

REFERENCES

- Abdel-Misih, S.R.Z. and Bloomston, M., 2010. Liver Anatomy. *The Surgical clinics of North America*, **90**: 643–653.
- Abubakar, A.R. and Haque, M., 2020. Preparation of Medicinal Plants: Basic Extraction and Fractionation Procedures for Experimental Purposes. *Journal of Pharmacy & Bioallied Sciences*, **12**: 1–10.
- Amin, A., Wunas, J., and Anin, Y.M., 2015. Uji Aktivitas Antioksidan Ekstrak Etanol Klika Faloak (*Sterculia quadrifida* R.Br) dengan Metode DPPH (2,2-diphenyl-1-picrylhydrazyl). *Jurnal Fitofarmaka Indonesia*, **2**: 111–114.
- Ansary, S.N., Hertiani, T., Murwanti, R., Siswadi, S., and Setyowati, E., 2021. Acute Toxicity Study of Standardized Faloak Bark (*Sterculia quadrifida* R. Br.) Extract on Wistar Rats. *International Journal of Research in Pharmaceutical Sciences*, **12**: 656–661.
- Ansary, S.N., 2020, 'Uji Aktivitas Hepatoprotektor and Toksisitas Akut Ekstrak Kulit Batang Faloak (*Sterculia quadrifida* R.Br) Secara In Vivo pada Tikus Galur Wistar', *Tesis*, M.Pharm., Sci., Universitas Gadjah Mada, Yogyakarta.
- Barve, A., Khan, R., Marsano, L., Ravindra, K.V., and McClain, C., 2008. Treatment of Alcoholic Liver Disease. *Annals of Hepatology*, **7**: 5–15.
- Bruha, R., Dvorak, K., and Petrtyl, J., 2012. Alcoholic Liver Disease. *World Journal of Hepatology*, **4**: 81–90.
- Buang, Y., 2011. The Mechanism of Hepatomegaly Associated with Hepatic Steatosis. *Journal of Pharmacy Research*, **4**.
- Campbell, I., 2006. Liver: Metabolic Functions. *Anaesthesia & Intensive Care Medicine Gastro*, **7**: 51–54.
- Carvalho, J.R. and Machado, M.V., 2018. New Insights About Albumin and Liver Disease. *Annals of Hepatology*, **17**: 547–560.
- Cederbaum, A.I., 2012. Alcohol Metabolism. *Clinics in Liver Disease*, **16**: 667–685.
- Ceni, E., Mello, T., and Galli, A., 2014. Pathogenesis of Alcoholic Liver Disease: Role of Oxidative Metabolism. *World Journal of Gastroenterology : WJG*, **20**: 17756–17772.
- Choi, S.S. and Diehl, A.M., 2018. Alcoholic Liver Disease, in: *Handbook of Liver Disease*. Elsevier, pp. 109–120.

- Dasgupta, A., 2015. Chapter 5 - Liver Enzymes as Alcohol Biomarkers, in: Dasgupta, A. (Editor), *Alcohol and Its Biomarkers*. Elsevier, San Diego, pp. 121–137.
- Del Rio, D., Rodriguez-Mateos, A., Spencer, J.P.E., Tognolini, M., Borges, G., and Crozier, A., 2013. Dietary (Poly)phenolics in Human Health: Structures, Bioavailability, and Evidence of Protective Effects Against Chronic Diseases. *Antioxidants & Redox Signaling*, **18**: 1818–1892.
- Depkes RI., 2008, 'Farmakope Herbal Indonesia', Departemen Kesehatan Republik Indonesia, Jakarta.
- Deshpande, N., Kandi, S., Muddeshwar, M., Das, R. and Ramana, K.V., 2014. A Study of Biochemical and Hematological Markers in Alcoholic Liver Cirrhosis. *World Journal of Nutrition and Health*, **2**: 24–27.
