

DAFTAR PUSTAKA

- Adnyana, I.K., Yulinah, E., Soemardji, A.A., Kumolosasi, E., Iwo, M.I., Sigit, J.I., dan Suwendar, 2004. Uji Aktivitas Antidiabetes Ekstrak Etanol Buah Mengkudu (*Morinda citrifolia* L.). *Acta Pharmaceutica Indonesia*, **XXIX**: 43–49.
- Akbar, S., 2011. *Andrographis paniculata*: A Review of Pharmacological Activities and Clinical Effects. *Alternative Medicine Review*, **16**: 66–77.
- American Diabetes Association, 2012. Diagnosis and Classification of Diabetes Mellitus. *Diabetes Care*, **35**: S64–S71.
- Arulmozhi, D., Veeranjayenulu, A., dan Bodhankar, S., 2004. Neonatal Streptozotocin-Induced Rat Model of Type 2 Diabetes Mellitus: A Glance. *Indian Journal of Pharmacology*, **36**: 217.
- Badan Pengawas Obat dan Makanan RI, 2010. *Monografi Ekstrak Tumbuhan Obat Indonesia*. Badan Pengawas Obat dan Makanan Republik Indonesia, Jakarta.
- Bahadoran, Z., Mirmiran, P., dan Azizi, F., 2013. Dietary Polyphenols as Potential Nutraceuticals in Management of Diabetes: A Review. *Journal of Diabetes & Metabolic Disorders*, **12**: 43.
- Behrens, M., Brockhoff, A., Batram, C., Kuhn, C., Appendino, G., dan Meyerhof, W., 2009. The Human Bitter Taste Receptor hTAS2R50 Is Activated by the Two Natural Bitter Terpenoids Andrographolide and Amarogentin. *Journal of Agricultural and Food Chemistry*, **57**: 9860–9866.
- Bonner-Weir, S., Trent, D.F., Honey, R.N., dan Weir, G.C., 1981. Responses of Neonatal Rat Islets to Streptozotocin: Limited B-Cell Regeneration and Hyperglycemia. *Diabetes*, **30**: 64–69.
- Brereton, M.F., Iberl, M., Shimomura, K., Zhang, Q., Adriaenssens, A.E., Proks, P., Spiliotis, I.I, Dace, W., Mattis, K.K., Ramracheya, R., Gribble, M.M., Reimann, F., Clark, A., Rorsman, P., dan Ashcroft, F.M., 2014. Reversible Changes in Pancreatic Islet Structure and Function Produced by Elevated Blood Glucose. *Nature Communication*, **5**: 1–11.
- Ceriello, A. dan Motz, E., 2004. Is Oxidative Stress the Pathogenic Mechanism Underlying Insulin Resistance, Diabetes, and Cardiovascular Disease? The Common Soil Hypothesis Revisited. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **24**: 816–823.

- Chan-Blanco, Y., Vaillant, F., Mercedes Perez, A., Reynes, M., Brillouet, J.M., dan Brat, P., 2006. The Noni Fruit (*Morinda citrifolia* L.): A Review of Agricultural Research, Nutritional and Therapeutic Properties. *Journal of Food Composition and Analysis*, **19**: 645–654.
- Chang, C.C., Yang, M.H., Wen, H.M., dan Chern, J.C., 2002. Estimation of Total Flavonoid Content in Propolis by Two Complementary Colorimetric Methods. *Journal of Food and Drug Analysis*, **10**: 178–182.
- Chao, W.W. dan Lin, B.F., 2010. Isolation and Identification of Bioactive Compounds in *Andrographis paniculata* (Chuanxinlian). *Chinese Medicine*, **5**: 1–15.
- Corwin, E.J., 2008. *Handbook of Pathophysiology*, 3rd ed. Lippincott Williams & Wilkins, Philadelphia.
- Cui, L., Qiu, F., Wang, N., dan Yao, X., 2004. Four New Andrographolide Metabolites in Human Urine. *Chemical and Pharmaceutical Bulletin*, **52**: 772–775.
- 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.
- Departemen Kesehatan RI, 1979. *Materia Medika Indonesia III*. Departemen Kesehatan Republik Indonesia.
- Departemen Kesehatan RI, 2000. *Parameter Standar Umum Ekstrak Tumbuhan Obat*. Departemen Kesehatan Republik Indonesia, Jakarta.
- Departemen Kesehatan RI, 2005. *Pharmaceutical Care Untuk Penyakit Diabetes Mellitus*. Departemen Kesehatan RI, Jakarta.
- Departemen Kesehatan RI, 2008. *Farmakope Herbal Indonesia*, 1st ed. Departemen Kesehatan Republik Indonesia, Jakarta.
- Djarmiko, W., Kusumawati, I., dan Sholehah, D.N., 2006. Penetapan Kadar Skopoletin Dalam Berbagai Umur Buah *Morinda citrifolia* Linn. dengan Metode KLT - Densitometri. *Jurnal Bahan Alam Indonesia*, **6**: 15–19.
- Erwin, Etriwati, Muttaqin, Pangestinarsih, T.W., dan Widayarni, S., 2013. Ekspresi Insulin pada Pankreas Mencit (*Mus musculus*) yang Diinduksi dengan Streptozotocin Berulang. *Jurnal Kedokteran Hewan*, **7**: 97–100.
- Farine, J.P., Legal, L., Moreteau, B., dan Le Quere, J.L., 1996. Volatile Components of Ripe Fruits of *Morinda citrifolia* and Their Effects on *Drosophila*. *Phytochemistry*, **41**: 433–438.

