

DAFTAR PUSTAKA

- Abdelmeguid NE, Fakhoury R, Kamal SM, and Wafai RJ. Effects of *Nigella sativa* and thymoquinone on biochemical and subcellular changes in pancreatic b-cells of streptozotocin-induced diabetic rats. *Journal of Diabetes*, 2010; 2: 256–266.
- ADA. Position Statement: Diagnosis and Classification of Diabetes Mellitus. *Diabetes Care*, 2013; 36 (1).
- Adeghate E and Kalász H. Amylin Analogues in The Treatment of Diabetes Mellitus: Medical Chemistry and Structural Basis of Its Function. *Open Medical Chemistry Journal*, 2011; 5 (2): 78-81.
- Aggarwal BB, Kunnumakkara AB. 2009. *Molecular Targets and Therapeutic Uses of Spices: Modern Uses for Ancient Medicine*, World Scientific Publishing Co. Pte. Ltd, Singapura, p. 260.
- Aggarwal NS. Nutritional Disorders & Therapy A Review of Recent Investigations on Medicinal Herbs Possessing Anti-Diabetic Properties. *Journal Nutrition Disorders Therapy*, 2011; 1 (1): 1-10.
- Ahmad A, Husain A, Mujeeb M. 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 F, 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): e10266.
- Akagi T, Masanori B, Mitsuru A. Biodegradable Nanoparticles as Vaccine Adjuvants and Delivery Systems: Regulation of Immune Responses by Nanoparticle-Based Vaccine. *Department of Applied Chemistry, Graduate School of Engineering, Osaka University*, 2011; 2-1 Yamadaoka, Suita, Osaka 565-0871, Japan.
- Akash MSH, Rehman K, Rasool F. Alternate therapy of Type 2 Diabetes Mellitus (T2DM) with *Nigella* (Ranunculaceae). *Journal of Medicinal Plants Research*, 2011; 5 (31): 6885-6889.
- Akloul R, Boukenouche A, Pauw E. Chemical Composition of the Essential Oil of *Nigella sativa* Seeds Extracted by Microwave Steam Distillation. *Journal of Essential Oil Bearing Plants*, 2013; 16 (6): 781-794.
- Al-Attar, Atef M, Wafa'a A, Al-Taisan. Preventive Effects of Black Seed (*Nigella Sativa*) Extract on Sprague Dawley Rats Exposed to Diazinon. *Australian Journal of Basic and Applied Sciences*, 2010; 4 (5): 957-968.
- Al-Hader A, Aquel M, and Hasan Z. Hypoglycemic Effects of The Volatile Oil of *Nigella sativa*. *International Journal of Pharmacognosy*, 1993; 31: 96-100.

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.

Alam S, Khan ZI, Mustafa G, Kumar M, Islam F, Bhatnagar A, et al. Development and Evaluation of Thymoquinone-Encapsulated Chitosan Nanoparticles for Nose-to-Brain Targeting: A Pharmacoscintigraphic Study. *International Journal of Nanomedicine*, 2012; 7: 5705-5718.

Alimohammadi S, Rahim H, Javad J, Danial K, Reza M, Maryam T, et al. Protective and Antidiabetic Effects of Extract from *Nigella sativa* on Blood Glucose Concentrations Against Streptozotocin (STZ)-Induced Diabetic in Rats: An Experimental Study with Histopathological Evaluation. *Diagnostic Pathology*, 2013; 8 (137): 1-7.

Andreollo NA, Santos EF, Araujo NR, Lopes LR. 2012. *Rat's Age Versus Human's Age*. UNICAMP, Brazil.

Anne MK, Lloyd YY, Brian KA, Robin LC, Joseph GB, Wayne AK, et al. 2009. *Applied Therapeutics: The Clinical Use of Drugs*, 9th Ed., Lippincott Williams & Wilkins, Philadelphia.

Archer M, Carin S, and Gary O. 2013. *Glucagon-Like Peptide-1 (GLP-1) Receptor Agonist Drug Class Review*. Final Report. University of Utah College of Pharmacy, Salt Lake City.