- Dewatisari, W.F., Rumiyantri, L., and Rakhmawati, I., 2017. Rendemen dan Skrining Fitokimia pada Ekstrak Daun Sansevieria sp. *Jurnal Penelitian Pertanian Terapan*, **17**: 197–202.
- Dhanani, T., Shah, S., Gajbhiye, N.A., and Kumar, S., 2017., Effect of Extraction Methods on Yield, Phytochemical Constituents, and Antioxidant Activity of *Withania somnifera*. *Arabian Journal of Chemistry*, **10**: S1193–S1199.
- Dhillon, A. and Steadman, R.H., 2012. Liver Diseases. *Anesthesia and Uncommon Diseases: Sixth Edition*, pp.162–214.
- Do, Q.D., Angkawijaya, A.E., Tran-Nguyen, P.L., Huynh, L.H., Soetaredjo, F.E., Ismadji, S., Ju, Y.H., 2014. Effect of Extraction Solvent on Total Phenol Content, Total Flavonoid Content, and Antioxidant Activity of *Limnophila aromatica*. *Journal of Food and Drug Analysis*, **22**: 296–302.
- Ebrahimi, H., Naderian, M., and Sohrabpour, A.A., 2016. New Concepts on Pathogenesis and Diagnosis of Liver Fibrosis; A Review Article. *Middle East Journal of Digestive Diseases*, **8**: 166–178.
- Egza, T.F., 2020. A Review on Extraction, Isolation, Characterization and Some Biological Activities of Essential Oils from Various Plants. *Global Scientific Journals*, **8**: 1692–1722.
- El-Sherei, M.M., Ragheb, A.Y., Kassem, M.E.S., Marzouk, M.M., Mosharrafa, S.A., and Saleh, N.A.M., 2016. Phytochemistry, Biological Activities and Economical Uses of The Genus Sterculia and the Related Genera: A reveiw. *Asian Pacific Journal of Tropical Disease*, **6**: 492–501.
- Frazier, T.H., Stocker, A.M., Kershner, N.A., Marsano, L.S., and McClain, C.J., 2011. Treatment of Alcoholic Liver Disease. *Therapeutic Advances in Gastroenterology*, **4**: 63–81.

- Friedman, S.L., 2008. Hepatic Stellate Cells: Protean, Multifunctional, and Enigmatic Cells of the Liver. *Physiological reviews*, **88**: 125–172.
- Gao, B. and Bataller, R., 2011. Alcoholic Liver Disease: Pathogenesis and New Therapeutic Targets. *Gastroenterology*, **141**: 1572–1585.
- Gellert, J. and Teschke, R., 1988. The Biochemistry of Alcohol Metabolism. *Zeitschrift Fur Gastroenterologie*, **26 Suppl 3**: 22–27.
- Giknis, M.L.A. and Clifford, C., 2008. Clinical Laboratory Parameters for Crl: WI (Han) rats. *Accel Drug Dev*, 1–14.
- Hertiani, T., Permanasari, P., Mashar, H., and Siswadi, S., 2017. 'Preliminary Study on Faloak Bark Potency for Prevention of Microbial Infection', *Proceeding of 2017 Conference on Health Management in Post Disaster Recovery*, Banda Aceh, Indonesia, pp. 59–66.
- Hiraganahalli, B.D., Chinampudur, V.C., Dethé, S., Mundkinajeddu, D., Pandre, M.K., Balachandran, J., Agarwal, A., 2012. Hepatoprotective and Antioxidant Activity of Standardized Herbal Extracts. *Pharmacognosy Magazine*, **8**: 116–123.
- Jang, S.-H., Cho, S.-W., Yoon, H.-M., Jang, K.-J., Song, C.-H., and Kim, C.-H., 2014. Hepatoprotective Evaluation of *Ganoderma lucidum* Pharmacopuncture: In vivo Studies of Ethanol-induced Acute Liver Injury. *Journal of Pharmacopuncture*, **17**: 16–24.