- Garofano, A., Czernichow, P., dan Bréant, B., 2000. Impaired Beta-Cell Regeneration in Perinatally Malnourished Rats: A Study with STZ. *FASEB Journal: Official Publication of the Federation of American Societies for Experimental Biology*, **14**: 2611–2617.
- Gautam, K., Kumar, P., dan Jain, C., 2013. Comparative Study of Alpha Amylase Inhibitory Activity of Flavonoids of *Vitex negundo* Linn. and *Andrographis paniculata* Nees. *International Journal of Green Pharmacy*, **7**: 25.
- Grassi, D., Desideri, G., dan Ferri, C., 2010. Flavonoids: Antioxidants Against Atherosclerosis. *Nutrients*, **2**: 889–902.
- Guz, Y., Nasir, I., dan Teitelman, G., 2001. Regeneration of Pancreatic Beta Cells from Intra-Islet Precursor Cells in an Experimental Model of Diabetes. *Endocrinology*, **142**: 4956–4968.
- Hadijah, H., Ayub, M.Y., Zaridah, H., dan Normah, A., 2004. Hypoglycemic Activity of *Morinda citrifolia* Extract in Normal and Streptozotocin-Induced Diabetic Rats. *J. Trop. Agric. and Fd. Sc.*, **32**: 39–44.
- Hadijah, H., Ayub, M.Y., Zaridah, H., dan Normah, A., 2008. Hypolipidemic Activity of an Aqueous Extract of *Morinda citrifolia* Fruit in Normal and Streptozotocin-Induced Diabetic Rats. *J. Trop. Agric. and Fd. Sc.*, **36**: 77–85.
- Hall, J.E., 2010. *Guyton and Hall Textbook of Medical Physiology*. Elsevier Health Sciences.
- Harborne, J., 1987. *Metode Fitokimia: Penuntun Cara Modern Menganalisis Tumbuhan. Penerjemah Kosasih Padmawinata, Iwang Soediro; Penyunting Sofia Niksolihin*. Penerbit ITB, Bandung.
- Hong, H.C., Li, S.L., Zhang, X.Q., Ye, W.C., dan Zhang, Q.W., 2013. Flavonoids with A-Glucosidase Inhibitory Activities and Their Contents in the Leaves of *Morus atropurpurea*. *Chinese Medicine*, **8**: 19.
- Hossain, M.A., Roy, B.K., Ahmed, K., Chowdhury, A.S., dan Rashid, M.A., 2007. Antidiabetic Activity of *Andrographis paniculata*. *Dhaka University Journal of Pharmaceutical Sciences*, **6**: 15–20.
- Husen, R., Pihie, A.H.L., dan Nallappan, M., 2004. Screening for Antihyperglycaemic Activity in Several Local Herbs of Malaysia. *Journal of Ethnopharmacology*, **95**: 205–208.
- International Diabetes Federation, 2014. 'Complications of Diabetes' *International Diabetes Federation*. URL: <http://www.idf.org/complications-diabetes> (diakses tanggal 16/7/2014).

