

DAFTAR PUSTAKA

- Abel ED, O'Shea KM and Ramasamy R. Insulin Resistance: Metabolic mechanisms and consequences in the heart. *Arteriosclerosis Thrombosis and Vascular Biology*, 2012; 32 (9): 2068-2076.
- AbuKhader MM. The effect of route of administration thymoquinone toxicity in male and female rats. *Indian Journal Pharmaceutical Sciences*, 2012; 74: 195-200.
- Adi P. 2008. *Pengaruh Pemberian Tepung Bekicot Terhadap Kadar Total Protein Darah pada Rattus Norvegicus Strain Wistar dengan Diet Non Protein*. Tugas Akhir. Tidak diterbitkan. Fakultas Kedokteran, Universitas Brawijaya.
- Ahmad A, Husain A, Mujeeb M, Khan SA, Najmi AK, Siddique NA, Damanhour ZA, Anwar F. A review on therapeutic potential of *Nigella sativa*: A miracle herb. *Asian Pacific Journal of Tropical Biomedicine*, 2013; 3 (5): 337-352.
- Ahmadi R, Pishghadam S, Mollaamine, Monfared MRZ. Comparing the Effects of Ginger and Glibenclamide on Dihydroxybenzoic Metabolites Produced in Stz-Induced Diabetic Rats. *International Journal of Endocrinology and Metabolism*, 2013; 11 (4): 1-5.
- Akram M. Diabetes Mellitus Type II: Treatment Strategies and Options: A Review. *Journal of Diabetes & Metabolism*, 2013; 4 (9): 1-9.
- Al-Ali A, Alkhawajah AA, Randhawa MA and Shaikh NA. Oral and Intraperitoneal LD₅₀ of Thymoquinone, an Active Principle of *Nigella Sativa*, in Mice and Rats. *Journal Ayub Medical College Abbottabad*, 2008; 20 (2): 107-112.
- Al-Majed AA, Al-Omar FA, Nagi MN. Neuroprotective effects of thymoquinone against transient forebrain ischemia in the rat hippocampus. *European Journal of Pharmacology*, 2006; 543: 40-47.
- Al-Naqeeb G, Ismail M and Al-Zubairi AS. Fatty Acid Profile, α -Tocopherol Content and Total Antioxidant Activity of Oil Extracted from *Nigella sativa* Seeds. *International Journal of Pharmacology*, 2009; 5 (4): 244-250.
- Amel B. Traditional treatment of high blood pressure and diabetes in Souk Ahras. *Journal of Pharmacognosy and Phytotherapy*, 2013; 5 (1): 12-20.
- Andaloussi AB, Martineau L, Vuong T, Meddah B, Madiraju P, Settaf A and Haddad PS. The In Vivo Antidiabetic Activity of *Nigella sativa* Is Mediated through Activation of the AMPK Pathway and Increased Muscle Glut4 Content. *Evidence-Based Complementary and Alternative Medicine*, 2011; 10: 1-9.

