S.S., Oktaviani, I., Ariyanti, Y., dan Akhmad, A.D., 2019. Ethnobotanical study of plants used by people in Labuhan Ratu Village, East Lampung Regency. *IOP Conference Series: Earth and Environmental Science*, **258**: 012027.
- Leonti, M. dan Weckerle, C.S., 2015. Quantitative and Comparative Methods in Ethnopharmacology, dalam: Heinrich, M. dan Jäger, A.K. (Editor), *Ethnopharmacology*. John Wiley & Sons, Ltd, Chichester, UK, hal. 29–40.

- Lestari, S.R., Rohman, F., Utomo, D.H., Purwanto, Arifah, S.N., Annisa, Y., dkk., 2020. 'Development of ethnobotany-based booklets as learning tools for communities', , dalam: *Proceedings of the International Conference on Learning Innovation 2019 (ICLI 2019)*. Dipresentasikan pada International Conference on Learning Innovation 2019 (ICLI 2019), Atlantis Press, Malang, Indonesia, hal. 15–20.
- Li, D., Zheng, X., Dun, L., Deng, S., Ye, W., Wang, A., dkk., 2017. Ethnobotanical survey of herbal tea plants from the traditional markets in Chaoshan, China. *Journal of Ethnopharmacology*, **2052**: 195–206.
- Li, S., Fan, T., Jia, W., Lu, A., dan Zhang, W., 2014. Network pharmacology in Traditional Chinese Medicine. *Evidence-Based Complementary and Alternative Medicine*, 1–2.
- Li, S., Han, Q., Qiao, C., Song, J., Lung Cheng, C., dan Xu, H., 2008. Chemical markers for the quality control of herbal medicines: an overview. *Chinese Medicine*, **3**: 7.
- Li, Y., Shen, Y., Yao, C., dan Guo, D., 2020. Quality assessment of herbal medicines based on chemical fingerprints combined with chemometrics approach: A review. *Journal of Pharmaceutical and Biomedical Analysis*, **185**: 113215.
- Li, Yongmei, Yan, H., Zhang, Z., Zhang, G., Sun, Y., Yu, P., dkk., 2015. Andrographolide derivative AL-1 improves insulin resistance through down-regulation of NF- κ B signalling pathway: AL-1 down-regulates the NF- κ B signalling pathway. *British Journal of Pharmacology*, **172**: 3151–3158.
- Li, Y., Yan, H., Zhang, Z., Zhang, G., Sun, Y., Yu, P., dkk., 2015. Andrographolide derivative AL-1 improves insulin resistance through down-regulation of NF- κ B signalling pathway. *British Journal of Pharmacology*, **172**: 3151–3158.
- Liang, E., Liu, X., Du, Z., Yang, R., dan Zhao, Y., 2018. Andrographolide ameliorates diabetic cardiomyopathy in mice by blockage of oxidative damage and NF- κ B-mediated inflammation. *Oxidative Medicine and Cellular Longevity*, **2018**: .
- Lima, J.E.B.F., Moreira, N.C.S., dan Sakamoto-Hojo, E.T., 2022. Mechanisms underlying the pathophysiology of type 2 diabetes: From risk factors to oxidative stress, metabolic dysfunction, and hyperglycemia. *Mutation Research/Genetic Toxicology and Environmental Mutagenesis*, **874–875**: 503437.
- Liu, X., He, G., Lo, K., Huang, Y., dan Feng, Y., 2021. The Triglyceride-Glucose Index, an Insulin Resistance Marker, Was Non-linear Associated With All-Cause and Cardiovascular Mortality in the General Population. *Frontiers in Cardiovascular Medicine*, **7**: 628109.
- Liunokas, A.B. dan Uki, N.M., 2020. Ethnobotany Study through the Utilization of Medicinal Plants in Obesi Village, Mollo Utara District, South Central Timor Regency. *Jurnal Biologi Tropis*, **20**: 378–387.
- Liyanagamage, D.S.N.K., Jayasinghe, S., Attanayake, A.P., dan Karunaratne, V., 2021. Dual mechanisms of a Sri Lankan traditional polyherbal mixture in

- the improvement of pancreatic beta cell functions and restoration of lipoprotein alterations in streptozotocin induced diabetic rats. *Journal of Ethnopharmacology*, **267**: 113613.
- Loh, Z.H. dan Lim, Y.Y., 2018. Drying effects on antioxidant activity, enzyme activity, and phytochemicals of avocado (*Persea americana*) leaves. *Journal of Food Processing and Preservation*, **42**: e13667.
- Lokman, E.F., Saparuddin, F., Muhammad, H., Omar, M.H., dan Zulkapli, A., 2019. *Orthosiphon stamineus* as a potential antidiabetic drug in maternal hyperglycemia in streptozotocin-induced diabetic rats. *Integrative Medicine Research*, **8**: 173–179.
- Lokman, F.E., Gu, H.F., Wan Mohamud, W.N., Yusoff, M.M., Chia, K.L., dan Östenson, C.-G., 2013. Antidiabetic effect of oral borapetol B compound, isolated from the plant *Tinospora crispa*, by stimulating insulin release. *Evidence-Based Complementary and Alternative Medicine*, **2013**: 1–7.
- Lu, Y., Yao, G., Wang, X., Zhang, Y., Zhao, J., Yu, Y.-J., dkk., 2022. Chemometric discrimination of the geographical origin of licorice in China by untargated metabolomics. *Food Chemistry*, **380**: 132235.
- Luardini, M.A., Asi, N., dan Garner, M., 2019. Ecolinguistics of ethno-medicinal plants of the Dayak Ngaju community. *Language Sciences*, **74**: 77–84.
- Ma, L.-L., Yuan, Y.-Y., Zhao, M., Zhou, X.-R., Jehangir, T., Wang, F.-Y., dkk., 2018. Mori Cortex extract ameliorates nonalcoholic fatty liver disease (NAFLD) and insulin resistance in high-fat-diet/streptozotocin-induced type 2 diabetes in rats. *Chinese Journal of Natural Medicines*, **16**: 411–417.
- MacDonald, K.I. dan Dressler, V., 2018. Using citation analysis to identify research fronts: a case study with the internet of things. *Science & Technology Libraries*, **37**: 171–186.
- Maleki, V., Jafari-Vayghan, H., Saleh-Ghadimi, S., Adibian, M., Kheirouri, S., dan Alizadeh, M., 2019. Effects of royal jelly on metabolic variables in diabetes mellitus: A systematic review. *Complementary Therapies in Medicine*, **43**: 20–27.
- Malini, D.M., Kusmoro, J., Kamilawati, F., dan Iskandar, J., 2017. Ethnobotanical study of medicinal plants in Karangwangi, District of Cianjur, West Java. *Biosaintifika: Journal of Biology & Biology Education*, **9**: 345–356.
- Man, S., Sui Kiong, L., Ab'lah, N.A., dan Abdullah, Z., 2015. Differentiation of the white and purple flower forms of *Orthosiphon aristatus* (Blume) miq. By 1D and 2D correlation IR spectroscopy. *Jurnal Teknologi*, **77**: 81–86.
- Mardisiswojo, S. dan Rajakmangunsudarso, H., 1987. *Cabe Puyang Warisan Nenek Moyang*. Balai Pustaka, Jakarta.
- Mardudi dan Selviyanti, E., 2021. Etnobotani Tanaman Obat Keluarga di Desa Ujong Gunong Rayeuk, Kota Bahagia, Aceh Selatan. *Prosiding Seminar Nasional Peningkatan Mutu Pendidikan*, **2**: 137–144.
- Mariam, A.L., Asmawi, M.Z., dan Sadikun, A., 1996. Hypoglycaemic activity of the aqueous extract of *Orthosiphon stamineus*. *Fitoterapia*, **67**: 465–468.
- Markley, J.L., Bruschweiler, R., Edison, A.S., Eghbalian, H.R., Powers, R., Raftery, D., dkk., 2017. The future of NMR-based metabolomics. *Current Opinion in Biotechnology*, **43**: 34–40.

- Masoodi, K.Z., Lone, S.M., dan Rasool, R.S., 2021. Thin layer chromatography (TLC), dalam: *Advanced Methods in Molecular Biology and Biotechnology*. Elsevier, Amsterdam, hal. 143–146.
- Maulana, F., Muhammad, A.A., Umar, A., Mahendra, F.R., Musthofa, M., dan Nurcholis, W., 2022. Profiling Metabolites through Chemometric Analysis in *Orthosiphon aristatus* Extracts as α -Glucosidase Inhibitory Activity and *In Silico* Molecular Docking. *Indonesian Journal of Chemistry*, **22**: 501–514.
- Mcclure, K.C., 2015. 'Value, Access, and Use of Ethnobotanical Databases in Ethnopharmacology: Methods, Ethical Research, and a Case Study on the Aurukun Ethnobiology Database Project', . University of Kansas, Kansas City.
- McCowen, K.C. dan Smith, R.J., 2013. Diabetes mellitus, dalam: *Encyclopedia of Human Nutrition*. Academic Press Elsevier, Amsterdam, hal. 17–24.
- McIntyre, H.D., Catalano, P., Zhang, C., Desoye, G., Mathiesen, E.R., dan Damm, P., 2019. Gestational diabetes mellitus. *Nature Reviews Disease Primers*, **5**: 47.
- Mechchate, H., Es-safi, I., Jawhari, F.Z., Bari, A., Grafov, A., dan Bousta, D., 2020. Ethnobotanical survey about the management of diabetes with medicinal plants used by diabetic patients in Region of Fez-Meknes, Morocco. *Ethnobotany Research and Applications*, **19**: .
- Menge, B.A., Schrader, H., Breuer, T.G.K., Dabrowski, Y., Uhl, W., Schmidt, W.E., dkk., 2009. Metabolic consequences of a 50% partial pancreatectomy in humans. *Diabetologia*, **52**: 306–317.
- Miller, J.N. dan Miller, J.C., 2010. *Statistics and Chemometrics for Analytical Chemistry*, 6th ed. Prentice Hall, Harlow.
- Mohamed, E.A.H., Mohamed, A.J., Asmawi, Mohd.Z., Sadikun, A., Ebrika, O.S., dan Yam, M.F., 2011. Antihyperglycemic effect of *Orthosiphon stamineus* Benth leaves extract and its bioassay-guided fractions. *Molecules*, **16**: 3787–3801.
- Mohamed, E.A.H., Siddiqui, M.J.A., Ang, L.F., Sadikun, A., Chan, S.H., Tan, S.C., dkk., 2012a. Potent α -glucosidase and α -amylase inhibitory activities of standardized 50% ethanolic extracts and sinensetin from *Orthosiphon stamineus* Benth as anti-diabetic mechanism. *BMC Complementary and Alternative Medicine*, **12**: 176.
- Mohamed, E.A.H., Siddiqui, M.J.A., Ang, L.F., Sadikun, A., Chan, S.H., Tan, S.C., dkk., 2012b. Potent α -glucosidase and α -amylase inhibitory activities of standardized 50% ethanolic extracts and sinensetin from *Orthosiphon stamineus* Benth as anti-diabetic mechanism. *BMC Complementary and Alternative Medicine*, **12**: 176.
- Mohamed, E.A.H., Yam, M.F., Ang, L.F., Mohamed, A.J., dan Asmawi, M.Z., 2013. Antidiabetic properties and mechanism of action of *Orthosiphon stamineus* Benth bioactive sub-fraction in streptozotocin-induced diabetic rats. *Journal of Acupuncture and Meridian Studies*, **6**: 31–40.

