

## DAFTAR PUSTAKA

- ADA, 2015. 2. Classification and Diagnosis of Diabetes. *Diabetes Care* 38, S8–S16.
- Ahmad, M., Razak, A., Akowuah, G.A., Asmawi, Z., Zhari, I., 2007. HPLC profile and antihyperglycemic effect of ethanol extracts of *Andrographis paniculata* in normal and streptozotocin-induced diabetic rats. *J. Nat. Med.* 61, 422–429.
- Akbar, S., 2011. *Andrographis paniculata*: a review of pharmacological activities and clinical effects. *Altern. Med. Rev.* 16, 66–77.
- Andrie, M., 2012. 'Uji Aktivitas Antidiabetes Mellitus (DM) Tipe 2 Andrografolid dan Ekstrak Terpurifikasi Herba Sambiloto (*Andrographis paniculata* (Burm.f.) nees.) Melalui Peningkatan Translokasi Protein GLUT-4 pada Otot Paha Tikus Resisten Insulin', *Tesis, MSc*, Universitas Gadjah Mada, Yogyakarta.
- Arce-Esquivel, A.A., Mikus, C.R., Laughlin, M.H., 2013. Insulin Resistance and Endothelial Dysfunction: Macro and Microangiopathy, in: Type 2 Diabetes. *InTech*, Croatia, pp. 3–10.
- Arner, P., 2003. The adipocyte in insulin resistance: key molecules and the impact of the thiazolidinediones. *Trends Endocrinol. Metab.* 14, 137–145.
- Arora, S., 2012. Molecular Basis of Insulin Resistance and Its Relation to Metabolic Syndrome, in: Insulin Resistance.
- Augustine, A.W., Narasimhan, A., Vishwanathan, M., Karundevi, B., 2014. Evaluation of antidiabetic property of *Andrographis paniculata* powder in high fat and sucrose-induced type-2 diabetic adult male rat. *Asian Pac. J. Trop. Dis.* 4, S140–S147.
- Backer, C.A., Brink, R.C.B. van den, 1962. *Flora of Java*. Springer Netherlands, NVP Noordhoof, Groningen.
- Borhan, M.Z., Ahmad, R., Rusop, M., Abdullah, S., Borhan, M.Z., Ahmad, R., Rusop, M., Abdullah, S., 2013. Green Extraction: Enhanced Extraction Yield of Asiatic Acid from *Centella asiatica* (L.) Nanopowders, Green Extraction: Enhanced Extraction Yield of Asiatic Acid from *Centella asiatica* (L.) Nanopowders. *J. Appl. Chem*, 2013, e460168.
- BPOM RI, 2011. *Acuan Sediaan Herbal, Pertama*. ed. Badan Pengawas Obat dan Makanan RI.