Arora, Rajesh. 2008. *Herbal Radiomodulators. Applications in Medicine, Homeland Defence & Space*. UK: Biddles Ltd, Kings Lynn, (online), (http://books.google.co.id/books?id=ILdRCuTFdj0C&pg=PA56&dq=nigella+sativa&hl=en&sa=X&ei=w3v1U7XLC5CJuASTyYDIAw&redir_esc=y#v=o_nepage&q=nigella%20sativa&f=false, diakes 22 Agustus 2014).

Bamosa AO, Kaatabi H, Lebda M, Elq AA, and Al-Sultan A. Effect of *Nigella Sativa* Seeds on The Glycemic Control of Patients with Type 2 Diabetes Mellitus. *Indian Journal of Physiology Pharmacology*, 2010; 54 (4): 344-354.

Bandeira SM, 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.

Basha, I.A., Rashed, M.S & Aboul-Enein, H.Y. 2006. TLC Assay of Thymoquinone in Black Seed Oil (*Nigella Sativa Linn*) and Identification of Dithymoquinone and Thymol. (Abstract). *Journal of Liquid Chromatography*, 18 (1): 105-115.

Bastaki S. Review Diabetes Mellitus and Its Treatment. *International Journal Diabetes & Metabolism*, 2005; 13: 111-134.

Benhaddou-Andaloussi A, Martineau L, Vuong T, Meddah B, Madiraju P, Settaf A, et al. 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; 1-9.

- Bhardwaj V, Ankola DD, Gupta SC, Schneider M, Lehr C, and Kumar MN. PLGA Nanoparticles Stabilized with Cationic Surfactant: Safety Studies and Application in Oral Delivery of Paclitaxel to Treat Chemical-Induce Breast Cancer in Rat. *Pharmaceutical Research*, 2009; 26 (11).
- Bhardwaj V, Hariharan S, Bala I, Lamprecht A, Kumar N, Panchagnula R, et al. Pharmaceutical Aspects of Polymeric Nanoparticles for Oral Delivery. *Journal of Biomedical Nanotechnology*, 2005; 1: 235-258.
- Bhaskar S, Tian F, Stoeger T, Kreyling W, Fuente JM, Grazú V, et al. Multifunctional Nanocarriers for diagnostics, drug delivery and targeted treatment across blood-brain barrier: perspectives on tracking and neuroimaging. *Particle and Fibre Toxicology*, 2010; 7: 3.
- Bolton JL, Trush MA, Penning TM, Dryhurst G, and Monks TJ. Role of quinines in toxicology. (Abstract). *Chemical Research in Toxicolog*, 2000; 13 (3): 135-160.
- Brunner and Suddarth. 2001. *A Text Book of Medical-Surgical Nursing: Foot and Leg Problems in Diabetes*, 9th Ed., Lippin cott, Raven publisher, 1016-1017.
- Can A, Akev N, Ozsoy N, Bolkent S, Arda BP, Yanardag R, et al. Effect of *Aloe vera* Leaf Gel and Pulp Extracts on the Liver in Type-II Diabetic Rat Models. *Biology Pharmacy Bulletin.*, 2004; 27 (5): 694-698.
- Centers of Disease Control and Prevention. Age-Adjusted Percentage of People with Diabetes Aged 35 Years or Older Reporting Heart Disease or Stroke, by Condition, United States, 1997–2011, Diabetes Public Health Resource, (online), (<http://www.cdc.gov/diabetes/statistics/cvd/fig2.htm>, diakses 23 Oktober 2014).
- Chinedu AA, Alani SO, and Olaide AO. Effect of the Ethanolic Leaf Extract of *Moringa oleifera* on Insulin Resistance in Streptozocin Induced Diabetic Rats. *Journal of Plant Sciences*, 2014; 2(6-1): 5-12.
- Cipierre C., Stéphane H, Delphine M, Jean-Paul S, and Jean-Charles P. 2013. Malondialdehyde Adduct to Hemoglobin: A New Marker of Oxidative Stress Suitable for Full-Term and Preterm Neonates. *Clinical Study Oxidative Medicine and Cellular Longevity*, 2013; 1-6.
- Colberg SR, Ronald JS, Bo F, Judith GR, Bryan JB, Richard RR, et al. Exercise and Type 2 Diabetes. The American College of Sports Medicine and the American Diabetes Association: Joint Position Statement. *Diabetes Care*, 2010; 33 (12): 147-167.
- 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*, p643-666.