- Moral-Muñoz, J.A., Herrera-Viedma, E., Santisteban-Espejo, A., dan Cobo, M.J., 2020. Software tools for conducting bibliometric analysis in science: An up-to-date review. *El Profesional de la Información*, **29**: 1–20.
- Moshi, M.J., Otieno, D.F., dan Weisheit, A., 2012. Ethnomedicine of the Kagera Region, north western Tanzania. Part 3: plants used in traditional medicine in Kikuku village, Muleba District. *Journal of Ethnobiology and Ethnomedicine*, **8**: 14.
- Mudau, T.E., Olowoyo, J.O., dan Amoo, S.O., 2022. Ethnobotanical assessment of medicinal plants used traditionally for treating diabetes in Vhembe district, Limpopo Province, South Africa. *South African Journal of Botany*, **146**: 304–324.
- Muhammad, A., Ali, M.A.H., dan Shanono, I.H., 2020. ANSYS – A bibliometric study. *Materials Today: Proceedings*, **26**: 1005–1009.
- Muhammad, H., Gomes-Carneiro, M.R., Poça, K.S., De-Oliveira, A.C.A.X., Afzan, A., Sulaiman, S.A., dkk., 2011. Evaluation of the genotoxicity of *Orthosiphon stamineus* aqueous extract. *Journal of Ethnopharmacology*, **133**: 647–653.
- Muhammad, H., Sulaiman, S.A., Ismail, Z., dan Paumgartten, F.J.R., 2013. Study on the developmental toxicity of a standardized extract of in rats *Orthosiphon stamineus*. *Revista Brasileira de Farmacognosia*, **23**: 513–520.
- Mukherjee, P.K., 2019a. Ethnopharmacology and Ethnomedicine-Inspired Drug Development, dalam: *Quality Control and Evaluation of Herbal Drugs*. Elsevier, hal. 29–51.
- Mukherjee, P.K., 2019b. High-Performance Thin-Layer Chromatography (HPTLC) for Analysis of Herbal Drugs, dalam: *Quality Control and Evaluation of Herbal Drugs*. Elsevier, Amsterdam, hal. 377–420.
- Muley, A. dan Medithi, S., 2022. A Quantitative Literature Analysis of the Research on Holy Basil (Tulsi). *Journal of Scientometric Research*, **11**: 30–36.
- Mulyadi, Tavita, G.E., dan Yusro, F., 2014. Ethnobotany study of medicinal plants in Panding Jaya, Ketungau Tengah Sub-district, Sintang District. *Jurnal Hutan Lestari*, **2**: 134–141.
- Mulyani, Y., Hasimun, P., dan Sumarna, R., 2020. Kajian Etnofarmakologi Pemanfaatan Tanaman Obat Oleh Masyarakat Di Kecamatan Dawuan Kabupaten Subang Provinsi Jawa Barat. *Jurnal Farmasi Galenika*, **6**: 37–54.
- Mulyani, Y., Munandar, A., dan Nuraeni, E., 2018. Local wisdom of Cikondang village community in the utilization of medicinal plants. *Journal of Physics: Conference Series*, **1013**: 012006.
- Musa, T.H., Musa, I.H., Osman, W., Campbell, M.C., dan Musa, H.H., 2021. A bibliometric analysis of global scientific research output on Gum Arabic. *Bioactive Carbohydrates and Dietary Fibre*, **25**: 100254.
- Mustofa, F.I., Rahmawati, N., dan Aminullah, 2020. Medicinal plants and practices of Rongkong Traditional Healers in South Sulawesi, Indonesia. *Biodiversitas*, **21**: 642–651.

- Mzhelskaya, K.V., Shipelin, V.A., Shumakova, A.A., Musaeva, A.D., Soto, J.S., Riger, N.A., dkk., 2020. Effects of quercetin on the neuromotor function and behavioral responses of Wistar and Zucker rats fed a high-fat and high-carbohydrate diet. *Behavioural Brain Research*, **378**: 112270.
- Nahdi, M.S. dan Kurniawan, A.P., 2019a. The Diversity and Ethnobotanical Study of Medicinal Plants in the Southern Slope of Mount Merapi, Yogyakarta, Indonesia. *Biodiversitas*, **20**: 2279–2287.
- Nahdi, M.S. dan Kurniawan, A.P., 2019b. Study on the ethnobotany of medicinal plants by people in Gunung Kidul, Yogyakarta, Indonesia. *Nusantara Bioscience*, **11**: 133–141.
- Nahdi, M.S., Martiwi, I.N.A., dan Arsyah, D.C., 2016. The ethnobotany of medicinal plants in supporting the family health in Turgo, Yogyakarta, Indonesia. *Biodiversitas, Journal of Biological Diversity*, **17**: 900–906.
- Naik, R.R., Munipally, P.K., dan Nagaraju, T., 2018. Andrographolide reorganise hyperglycaemia and distorted antioxidant profile in streptozotocin-induced diabetic rats. *Cardiovascular and Hematological Agents in Medicinal Chemistry*, **15**: 121–127.
- Nasution, B.R., Aththorick, T.A., dan Rahayu, S., 2018. Medicinal plants used in the treatment of diabetes in Karo ethnic, North Sumatra, Indonesia. *IOP Conference Series: Earth and Environmental Science*, **130**: 012038.
- Nath, S., Ghosh, S.K., dan Choudhury, Y., 2017. A murine model of type 2 diabetes mellitus developed using a combination of high fat diet and multiple low doses of streptozotocin treatment mimics the metabolic characteristics of type 2 diabetes mellitus in humans. *Journal of Pharmacological and Toxicological Methods*, **84**: 20–30.
- Ndhlovu, P.T., Omotayo, A.O., Otang-Mbeng, W., dan Aremu, A.O., 2021. Ethnobotanical review of plants used for the management and treatment of childhood diseases and well-being in South Africa. *South African Journal of Botany*, **137**: 197–215.
- Nerurkar, P.V., Nishioka, A., Eck, P.O., Johns, L.M., Volper, E., dan Nerurkar, V.R., 2012. Regulation of glucose metabolism via hepatic forkhead transcription factor 1 (FoxO1) by *Morinda citrifolia* (noni) in high-fat diet-induced obese mice. *British Journal of Nutrition*, **108**: 218–228.
- Ng, Z.X., Yong, P.H., dan Lim, S.Y., 2020. Customized drying treatments increased the extraction of phytochemicals and antioxidant activity from economically viable medicinal plants. *Industrial Crops and Products*, **155**: 112815.
- Ngo, Y.L. dan Chua, L.S., 2018. Anti-diabetic Activity of Rosmarinic Acid Rich Fractions from *Orthosiphon stamineus*. *Current Enzyme Inhibition*, **14**: 97–103.
- Nguyen, P.H., Tuan, H.N., Hoang, D.T., Vu, Q.T., Pham, M.Q., Tran, M.H., dkk., 2019. Glucose uptake stimulatory and PTP1B inhibitory activities of pimarane diterpenes from *Orthosiphon stamineus* Benth. *Biomolecules*, **9**: 859.

- Nguyen, T. dan Vo, T., 2020. Investigation of the Anti-Diabetic and Antioxidant Activities of *Physalis angulata* Extract. *Tropical Journal of Natural Product Research*, **4**: 243–248.
- Nikmatullah, M., Nisyawati, N., Suffan, W., dan Walujo, E.B., 2018a. 'Landscape utilization as a source of medicinal plants by Baduy-Dalam in Cikeusik, Banten', , dalam: *AIP Conference Proceedings*. Dipresentasikan pada The 9th International Conference on Global Resource Conservation (ICGRC) and AJI from Ritsumeikan University, Malang City, Indonesia, hal. 020013.
- Nikmatullah, M., Nisyawati, dan Walujo, E.B., 2018b. 'Utilization of a diversity of medicinal plants in Cibeo society, Baduy-Dalam, in Kanekes Village, Leuwidamar District, Lebak Regency, Banten', , dalam: *AIP Conference Proceedings*. Dipresentasikan pada The 9th International Conference on Global Resource Conservation (ICGRC) and AJI from Ritsumeikan University, Malang City, Indonesia, hal. 020003.
- Nilawati, Mubarrak, J., dan Brahmana, E.M., 2017. Studi Etnobotani Tumbuhan Obat Di Kecamatan Bangun Purba Kabupaten Rokan Hulu Provinsi Riau. *Jurnal Mahasiswa Prodi Biologi UPP*, **3**: .
- Nisyapuri, F.F., Iskandar, J., dan Partasasmita, R., 2018. Studi etnobotani tumbuhan obat di Desa Wonoharjo, Kabupaten Pangandaran, Jawa Barat. *Prosiding Seminar Nasional Masyarakat Biodiversitas Indonesia*, **4**: 122–132.
- Noipha, K., Purintrapiban, J., Herunsalee, A., dan Ratanachaiyavong, S., 2008. In vitro glucose uptake activity of *Tinospora crispa* in skeletal muscle cells. *Asian Biomedicine*, **2**: .
- Noor, H. dan Ashcroft, S.J.H., 1989. Antidiabetic effects of *Tinospora crispa* in rats. *Journal of Ethnopharmacology*, **27**: 149–161.
- Noor, H. dan Ashcroft, S.J.H., 1998a. Insulinotropic activity of *Tinospora crispa* extract: effect on β -cell Ca^{2+} handling. *Phytotherapy Research*, **12**: 98–102.
- Noor, H. dan Ashcroft, S.J.H., 1998b. Pharmacological characterisation of the antihyperglycaemic properties of *Tinospora crispa* extract. *Journal of Ethnopharmacology*, **62**: 7–13.
- Noor, H., Hammonds, P., Sutton, R., dan Ashcroft, S.J.H., 1989. The hypoglycaemic and insulinotropic activity of *Tinospora crispa*: studies with human and rat islets and HIT-T15 B cells. *Diabetologia*, **32**: 354–359.
- Novaryatiin, S. dan Indah, I., 2019. The medicinal plants used in Anjir Pulang Pisau, Central Kalimantan-Indonesia. *Pharmacognosy Journal*, **11**: 1572–1579.
- Novitasari, P.R., Astuti, N.T., Pramono, S., Tjandrawinata, R., dan Nugroho, A.E., 2020. A Simple Liquid-Liquid Fractionation (LLF) Method for Isolating Deoxyandrographolide dan Andrographolide from Herbs of *Andrographis paniculata* (Burm., F) Ness and Its Cytotoxic Activity on 3T3-L1 Preadipocyte Cells. *Journal of Food and Pharmaceutical Sciences*, **8**: 306–314.
- Nowbandegani, A.S., Kiumarcy, S., Rahmani, F., Dokouhaki, M., Khademian, S., Zarshenas, M.M., dkk., 2015. Ethnopharmacological knowledge of Shiraz and Fasa in Fars region of Iran for diabetes mellitus. *Journal of Ethnopharmacology*, **172**: 281–287.