- BPOM RI, 2007. Acuan Sediaan Herbal, Pertama. ed. Badan Pengawas Obat dan Makanan RI.
- Brinkhaus, B., Lindner, M., Schuppan, D., Hahn, E.G., 2000. Chemical, pharmacological and clinical profile of the East Asian medical plant *Centella asiatica*. *Phytomedicine* 7, 427–448.
- Carlson, C.J., Koterski, S., Sciotti, R.J., Pocard, G.B., Rondinone, C.M., 2003. Enhanced Basal Activation of Mitogen-Activated Protein Kinases in Adipocytes From Type 2 Diabetes. *Diabetes* 52, 634–641.
- Chauhan, P.K., Pandey, I.P., Dhatwali, V.K., 2010. Evaluation of the anti-diabetic effect of ethanolic and methanolic extracts of *Centella asiatica* leaves extract on alloxan induced diabetic rats. *Adv Biol Res* 4, 27–30.
- Departemen Kesehatan, R., 1986. Sediaan galenik. Departemen Kesehatan, Republik Indonesia.
- Edvardsson, U., Bergström, M., Alexandersson, M., Bamberg, K., Ljung, B., Dahllöf, B., 1999. Rosiglitazone (BRL49653), a PPAR  $\gamma$ -selective agonist, causes peroxisome proliferator-like liver effects in obese mice. *J. Lipid Res.* 40, 1177–1184.
- Evans, R.M., Barish, G.D., Wang, Y.-X., 2004. PPARs and the complex journey to obesity. *Nat. Med.* 10, 355–361.
- Gayathri, V., Lekshmi, P., Padmanabhan, R., 2011. Anti-diabetes activity of ethanol extract of *Centella asiatica* (L.) Urban (whole plant) in Streptozotocin-induced diabetic rats, isolation of an active fraction and toxicity evaluation of the extract. *Int. J. Med. Aromat. Plants* 1, 278–286.
- Ginsberg, H.N., 2000. Insulin resistance and cardiovascular disease. *J. Clin. Invest.* 106, 453–458.
- Gregoire, F.M., Smas, C.M., Sul, H.S., 1998. Understanding Adipocyte Differentiation. *Physiol. Rev.* 78, 783–809.
- Gunton, J.E., Cheung, N.W., Davis, T.M.E., Zoungas, S., Colagiuri, S., 2014. A new blood glucose management algorithm for type 2 diabetes: a position statement of the Australian Diabetes Society. *Med. J. Aust.* 201, 650–653.
- Harborne, J.B., 1987. Metode Fitokimia Penuntun Cara Modern Menganalisis Tumbuhan, Cetakan Kedua. ed. ITB, Bandung.
- He, W., 2013. Adipose Tissue-Specific PPAR  $\gamma$  Gene Targeting, in: Peroxisome Proliferator - Activated Receptors (PPARs), Methods and Protocols. *Humana Press*, New York, NY, pp. 118–119.

- Hossain, M.A., Roy, B.K., Ahmed, K., Chowdhury, A.S., Rashid, M.A., 2007. Antidiabetic activity of *Andrographis paniculata*. *Dhaka Univ. J. Pharm. Sci.* 6, 15–20.
- Hsu, Y.-H., Hsu, Y.-L., Liu, S.-H., Liao, H.-C., Lee, P.-X., Lin, C.-H., Lo, L.-C., Fu, S.-L., 2016. Development of a Bifunctional Andrographolide-Based Chemical Probe for Pharmacological Study. *Plos One* 11, e0152770.
- Hwang, C., T.M, L., S, M., M.D, L., 1997. Adipocyte differentiation and leptin expression. *Res. Gate*.
- IDF, 2016. IDF diabetes atlas - Home [WWW Document]. IDF. URL <http://www.diabetesatlas.org/> (accessed 4.15.16).
- Kido, Y., Nakae, J., Accili, D., 2001. The Insulin Receptor and Its Cellular Targets 1. *J. Clin. Endocrinol. Metab.* 86, 972–979.
- Koehler, L.H., 1954. Reaction of Deoxy Sugars with Anthrone. *Anal. Chem.* 26, 1914–1916.
- Laplante, M., Sell, H., MacNaul, K.L., Richard, D., Berger, J.P., Deshaies, Y., 2003. PPAR- Activation Mediates Adipose Depot–Specific Effects on Gene Expression and Lipoprotein Lipase Activity Mechanisms for Modulation of Postprandial Lipemia and Differential Adipose Accretion. *Diabetes* 52, 291–299.
- Lefterova, M.I., Lazar, M.A., 2009. New developments in adipogenesis. *Trends Endocrinol. Metab.* 20, 107–114.
- Lindawati, N.Y., Nugroho, A.E., Pramono, S., 2013. 'Pengaruh Kombinasi Ekstrak Terpurifikasi Herba Sambiloto (*Andrographis paniculata* (Burm. f.) Nees) dan Herba Pegagan (*Centella asiatica* (L.) Urban) Terhadap Kadar Glukosa Darah dan Translokasi Protein GLUT-4 pada Tikus Diabetes Mellitus Tipe 2 Resisten Insulin' *Tesis, MSc*, Universitas Gadjah Mada, Yogyakarta.
- Meeking, D., 2011. Understanding diabetes & endocrinology: a problem-orientated approach. *Manson Pub.*, London.
- Meenatchisundaram, S., Parameswari, G., Subbraj, T., Suganya, T., Michael, A., 2009. Medicinal and Pharmacological Activities of *Andrographis paniculata*–Review. *Ethnobot. Leaflet* 1.
- Meloan, C.E., 1999. Chemical Separations Principles Techniques And Experiments. Manhattan, Kansas.