- Jelski, W., Chrostek, L., and Szmitkowski, M., 1999. Metabolism of Ethyl Alcohol in the Human Body. *Postepy Higieny I Medycyny Doswiadczalnej*, **53**: 871–883.
- Jonker, J., Stedman, C., Liddle, C., and Downes, M., 2009. Hepatobiliary ABC transporters: physiology, regulation and implications for disease. *Frontiers in bioscience : a journal and virtual library*, **14**: 4904–20.
- Kalra, A., Yetiskul, E., Wehrle, C.J., and Tuma, F., 2021. Physiology, Liver, in: *StatPearls*. StatPearls Publishing, Treasure Island (FL).
- Kawaratani, H., Tsujimoto, T., Douhara, A., Takaya, H., Moriya, K., Namisaki, T., Noguchi, R., Yoshiji, H., Fujimoto, M., Fukui, H., 2013. The effect of Inflammatory Cytokines in Alcoholic Liver Disease. *Mediators of Inflammation*, **2013**: 495156.
- Kulkarni, S., Roper, S.M., and Stoll, J.M., 2021. Chapter 8 - Hepatic and Gastrointestinal Disorders, in: Dietzen, D., Bennett, M., Wong, E., and Haymond, S. (Editor), *Biochemical and Molecular Basis of Pediatric Disease (Fifth Edition)*. Academic Press, pp. 229–266.

- Lamuela-Raventós, R.M., 2018. Folin–Ciocalteu method for the measurement of total phenolic content and antioxidant capacity, in: *Measurement of Antioxidant Activity & Capacity*. John Wiley & Sons, Ltd, pp. 107–115.
- Lette, A.R., Ratnawati, A.T., and Swasti, I.K., 2018. Perilaku Minum Sopi pada Remaja di Kecamatan Maulafa, Kota Kupang. *Berita Kedokteran Masyarakat*, **32**: 237–244.
- Lieber, C.S., 2005. Metabolism of Alcohol. *Clinics in liver disease*, **9**: 1–35.
- Lieber, C.S., 2004. Alcoholic Fatty Liver: its pathogenesis and mechanism of progression to inflammation and fibrosis. *Alcohol (Fayetteville, N.Y.)*, **34**: 9–19.
- Ling, H., Patel, A., Park, J., and Bhave, V.S., 2019. Chapter 39 - Thyroid Hormones, Iodine and Iodides, and Antithyroid Drugs, in: Ray, S.D. (Editor), *Side Effects of Drugs Annual, A Worldwide Yearly Survey of New Data in Adverse Drug Reactions*. Elsevier, pp. 481–492.
- Louvet, A. and Mathurin, P., 2015. Alcoholic Liver Disease: mechanisms of injury and targeted treatment. *Nature Reviews Gastroenterology & Hepatology*, **12**: 231–242.
- Ludwig, S. and Kaplowitz, N., 1980. Effect of Pyridoxine Deficiency on Serum and Liver Transaminases in Experimental Liver Injury in the Rat. *Gastroenterology*, **79**: 545–549.
- Lui, F., 2018. Laboratory Tests in Liver Failure. *Anaesthesia & Intensive Care Medicine*, **19**: 1–3.
- Manzo-Avalos, S. and Saavedra-Molina, A., 2010. Cellular and Mitochondrial Effects of Alcohol Consumption. *International Journal of Environmental Research and Public Health*, **7**: 4281–4304.
- Marsano, L.S., Mendez, C., Hill, D., Barve, S., and McClain, C.J., 2003. Diagnosis and Treatment of Alcoholic Liver Disease and Its Complications. *Alcohol Research & Health*, **27**: 247–256.
- Massey, V.L. and Arteel, G.E., 2012. Acute Alcohol-Induced Liver Injury. *Frontiers in Physiology*, **3**: 193.
- McClain, C., Hill, D., Schmidt, J., and Diehl, A., 1997. Cytokines and Alcoholic Liver Disease. *Seminars in Liver Disease*, **13**: 170–182.