- Nugroho, A.E., 2018. *Farmakologi: Obat-Obat Penting Dalam Pembelajaran Ilmu Farmasi Dan Dunia Kesehatan*, 2nd ed. Pustaka Pelajar, Yogyakarta, Indonesia.
- Nugroho, A.E., Warditiani, N., Pramono, S., Andrie, M., Siswanto, E., dan Lukitaningsih, E., 2012. Antidiabetic and antihyperlipidemic effect of *Andrographis paniculata* (Burm. f.) Nees and andrographolide in high-fructose-fat-fed rats. *Indian Journal of Pharmacology*, **44**: 377.
- Nuraeni, H. dan Rustaman, N.Y., 2019. Traditional knowledge of medicinal plants for health of women in Cibodas Village Lembang Subdistrict West Bandung Regency and their potency to development of biodiversity education. *Journal of Physics: Conference Series*, **1157**: 022115.
- Nurfadila, N., Iqbal, Moh., dan Pitopang, R., 2019. Kajian etnobotani Pandanaceae pada Suku Moma Di Ngata Toro, Kulawi, Sulawesi Tengah. *Natural Science: Journal of Science and Technology*, **8**: 36–43.
- Okakinanti, E.A., Syamswisna, dan Titin, 2014. Etnobotani tumbuhan obat di Menyuke dan implementasinya dalam pembuatan buklet manfaat keanekaragaman hayati. *Jurnal Pendidikan dan Pembelajaran Khatulistiwa*, **3**: .
- Oknarida, S., Husain, F., dan Wicaksono, H., 2018. Kajian Etnomedisin Dan Pemanfaatan Tumbuhan Obat Oleh Penyembuh Lokal Pada Masyarakat Desa Colo Kecamatan Dawe Kabupaten Kudus. *Solidarity*, **7**: 480–500.
- Okoduwa, S.I.R., Umar, I.A., James, D.B., dan Inuwa, H.M., 2017. Appropriate Insulin Level in Selecting Fortified Diet-Fed, Streptozotocin-Treated Rat Model of Type 2 Diabetes for Anti-Diabetic Studies. *PLOS ONE*, **12**: e0170971.
- Oktavia, G.A.E., Darma, I.D.P., dan Sujarwo, W., 2017. Studi etnobotani tumbuhan obat di kawasan sekitar Danau Buyan-Tamblingan, Bali. *Buletin Kebun Raya*, **20**: 1–15.
- Oktavianingsih, L., Suharyanto, E., Daryono, B.S., dan Purnomo, P., 2017. Traditional usages of taro (*Colocasia spp.*) by ethnic communities in Borneo. *Biosaintifika: Journal of Biology & Biology Education*, **9**: 248–256.
- Onuh, J.O. dan Aluko, R.E., 2019. Metabolomics as a tool to study the mechanism of action of bioactive protein hydrolysates and peptides: A review of current literature. *Trends in Food Science & Technology*, **91**: 625–633.
- Osama, A.K., Makky, E.A., Tawfiq, A.A., Mahendran, K., dan Zamri, N., 2020. Evaluating the effect of combined plant extracts on α -amylase and α -glucosidase inhibition activity as antidiabetic agents. *Pakistan Journal of Biological Sciences*, **23**: 287–294.
- Owen, P.L., Johns, T., dan Etkin, N.L., 2011. Bridging the “two cultures” in ethnopharmacology: barriers against interdisciplinarity in postgraduate education. *Journal of Ethnopharmacology*, **134**: 999–1005.
- Pae, C.-U., 2015. Why systematic review rather than narrative review? *Psychiatry Investigation*, **12**: 417.
- Pandiangan, D., Silalahi, M., Dapas, F., dan Kandau, F., 2019. Diversity of medicinal plants and their uses by the Sanger tribe of Sangihe Islands, North

- Sulawesi, Indonesia. *Biodiversitas Journal of Biological Diversity*, **20**: 611–621.
- Pariyani, R., Ismail, I.S., Ahmad Azam, A., Abas, F., dan Shaari, K., 2017. Identification of the compositional changes in *Orthosiphon stamineus* leaves triggered by different drying techniques using ¹ H NMR metabolomics: Metabolite profiling of *Orthosiphon stamineus* leaves. *Journal of the Science of Food and Agriculture*, **97**: 4169–4179.
- Patil, R. dan Jain, V., 2021. Andrographolide: A Review of Analytical Methods. *Journal of Chromatographic Science*, **59**: 191–203.
- Patwardhan, B., 2005. Ethnopharmacology and drug discovery. *Journal of Ethnopharmacology*, **100**: 50–52.
- Pautasso, M., 2013. Ten simple rules for writing a literature review. *PLoS Computational Biology*, **9**: e1003149.
- Pavia, D.L., Lampman, G.M., Kriz, G.S., dan Vyvyan, J.R., 2015. *Introduction to Spectroscopy: A Guide for Students of Organic Chemistry*, 5th ed. Cengage Learning, Stamford.
- Peñaloza, E., Casanova, L., Leal, I., de Aguiar, P., dan Costa, S., 2018. Metabolite Fingerprinting and Profiling of the Medicinal Grass *Eleusine indica* Based on HPLC-DAD, UPLC-DAD-MS/MS and NMR Analyses. *Journal of the Brazilian Chemical Society*, .
- Phattanawasin, P., Sotanaphun, U., dan Buranaosot, J., 2014. Thin-Layer Chromatography-Image Analysis Method for the Simultaneous Quantification of Andrographolide and Related Diterpenoids in *Andrographis paniculata*. *Journal of Planar Chromatography – Modern TLC*, **27**: 140–144.
- Phumthum, M. dan Balslev, H., 2018. Thai ethnomedicinal plants used for diabetes treatment. *OBM Integrative and Complementary Medicine*, **3**: .
- Pinelo, M., Fabbro, P., Manzocco, L., Nunez, M., dan Nicoli, M., 2005. Optimization of continuous phenol extraction from byproducts. *Food Chemistry*, **92**: 109–117.
- Pitopang, R., Damry, Rusdi, Hamzah, B., Zubair, M.S., Amar, A.L., dkk., 2019. Diversity of Zingiberaceae and traditional uses by three indigenous groups at Lore Lindu National Park, Central Sulawesi, Indonesia. *Journal of Physics: Conference Series*, **1242**: 012039.
- Pitra, H., Haerullah, A., dan Papuangan, N., 2017. Studi pengetahuan lokal masyarakat Moya tentang pemanfaatan tumbuhan sebagai obat tradisional. *Jurnal Saintifik MIPA*, **1**: 45–49.
- Plubrukarn, A., Pinsuwan, S., Ingkatawornwong, S., dan Supavita, T., 2006. Stability of Andrographolide in Powdered *Andrographis* Herb under Accelerated Conditions. *Planta Medica*, **72**: 954–956.
- Porzel, A., Farag, M.A., Mülbradt, J., dan Wessjohann, L.A., 2014. Metabolite profiling and fingerprinting of *Hypericum* species: a comparison of MS and NMR metabolomics. *Metabolomics*, **10**: 574–588.
- Prajapati, P.B., Patel, P.R., dan Shah, S.A., 2022. Chemometric and DoE-Based Analytical Quality Risk Management to HPTLC Method for Simultaneous

- Estimation of Metronidazole and Norfloxacin. *Journal of Chromatographic Science*, bmab145.
- Pramono, S., 2006. *Pidato Pengukuhan Jabatan Guru Besar Pada Fakultas Farmasi Universitas Gadjah Mada*. Universitas Gadjah Mada, Yogyakarta.
- Pramono, S. dan Ajiastuti, D., 2004. Standardisasi ekstrak herba pegagan (*Centella asiatica*.(L.).Urban) berdasarkan kadar asiatikosida secara KLT-densitometri. *Majalah Farmasi Indonesia*, **15**: 118–123.
- Pramono, S., Arifah, F.H., Pribadi, F.H., dan Nugroho, A.E., 2018. Hepatoprotective activity of *Curcuma xanthorrhiza* Roxb. on paracetamol-induced liver damage in rats and correlation with their chemical compounds. *Thai Journal of Pharmaceutical Sciences*, **42**: 188–195.
- Prashar, A. dan Sunder, V., 2020. A bibliometric and content analysis of sustainable development in small and medium-sized enterprises. *Journal of Cleaner Production*, **245**: 118665.
- Premanath, R. dan Nanjaiah, L., 2015. Antidiabetic and antioxidant potential of *Andrographis paniculata* Nees. leaf ethanol extract in streptozotocin induced diabetic rats. *Journal of Applied Pharmaceutical Science*, **5**: 069–076.
- Purba, E.C., Nisyawati, dan Silalahi, M., 2016. The ethnomedicine of the Batak Karo people of Merdeka sub-district, North Sumatra, Indonesia. *International Journal of Biological Research*, **4**: 181–189.
- Purwanti, E., Mahmudati, N., Faradila, S.F., dan Fauzi, A., 2020. 'Utilization of plants as traditional medicine for various diseases: Ethnobotany study in Sumenep, Indonesia', , dalam: *AIP Conference Proceedings*. Dipresentasikan pada International Conference on Life Sciences and Technology (ICoLiST), AIP Publishing, Tangerang Selatan, Indonesia, hal. 040024.
- Purwanti, E. dan Mulyatin, T., 2018. 'Ethnobotany medicinal plants for local community in Southwest Sumba District', , dalam: *Proceedings of the 5th International Conference on Community Development (AMCA 2018)*. Dipresentasikan pada 2018 3rd International Conference on Education, Sports, Arts and Management Engineering (ICESAME 2018), Atlantis Press, Quezon City, Philippines, hal. 544–547.
- Putri, L.S.E., Dasumiati, Kristiyanto, Mardiansyah, Malik, C., Leuvinadrie, L.P., dkk., 2016. Ethnobotanical study of herbal medicine in Ranggawulung Urban Forest, Subang District, West Java, Indonesia. *Biodiversitas, Journal of Biological Diversity*, **17**: 172–176.
- Qamariah, N., Handayani, R., dan Novaryatiin, S., 2018. Kajian Empiris dan Etnofarmakologi Tumbuhan Hutan Berkhasiat Obat asal Desa Tumbang Rungan Kelurahan Pahandut Kota Palangkaraya Kalimantan Tengah. *Anterior Jurnal*, **18**: 98–106.
- Qamariah, N., Mulia, D.S., dan Fakhrizal, D., 2020. Indigenous knowledge of medicinal plants by Dayak community in Mandomai Village, Central Kalimantan, Indonesia. *Pharmacognosy Journal*, **12**: 386–390.