- Andreollo NA, Santos EF, Araujo MR, Lopes LR. Rat's Age Versus Human's Age: What is The Relationship?. *Arquivos Brasileiros Cirurgia Digestiva*, 2012; 25 (1): 49-51.
- Anggraeni MM, Sutijati E. Pemberian Quersetin Terhadap Perubahan Kadar TNF-Alpha Pada Serum Tikus Wistar Dengan Diet Tinggi Karbohidrat. *Jurnal Kesehatan*, 2009; 7 (2): 67-73.
- Arfiyanti DA. 2010. *Efek Ekstrak Etanol Daun Ceplukan (Physalis minima L) Terhadap Kadar Malondialdehyde (MDA) Serum Tikus Putih (Rattus norvegicus) Strain Wistar Yang Dilakukan Ovariectomy*. Tugas Akhir. Tidak diterbitkan, Fakultas Kedokteran Universitas Brawijaya, Malang.
- Arulmozhi DK, Veeranjanyulu A and Bodhankar SL. Neonatal streptozotocin-induced rat model of Type 2 diabetes mellitus: A glance. *Indian Journal of Pharmacology*, 2004; 36 (4): 217-221.
- Bandeira, SM, de Fonseca, LJS, Guedes, GS, Rabelo, LA, Goulart, MOF and Vasconcelos, SML. Oxidative Stress as an Underlying Contributor in the Development of Chronic Complication in Diabetes Mellitus. *International Journal of Molecular Science*, 2013; 14: 3265-3284.
- Bastaki S. Diabetes Mellitus and its Treatment. *International Journal Diabetes & Metabolism*, 2005; 13: 111-134.
- Bolton JL, Trush MA, Penning TM, Dryhurst G and Monks TJ. Role of quinones in toxicology. (Abstract). *Chemical Research in Toxicology*, 2000; 13 (3): 135-160.
- Bruno G, Runzo C, Cavallo-Perin P, Merletti F, Rivetti M, Pinach S, Novelli G, Trovati M, Cerutti F, Pagano G. Incidence of Type 1 and Type 2 Diabetes in Adults Aged 30-49 Years. *Diabetes Care*, 2005; 28: 2613-2619.
- Buchanan TA and Xiang AH. Gestational diabetes mellitus. *The Journal Clinical Investigation*, 2005; 115 (3): 485-491.
- Canadian Diabetes Association 2008 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. *Canadian Journal of Diabetes*, 2008; 32 (1): 1-17.
- Chang YC, Chuang LM. The role of oxidative stress in the pathogenesis of type 2 diabetes: from molecular mechanism to clinical implication. *American Journal of Translational Research*, 2010; 2 (3): 316-331.
- Chang CLT, Lin Y, Bartolome AP, Chen YC, Chiu SC and Yang WC. Herbal Therapies for Type 2 Diabetes Mellitus: Chemistry, Biology, and Potential Application of Selected Plants and Compounds. *Evidence-Based Complementary and Alternative Medicine*, 2013; p. 1-33.

- Chung SSM, Ho ECM, Lam KSL and Chung SK. Contribution of Polyol Pathway to Diabetes-Induced Oxidative Stress. *Journal of the American Society Nephrology*, 2003; 14: 223-236.
- Cook CL, Johnson JT and Wade WE. 2008. Diabetes Mellitus. In Burns MAV, Wells BG, Schwinghammer TL, Malone PM, Kolesar JM, Rotschafer JC, Dipiro JT (Eds), *Pharmacotherapy principles & practice*, p.643-666.
- Deacon CF. Dipeptidyl peptidase-4 inhibitor in the treatment of type 2 diabetes: comparative review. *Diabetes, Obesity and Metabolism*, 2011; 13: 7-18.
- DeFronzo RA. Pharmacologic Therapy for Type 2 Diabetes Mellitus. *Annals of Internal Medicine*, 1999; 131: 281-303.
- Departemen Kesehatan Republik Indonesia. 1989. *Materia Medika Indonesia*, Jilid V. Menteri Kesehatan. Jakarta.
- Direktorat Bina Farmasi Komunitas dan Klinik. 2005. *Pharmaceutical Care Untuk Penyakit Diabetes Mellitus*. Departemen Kesehatan Republik Indonesia. Jakarta.
- Ekoé JM, Punthakee Z, Ransom T, Prebtani APH, Goldenberg R. 2013. Screening for type 1 and Type 2 Diabetes. In Lau D *et al* (Eds), *Can J Diabetes*, p.12-15.
- Fauci AS, Braunwald E, Kasper DL, Hauser SL, Longo, DL, Jameson JL, Loscalzo J. 2008. *Harrison's Principles of Internal Medicine Seventeenth Edition*. USA: McGraw-Hill Companies, Inc.
- Federer W. 1991. *Statistic and Society: Data Collection and Interpretation, 2nd Ed*. New York: Marcel Dekker.
- Fox JG, Anderson LC, Loew FM and Quimby FW. 2002. *Laboratory Animal Medicine 2nd edition*. USA: Academic Press.
- Gauguier D, Bihoreau MT, Oicon L and Ktorza A. Insulin Secretion In Adults Rat After Intrauterine Exposure to Mild hyperglycemia During Late Gestation. *Diabetes*, 1991; 40 (2): 109-114.
- Ghezzi AC, Cambri LT, Botezelli JD, Ribeiro C, Dalia RA and de Mello MAR. Metabolic syndrome markers in wistar rats of different ages. *Diabetology & Metabolic Syndrome*, 2012; 4 (16): 1-7.
- Giacco F and Brownlee M. Oxidative Stress and Diabetic Complication. *Journal of The American Heart Association*, 2010; 107: 1058-1070.
- Goldenberg, R, Punthakee, Z. 2013. Definition, Classification and Diagnosis of Diabetes, Prediabetes and Metabolic Syndrome. In Lau D *et al* (Eds), *Canadian Journal of Diabetes*, 37: 8-11.