- International Expert Committee, 2009. International Expert Committee Report on the Role of the A1C Assay in the Diagnosis of Diabetes. *Diabetes Care*, **32**: 1327–1334.
- Jin, B.J., 2007. Evaluation of Hypoglycemic Property of *Morinda citrifolia* Fruit Extracts in Streptozotocin-Induced Diabetic Rats. *J. Trop. Med. Plants*, **8**: 15–19.
- Juvekar, A.R. dan Halade, G.V., 2006. Hypoglycemic Activity of *Cassia auriculata* in Neonatal Streptozotocin-induced Non-insulin Dependent Diabetes Mellitus in Rats. *Journal of Natural Remedies*, **6**: 14–18.
- Katzung, B.G., Masters, S., dan Trevor, A., 2012. *Basic and Clinical Pharmacology*, 12th ed. McGraw Hill.
- Kumar, A., Dora, J., Singh, A., dan Tripathi, R., 2012. A Review on King of Bitter (Kalmegh). *International Journal of Research in Pharmacy and Chemistry*, **2**: 116–124.
- Kustarini, I., Dewi, S.S., dan Ika, P.M., 2012. Efek Ekstrak Etanol *Morinda citrifolia* L (Mengkudu) Terhadap Kadar Gula Darah, Jumlah Neutrofil, dan Fibronektin Glomerulus Tikus Diabetes Mellitus. *Media Medika Indonesiana*, **46**: 178–183.
- Lee, H.W., Park, Y.S., Choi, J.W., Yi, S., dan Shin, W.S., 2003. Antidiabetic Effects of Chitosan Oligosaccharides in Neonatal Streptozotocin-Induced Noninsulin-Dependent Diabetes Mellitus in Rats. *Biological and Pharmaceutical Bulletin*, **26**: 1100–1103.
- Lee, K.W., Kim, Y.J., Lee, H.J., dan Lee, C.Y., 2003. Cocoa Has More Phenolic Phytochemicals and a Higher Antioxidant Capacity Than Teas and Red Wine. *Journal of Agricultural and Food Chemistry*, **51**: 7292–7295.
- Lee, S.Y., Park, S.L., Hwang, J.T., Yi, S.H., Nam, Y.D., dan Lim, S.I., 2012. Antidiabetic Effect of *Morinda citrifolia* (Noni) Fermented by Cheonggukjang in KK-A Diabetic Mice. *Evidence-Based Complementary and Alternative Medicine*, **2012**: e163280.
- Lenzen, S., 2008. The Mechanisms of Alloxan- and Streptozotocin-Induced Diabetes. *Diabetologia*, **51**: 216–226.
- Li, W., Xu, X., Zhang, H., Ma, C., Fong, H., van Breemen, R., dan Fritzloff, J., 2007. Secondary Metabolites from *Andrographis paniculata*. *Chem. Pharm. Bull.*, **55**: 455–458.
- Luzi, L. dan Pozza, G., 2007. Glibenclamide: An Old Drug with a Novel Mechanism of Action? *Acta Diabetologica*, **34**: 239–244.

- Mardiswojo, S. dan Rajakmangunsudarso, H., 1996. *Cabe Puyang Warisan Nenek Moyang I. Cetakan kedua*. Balai Pustaka, Jakarta.
- Marinova, D., Ribarofa, F., dan Atanassova, M., 2005. Total Phenolics and Total Flavonoids in Bulgarian Fruits and Vegetables. *Journal of the University of Chemical Technology and Metallurgy*, **40**: 255–260.
- Markham, K.R., 1988. *Cara Mengidentifikasi Flavonoid. Terjemahan Kosasih Padmawinata*. Penerbit ITB, Bandung.
- McClatchey, W., 2002. From Polynesian Healers to Health Food Stores: Changing Perspectives of *Morinda citrifolia* (Rubiaceae). *Integrative Cancer Therapies*, **1**: 110–120.
- Modak, M., Dixit, P., Londhe, J., Ghaskadbi, S., dan Paul, A.D.T., 2007. Indian Herbs and Herbal Drugs Used for the Treatment of Diabetes. *Journal of Clinical Biochemistry and Nutrition*, **40**: 163–173.
- Mujahid, R., 2011. Pemilihan Metode Analisis Flavonoid Secara Spektroskopi UV-Vis Serta Penerapannya pada Seledri (*Apium graveolens* L.), Murbei (*Morus alba* L.), Patikan Kebo (*Euphorbia hirta* L.), dan Jeruk Nipis (*Citrus aurantifolia*). *Tesis*. M.Sc. Fakultas Farmasi, Universitas Gadjah Mada, Yogyakarta.
- Nayak, B.S., Isitor, G.N., Maxwell, A., Bhogadi, V., dan Ramdath, D.D., 2007. Wound-Healing Activity of *Morinda citrifolia* Fruit Juice on Diabetes-Induced Rats. *Journal of Wound Care*, **16**: 83–86.
- Nayak, B.S., Marshall, J.R., Isitor, G., dan Adogwa, A., 2010. Hypoglycemic and Hepatoprotective Activity of Fermented Fruit Juice of *Morinda citrifolia* (Noni) in Diabetic Rats. *Evidence-Based Complementary and Alternative Medicine*, **2011**: e875293.
- Nayak, S. dan Mengi, S., 2010. Immunostimulant Activity of Noni (*Morinda citrifolia*) on T and B Lymphocytes. *Pharmaceutical Biology*, **48**: 724–731.
- Nugroho, A.E., 2006. Hewan Percobaan Diabetes Mellitus: Patologi Dan Mekanisme Aksi Diabetogenik. *Biodiversitas*, **7**: 378–382.
- Nugroho, A.E., Andrie, M., Warditiani, N.K., Siswanto, E., Pramono, S., dan Lukitaningsih, E., 2012. Antidiabetic and Antihiperlipidemic Effect of *Andrographis paniculata* (burm. F.) Nees and Andrographolide in High-Fructose-Fat-Fed Rats. *Indian Journal of Pharmacology*, **44**: 377–381.
- Nugroho, A.E., Rais, I.R., Setiawan, I., Pratiwi, P.Y., Hadibarata, T., Tegar, M., dan Pramono, S., 2014. Pancreatic Effect of Andrographolide Isolated