- Qasrin, U., Setiawan, A., Yulianty, Y., dan Bintoro, A., 2020. Studi etnobotani tumbuhan berkhasiat obat yang dimanfaatkan masyarakat Suku Melayu Kabupaten Lingga Provinsi Kepulauan Riau. *Jurnal Belantara*, **3**: 139–152.
- Radenković, M., Stojanović, M., dan Prostran, M., 2016. Experimental diabetes induced by alloxan and streptozotocin: The current state of the art. *Journal of Pharmacological and Toxicological Methods*, **78**: 13–31.
- Radhika, P., Annapurna, A., dan Nageswara Rao, S., 2012a. Lipid lowering and antioxidant activities of methanolic extract of *Andrographis paniculata* leaves in normal and streptozotocin-induced diabetic rats. *Research Journal of Biotechnology*, **7**: 43–48.
- Radhika, P., Annapurna, A., dan Nageswara Rao, S., 2012b. Immunostimulant, cerebroprotective & nootropic activities of *Andrographis paniculata* leaves extract in normal & type 2 diabetic rats. *Indian Journal of Medical Research*, **135**: 636–641.
- Rafi, M., Purwakusumah, E.D., Ridwan, T., Barus, B., Sutandi, A., dan Darusman, L.K., 2015. Geographical classification of Java Tea (*Orthosiphon stamineus*) from Java Island by FTIR Spectroscopy Combined with Canonical Variate Analysis. *Jurnal Sains Dan Matematika*, **23**: 25–31.
- Rafi, M., Rismayani, W., Sugiarti, R.M., Syafitri, U.D., Wahyuni, W.T., dan Rohaeti, E., 2021a. FTIR-based fingerprinting combined with chemometrics for discrimination of *Sonchus arvensis* leaves extracts of various extracting solvents and the correlation with its antioxidant activity. *Indonesian Journal of Pharmacy*, **32**: 132–140.
- Rafi, M., Septaningsih, D.A., Karomah, A.H., Lukman, L., Prajogo, B., Amran, M.B., dkk., 2021b. Inhibition of α -glucosidase activity, metals content, and phytochemical profiling of *Andrographis paniculata* from different geographical origins based on FTIR and UHPLC-Q-Orbitrap HRMS metabolomics. *Biodiversitas Journal of Biological Diversity*, **22**: 1535–1542.
- Rahayu, M. dan Rustiami, H., 2017. Etnobotani masyarakat Samawa Pulau Sumbawa. *Scripta Biologica*, **4**: 235–245.
- Rahayu, S.M. dan Andini, A.S., 2019. Ethnobotanical study on medicinal plants in Sesaot Forest, Narmada, West Lombok, Indonesia. *Biosaintifika: Journal of Biology & Biology Education*, **11**: 234–242.
- Rahayu, Y.Y.S., Araki, T., dan Rosleine, D., 2020a. Factors affecting the use of herbal medicines in the universal health coverage system in Indonesia. *Journal of Ethnopharmacology*, **260**: 112974.
- Rahayu, Y.Y.S., Araki, T., dan Rosleine, D., 2020b. Factors affecting the use of herbal medicines in the universal health coverage system in Indonesia. *Journal of Ethnopharmacology*, **260**: 112974.
- Rahayu, M., Ibo, L.K., Arimukti, S.D., dan Susiarti, S., 2020c. Diversity of medicinal plants in Yard in several villages in Indonesia. *IOP Conference Series: Earth and Environmental Science*, **572**: 012004.
- Rahayu, M., Arifa, N., Nikmatullah, M., dan Keim, A.P., 2020d. Pengetahuan Lokal dan Keanekaragaman Tumbuhan Berguna Pada Masyarakat

- Batulanteh, Pulau Sumbawa, Nusa Tenggara Barat: Sebuah Kajian Etnobotani. *Journal of Tropical Ethnobiology*, **3**: 28–42.
- Rahi, S., Mobli, H., Jamshidi, B., Azizi, A., dan Sharifi, M., 2020. Different supervised and unsupervised classification approaches based on visible/near infrared spectral analysis for discrimination of microbial contaminated lettuce samples: Case study on E. coli ATCC. *Infrared Physics & Technology*, **108**: 103355.
- Rahmawati, N., Fanie Indrian Mustofa, dan Sari Haryanti, 2020a. Diversity of medicinal plants utilized by To Manui ethnic of Central Sulawesi, Indonesia. *Biodiversitas Journal of Biological Diversity*, **21**: 375–392.
- Rahmawati, N., Widiyastuti, Y., Purwanto, R., Lestari, S.S., Sene, I.Hi.A., dan Bakari, Y., 2020b. 'Medicinal plants used by traditional healers for the treatment of various diseases in Ondae sub-ethnic of Poso District in Indonesia', , dalam: *Proceedings of the 4th International Symposium on Health Research (ISHR 2019)*. Dipresentasikan pada 4th International Symposium on Health Research (ISHR 2019), Atlantis Press, Bali, Indonesia, hal. 460–468.
- Ramadhani, S., Iskandar, J., dan Husodo, T., 2020. Studi etnobotani pemanfaatan tumbuhan obat di Desa Cintakarya, Kabupaten Pangandaran, Jawa Barat. *Prosiding Seminar Nasional Masyarakat Biodiversitas Indonesia*, **6**: 518–524.
- Ramadhani, S., Iskandar, J., Partasasmita, R., dan Rohmatullayaly, E.N., 2021. Local knowledge of Sundanese village people on traditional medicine: A case study in Cibeurih Hamlet, Nagarawangi Village, Sumedang District, Indonesia. *Biodiversitas Journal of Biological Diversity*, **22**: 2891–2898.
- Ramdhan, B., Chikmawati, T., dan Waluyo, E.B., 2015. Ethnomedical herb from Cikondang indigenous village, district Bandung West Java Indonesia. *Journal of Biodiversity and Environmental Sciences*, **6**: 277–288.
- Rani, A.R., Venkatesh, K., dan Chakrapani, P., 2009. 'Biochemical studies on the effect of medicinal plants *Gymnema* and *Andrographis* species on diabetes induced wistar rats', , dalam: *Int. Conf. Biomed. Pharm. Eng., ICBPE - Conf. Proc.* Dipresentasikan pada 2nd International Conference on Biomedical and Pharmaceutical Engineering, ICBPE 2009, Singapore.
- Rao, N.K., Bethala, K., Sisinthy, S.P., dan Rajeswari, S., 2014. Antidiabetic activity of *Orthosiphon stamineus* benth roots in streptozotocin induced type 2 diabetic rats. *Asian Journal of Pharmaceutical and Clinical Research*, **7**: 149–153.
- Rao, U.M., 2018. *In Vitro* Free Radical Scavenging and Reducing Potentials as well as Inhibitory Potential on α -Amylase and α -Glucosidase Activities of Fruit of *Morinda citrifolia* (Rubiaceae). *Research Journal of Pharmacy and Technology*, **11**: 4135–4142.
- Rao, U.S.M. dan Subramanian, S., 2009. Biochemical evaluation of antihyperglycemic and antioxidative effects of *Morinda citrifolia* fruit extract studied in streptozotocin-induced diabetic rats. *Medicinal Chemistry Research*, **18**: 433–446.

- Rashidi, W.N.A.S.W.M., Muhammad, N., Abdullah, N., Talip, B.A., dan Bahrin, N., 2020. The antioxidant properties and α -amylase inhibition activities of polyphyto mixture with honey formulations. *Food Research*, **4**: 2190–2196.
- Rasineni, K., Bellamkonda, R., Singareddy, S.R., dan Desireddy, S., 2013. Abnormalities in carbohydrate and lipid metabolisms in high-fructose dietfed insulin-resistant rats: amelioration by *Catharanthus roseus* treatments. *Journal of Physiology and Biochemistry*, **69**: 459–466.
- Rasna, I.W. dan Tantra, D.K., 2017. 'Medical Plants in Usadha: Loloh as Balinese Medicine and Traditional Herbal Product in Educational Perspective', , dalam: *Proceedings of the 2nd International Conference on Innovative Research Across Disciplines (ICIRAD 2017)*. Dipresentasikan pada 2nd International Conference on Innovative Research Across Disciplines (ICIRAD 2017), Atlantis Press, Denpasar, Bali-Indonesia.
- Rathod, P. dan Yadav, R.P., 2021. Anti-diabetes potential of various multifunctional natural molecules. *Journal of Herbal Medicine*, 100430.
- Rau, O., Wurglics, M., Dingermann, T., Abdel-Tawab, M., dan Schubert-Zsilavecz, M., 2006. Screening of herbal extracts for activation of the human peroxisome proliferator-activated receptor. *Pharmazie*, **61**: 952–956.
- Rees, D.A. dan Alcolado, J.C., 2005. Animal models of diabetes mellitus. *Diabetic Medicine*, **22**: 359–370.
- Rehn, C., Gornitzki, C., Larsson, A., dan Wadskog, D., 2014. *Bibliometric Handbook for Karolinska Institutet*. Karolinska Institutet.
- Renganathan, S., Manokaran, S., Vasanthakumar, P., Singaravelu, U., Kim, P.-S., Kutzner, A., dkk., 2021. Phytochemical Profiling in Conjunction with *In Vitro* and *In Silico* Studies to Identify Human α -Amylase Inhibitors in *Leucaena leucocephala* (Lam.) De Wit for the Treatment of Diabetes Mellitus. *ACS Omega*, **6**: 19045–19057.
- Riadi, R., Oramahi, H.A., dan Yusro, F., 2019. Pemanfaatan tumbuhan obat oleh suku Dayak Kanayatn di Desa Mamek Kecamatan Menyuke Kabupaten Landak. *Jurnal Hutan Lestari*, **7**: 905–915.
- Rivera, D., Verde, A., Fajardo, J., Obón, C., Consuegra, V., García-Botía, J., dkk., 2019. Ethnopharmacology in the Upper Guadiana River area (Castile-La Mancha, Spain). *Journal of Ethnopharmacology*, **241**: 111968.
- Rivera-Pérez, A., Romero-González, R., dan Garrido Frenich, A., 2022. A metabolomics approach based on ¹H NMR fingerprinting and chemometrics for quality control and geographical discrimination of black pepper. *Journal of Food Composition and Analysis*, **105**: 104235.
- Riyanti, S., Suganda, A.G., dan Sukandar, E.Y., 2016. Dipeptidyl peptidase-IV inhibitory activity of some Indonesian medicinal plants. *Asian Journal of Pharmaceutical and Clinical Research*, **9**: 375–377.
- Roestamadji, R.I., Arundina, I., Diyatri, I., Sambodo, D.T., dan Irmalia, W.R., 2017. Brotowali extract (*Tinospora crispa*) for oral traumatic ulcer in diabetes mellitus Wistar Rat. *Journal of International Dental and Medical Research*, **10**: 991–996.
- Rohman, A., Luthfianasari, H., Irnawati, I., Riyanto, S., Rafi, M., Prajogo, B., dkk., 2021. HPLC-FTIR spectroscopy combined with multivariate calibration for