- Goraca A, Piechota A, Kolega HH. Effect of Alpha-Lipoic Acid on LPS-Induced Oxidative Stress in The Heart. *Journal of Physiology and Pharmacology*, 2009; 60 (1): 61-68.
- Gurgenova K and Wawrzyniak P. Dynamic and static solubility of thymoquinone in the supercritical carbone dioxide. *Inzynieria I Aparatura Chemiczna*, 2012; 51 (6):320-321.
- Hakim J. 1993. Reactive oxygen species and inflammation. (Abstract). *Comptes Rendus des Seances de la Societe de Biologie et de ses Filiales*, 187 (3): 286-295.
- Handayani W, Rudijanto A and Indra MR. Susu Kedelai Menurunkan Resistensi Insulin pada Rattus norvegicus Model Diabetes Melitus Tipe 2. *Jurnal Kedokteran Brawijaya*, 2009; 25 (2): 60-66.
- Hegab Z, Gibbons S, Neyses L, Mamas MA. Role of advanced glycation end products in cardiovascular disease. *World Journal of Cardiology*, 2012; 4 (4): 90-102.
- Halliwell B, Whiteman M. Measuring reactive species and oxidative damage in vivo and in cell culture: how should you do it and what do the results mean?. *British Journal of Pharmacology*, 2004; 142: 231-255.
- Ilie M and Margina D. 2012. Trends in the Evaluation of Lipid Peroxidation Processes. In Catala A (Ed), *Lipid Peroxidation*, In Tech Prepress, Croatia, p.111-130.
- Inoguchi T, Sonta T, Tsubouchi H, Etoh T, Kakimoto M, Sonoda N, Sato N, Sekiguchi N, Kobayashi K, Sumimoto H, Utsumi H and Nawata H. Protein Kinase C-Dependent Increase in Reactive Oxygen Species (ROS) Production in Vascular Tissues of Diabetes: Role of Vascular NAD(P)H Oxidase. *Journal of the American Society of Nephrology*, 2003; 14: 227-232.
- International Diabetes Federation. 2012. *Global Guideline for Type 2 Diabetes*. Brussel: Merck and Co., Inc.
- Janan FF, Santosa RSS, Sulistiowati M. Pengaruh Lama Maserasi dan Perbandingan Kuning Telur Dengan Etanol Pada Pembuatan Tepung Kuning Telur Puyuh Terhadap Kadar Protein dan Lemak. *Jurnal Ilmiah Peternakan*, 2013; 1 (2): 710-717.
- Jeong YC, Nakamura J, Upton PB and Swenberg JA. Pyrimidol[1,2-a]-purin-10(3H)-one, M₁G, is less prone to artifact than base oxidation. *Nucleic Acid Research*, 2005; 33 (19): 6426-6433.
- Kangralkar, VA, Patil SD and Bandivadekar RM. Oxidative Stress and Diabetes : A Review. *International Journal of Pharmaceutical Applications*, 2010; 1: 38-45.