- Cooper and Harirforoosh. Design and Optimization of PLGA-Based Diclofenac Loaded Nanoparticles. *Plos One*, 2014; 9 (1): 1-10.
- Corwin EJ. 2009. Patofisiologi: Buku Saku/Elizabeth J. Corwin; alih bahasa, Nike Budhi Subekti; editor edisi bahasa Indonesia, Egi Komara Yudha et al. – Ed.3., EGC, Jakarta.
- Danhier F, Ansorena E, Silva JM, Coco R, Breton AL, Préat V. PLGA-based Nanoparticles: An Overview of Biomedical Applications. *Journal of Controlled Release*, 2012; 161 (2): 505-522.
- Datau EA, Wardhana, Surachmanto EE, Pandelaki K, Langi JA, Fias. Efficacy of *Nigella sativa* on serum free testosterone and metabolic disturbances in central obese male. *Acta Medical Indonesian*, 2010; 42: 130-134.
- Day RA and Underwood AL. 1998. *Quantitative Analysis Sixth Edition*. Prentice-Hall, Inc.
- Depkes RI. 1989. *Materia Medika Indonesia*, Jilid V. Jakarta: Departemen Kesehatan Republik Indonesia. Halaman: 549-553.
- Depkes RI. 2009. *Profil Kesehatan Indonesia*. Jakarta: Departemen Kesehatan Republik Indonesia.
- Dewi TW. 2010. *Hubungan Pemberian Ekstrak Ethanol Patikan Kebo (Euphorbia hirta L.) dengan Kadar Kolesterol Serum pada Tikus Putih yang Diinduksi Streptozotocin*. Skripsi. Tidak diterbitkan. Fakultas Kedokteran Universitas Sebelas Maret, Surakarta.
- Direktorat Bina Farmasi Komunitas dan Klinik. 2005. *Pharmaceutical Care untuk Penyakit Diabetes Mellitus*, Departemen Kesehatan Republik Indonesia, Jakarta.
- Dirjen POM Depkes RI. 2000. *Parameter Standar Umum Ekstrak Tumbuhan Obat*, Cetakan Pertama, Direktorat Jenderal Pengawasan Obat dan Makanan Direktorat Pengawasan Obat Tradisional, Jakarta: Halaman 1, 3-5, 10-12.
- Donath MY, Gross DJ, Cerasi E, and Kaiser N. Hyperglycemia-Induced Beta-Cell Apoptosis in Pancreatic Islet of *Psammomys obesus* During Development of Diabetes. *Diabetes*, 2003; 48 (4): 738-44.
- Dwarampudi LP, Dhanabal P, Muruganantham M, and Raghu PS. Antipsoriatic Activity and Cytotoxicity of Ethanolic Extract of *Nigella sativa* Seeds. *Pharmacognosy Magazine*, 2012, 8 (32): 268-272.
- El-Dakhakhny M, Mady N, Lembert N, and H. P.T. Ammon. The Hypoglycemic Effect of *Nigella sativa* Oil is Mediated by Extrapancreatic Actions. *Planta Medica*, 2002; 68 (5): 465–466.
- El-Salam SA, Ragab MR, Eman MK and Mohamed T. Biochemical Changes in Lipid Peroxidation and Anti Oxidative Defense Following Lipoic Acid