- Munawaroh, R., 2021, ‘Isolasi dan Elusidasi Struktur Senyawa Imunomodulator dari Kulit Batang Faloak (*Sterculia quadrifida* R.Br)’, *Disertasi*, Dr., Universitas Gadjah Mada, Yogyakarta.

- Nalpas, B., Vassault, A., Le Guillou, A., Lesgourgues, B., Ferry, N., Lacour, B., Berthelot, P., 1984. Serum Activity of Mitochondrial Aspartate Aminotransferase: a sensitive marker of alcoholism with or without alcoholic hepatitis. *Hepatology*, **4**: 893–896.
- Nurrochmad, A. and Airin, C.M., 2013. Standarisasi Hewan Laboratorium Unit Pengembangan Hewan Percobaan dalam Rangka Penguatan Riset di Lingkungan Universitas Gadjah Mada, *Laporan Akhir*, Lembaga Penelitian dan Pengabdian kepada Masyarakat, Universitas Gadjah Mada, Yogyakarta.
- Ontko, J.A., 1973. Effects of Ethanol on the Metabolism of Free Fatty Acids in Isolated Liver Cells. *Journal of Lipid Research*, **14**: 78–86.
- Orman, E.S., Odena, G., and Bataller, R., 2013. Alcoholic Liver Disease: Pathogenesis, Management, and Novel Targets for Therapy. *Journal of Gastroenterology and Hepatology*, **28**: 77–84.
- O'Shea, R.S., Dasarathy, S., and McCullough, A.J., Practice Guideline Committee of the American Association for the Study of Liver Diseases, and Practice Parameters Committee of the American College of Gastroenterology, 2010. Alcoholic liver disease. *Hepatology*, **51**: 307–328.
- Osna, N.A., Donohue, T.M., and Kharbanda, K.K., 2017. Alcoholic Liver Disease: Pathogenesis and Current Management. *Alcohol Research: Current Reviews*, **38**: 147–161.
- Ozougwu, J., 2017. Physiology of the Liver. *International Journal of Research in Pharmacy and Biosciences*, **4**: 13–24.
- Patel, R. and Mueller, M., 2021. Alcoholic Liver Disease, in: *StatPearls*. StatPearls Publishing, Treasure Island (FL).
- Queensland Herbarium., 1985. Perserved Specimen; Catalogue Number BRI AQ0444922, Supplied Scientific Name “*Sterculia quadrifida* R.Br.”. *Queensland Herbarium*, Queensland.
- Rajendram, R., Rajendram, R., and Preedy, V.R., 2016. Chapter 35 - Ethanol Metabolism and Implications for Disease, in: Preedy, V.R. (Editor), *Neuropathology of Drug Addictions and Substance Misuse*. Academic Press, San Diego, pp. 377–388.
- Rambung, C.C., 2002. Efek Hepatoprotektif Air Rebusan Serbuk Simplisia Kulit Batang Faloak (*Sterculia urceolata* Smith.) pada Mencit Jantan (*Mus musculus*) Terinduksi Karbon Tetraklorida (CCl₄), *Skripsi*, S.Si, Universitas Sanata Dharma, Yogyakarta.
- Ranta, F., 2011, ‘Antimicrobial Activity of Extractive of Faloak (*Sterculia comosa* Wallich)’, *Tesis*, Institut Pertanian Bogor, Bogor.

- Recueno, M.C., De Luna, J.R.P., Magallano, N.G., and Salamanez, K.C., 2020. Phytochemical Screening, Total Phenolics, and Antioxidant and Antibacterial Activities of Selected Philippine Indigenous Fruits. *Philippine Journal of Science*, 149: 14.
- Riset Kesehatan Dasar (Riskesdas), 2018. Badan Penelitian and Pengembangan Kesehatan Kementerian RI 2018. Jakarya: Riskesdas 2018.