- analysis of Andrographolide in *Andrographis paniculata* extract. *Journal of Applied Pharmaceutical Science*, .
- Rohman, F., Juma, Y., Sulisetijono, Utomo, D.H., Purwanto, Lestari, S.R., dkk., 2019a. Plants diversity as a medicinal plants by the Tengger Tribe, Bromo Tengger Semeru National Park, East Java, Indonesia. *EurAsian Journal of BioSciences*, **13**: 2293–2298.
- Rohman, F., Rahyu Lestari, S., Hari Utomo, D., Purwanto, Juma, Y., Nur Arifah, S., dkk., 2019b. The Utilization of plant diversity by Tengger Tribe around Bromo Tengger Semeru National Park, East Java, Indonesia. *IOP Conference Series: Earth and Environmental Science*, **276**: 012042.
- Roosita, K., Kusharto, C.M., Sekiyama, M., Fachrurrozi, Y., dan Ohtsuka, R., 2008. Medicinal plants used by the villagers of a Sundanese community in West Java, Indonesia. *Journal of Ethnopharmacology*, **115**: 72–81.
- Rosalia, N. dan Susandarini, R., 2020. Medicinal plants diversity in Bukit Rimbang Bukit Baling wildlife reserve, Riau, Indonesia. *International Journal of Herbal Medicine*, **8**: 33–38.
- Rouessac, F. dan Rouessac, A., 2007. *Chemical Analysis: Modern Instrumentation Methods and Techniques*, 2nd ed. John Wiley & Sons Ltd, West Sussex.
- Royyani, M.F. dan Rahayu, M., 2010. Pengetahuan lokal tumbuhan obat masyarakat desa Dompoo-Dompoo Jaya, pulau Wawonii, Sulawesi Tenggara. *Jurnal Teknologi Lingkungan*, **11**: 157–165.
- Ruan, C.-T., Lam, S.-H., Chi, T.-C., Lee, S.-S., dan Su, M.-J., 2012. Borapetoside C from *Tinospora crispa* improves insulin sensitivity in diabetic mice. *Phytomedicine*, **19**: 719–724.
- Ruan, C.-T., Lam, S.-H., Lee, S.-S., dan Su, M.-J., 2013. Hypoglycemic action of borapetoside A from the plant *Tinospora crispa* in mice. *Phytomedicine*, **20**: 667–675.
- Rusman, A., Nugroho, A.E., dan Pramono, S., 2020. The effect of combination of active fraction *Andrographis paniculata* (Burm.f) Ness and *Centella asiatica* (i) Urban on the alpha glucosidase inhibitor and antioxidant activities. *Indonesian Journal of Pharmacy*, **31**: 56–60.
- Rusmina, H.Z., Miswan, dan Pitopang, R., 2015. Studi etnobotani tumbuhan obat pada masyarakat suku Mandar di desa Sarude Sarjo kabupaten Mamuju Utara Sulawesi Barat. *Biocelbes*, **9**: 73–87.
- Saadah, N., 2017. 'Keanekaragaman jenis dan bagian tumbuhan sebagai bahan baku ramuan tradisional jamu gendong di Yogyakarta', . Universitas Gadjah Mada, Yogyakarta.
- Sadia, S., Tariq, A., Shaheen, S., Malik, K., khan, F., Ahmad, M., dkk., 2018. Ethnopharmacological profile of anti-arthritic plants of Asia-a systematic review. *Journal of Herbal Medicine*, **13**: 8–25.
- Safdar, M., Khan, A., dan Habibullah, 2006. Effect of Jaman Fruit Extract on Serum Glucose and Lipid Profile in Type 2 Diabetic Individuals. *Pakistan Journal of Nutrition*, **5**: 573–576.
- Saidan, N.H., Hamil, M.S.R., Memon, A.H., Abdelbari, M.M., Hamdan, M.R., Mohd, K.S., dkk., 2015. Selected metabolites profiling of *Orthosiphon stamineus* Benth leaves extracts combined with chemometrics analysis and

- correlation with biological activities. *BMC Complementary and Alternative Medicine*, **15**: 350.
- Saifudin, A., Kadota, S., dan Tezuka, Y., 2013. Protein tyrosine phosphatase 1B inhibitory activity of Indonesian herbal medicines and constituents of *Cinnamomum burmannii* and *Zingiber aromaticum*. *Journal of Natural Medicines*, **67**: 264–270.
- Salazar, J., Bermúdez, V., Calvo, M., Olivar, L.C., Luzardo, E., Navarro, C., dkk., 2018. Optimal cutoff for the evaluation of insulin resistance through triglyceride-glucose index: A cross-sectional study in a Venezuelan population. *F1000Research*, **6**: 1337.
- Sangsuwan, C., Udompanthurak, S., Vannasaeng, S., dan Thamlikitkul, V., 2004. Randomized Controlled Trial of *Tinospora crispa* for Additional Therapy in Patients with Type 2 Diabetes Mellitus. *Journal of the Medical Association of Thailand*, **87**: 543–546.
- Saokaew, S., Suwankesawong, W., Permsuwan, U., dan Chaikyunapruk, N., 2011. Safety of Herbal Products in Thailand: An Analysis of Reports in the Thai Health Product Vigilance Center Database from 2000 to 2008. *Drug Safety*, **34**: 339–350.
- Saputra, S.D., Harso, W., dan Ramadanil, 2019. Kajian etnobotani masyarakat suku Dampelas di Desa Talaga Kecamatan Dampelas Kabupaten Donggala, Sulawesi Tengah. *Biocelbes*, **13**: 109–120.
- Sari, R.Y., Wardenaar, E., dan Muflihati, 2014. Ethnobotany of medical plants in Serambai Village, Sub-District of Kembayan, Sanggau District, West Kalimantan. *Jurnal Hutan Lestari*, **2**: 379–387.
- Saribanon, N., Utami, K.P., dan Rahayu, S.E., 2021. Exploration of Ethno-medicinal Knowledge among Periurban Community of Hurip Jaya Village, Babelan, District Bekasi, West Java. *Journal of Tropical Biodiversity*, **1**: 103–113.
- Schober, P., Boer, C., dan Schwarte, L.A., 2018. Correlation Coefficients: Appropriate Use and Interpretation. *Anesthesia & Analgesia*, **126**: 1763–1768.
- Schripsema, J., Augustyn, W., dan Viljoen, A., 2023. Characterisation of *SCLEROCARYA BIRREA* (marula) seed oil and investigation of the geographical origin by applying similarity calculations, differential NMR and hierarchical cluster analysis. *Phytochemical Analysis*, **34**: 959–969.
- Selvi, N.M.K., Nandhini, S., Sakthivadivel, V., Lokesh, S., Srinivasan, A.R., dan Sumathi, S., 2021. Association of Triglyceride–Glucose Index (TyG index) with HbA1c and Insulin Resistance in Type 2 Diabetes Mellitus. *Maedica - A Journal of Clinical Medicine*, **16**: 375–381.
- Sembiring, M.B. dan Safrianti, 2021. Pengetahuan masyarakat terhadap keanekaragaman tumbuhan liar berkhasiat obat dan potensi pemanfaatannya di Kecamatan Namorambe. *Prosiding Seminar Nasional Peningkatan Mutu Pendidikan*, **2**: 14–18.
- Şenel, E. dan Demir, E., 2018. Bibliometric analysis of apitherapy in complementary medicine literature between 1980 and 2016. *Complementary Therapies in Clinical Practice*, **31**: 47–52.

- Sengupta, I.N., 1992. Bibliometrics, informetrics, scientometrics and librametrics. an overview. *Libri*, **42**: 75–98.
- Serrano, C.A., Villena, G.K., dan Rodríguez, E.F., 2021. Phytochemical profile and rosmarinic acid purification from two Peruvian *Lepechinia Willd.* species (Salviinae, Mentheae, Lamiaceae). *Scientific Reports*, **11**: 7260.
- Setiawan, A., Listiani, L., dan Abrori, F.M., 2019. Kajian etnobotani tumbuhan obat suku Dayak Lundayeh di Desa Kaliamok Kecamatan Malinau Utara Kabupaten Malinau sebagai booklet untuk masyarakat. *Borneo Journal of Biology Education*, **1**: 51–67.
- Setiawan, H. dan Qiptiyah, M., 2014. Kajian etnobotani masyarakat adat suku Moronene di Taman Nasional Rawa Aopa Watumohai. *Jurnal Penelitian Kehutanan Wallacea*, **3**: 107–117.
- Shabir, O., Moll, T.A., Matuszyk, M.M., Eyre, B., Dake, M.D., Berwick, J., dkk., 2020. Preclinical models of disease and multimorbidity with focus upon cardiovascular disease and dementia. *Mechanisms of Ageing and Development*, **192**: 111361.
- Shafaei, A., Esmaili, K., Farsi, E., Aisha, A.F.A., Abul Majid, A.M.S., dan Ismail, Z., 2015. Genotoxicity, acute and subchronic toxicity studies of nano liposomes of *Orthosiphon stamineus* ethanolic extract in Sprague Dawley rats. *BMC Complementary and Alternative Medicine*, **15**: 1–14.
- Shah, A., Niaz, A., Ullah, N., Rehman, A., Akhlaq, M., Zakir, M., dkk., 2013. Comparative Study of Heavy Metals in Soil and Selected Medicinal Plants. *Journal of Chemistry*, **2013**: 1–5.
- Sharma, B., Balomajumder, C., dan Roy, P., 2008. Hypoglycemic and hypolipidemic effects of flavonoid rich extract from *Eugenia jambolana* seeds on streptozotocin induced diabetic rats. *Food and Chemical Toxicology*, **46**: 2376–2383.
- Sharma, S., Pathak, S., Gupta, G., Sharma, S.K., Singh, L., Sharma, R.K., dkk., 2017. Pharmacological evaluation of aqueous extract of *Syzigium cumini* for its antihyperglycemic and antidyslipidemic properties in diabetic rats fed a high cholesterol diet—Role of PPAR γ and PPAR α . *Biomedicine & Pharmacotherapy*, **89**: 447–453.
- Sharma, V., Qayum, A., Kaul, S., Singh, A., Kapoor, K.K., Mukherjee, D., dkk., 2019. Carbohydrate Modifications of Neoandrographolide for Improved Reactive Oxygen Species-Mediated Apoptosis through Mitochondrial Pathway in Colon Cancer. *ACS Omega*, **4**: 20435–20442.
- Shivaprakash, G., Sahana, D.A., Rajendran, K., Shirwaikar, A., Adhikari, M.R., dan Ganesh, J., 2011. Antioxidant potential of *Eugenia jambolana* seed; A randomized clinical trial in type 2 diabetes mellitus. *International Journal of Pharma and Bio Sciences*, **2**: 220–228.
- Sidana, S., Singh, V., Meena, B., Beniwal, S., Singh, K., Kumar, D., dkk., 2017. Effect of *Syzygium cumini* (jamun) seed powder on glycemic control: A double-blind randomized controlled trial. *Journal of Medical Society*, **31**: 185–189.
- Siharis, F.S. dan Fidrianny, I., 2016. Etnofarmakologi dan uji aktivitas salah satu tumbuhan yang ditemukan di suku Moronene Tobu Hukaea Laea Kabupaten