from *Andrographis paniculata* (burm. F.) Nees. *Pakistan Journal of Biological Sciences*, **17**: 22–31.

- Patel, D., Kumar, R., Laloo, D., dan Hemalatha, S., 2012. Diabetes Mellitus: An Overview on Its Pharmacological Aspects and Reported Medicinal Plants Having Antidiabetic Activity. *Asian Pacific Journal of Tropical Biomedicine*, **2**: 411–420.
- Pawlus, A.D. dan Kinghorn, A.D., 2007. Review of the Ethnobotany, Chemistry, Biological Activity and Safety of the Botanical Dietary Supplement *Morinda citrifolia* (Noni). *Journal of Pharmacy and Pharmacology*, **59**: 1587–1609.
- Pietta, P.G., 2000. Flavonoids as Antioxidants. *Journal of Natural Products*, **63**: 1035–1042.
- Pujiasmanto, B., Moenandir, J., Syamsulbahri, dan Kuswanto, 2007. Kajian Agroekologi dan Morfologi Sambiloto (*Andrographis paniculata* Ness.) pada Berbagai Habitat. *Biodiversitas*, **8**: 326–329.
- Ramachandran, A., Das, A., Joshi, S., Yajnik, C., Shah, S., dan Kumar, K., 2010. Current Status of Diabetes in India and Need for Novel Therapeutic Agents. *Journal of The Association of Physicians of India*, **58**: 7–9.
- 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.
- Ravikumar, R., Krishnamoorthy, P., dan Kalidoss, A., 2010. Antidiabetic and Antioxidant Efficacy of *Andrographis paniculata* in Alloxanized Albino Rats. *International Journal Of Pharmacy & Technology*, **2**: 1016–1027.
- Rees, D.A. dan Alcolado, J.C., 2005. Animal Models of Diabetes Mellitus. *Diabetic Medicine*, **22**: 359–370.
- Saraswaty, V., Srikandace, Y., Simbiyani, N.A., Jasmansyah, null, Setiyanto, H., dan Udin, Z., 2013. Antioxidant Activity and Total Phenolic Content of Endophytic Fungus *Fennellia nivea* NRRL 5504. *Pakistan Journal of Biological Sciences*, **16**: 1574–1578.
- Sari, K.R., 2014. Efek Hipoglikemik Kombinasi Ekstrak Larut Etanol Herba Sambiloto (*Andrographis paniculata* (burm.F.) Ness) dan Daun Sambung Nyawa (*Gynura procumbens* (lour.) Merr) Terstandar Andrografolid dan Kuersetin pada Tikus Diabetes Diinduksi Aloksan. *Tesis*. M.Sc. Fakultas Farmasi, Universitas Gadjah Mada, Yogyakarta.