- Nolte, M.S., 2012. Chapter 41. Pancreatic Hormones & Antidiabetic Drugs, in: Katzung, B.G., Masters, S.B., Trevor, A.J. (Eds.), *Basic & Clinical Pharmacology*. *The McGraw-Hill Companies*, New York, NY.
- Nugroho, A., Warditiani, N., Pramono, S., Andrie, M., Siswanto, E., Lukitaningsih, E., 2012. Antidiabetic and antihyperlipidemic effect of *Andrographis paniculata* (Burm. f.) Nees and andrographolide in high-fructose-fat-fed rats. *Indian J. Pharmacol.* 44, 377.
- Nugroho, A.E., Lindawati, N.Y., Herlyanti, K., Widyastuti, L., Pramono, S., 2013. Anti-diabetic effect of a combination of andrographolide-enriched extract of *Andrographis paniculata* (Burm f.) Nees and asiaticoside-enriched extract of *Centella asiatica* L. in high fructose-fat fed rats. *Indian J. Exp. Biol.* 51, 1101–1108.
- Nugroho, A.E., Sari, K.R.P., Sunarwidhi, A.L., 2014. Blood Glucose Reduction by Combination of *Andrographis paniculata* (Burm. f.) Ness Herbs and *Azadirachta indica* A. Juss Leaves in Alloxan-Induced Diabetic Rats. *J. Appl. Pharm. Sci.* 4, 30.
- Petersen, R.K., Madsen, L., Pedersen, L.M., Hallenborg, P., Hagland, H., Viste, K., Døskeland, S.O., Kristiansen, K., 2008. Cyclic AMP (cAMP)-Mediated Stimulation of Adipocyte Differentiation Requires the Synergistic Action of Epac- and cAMP-Dependent Protein Kinase-Dependent Processes. *Mol. Cell. Biol.* 28, 3804–3816.
- Pratley, R.E., Weyer, C., 2001. The role of impaired early insulin secretion in the pathogenesis of Type II diabetes mellitus. *Diabetologia* 44, 929–945.
- R Kokil, G., V Rewatkar, P., Verma, A., Thareja, S., R Naik, S., 2010. Pharmacology and chemistry of diabetes mellitus and antidiabetic drugs: a critical review. *Curr. Med. Chem.* 17, 4405–4423.
- Rangwala, S.M., Lazar, M.A., 2000. Transcriptional control of adipogenesis. *Annu. Rev. Nutr.* 20, 535–559.
- Rosen, E.D., Spiegelman, B.M., 2006. Adipocytes as regulators of energy balance and glucose homeostasis. *Nature* 444, 847–853.
- Shen, Y., Honma, N., Kobayashi, K., Jia, L.N., Hosono, T., Shindo, K., Ariga, T., Seki, T., 2014. Cinnamon Extract Enhances Glucose Uptake in 3T3-L1 Adipocytes and C2C12 Myocytes by Inducing LKB1-AMP-Activated Protein Kinase Signaling. *Plos One* 9, e87894.
- Shepherd, P.R., Kahn, B.B., 1999. Glucose transporters and insulin action—implications for insulin resistance and diabetes mellitus. *N. Engl. J. Med.* 341, 248–257.