- Bombana Sulawesi Tenggara. *Indonesia Natural Research Pharmaceutical Journal*, **1**: 36–42.
- Silalahi, M. dan Nisyawati, 2015. Pemanfaatan anggrek sebagai bahan obat tradisional pada etnis Batak Sumatera Utara. *Berita Biologi*, **14**: 187–193.
- Silalahi, M. dan Nisyawati, 2018a. An ethnobotanical study of traditional steam-bathing by the Batak people of North Sumatra, Indonesia. *Pacific Conservation Biology*, **25**: 266–282.
- Silalahi, M. dan Nisyawati, N., 2018b. The ethnobotanical study of edible and medicinal plants in the home garden of Batak Karo sub-ethnic in North Sumatra, Indonesia. *Biodiversitas Journal of Biological Diversity*, **19**: 229–238.
- Silalahi, M., Nisyawati, N., dan Pandiangan, D., 2019. Medicinal plant by Batak Toba medicinal plants used by the Batak Toba Tribe in Peadundung Village, North Sumatra, Indonesia. *Biodiversitas Journal of Biological Diversity*, **20**: 510–525.
- Silalahi, M., Nisyawati, N., Walujo, E.B., dan Mustaqim, W., 2018a. Ethnomedicine of medicinal plants by Batak Phakpak Subethnic in The Surung Mersada Village, Phakpak Bharat District, North Sumatra. *Jurnal Ilmu Dasar*, **19**: 77–92.
- Silalahi, M., Nisyawati, Walujo, E.B., Supriatna, J., dan Mangunwardoyo, W., 2015a. The local knowledge of medicinal plants trader and diversity of medicinal plants in the Kabanjahe traditional market, North Sumatra, Indonesia. *Journal of Ethnopharmacology*, **175**: 432–443.
- Silalahi, M., Nisyawati, Walujo, E.B., Supriatna, J., dan Mangunwardoyo, W., 2015b. The Local Knowledge of Medicinal Plants Trader and Diversity of Medicinal Plants in the Kabanjahe Traditional Market, North Sumatra, Indonesia. *Journal of Ethnopharmacology*, **175**: 432–443.
- Silalahi, M., Pikoli, M.R., dan Sugoro, I., 2018b. Studi etnobotani tumbuhan pangan yang tidak dibudidayakan oleh masyarakat lokal sub-etnis Batak Toba, di Desa Peadundung Sumatera Utara, Indonesia. *Jurnal Pengelolaan Sumberdaya Alam dan Lingkungan (Journal of Natural Resources and Environmental Management)*, **8**: 241–250.
- Silalahi, M., Supriatna, J., Walujo, E.B., dan Nisyawati, 2015c. Local knowledge of medicinal plants in sub-ethnic Batak Simalungun of North Sumatra, Indonesia. *Biodiversitas, Journal of Biological Diversity*, **16**: 44–54.
- Silviani, D., Wahyuni, W.T., Syafitri, U.D., Ilmiawati, A., Septaningsih, D.A., Insanu, M., dkk., 2023. LC-HRMS and FTIR-based metabolomics analysis and xanthine oxidase inhibitory evaluation of *Sida rhombifolia* with different drying methods. *Biocatalysis and Agricultural Biotechnology*, **52**: 102833.
- Situmorang, R.O.P., Harianja, A.H., dan Silalahi, J., 2015. Karo's local wisdom: the use of woody plants for traditional diabetic medicines. *Indonesian Journal of Forestry Research*, **2**: 121–131.
- Slamet, A. dan Andarias, S.H., 2018. Studi etnobotani dan identifikasi tumbuhan berkhasiat obat masyarakat sub Etnis Wolio Kota Baubau Sulawesi Tenggara. *Proceeding Biology Education Conference*, **15**: 721–732.

- Smolarz, H.D., 2002. Flavonoids from *Polygonum lapathifolium* ssp. tomentosum. *Pharmaceutical Biology*, **40**: 390–394.
- Sofiah, W., 2014. *Studi Etnobotani Tumbuhan Obat Pada Masyarakat Kecamatan Arjasa Kepulauan Kangean Kabupaten Sumenep Madura*. Universitas Islam Negeri Maulana Malik Ibrahim, Malang.
- Soselisa, H.L. dan Ellen, R., 2013. The management of cassava toxicity and its changing sociocultural context in the Kei Islands, Eastern Indonesia. *Ecology of Food and Nutrition*, **52**: 427–450.
- Sriplang, K., Adisakwattana, S., Rungsipipat, A., dan Yibchok-anun, S., 2007. Effects of *Orthosiphon stamineus* aqueous extract on plasma glucose concentration and lipid profile in normal and streptozotocin-induced diabetic rats. *Journal of Ethnopharmacology*, **109**: 510–514.
- Srivastava, A., Misra, H., Verma, R.K., dan Gupta, M.M., 2004. Chemical fingerprinting of *Andrographis paniculata* using HPLC, HPTLC and densitometry. *Phytochemical Analysis*, **15**: 280–285.
- Su, H., Mo, J., Ni, J., Ke, H., Bao, T., Xie, J., dkk., 2020. Andrographolide Exerts Antihyperglycemic Effect through Strengthening Intestinal Barrier Function and Increasing Microbial Composition of *Akkermansia muciniphila*. *Oxidative Medicine and Cellular Longevity*, **2020**: .
- Subramanian, R. dan Asmawi, M.Z., 2006. Inhibition of α -glucosidase by *Andrographis paniculata* ethanol extract in rats. *Pharmaceutical Biology*, **44**: 600–606.
- Subramanian, R., Asmawi, M.Z., dan Sadikun, A., 2008a. Effect of andrographolide and ethanol extract of *Andrographis paniculata* on liver glycolytic, gluconeogenic, and lipogenic enzymes in a type 2 diabetic rat model. *Pharmaceutical Biology*, **46**: 772–780.
- Subramanian, R., Asmawi, M.Z., dan Sadikun, A., 2008b. In vitro α -glucosidase and α -amylase enzyme inhibitory effects of *Andrographis paniculata* extract and andrographolide. *Acta Biochimica Polonica*, **55**: 391–398.
- Sudagani, J. dan Hitman, G.A., 2005. Diabetes Mellitus: Etiology and Epidemiology, dalam: *Encyclopedia of Human Nutrition*. Elsevier, London, hal. 535–542.
- Suharjito, D., Darusman, L.K., Darusman, D., dan Suwarno, E., 2014. Comparing medicinal plants use for traditional and modern herbal medicine in Long Nah village of East Kalimantan. *Bionatura-Jurnal Ilmu-ilmu Hayati dan Fisik*, **16**: 95–102.
- Sujarwo, W., Keim, A.P., Savo, V., Guarrera, P.M., dan Caneva, G., 2015. Ethnobotanical study of Loloh: Traditional herbal drinks from Bali (Indonesia). *Journal of Ethnopharmacology*, **169**: 34–48.
- Sukenti, K., Hakim, L., Indriyani, S., dan Purwanto, Y., 2019. Ethnobotany of Sasak traditional beverages as functional foods. *Indian Journal of Traditional Knowledge*, **18**: 775–780.
- Sulistia, E., Sukenti, K., dan Mulyaningsih, T., 2020. Kajian Etnobotani Arecaceae Pada Masyarakat Kabupaten Lombok Barat. *Prosiding Seminar Nasional PMEI ke V*, **4**: .

- Sumara, A., Stachniuk, A., Olech, M., Nowak, R., Montowska, M., dan Fornal, E., 2023. Identification of sunflower, rapeseed, flaxseed and sesame seed oil metabolomic markers as a potential tool for oil authentication and detecting adulterations. *PLOS ONE*, **18**: e0284599.
- Sun, K., Ding, M., Fu, C., Li, P., Li, T., Fang, L., dkk., 2023. Effects of dietary wild bitter melon (*Momordica charantia* var. abbreviate Ser.) extract on glucose and lipid metabolism in HFD/STZ-induced type 2 diabetic rats. *Journal of Ethnopharmacology*, **306**: 116154.
- Sun, L., Wang, M., Ren, X., Jiang, M., dan Deng, Y., 2018. Rapid authentication and differentiation of herbal medicine using 1H NMR fingerprints coupled with chemometrics. *Journal of Pharmaceutical and Biomedical Analysis*, **160**: 323–329.
- Sun, Y., Zhu, H., Wang, J., Liu, Z., dan Bi, J., 2009. Isolation and purification of salvianolic acid A and salvianolic acid B from *Salvia miltiorrhiza* by high-speed counter-current chromatography and comparison of their antioxidant activity. *Journal of Chromatography B*, **877**: 733–737.
- Sunandar, A., 2017. New record of wild banana (*Musa balbisiana* Colla) in West Kalimantan, Indonesia. *Biodiversitas Journal of Biological Diversity*, **18**: 1324–1330.
- Susiarti, S., Arifa, N., dan Napisatunnaqiah, E., 2021. Medicinal Plant Diversity in the Market of Cibinong and Ciluar, Bogor. *Journal of Tropical Ethnobiology*, **4**: 33–48.
- Susilo, A. dan Denny, D., 2016. Keragaman tumbuhan dan potensi pemanfaatannya di kawasan hutan alam sekunder RPH Cisujen KPH Sukabumi, Jawa Barat. *Prosiding Seminar Nasional Masyarakat Biodiversitas Indonesia*, **2**: 256–262.
- Sutomo, S. dan Iryadi, R., 2019. Konservasi tumbuhan obat tradisional “Usada Bali.” *Buletin Udayana Mengabdi*, **18**: 58–63.
- Suwardi, A.B., Mardudi, M., Zidni Ilman Navia, Baihaqi, B., dan Muntaha, M., 2021. Documentation of medicinal plants used by Aneuk Jamee tribe in Kota Bahagia Sub-district, South Aceh, Indonesia. *Biodiversitas Journal of Biological Diversity*, **22**: 6–15.
- Syama, H.P., Arun, K.B., Sinumol, G., Dhanya, R., Suseela Anusree, S., Nisha, P., dkk., 2018. *Syzygium cumini* seed exhibits antidiabetic potential via multiple pathways involving inhibition of α -glucosidase, DPP-IV, glycation, and ameliorating glucose uptake in L6 cell lines. *Journal of Food Processing and Preservation*, **42**: e13464.
- Syamsiah, S., Hiola, S.F., Mu'nisa, A., dan Jumadi, O., 2016. Study on medicinal plants used by the Ethnic Mamuju in West Sulawesi, Indonesia. *Journal of Tropical Crop Science*, **3**: 43–48.
- Szabadfi, K., Pinter, E., Reglodi, D., dan Gabriel, R., 2014. Neuropeptides, Trophic Factors, and Other Substances Providing Morphofunctional and Metabolic Protection in Experimental Models of Diabetic Retinopathy, dalam: *International Review of Cell and Molecular Biology*. Elsevier, hal. 1–121.