- Rodiata, T.A., 2021, 'Analisis Data Sekunder Profil Kandungan Kimia Kulit Batang Faloak (*Sterculia quadrifida* R.Br.) and Aktivitas Antioksidan sebagai Upaya Standarisasi Ekstrak', *Skripsi*, S.Farm., Universitas Gadjah Mada, Yogyakarta.
- Rollando, R. and Alfanaar, R., 2017. Isolasi Senyawa Turunan Naptokuinon dari Kulit Batang Faloak (*Sterculia quadrifida* R.Br) and Uji Aktivitas Antikanker pada Sel Kanker Payudara Jenis T47D. *Cakra Kimia (Indonesian E-Journal of Applied Chemistry)*, 5: 12.
- Roth, N.C. and Qin, J., 2019. Histopathology of Alcohol-Related Liver Diseases. *Clinics in Liver Disease*, 23: 11–23.
- Saragih, G.S., and Siswadi, S., 2019. Antioxidant Activity of Plant Parts Extracts from *Sterculia quadrifida* R. Br. *Asian Journal of Pharmaceutical and Clinical Research*, 12: 143–148.
- Sear, J., 1992. Anatomy and Physiology of the Liver. *Baillière's Clinical Anaesthesiology*, 6: 697–727.
- Seitz, H.K., Bataller, R., Cortez-Pinto, H., Gao, B., Gual, A., Lackner, C., Mathurin, P., Mueller, S., Szabo, G., Tsukamoto, H., 2018. Alcoholic Liver Disease. *Nature Reviews Disease Primers*, 4: 1–22.
- Sibulesky, L., 2013. Normal Liver Anatomy. *Clinical Liver Disease*, 2: S1.
- Singleton, V.L., Orthofer, R., and Lamuela-Raventós, R.M., 1999. Analysis of Total Phenols and Other Oxidation Substrates and Antioxidants by Means of Folin-Ciocalteu Reagent, in: *Methods in Enzymology, Oxidants and Antioxidants Part A*. Academic Press, pp. 152–178.
- Siswadi, S., Rianawati, H., Hadi, D., Saragih, G., 2018. 'The Potency Of Faloak'S (*Sterculia quadrifida*, R.Br.) Active Compunds As Natural Remedy', *Proceeding of the International Seminar "Forests & Medicinal Plants for Better Human Welfare"*, pp 73–79.
- Siswadi, S. and Saragih, G.S., 2018. Uji Toksisitas Akut Ekstrak Etanol Kulit Batang Faloak (*Sterculia quadrifida* R.Br.) pada Tikus Sprague Dawley. *Traditional Medicine Journal*, 23: 127–134..

- Siswadi, S., Saragih, G., and Rianawati, H., 2013. 'Potential Distributions and Utilization of Faloak (*Sterculia quadrifida* R.Br 1844) on Timor island, East Nusa Tenggara', *Proceeding of International Conference Forest and Biodiversity*. Balai Penelitian Kehutanan Kupang Press, Kupang, Indonesia.
- Song, X., Liu, Z., Zhang, J., Yang, Q., Ren, Z., Zhang, C., Liu, M., Gao, Z., Zhao, H., Jia, L., 2018. Anti-inflammatory and Hepatoprotective Effects of Exopolysaccharides Isolated from *Pleurotus geesteranus* on Alcohol-Induced Liver Injury. *Scientific Reports*, **8**: 10493.
- Sudeep, H.V., Venkatakrishna, K., Sundeep, K., Vasavi, H.S., Raj, A., Chandrappa, S., Shyamprasad, K., 2020. Turcuron: A standardized bisacurone-rich turmeric rhizome extract for the prevention and treatment of hangover and alcohol-induced liver injury in rats. *Pharmacognosy Magazine*, **16**: 263.
- Teschke, R., 2018. Alcoholic Liver Disease: Alcohol Metabolism, Cascade of Molecular Mechanisms, Cellular Targets, and Clinical Aspects. *Biomedicines*, **6**: 106.