- Semenya, S., Potgieter, M., dan Erasmus, L., 2012. Ethnobotanical Survey of Medicinal Plants Used by Bapedi Healers to Treat Diabetes Mellitus in the Limpopo Province, South Africa. *Journal of Ethnopharmacology*, **141**: 440–445.
- Serrano-Martín, X., Payares, G., dan Mendoza-León, A., 2006. Glibenclamide, a Blocker of K⁺ATP Channels, Shows Antileishmanial Activity in Experimental Murine Cutaneous Leishmaniasis. *Antimicrobial Agents and Chemotherapy*, **50**: 4214–4216.
- Sethiya, N.K., Trivedi, A., dan Mishra, S.H., 2015. Rapid Validated High Performance Thin Layer Chromatography Method for Simultaneous Estimation of Mangiferin and Scopoletin in *Canscora decussata* (South Indian Shankpushpi) Extract. *Revista Brasileira de Farmacognosia*, **25**: 193–198.
- Setiawan, I., 2013. Efek Anti Diabetes Kombinasi Ekstrak Terpurifikasi Herba Sambiloto (*Andrographis paniculata* (Burm.f.)Nees) dan Glibenklamid Pada Tikus DM Tipe 2 Defisiensi Insulin. *Tesis*. M.Sc. Fakultas Farmasi, Universitas Gadjah Mada, Yogyakarta.
- Singh, P., Srivastava, M.M., dan Khemani, L.D., 2009. Renoprotective Effects of *Andrographis paniculata* (burm. F.) Nees in Rats. *Upsala Journal of Medical Sciences*, **114**: 136–139.
- Singleton, V.L., Orthofer, R., dan Lamuela-Raventós, R.M., 1999. Analysis of Total Phenols and Other Oxidation Substrates and Antioxidants by Means of Folin-Ciocalteu Reagent. *Methods in Enzymology*, **299**: 152–178.
- Syamsul, E.S., Nugroho, A.E., dan Pramono, S., 2011. Aktivitas Antidiabetes Kombinasi Ekstrak Terpurifikasi Herba Sambiloto (*Andrographis paniculata* (burm.F.) Ness.) dan Metformin pada Tikus DM Tipe 2 Resisten Insulin. *Majalah Obat Tradisional*, **16**: 124–131.
- Szkudelski, T., 2001. The Mechanism of Alloxan and Streptozotocin Action in B Cells of the Rat Pancreas. *Physiological Research/ Academia Scientiarum Bohemoslovaca*, **50**: 537–546.
- Tiwari, A.K. dan Rao, M., 2002. Diabetes Mellitus and Multiple Therapeutic Approaches of Phytochemicals: Present Status and Future Prospects. *Current Science*, **83**: 30–38.
- Trivedi, N. dan Rawal, U.M., 2000. Hepatoprotective and Toxicological Evaluation of *Andrographis paniculata* on Severe Liver Damage. *Indian Journal of Pharmacology*, **32**: 288–293.

- United States Pharmacopeial Convention, 2011. *USP35 NF30, 2012: U. S. Pharmacopoeia National Formulary*. United States Pharmacopeial.
- Verma, A., Dewangan, P., Disha, K., dan Kela, S.P., 2013. Hypoglycemic and Hypolipidemic Activity of Scopoletin (Coumarin Derivative) in Streptozotocin Induced Diabetic Rats. *International Journal of Pharmaceutical Sciences Review & Research*, **22**: 79–83.
- Wagner, H., 2006. Multitarget Therapy – the Future of Treatment for More Than Just Functional Dyspepsia. *Phytomedicine*, **13**, **Supplement 1**: 122–129.
- Wagner, H., Blatt, S., dan Zgainski, E.M., 2013. *Plant Drug Analysis: A Thin Layer Chromatography Atlas*. Springer Science & Business Media.
- Wang, M.Y., West, B.J., Jensen, C.J., Nowicki, D., Su, C., Palu, A.K., dan Anderson, G., 2002. *Morinda citrifolia* (Noni): A Literature Review and Recent Advances in Noni Research. *Acta Pharmacologica Sinica*, **23**: 1127–1141.
- Wild, S., Roglic, G., Green, A., Sicree, R., dan King, H., 2004. Global Prevalence of Diabetes Estimates for the year 2000 and projections for 2030. *Diabetes Care*, **27**: 1047–1053.
- World Health Organization, 1999. *Definition, Diagnosis and Classification of Diabetes Mellitus and Its Complications: Report of a WHO Consultation. Part 1. Diagnosis and Classification of Diabetes Mellitus*. World Health Organization, Department of Noncommunicable Disease Surveillance, Geneva.
- 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.
- Zhang, B., Kang, M., Xie, Q., Xu, B., Sun, C., Chen, K., dan Wu, Y., 2011. Anthocyanins from Chinese Bayberry Extract Protect B Cells from Oxidative Stress-Mediated Injury Via HO-1 Upregulation. *Journal of Agricultural and Food Chemistry*, **59**: 537–545.
- 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, X.F. dan Tan, B.K.H., 2000. Antihyperglycaemic and Anti-Oxidant Properties of *Andrographis paniculata* in Normal and Diabetic Rats. *Clinical and Experimental Pharmacology and Physiology*, **27**: 358–363.