- Tabeo, D.F., Ibrahim, N., dan Nugrahani, A.W., 2019. Etnobotani Suku Togian di Pulau Malenge Kecamatan Talatako, Kabupaten Tojo Una-Una, Sulawesi Tengah. *Biocelbes*, **13**: 30–37.
- Tajidin, N.E., Shaari, K., Maulidiani, M., Salleh, N.S., Ketaren, B.R., dan Mohamad, M., 2019. Metabolite profiling of *Andrographis paniculata* (Burm. f.) Nees. young and mature leaves at different harvest ages using ¹H NMR-based metabolomics approach. *Scientific Reports*, **9**: 16766.
- Tapundu, A.S., Anam, S., dan Pitopang, R., 2015. Studi etnobotani tumbuhan obat pada Suku Seko di Desa Tanah Harapan, Kabupaten Sigi, Sulawesi Tengah. *Biocelbes*, **9**: 66–86.
- Tchabo, W., Ma, Y., Kwaw, E., Xiao, L., Wu, M., dan T. Apaliya, M., 2018. Impact of extraction parameters and their optimization on the nutraceuticals and antioxidant properties of aqueous extract mulberry leaf. *International Journal of Food Properties*, **21**: 717–732.
- Teimouri, M., Rooein, D., dan Ebrahimi, M., 2015. 'Optimization of budgeting type 2 diabetes through modeling disease burden', . Dipresentasikan pada 5th International Conference on Computer and Knowledge Engineering, IEEE, hal. 164–169.
- Teixeira, C.C., Fuchs, F.D., Weinert, L.S., dan Esteves, J., 2006. The efficacy of folk medicines in the management of type 2 diabetes mellitus: results of a randomized controlled trial of *Syzygium cumini* (L.) Skeels. *Journal of Clinical Pharmacy and Therapeutics*, **31**: 1–5.
- Teixeira, C.C., Rava, C.A., Mallman da Silva, P., Melchior, R., Argenta, R., Anselmi, F., dkk., 2000. Absence of antihyperglycemic effect of jambolan in experimental and clinical models. *Journal of Ethnopharmacology*, **71**: 343–347.
- Thakur, A.K., Rai, G., Chatterjee, S.S., dan Kumar, V., 2016. Beneficial effects of an *Andrographis paniculata* extract and andrographolide on cognitive functions in streptozotocin-induced diabetic rats. *Pharmaceutical Biology*, **54**: 1528–1538.
- Thengyai, S., Thiantongin, P., Sontimuang, C., Ovatlarnporn, C., dan Puttarak, P., 2020. α -Glucosidase and α -amylase inhibitory activities of medicinal plants in Thai antidiabetic recipes and bioactive compounds from *Vitex glabrata* R. Br. stem bark. *Journal of Herbal Medicine*, **19**: .
- Thiyagarajan, G., Muthukumaran, P., Sarath Kumar, B., Muthusamy, V.S., dan Lakshmi, B.S., 2016. Selective Inhibition of PTP1B by Vitalboside A from *Syzygium cumini* Enhances Insulin Sensitivity and Attenuates Lipid Accumulation Via Partial Agonism to PPAR γ : *In Vitro* and *In Silico* Investigation. *Chemical Biology & Drug Design*, **88**: 302–312.
- Tima, M.T., Wahyuni, S., dan Murdaningsih, M., 2020. Etnobotani tanaman obat di Kecamatan Nangapanda Kabupaten Ende Nusa Tenggara Timur. *Jurnal Penelitian Kehutanan Faloak*, **4**: 23–38.
- Tiong, S.H., Looi, C.Y., Arya, A., Wong, W.F., Hazni, H., Mustafa, M.R., dkk., 2015. Vindogentianine, a hypoglycemic alkaloid from *Catharanthus roseus* (L.) G. Don (Apocynaceae). *Fitoterapia*, **102**: 182–188.

- Tobey, T.A., Mondon, C.E., Zavaroni, I., dan Reaven, G.M., 1982. Mechanism of insulin resistance in fructose-fed rats. *Metabolism*, **31**: 608–612.
- Trimanto, Danarto, S.A., dan Ashrafuzzaman, M., 2019. Ethnobotanical uses of plants by Brangkuah Community of Moyo Island, West Nusa Tenggara, Indonesia. *Journal of the Bangladesh Agricultural University*, **17**: 325–337.
- Tulhasanah, A., Chatri, M., Fevria, R., dan M, D., 2020. Utilization of Medicinal Plants to Overcome Diabetes in Nagari Manggopoh Subdistrict Lubuk Basung Regency of Agam. *Serambi Biologi*, **5**: 86–91.
- Umartani, L.A. dan Nahdi, M.S., 2021. Ethnobotany of Community Food Plants on the Slopes of Merapi Merbabu, Central Java, Indonesia. *Proceeding International of Conference of Scientific Engineer*, **3**: 56–63.
- Unger, G., Benozzi, S.F., Perruzza, F., dan Pennacchiotti, G.L., 2014. Triglycerides and glucose index: A useful indicator of insulin resistance. *Endocrinología y Nutrición (English Edition)*, **61**: 533–540.
- United States Department of Agriculture, 2023a. Classification for Kingdom Plantae Down to Species *Orthosiphon aristatus* (Blume) Miq.
- United States Department of Agriculture, 2023b. Classification for Kingdom Plantae Down to Species *Andrographis paniculata* (Burm. f.) Wall. ex Nees.
- Utaminigrum, W., Nofrianti, N., dan Hartanti, D., 2020a. Ethnomedicinal survey of traditional antidiabetic plants in Baturraden and Sumbang. *MEDISAINS*, **18**: 43–51.
- Utaminigrum, W., Nofrianti, N., dan Hartanti, D., 2020b. Ethnomedicinal survey of traditional antidiabetic plants in Baturraden and Sumbang. *Medisains*, **18**: 43–51.
- van Eck, N.J. dan Waltman, L., 2020. VOSviewer.
- Veerapur, V.P., Prabhakar, K.R., Kandadi, M.R., Srinivasan, K.K., dan Unnikrishnan, M.K., 2010. Antidiabetic effect of *Dodonaea viscosa* aerial parts in high fat diet and low dose streptozotocin-induced type 2 diabetic rats: A mechanistic approach. *Pharmaceutical Biology*, **48**: 1137–1148.
- Vicamilia, N., 2020. *Etnobotani Tumbuhan Obat Oleh Masyarakat Kecamatan Tanah Merah Kabupaten Bangkalan Madura*. Universitas Islam Negeri Maulana Malik Ibrahim, Malang.
- Viggiano, E., Mollica, M.P., Lionetti, L., Cavaliere, G., Trinchese, G., De Filippo, C., dkk., 2016. Effects of an High-Fat Diet Enriched in Lard or in Fish Oil on the Hypothalamic Amp-Activated Protein Kinase and Inflammatory Mediators. *Frontiers in Cellular Neuroscience*, **10**: .
- Viljoen, A., Sandasi, M., dan Vermaak, I., 2019. The role of the South African Journal of Botany as a vehicle to promote medicinal plant research- A bibliometric appraisal. *South African Journal of Botany*, **122**: 3–10.
- Vogl, S., Picker, P., Mihaly-Bison, J., Fakhrudin, N., Atanasov, A.G., Heiss, E.H., dkk., 2013. Ethnopharmacological in vitro studies on Austria's folk medicine—An unexplored lore in vitro anti-inflammatory activities of 71 Austrian traditional herbal drugs. *Journal of Ethnopharmacology*, **149**: 750–771.

- Wagner, H., Bauer, R., Melchart, D., Xiao, P.-G., dan Staudinger, A., 2011. *Chromatographic Fingerprint Analysis of Herbal Medicines: Thin-Layer and High Performance Liquid Chromatography of Chinese Drugs*. Springer, Vienna.
- Wahidah, B.F., Hayati, N., Khusna, U.N., Ducha Rahmani, T.P., Khasanah, R., Kamal, I., dkk., 2021. The ethnobotany of Zingibraceae as the traditional medicine ingredients utilized by Colo Muria mountain villagers, Central Java. *Journal of Physics: Conference Series*, **1796**: 012113.
- Wahidah, B.F. dan Husain, F., 2018. Etnobotani tumbuhan obat yang Dimanfaatkan oleh masyarakat desa Samata Kecamatan Somba Opu Kabupaten Gowa Sulawesi Selatan. *Life Science*, **7**: 56–65.
- Wahjuni, S., Mayun Laksmiwati, A., dan Manuaba, I.B.P., 2018. Antidiabetic effects of Indonesian bay leaves (*Syzygium polyanthum*) extracts through decreasing advanced glycation end products and blood glucose level on alloxan-induced hyperglycemic wistar rats. *Asian Journal of Pharmaceutical and Clinical Research*, **11**: 340–343.
- Wall, P.E., 2005. *Thin-Layer Chromatography A Modern Practical Approach*. The Royal Society of Chemistry, Cambridge.
- Wang, X., Son, M., Meram, C., dan Wu, J., 2019. Mechanism and Potential of Egg Consumption and Egg Bioactive Components on Type-2 Diabetes. *Nutrients*, **11**: 357.
- Watson, D.G., 2017. *Pharmaceutical Analysis: A Textbook for Pharmacy Students and Pharmaceutical Chemists*, 4th ed. Elsevier, Edinburgh.
- Weckerle, C.S., de Boer, H.J., Puri, R.K., van Andel, T., Bussmann, R.W., dan Leonti, M., 2018. Recommended standards for conducting and reporting ethnopharmacological field studies. *Journal of Ethnopharmacology*, **210**: 125–132.
- Weingart, P., 2005. Impact of bibliometrics upon the science system: inadvertent consequences? *Scientometrics*, **26**: 117–131.
- Wickramasinghe, A.S.D., Attanayake, A.P., dan Kalansuriya, P., 2022. Biochemical characterization of high fat diet fed and low dose streptozotocin induced diabetic Wistar rat model. *Journal of Pharmacological and Toxicological Methods*, **113**: 107144.
- Widiyastuti, Y. dan Widayat, T., 2012. Inventarisasi tanaman obat di Kabupaten Jayapura Propinsi Papua. *Jurnal Tumbuhan Obat Indonesia*, **6**: 116–126.
- Widjajakusuma, E.C., Jonosewojo, A., Hendriati, L., Wijaya, S., Ferawati, Surjadhana, A., dkk., 2019. Phytochemical screening and preliminary clinical trials of the aqueous extract mixture of *Andrographis paniculata*(Burm. f.) Wall. ex Nees and *Syzygium polyanthum* (Wight.) Walp leaves in metformin treated patients with type 2 diabetes. *Phytomedicine*, **55**: 137–147.
- Widodo, H., Sisindari, S., Asmara, W., dan Rohman, A., 2019. Antioxidant activity, total phenolic and flavonoid contents of selected medicinal plants used for liver diseases and its classification with chemometrics. *Journal of Applied Pharmaceutical Science*, **9**: 99–105.