- Thabet, A.A., Youssef, F.S., El-Shazly, M., El-Beshbishy, H.A., and Singab, A.N.B., 2018. Validation of the Antihyperglycaemic and Hepatoprotective Activity of the Flavonoid Rich Fraction of *Brachychiton rupestris* using In Vivo Experimental Models and Molecular Modelling. *Food and Chemical Toxicology*, **114**: 302–310.
- Tiniakos, D.G., Anstee, Q.M., and Burt, A.D., 2018. 5 - Fatty Liver Disease, in: Burt, A.D., Ferrell, L.D., and Hübscher, S.G. (Editor), *Macswreen's Pathology of the Liver (Seventh Edition)*. Elsevier, pp. 308–371.
- Trefts, E., Gannon, M., and Wasserman, D.H., 2017. The Liver. *Current Biology*, **27**: R1147–R1151.
- Vairappan, B., 2016. Chapter 15 - Cholesterol Regulation by Leptin in Alcoholic Liver Disease, in: Patel, V.B. (Editor), *Molecular Aspects of Alcohol and Nutrition*. Academic Press, San Diego, pp. 187–200.
- Wang, H., Liang, X., Gravot, G., Thorling, C.A., Crawford, D.H.G., Xu, Z.P., Liu, X., Roberts, M.S., 2017. Visualizing Liver Anatomy, Physiology and Pharmacology using Multiphoton Microscopy. *Journal of Biophotonics*, **10**: 46–60.
- Wang, Y., Wang, S., Wang, R., Li, S., and Yuan, Y., 2021. Neferine Exerts Antioxiandt and Anti-Inflammatory Effects on Carbon Tetrachloride-Induced Liver Fibrosis by Inhibiting the MAPK and NF-κB/IκBα Pathways. *Evidence-Based Complementary and Alternative Medicine*, **2021**: e4136019.

- World Health Organization, 2018. *Alcohol*, <https://www.who.int/news-room/fact-sheets/detail/alcohol>, accessed date: October 10th 2020.
- Winanta, A., Hertiani, T., Purwantiningsih, and Siswadi, S., 2019. In vivo Immunomodulatory Activity of Faloak Bark Extract (*Sterculia quadrifida* R.Br). *Pakistan Journal of Biological Sciences*, **22**: 590–596.
- Winanta, A., 2017, ‘Uji Aktivitas Imunomodulator Ekstrak Kulit Batang Faloak (*Sterculia quadrifida* R.Br) secara In Vitro And In Vivo’, *Tesis*, M.Sc. Universitas Gadjah Mada, Yogyakarta.
- Yue, R., Chen, G., Xie, G., Hao, L., Guo, W., Sun, X., Noguchi, R., Yoshiji, H., Fujimoto, M., Fukui, H., 2021. Activation of PPAR α -catalase Pathway Reverses Alcoholic Liver Injury via Upregulating NAD Synthesis and Accelerating Alcohol Clearance. *Free Radical Biology and Medicine*, **174**: 249–263.
- Zakhari, S., 2006. Overview: How Is Alcohol Metabolized by the Body?. *Alcohol Research & Health*, **29**: 245–254.
- Zhang, Q.W., Lin, L.G., and Ye, W.C., 2018. Techniques for extraction and isolation of natural products: A comprehensive review. *Chinese Medicine*, **13**: 1–26.
- Zheng, Y., Cui, J., Chen, A.H., Zong, Z.M., and Wei, X.Y., 2019. Optimization of Ultrasonic-Microwave Assisted Extraction and Hepatoprotective Activities of Polysaccharides from *Trametes orientalis*. *Molecules*, **24**: 147.
- Zhou, S.L., Gordon, R.E., Bradbury, M., Stump, D., Kiang, C.L., and Berk, P.D., 1998. Ethanol up-regulates fatty acid uptake and plasma membrane expression and export of mitochondrial aspartate aminotransferase in HepG2 cells. *Hepatology*, **27**: 1064–1074.