- Kiang JG, Fukumoto R and Gorbunov NV. 2012. Lipid Peroxidation After Ionizing Irradiation leads to Apoptosis and Autophagy. In Catala A (Ed), *Lipid Peroxidation*, In Tech Prepress, Croatia, p.261-277.
- Kiencke S, Handschin R, Dahlen R, Muser J, LaRocca HPB, Schumann J, Felix B, Berneis K and Rickenbacher P. Pre-clinical diabetic cardiomyopathy: prevalence, screening, and outcome. *European Journal of Heart Failure*, 2010; 12: 951-957.
- Kumawat M, Singh I, Singh N, Sing V, Kharb S. Lipid Peroxidation and Lipid Profile in Type II Diabetes Mellitus. *WebmedCentral BIOCHEMISTRY*, 2012; 3 (3): 31-47.
- Leong XF, Mustafa MR and Jaarin K. Nigella sativa and Its Protective Role in Oxidative Stress and Hypertension. *Evidence-Based Complementary and Alternative Medicine*, 2013; p. 1-9.
- Lin Y and Zhongjie S. Current views on type 2 diabetes. *Journal of Endocrinology*, 2010; 204 (1): 1-18.
- Losso, JN, and Bawadi, HA. Hypoxia Inducible Factor Pathways as Targets for Functional Foods. *Journal of Agricultural and Food Chemistry*, 2005; 53: 3751-3768.
- Maniyar Y and Bhixavatimath P. Antihyperglycemic and hypolipidemic activities of aqueous extract of Carica papaya Linn. Leaves in alloxan-induced diabetic rats. *Journal Ayurveda and Integrative Medicine*, 2012; 3 (2): 70-74.
- Mahreen, R, Mohsin, M, Nasreen, Z, Siraj, M, Ishaq, M. Significantly increased levels of serum malondialdehyde in type 2 diabetic with myocardial infarction. *International Journal of Diabetes in Developing Countries*, 2010; 30 (1): 49-51.
- Marliana SD, Suryanti V, Suyono. Skrining Fitokimia Kromatografi Lapis Tipis Komponen Kimia Buah Labu Siam (*Sechium edule* Jacq. Swartz.) dalam Ekstrak Etanol. *Biofarmasi*, 2005; 3 (1): 26-31.
- Mathur ML, Gaur J, Sharma R, Haldiya KR. Antidiabetic Properties of a Spice Plant Nigella sativa. *Journal of Endocrinol and Metabolism*, 2011; 1 (1): 1-8.
- Margout D, Kelly MT, Meunier A, Auinger D, Pelissier Y and Larroque M. Morphological, microscopic and chemical comparison between Nigella sativa L. Cv (black cumin) and Nigella damascena L. Cv. *Journal of Food Agriculture & Environment*, 2013; 11 (1): 165-171.
- McKarsie BD. 1996. Oxidative Stress. (online) (<http://www.plantstress.com/articles/oxidative%20Stress.htm>, diakses tanggal 12 Desember 2013).

- Mohora M, Greabu M, Muscurel C, Duta C, totan A. The Source and the Targets of Oxidative Stress in the Etiology of Diabetic Complications. *Romanian Journal Biophys*, 2007; 17 (2): 63-84.
- Morello CM. Pharmacokinetics and pharmacodynamics of insulin analogs in special populations with type 2 diabetes mellitus. *International Journal of General Medicine*, 2011; 4: 827-835.
- Moussa SA. Oxidative Stress in Diabetes Mellitus. *Romanian Journal of Biophysics*, 2008; 18 (3): 225-236.
- Nugroho AE. Hewan Percobaan Diabetes Mellitus : Patologi dan Mekanisme Aksi Diabetogenik. *BIODIVERSITAS*, 2006; 7 (4): 378-382.
- O'Brien. Molecular mechanisms of quinone cytotoxicity. (Abstract). *Chemico-Biological Interactions*, 1992; 81 (1-2): 219.
- Ohshima H, Tatemichi M, Sawa T. Chemical basis of inflammation-induced carcinogenesis. (Abstract). *Archives of Biochemistry and Biophysics*, 2003; 417 (1): 3-11.
- Ozkaya YG. 2012. The Role of Physical Exercise on Lipid Peroxidation in Diabetic Complications. In Catala A (Ed), *Lipid Peroxidation*, In Tech Prepress, Croatia, p.293-314.
- Paarakh, Padmaa. *Nigella sativa* Linn.-Aa Comprehensive Review. *Indian Journal of Natural Products and Resources*, 2010; 1 (4): 409-429.
- Paget G and Barnes J. 1964. Toxicity test in Evaluation of Drug Activities. In Laurence (Eds), *Pharmacometrics*. In Academic press, London, New York, p. 161-162.
- Patidar D and Dwivedi SK. Diabetes Mellitus: An Update. *International Journal of Pharmaceutical & Research Sciences*, 2012; 1 (4): 259-276.
- Paavonen AS, Watson AMD, Li J, Paavonen K, Koitka A, Calkin AC, Barit D, Coughlan MT, Drew BG, Lancaster GI, Thomas M, Forbes JM, Mawroth PP, Bierhaus A, Cooper ME and Dahm KAJ. Receptor for Advanced Glycation End Products (RAGE) Deficiency Attenuates the Development of Atherosclerosis in Diabetes. *Original Article Diabetes*, 2008; 57: 2461-2469.
- PERSAGI. 2005. *Daftar Komposisi Bahan Makanan*. Jakarta: PERSAGI.
- Petznick A. Insulin Management of Type 2 Diabetes Mellitus. *American Family Physician*, 2011, 84 (2): 183-190.
- Pittas AG, Joseph NA and Greenberg AS. Adipocytokines and Insulin Resistance. *The Journal of Clinical Endocrinology and Metabolism*, 2004; 89 (2): 447-452.