- Widyawati, T., Purnawan, W.W., Atangwho, I.J., Yusoff, N.A., dan Asmawi, M.Z., 2015a. Anti-diabetic activity of *Syzygium polyanthum* (Wight) leaf extract, the most commonly used herb among diabetic patients in Medan, North Sumatera, Indonesia. *International Journal of Pharmaceutical Sciences and Research*, **6**: 1698–1704.
- Widyawati, T., Yusoff, N., Asmawi, M., dan Ahmad, M., 2015b. Antihyperglycemic effect of methanol extract of *Syzygium polyanthum* (Wight.) leaf in streptozotocin-induced diabetic rats. *Nutrients*, **7**: 7764–7780.
- Windarsih, A., Rohman, A., dan Swasono, R.T., 2019. Application of 1H-NMR based metabolite fingerprinting and chemometrics for authentication of *Curcuma longa* adulterated with *C. heyneana*. *Journal of Applied Research on Medicinal and Aromatic Plants*, **13**: 100203.
- Wishart, D.S., Guo, A., Oler, E., Wang, F., Anjum, A., Peters, H., dkk., 2022. HMDB 5.0: the Human Metabolome Database for 2022. *Nucleic Acids Research*, **50**: D622–D631.
- Worasuttayangkurn, L., Nakareangrit, W., Kwangjai, J., Sritangos, P., Pholphana, N., Watcharasit, P., dkk., 2019. Acute oral toxicity evaluation of *Andrographis paniculata*-standardized first true leaf ethanolic extract. *Toxicology Reports*, **6**: 426–430.
- Wulandara, F.D., Rafdinal, dan Linda, R., 2018. Etnobotani Tumbuhan Obat Suku Melayu Desa Durian Sebatang Kecamatan Seponti Kabupaten Kayong Utara. *Jurnal Probiot*, **7**: 36–46.
- Wulandari, I., Iskandar, B.S., Parikesit, P., Hudoso, T., Iskandar, J., Megantara, E.N., dkk., 2021. Ethnoecological study on the utilization of plants in Ciletuh-Palabuhanratu Geopark, Sukabumi, West Java, Indonesia. *Biodiversitas Journal of Biological Diversity*, **22**: 659–672.
- Xu, Y., Niu, Y., Gao, Y., Wang, F., Qin, W., Lu, Y., dkk., 2017. Borapetoside E, a clerodane diterpenoid extracted from *Tinospora crispa*, improves hyperglycemia and hyperlipidemia in high-fat-diet-induced type 2 diabetes mice. *Journal of Natural Products*, **80**: 2319–2327.
- Yakub, A., Leksono, A.S., dan Batoro, J., 2019. Ethnobotany of medicinal and edible plants of Tobelo Dalam tribe in Aketajawe Lolobata National Park Area. *Jurnal Pembangunan dan Alam Lestari*, **10**: 45–50.
- Yam, M.F., Lim, C.P., Fung Ang, L., Por, L.Y., Wong, S.T., Asmawi, Mohd.Z., dkk., 2013. Antioxidant and toxicity studies of 50% methanolic extract of *Orthosiphon stamineus* Benth. *BioMed Research International*, **2013**: 1–10.
- Yan, H., Li, Y., Yang, Y., Zhang, Z., Zhang, G., Sun, Y., dkk., 2016. Protective effects of andrographolide derivative AL-1 on high glucose-induced oxidative stress in RIN-m cells. *Current Pharmaceutical Design*, **22**: 499–505.
- Yaseen, G., Ahmad, M., Zafar, M., Sultana, S., Kayani, S., Cetto, A.A., dkk., 2015. Traditional management of diabetes in Pakistan: Ethnobotanical investigation from Traditional Health Practitioners. *Journal of Ethnopharmacology*, **174**: 91–117.

- Yatias, E.A., 2015. *Etnobotani Tumbuhan Obat Di Desa Negalasari Kecamatan Nyalindung Kabupaten Sukabumi Jawa Barat*. Universitas Islam Negeri Syarif Hidayatullah, Jakarta.
- Yeung, S., Soliternik, J., dan Mazzola, N., 2018a. Nutritional supplements for the prevention of diabetes mellitus and its complications. *Journal of Nutrition & Intermediary Metabolism*, **14**: 16–21.
- Yeung, A.W.K., Heinrich, M., dan Atanasov, A.G., 2018b. Ethnopharmacology—A bibliometric analysis of a field of research meandering between medicine and food science? *Frontiers in Pharmacology*, **9**: 1–15.
- Yeung, A.W.K., Heinrich, M., Kijjoo, A., Tzvetkov, N.T., dan Atanasov, A.G., 2020. The ethnopharmacological literature: An analysis of the scientific landscape. *Journal of Ethnopharmacology*, **250**: 112414.
- Yin, Y., Zheng, Z., dan Jiang, Z., 2019. Effects of lycopene on metabolism of glycolipid in type 2 diabetic rats. *Biomedicine & Pharmacotherapy*, **109**: 2070–2077.
- Yingying, Z., Lianger, D., Lu, H., Zhenxing, S., Jilin, D., Yang, Y., dkk., 2020. Effects of oat β -glucan, oat resistant starch, and the whole oat flour on insulin resistance, inflammation, and gut microbiota in high-fat-diet-induced type 2 diabetic rats. *Journal of Functional Foods*, **69**: 103939.
- Yu, B.C., Chang, C.K., Su, C.F., dan Cheng, J.T., 2008. Mediation of β -endorphin in andrographolide-induced plasma glucose-lowering action in type I diabetes-like animals. *Naunyn-Schmiedeberg's Archives of Pharmacology*, **377**: 529–540.
- Yu, B.-C., Hung, C.-R., Chen, W.-C., dan Cheng, J.-T., 2003. Antihyperglycemic effect of andrographolide in streptozotocin-induced diabetic rats. *Planta Medica*, **69**: 1075–1079.
- Yu, Z., Lu, B., Sheng, Y., Zhou, L., Ji, L., dan Wang, Z., 2015. Andrographolide ameliorates diabetic retinopathy by inhibiting retinal angiogenesis and inflammation. *Biochimica et Biophysica Acta (BBA) - General Subjects*, **1850**: 824–831.
- Yulia, C., Fahri, dan Ramadanil, 2017. Studi etnobotani tumbuhan obat suku “Topo Uma” di Desa Oo Parese Kecamatan Sigi Sulawesi Tengah. *Biocelebes*, **12**: 1–22.
- Yumni, S.Z., 2019. 'Keanekaragaman tumbuhan dalam pengobatan tradisional masyarakat suku Yaghai Kabupaten Mappi', . Universitas Gadjah Mada, Yogyakarta.
- Yusro, F., Pranaka, R.N., Budiastutik, I., dan Mariani, Y., 2020. The Utilization of Medicinal Plants by Communities around Bukit Kelam Nature Park, Sintang Regency, West Kalimantan. *Jurnal Sylva Lestari*, **8**: 255–272.
- Zaheri, Z., Fahremend, F., Rezvani, M.E., Karimollah, A., dan Moradi, A., 2019. Curcumin exerts beneficial role on insulin resistance through modulation of SOCS3 and Rac-1 pathways in type 2 diabetic rats. *Journal of Functional Foods*, **60**: 103430.
- Zaman, Moh.Q., 2009. *Etnobotani Tumbuhan Obat Di Kabupaten Pamekasan-Madura Provinsi Jawa Timur*. Universitas Islam Negeri Maulana Malik Ibrahim, Malang.

- Zhang, C., Gui, L., Xu, Y., Wu, T., dan Liu, D., 2013. Preventive effects of andrographolide on the development of diabetes in autoimmune diabetic NOD mice by inducing immune tolerance. *International Immunopharmacology*, **16**: 451–456.
- Zhang, M., Lv, X.-Y., Li, J., Xu, Z.-G., dan Chen, L., 2008. The Characterization of High-Fat Diet and Multiple Low-Dose Streptozotocin Induced Type 2 Diabetes Rat Model. *Experimental Diabetes Research*, **2008**: 1–9.
- Zhang, Q.-W., Lin, L.-G., dan Ye, W.-C., 2018. Techniques for extraction and isolation of natural products: a comprehensive review. *Chinese Medicine*, **13**: 20.
- Zhang, S., Huang, F., Tian, W., Lai, J., Qian, L., Hong, W., dkk., 2020. Andrographolide promotes pancreatic duct cells differentiation into insulin-producing cells by targeting PDX-1. *Biochemical Pharmacology*, **174**: 113785.
- Zhang, X.-F. dan Tan, B.K.-H., 2000a. Antihyperglycaemic and anti-oxidant properties of *Andrographis paniculata* in normal and diabetic rats. *Clinical and Experimental Pharmacology and Physiology*, **27**: 358–363.
- Zhang, X.-F. dan Tan, B.K.-H., 2000b. Anti-diabetic property of ethanolic extract of *Andrographis paniculata* in streptozotocin-diabetic rats. *Acta Pharmacologica Sinica*, **21**: 1157–1164.
- Zhang, Z., Jiang, J., Yu, P., Zeng, X., Larrick, J.W., dan Wang, Y., 2009. Hypoglycemic and beta cell protective effects of andrographolide analogue for diabetes treatment. *Journal of Translational Medicine*, **7**: 1–13.
- Zhao, F., Liu, Q., Cao, J., Xu, Y., Pei, Z., Fan, H., dkk., 2020. A sea cucumber (*Holothuria leucospilota*) polysaccharide improves the gut microbiome to alleviate the symptoms of type 2 diabetes mellitus in Goto-Kakizaki rats. *Food and Chemical Toxicology*, **135**: 1–9.
- Zhao, J., Wang, M., Adams, S.J., Lee, J., Chittiboyina, A.G., Avula, B., dkk., 2022. Metabolite variation and discrimination of five licorice (*Glycyrrhiza*) species: HPTLC and NMR explorations. *Journal of Pharmaceutical and Biomedical Analysis*, **220**: 115012.
- Zhao, J., Zhang, Y., Wei, F., Song, J., Cao, Z., Chen, C., dkk., 2019. Triglyceride is an independent predictor of type 2 diabetes among middle-aged and older adults: a prospective study with 8-year follow-ups in two cohorts. *Journal of Translational Medicine*, **17**: 403.
- Zheng, S., Wu, H., Li, Z., Wang, J., Zhang, H., dan Qian, M., 2015. Ultrasound/microwave-assisted solid-liquid-solid dispersive extraction with high-performance liquid chromatography coupled to tandem mass spectrometry for the determination of neonicotinoid insecticides in *Dendrobium officinale*: Sample Preparation. *Journal of Separation Science*, **38**: 121–127.
- Zheng, Y., Ley, S.H., dan Hu, F.B., 2018. Global aetiology and epidemiology of type 2 diabetes mellitus and its complications. *Nature Reviews Endocrinology*, **14**: 88–98.
- Zohra, T., Ovais, M., Khalil, A.T., Qasim, M., Ayaz, M., dan Shinwari, Z.K., 2019. Extraction optimization, total phenolic, flavonoid contents, HPLC-DAD

- analysis and diverse pharmacological evaluations of *Dysphania ambrosioides* (L.) Mosyakin & Clemants. *Natural Product Research*, **33**: 136–142.
- Zohriah, S., Ayu, I.W., Suhada, I., dan Sukmawati, D., 2020. Studi Etnobotani Tumbuhan Obat di Desa Songkar, Kecamatan Moyo Utara, Sumbawa Besar. *Prosiding Seminar Nasional IPPeMas 2020*, 334–340.
- Zubaidah, S., Suhartini Azis, Mahanal, S., Batoro, J., dan Sumitro, S.B., 2020. Local knowledge of traditional medicinal plants use and education system on their young of Ammatoa Kajang tribe in South Sulawesi, Indonesia. *Biodiversitas Journal of Biological Diversity*, **21**: 3989–4002.
- Zubair, Suleman, S.M., dan Ramadhanil, 2019. Studi etnobotani tumbuhan obat pada masyarakat Kaili Rai di Desa Wombo Kecamatan Tanantovea Kabupaten Donggala Sulawesi Tengah. *Biocelbes*, **13**: 182–194.
- Zulfiani, Yuniati, E., dan Pitopang, R., 2013. Kajian etnobotani suku Kaili Tara di Desa Binangga Kecamatan Parigi Tengah Kabupaten Parigi Moutong Sulawesi Tengah. *Biocelbes*, **7**: 67–74.
- Zupic, I. dan Čater, T., 2015. Bibliometric methods in management and organization. *Organizational Research Methods*, **18**: 429–472.
- Zyoud, S.H., Sweileh, W.M., Awang, R., dan Al-Jabi, S.W., 2018. Global trends in research related to social media in psychology: mapping and bibliometric analysis. *International Journal of Mental Health Systems*, **12**: 4.