- Administration in Alloxan-Induced Diabetes in Rats. *Veterinary Medical Journal*, 2007; 17 (1): 61-8.
- Ers, ahin M, Toklu HZ, Akakin D, Yuksel M, Yēgen BC, and Sener G. The Effects of *Nigella sativa* Against Oxidative Injury in A Rat Model of Subarachnoid Hemorrhage. *Acta Neurochirurgica*, 2011; 153 (2): 333–341.
- Farnsworth NR. Biological and Phytochemical Screening of Plant. *Journal Pharmacy Sciences*, 1966; 55: 59.
- Federer W. 1991. *Statistics and society: data collection and interpretation 2nd Ed.*, Marcel Dekker, New York.
- Folli F, Corradi D, Fanti P, Davalli A, Paez A, Giaccari C, et al. The Role of Oxidative Stress in the Pathogenesis of Type 2 Diabetes Mellitus Micro- and Macrovascular Complications: Avenues for a Mechanistic-Based Therapeutic Approach. *Current Diabetes Reviews*, 2011; 7: 313-324.
- Gali-Muhtasib H, Roessner A, and Schneider-Stock R. Thymoquinone: A Promising Anti-Cancer Drug from Natural Sources. *International Journal of Biochemistry Cellular Biology*, 2006; 38 (8): 1249–1253.
- Gilani AH, Jabeen Q, and Khan MAU. A Review of Medicinal Uses and Pharmacological Activities of *Nigella sativa*. *Pakistan Journal of Biology Science*, 2004; 7: 441-451.
- Golan DE, Armen H, Tashjian J, Ehrin JA, April W.A. 2012. *Principles of Pharmacology: The Phatophysiologic Basis of Drug Therapy*, Lippincott Williams & Wilkins, Philadelphia.
- Gurgenova K and Wawrzyniak P. Dynamic and Static Solubility of Thymoquinone in the Supercritical Carbone Dioxide. *Inzyniera I Aparatura Chemiczna*, 2012; 51 (6): 320-321.
- Halliwell B and 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.
- Hamdy NM and Taha RA. Effects of *Nigella sativa* Oil and Thymoquinone on Oxidative Stress and Neuropathy in Streptozotocin-Induced Diabetic Rats. *Pharmacology*, 2009; 84: 127-134.
- Handleman GJ and Pryor WA. 1998. *Evaluation of Antioxidant Status in Human*. In: A. Papas, (Ed.), *Antioxidant Status, Diet, Nutrition, and Health*, CRC Press, New York, 39-62.
- Hendromartono. Peran Radikal Bebas dan Infeksi terhadap Komplikasi Vaskuler Diabetes Mellitus. Dalam: *Indonesian Journal of Tropical Medicine* (Majalah KedokteranTropis Indonesia), 2001, 1 (12): 41.
- Herlambang N. 2006. *Pengaruh Penambahan Vitamin E pada Terapi Standar Stroke Iskemik Akut Terhadap Perbaikan Status Neurologis*. Tesis. Tidak

- diterbitkan. Program Pascasarjana Magister Ilmu Biomedik dan Program Pendidikan Dokter Spesialis Saraf I Universitas Diponegoro, Semarang.
- Holbrook NJ, Martin GR, Lockshin RA. 1996. *Cellular Aging and Cell Death*. Wiley-Liss, Inc., New York, p. 35-49.
- Houghton PJ, Zarka R, Heras BDL, and Hoult JRS. Fixed oil of *Nigella sativa* and derived thymoquinone inhibit eicosanoid generation in leukocytes and membrane lipid peroxidation. *Planta Medica*, 1995; 61 (1): 33–36.
- Huie R.E, Neta P, Gilbert CA. In: Chemistry of reactive oxygenspecies: reactive oxygen species in biological systems. Huie R.E, Neta P, Gilbert CA, editors. NewYork: Kluwer Academic; 1999. p. 33-63.
- 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.
- International Diabetes Federation. 2013. *IDF Diabetes Atlas*. 6th Ed. International Diabetes Federation.
- Inzucchi SE, Richard MB, John BB, Michaela D, Ele F, Michael N, et al. Management of Hyperglycemia in Type2 Diabetes: A Patient-Centered Approach: Position Statement of the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD). *Diabetes care*, 2012; 35: 1364-1379.
- Ismail M, Al-Naqeep G, and Chan K.W. *Nigella sativa* Thymoquinone-Rich Fraction Greatly Improves Plasma Antioxidant Capacity and Expression of Antioxidant Genes in Hypercholesterolemic Rats. *Free Radical Biology and Medicine*, 2010; 48 (5): 664–672.
- Jones MC. Therapies for Diabetes: Pramlintide and Exenatide. *American Family Physician*, 2007; 75 (12): 1831-1835.
- Jotic A, Sternic NC, Kostic VS, Lalic K, Milicic T, Mijajlovic M, et al. Type 2 Diabetic Patients with Ischemic Stroke: Decreased Insulin Sensitivity and Decreases in Antioxidant Enzyme Activity Are Related to Different Stroke Subtypes. *International Journal of Endocrinology*, 2013; 1-7.
- Kahadi C. 2010. *Pengaruh Genistein sebagai Antioksidan terhadap Kadar MDA Serum Tikus Wistar dengan Diabetes Mellitus*. Tugas Akhir. Tidak diterbitkan, Fakultas Kedokteran Universitas Brawijaya, Malang.
- Kamal A and Ahmad IZ. Phytochemical Studies Of Different Phases Of Germination Of *Nigella Sativa* Linn - A Medicinally Important Plant. *International Journal of Pharmacy and Pharmaceutical Sciences*, 2014; 6 (4): 318-323.
- Kamal ET, Al-Ajmi MF, Al-Bekairi AM. Some Cardiovascular Effects of The Dethymoquinonated *Nigella sativa* Volatile Oil and Its Major Components α -Pinene and p-Cymene in Rats. *Saudi Pharmaceutical Journal*, 2003; 11 (3).