- Powers AC. 2010. Diabetes Mellitus. In Jameson JL (Ed). *Harrison's Endocrinology Second Edition*, McGraw-Hill Companies, Inc, USA, p. 267-313.
- Rahmatullah M, Ishika T, Rahman M, Swarna A, Khan T, Monalisa MN, Seraj S, Mou SM, Mahal MJ and Biswas KR. Plants Prescribed For Both Preventive and Therapeutic Purpose By The Traditional Healers of The Bede Community Residing By The turag River, Dhaka District. *American-Eurasian Journal os Sustainable Agriculture*, 2011; 5 (3): 325-331.
- Repetto M, Semprine J and Boveris A. 2012. Lipid Peroxidation: Chemical Mechanism, Biological Implications and Analytical Determination. In Catala A (Ed), *Lipid Peroxidation*, In Tech Prepress, Croatia, p. 3-30.
- Rousselot B, B Raji, S Walrand, M Albert, D Jore, A Legrand, J Peynet, MP Vasson. 2003. An intracellular modulation of free radical production could contribute to the beneficial effect of metformin towards oxidative stress. (Abstract). *Metabolism*, 52 (5): 586-589.
- Salem ML. Immunomodulatory and therapeutic properties of the Nigella sativa L. Seed. *International Immunopharmacology*, 2005; 5: 1749-1770.
- Schafer FQ, Qian SY and Buettner GR. Iron and Free Radical Oxidations in Cell Membranes. *Cellular and Molecular Biology*, 2000; 46 (3): 657-662.
- Sethi A. 2003. *Systematic Lab Experiments in Organic Chemistry*. Delhi: New Age International.
- Shahidi F and Zhong Y. 2005. Lipid Oxidation: Measurement Methods. In Shahidi F (Ed), *Bailey's Industrial Oil & Fat Products Sixth Edition*, Canada, p. 357-385.
- Sharma NK, Ahirwar D, Jhade D and Gupta S. Medicinal and Pharmacological Potential of Nigella Sativa: A Review. *Ethnobotanical Review*, 2009; 13: 946-955.
- Shinde SN, Dhadke VN, Suryakar AN. Evaluation of Oxidative Stress in Type 2 Diabetes Mellitus and Follow-up Along with Vitamin E Supplementation. *Indian Journal Clinical Biochemistry*, 2010; 26 (1): 74-77.
- Shubrook J, Colucci R, Guo A and Schwartz F. Saxagliptin: A Selective DPP-4 inhibitor for the treatment of Type 2 Diabetes Mellitus. *Clinical Medicine Insight: Endocrinology and Diabetes*, 2011; 4: 1-12.
- Silbernagl S and Lang F. 2000. *Color Atlas of Pathophysiology*. German: Thieme.
- Singh R, Barden A, Mori T, Beilin T. Advanced glycation end-products: a review. *Diabetologia*, 2001; 44: 129-146.
- Sobrevilla V, Villa B, Aguilar VD, Ramos CNR and Avila V. Effect of Varying Dose and Administration of Streptozotocin on Blood Sugar in Male CD1 Mice. *Proceedings of the Western Pharmacology Society*, 2011; 54: 5-9.