- Shulman, G.I., 2000. Cellular mechanisms of insulin resistance. *J. Clin. Invest.* 106, 171.
- Siddle, K., 2005. The Insulin Receptor and Downstream Signalling, in: *Insulin Resistance Insulin Action and Its Disturbances in Disease*. John Wiley & Sons Ltd, Germany.
- Simonsen, T., 2006. *Illustrated pharmacology for nurses*. Hodder Arnold; Distributed in the United States of America by Oxford University Press, London; New York.
- Spalding, K.L., Arner, E., Westermark, P.O., Bernard, S., Buchholz, B.A., Bergmann, O., Blomqvist, L., Hoffstedt, J., Näslund, E., Britton, T., Concha, H., Hassan, M., Rydén, M., Frisén, J., Arner, P., 2008. Dynamics of fat cell turnover in humans. *Nature* 453, 783–787.
- Subramoniam, A., 2016. *Plants with Anti-Diabetes Mellitus Properties*. CRC Press.
- Tan, M.C.S., Oyong, G.G., Shen, C.-C., Ragasa, C.Y., 2016. Chemical Constituents of *Andrographis paniculata* (Burm. f.) Nees.
- Tjandrawinata, R., Wulan, Nailufar, F., Sinambela, Tandrasasmita, O., 2011. Glucose-lowering effect of DLBS3233 is mediated through phosphorylation of tyrosine and upregulation of PPAR&gamma; and GLUT4 expression. *Int. J. Gen. Med.* 345.
- Viollet, B., Guigas, B., Garcia, N.S., Leclerc, J., Foretz, M., Andreelli, F., 2012. Cellular and molecular mechanisms of metformin: an overview. *Clin. Sci. Lond. Engl.* 1979 122, 253.
- Vohra, K., Pal, G., Gupta, V.K., Singh, S., Bansal, Y., 2011. An Insight Of *Centella Asiatica* Linn. : A Review Of Recent Research.
- Whalen, K., 2015. Drug For Diabetes, in: *Lippincott Illustrated Reviews : Pharmacology*. Wolters Kluwer, Gainesville, Florida, pp. 335–346.
- Whalen, K., Finkel, R., Panavelil, T.A., 2014. *Pharmacology*, Sixth. ed.
- WHO, 2016. WHO | Diabetes programme [WWW Document]. WHO. URL <http://www.who.int/diabetes/en/> (accessed 4.15.16).
- Wibudi, A., Kiranadi, B., Manalu, W., Suyono, S., 2008. The traditional plant, *Andrographis paniculata* (Sambiloto), exhibits insulin-releasing actions in vitro. *Acta Medica Indones.* 40, 63–68.
- Widyawati, T., 2007. Aspek Farmakologi Sambiloto (*Andrographis paniculata* Nees). *Maj. Kedokt. Nusant.* 40, 216–222.

- Wilcox, G., 2005. Insulin and insulin resistance. *Clin Biochem Rev* 26, 19–39.
- Williams, C.L., Hayman, L.L., Daniels, S.R., Robinson, T.N., Steinberger, J., Paridon, S., Bazzarre, T., 2002. *Cardiovascular Health in Childhood. Circulation* 106, 143–160.
- Xing, Y., Yan, F., Liu, Y., Liu, Y., Zhao, Y., 2010. Matrine inhibits 3T3-L1 preadipocyte differentiation associated with suppression of ERK1/2 phosphorylation. *Biochem. Biophys. Res. Commun.* 396, 691–695.
- Youssef, J., Badr, M.Z., 2013. PPARs: History and Advances, in: Peroxisome Proliferator - Activated Receptors (PPARs), Methods and Protocols. *Humana Press*, New York, NY, pp. 1–4.
- Yu, B.C., Chang, C.K., Su, C.F., Cheng, J.T., 2008. Mediation of  $\beta$ -endorphin in andrographolide-induced plasma glucose-lowering action in type I diabetes-like animals. *Naunyn. Schmiedebergs Arch. Pharmacol.* 377, 529–540.
- Yu, B.-C., Chen, W.-C., Cheng, J.-T., others, 2003. Antihyperglycemic effect of andrographolide in streptozotocin-induced diabetic rats. *Planta Med.* 69, 1075–1079.
- Yulinah, E., Sukrasno, S., Fitri, M.A., 2001. Aktivitas antidiabetika ekstrak etanol herba sambiloto (*Andrographis paniculata* Nees (Acanthaceae)). *J. Mat. Sains* 6, 13–20.
- Zhang, X.-F., Tan, B., 2000. Anti-diabetic property of ethanolic extract of *Andrographis paniculata* in streptozotocin-diabetic rats. *Acta Pharmacol. Sin.* 21, 1157–1164.