- Standiford CJ, Vijan S, Choe HM, Harrison RV, Richardson CR, Wyckoff JA. Management of Type 2 Diabetes Mellitus. *Guidelines for Clinical Care Ambulatory*, 2012, p. 1-27.
- Tembhurne SV, Feroz S, More BH and Sakarkar DM. A review on therapeutic potential of *Nigella sativa* (kalonji) seeds, *Journal of Medicinal Plants Research*, 2014; 8 (3): 167-177.
- Thompson, D, Berger, H, Feig, D, Gagonon, R, Kader, T, Keely, E, Kozak, S, Ryan, E, Sermer, M, Vinokuroff, C. 2013. Diabetes and Pregnancy. In Lau D *et al* (Eds), *Canadian Journal of Diabetes*, 37, p.168-183.
- Triplitt CL, Reasner CA and Isley WL. 2008. Diabetes Mellitus. 2008. In Dipro JT, Talbert RL, Yee GC, Matzke GR, Wells BG, Posey LM (Eds), *Pharmacotherapy: a Pathophysiological Approach, 7th Edition*, p.1205-1241.
- Tsutsui H, Kinugawa S, Matsushima S and Yokota T. Oxidative stress in cardiac and skeletal muscle dysfunction associated with diabetes mellitus. *Review Journal of Clinical Biochemistry and Nutrition*, 2010; 48 (1): 68-71.
- Uchida K, Kanematsu M, Sakai K, Matsuda T, Hattori N, Mizuno Y, Suzuki D, Miyata T, Noguchi N, Niki E and Osawa T. Protein-bound acrolein: Potential markers for oxidative stress. *Proceedings of the National Academy of Sciences USA*, 1998; 95: 4882-4887.
- Uslu C, Taysi S and Bakan N. Lipid Peroxidation and Antioxidant Enzyme Activities in Experimental Maxillary Sinusitis. *Annals of Clinical & Laboratory Science*, 2003; 33 (1): 18-22.
- U.S National Library of Medicine. 2014. GAA. (online) (<http://ghr.nlm.nih.gov/gene/GAA>), diakses tanggal 09 Januari 2014).
- U.S Pharmacopeia. 2007
- Virkamäki A, ueki K and Kahn R. Protein-protein interaction in insulin signaling and the molecular mechanisms of insulin resistance. The *Journal of Clinical Investigation*, 1999; 103 (7): 931-943.
- Wang HJ, Jin YX, Shen W, Neng J, Wu T, Li YJ and Fu ZW. Low dose streptozotocin (STZ) combined with high energy intake can effectively induce type 2 diabetes through altering the related gene expression. *Asia Pacific Journal of Clinical Nutrition*, 2007; 16 (1): 412-417.
- Wang L, Duan G, Lu Y, Pang S, Huang X, Jiang Q and Dang N. The Effect of Simvastatin on Glucose Homeostasis in Streptozotocin Induced Type 2 Diabetic Rats. *Journal of Diabetes Research*, 2013; p.1-5.

Watanabe K, Thandavarayan RA, Harima M, Sari FR, Gurusamy N, Veeraveedu PT, Mito S, Arozal W, Sukumaran V, Laksmanan AP, Soetikno V, Kodama M and Aizawa Y. Role of Differential Signaling Pathways and Oxidative Stress in Diabetic Cardiomyopathy. *Current Cardiology Reviews*, 2010; 6: 280-290.

Winarsi, H. 2007. *Antioksidan Alami & Radikal Bebas*. Yogyakarta : Kanisius.

WHO. 2006. *Guidelines for prevention, management and care of diabetes mellitus*. Egypt: WHO.

WHO. 2011. *Global status report on noncommunicable diseases 2010*. Italy: WHO.

WHO. 2013. Diabetes. (online)
(<http://www.who.int/mediacentre/factsheets/fs312/en/>), diakses tanggal 31 Januari 2014).

Yoruk O, Gur FO, Uyanik H, Yasar M, Mutlu V, Altas E, Baysal E, Taysi S. Antioxidant Effects of *Nigella sativa* in the Treatment of Experimentally Induced Rhinosinusitis. *Macedonia Journal of Medical Science*, 2010; 3(2): 132-137.