Kangralkar VA, Patil SD, and Bandivadekar RM. Oxidative Stress and Diabetes: A Review. *International Journal of Pharmaceutical Applications*, 2010; 1: 38-45.

Kanter M, Meral I, Yener Z, Ozbek H, Demir H. Partial regeneration/proliferation of the β -cells in the islets of Langerhans by *Nigella sativa* L. in streptozocin-induced diabetic rats. *Tohoku J. Exp. Med.*, 2003; 20: 213–219.

Kanter M, Coskun O, Korkmaz A, and Oter S. Effects of *Nigella sativa* on Oxidative Stress and β -cell Damage in Streptozotocin-induced Diabetic Rats. *The Anatomical Record Part A*, 2004: 685-691.

Kanter M, Demir H, Karakaya C, Ozbek H. Gastroprotective activity of *Nigella sativa* L oil and its constituent, thymoquinone against acute alcohol-induced gastric mucosal injury in rats. *W. Journal of Gastroenterology*, 2005; 11: 6662–6666.

Kanter M, Coskun O, Kalayc M, Buyukbas S, Cagavi F. Neuroprotective effects of *Nigella sativa* on experimental spinal cord injury in rats. *Hum. Exp. Toxicol.*, 2006; 25: 127–133.

Keyhanmanes R, Horeyah B, Hossein N, Fariba MB, and Alipour MR. The Main Relaxant Constituent of *Nigella sativa* Methanolic Fraction on Guinea Pig Tracheal Chains. *Iran Journal of Allergy Asthma Immunology* 12, 2013; p: 136-143.

Kreuter J, Petrov VE, Kharkevich DA, Alyautdin RN. Influence of the Type of Surfactan on the Analgesic Effects Induced by the Peptide Dalagrin After Its Delivery Across the Blood-Brain Barrier Using Surfactant-coated Nanoparticles. *Journal of Control Release*, 1997;49 (1): 81-87.

Kumar, J.S., Suresh, Menon, V.P. 1993. Effect of Diabetes on Levels of Lipid Peroxides and Glycolipids in Rat Brain. (Abstract). *Journal of Metabolism*, 42 (11): 1435-1439.

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.

Kuo J, Lo C, Chang C, Lin M, and Chio C. Attenuation of Brain Nitrosative and Oxidative Damage by Brain Cooling during Experimental Traumatic Brain Injury. *Journal of Biomedicine and Biotechnology*, 2011; 1-8.

Labhal A, Settaf A, Bennani-Kabchi N, Cherrah Y, Slaoui A, and Hassar M. Actions anti-obésité, hypocholestérolémiant et hypotriglycéridémiant de *Nigella sativa* chez le *Psammomys obesus*. *Caducée*, 1997; vol. 27, pp. 26–28.

Lampe KJ, Namba RM, Silverman TR, Bjugstad KB, and Mahoney MJ. Impact of Lactic Acid on Cell Proliferation and Free Radical Induced Cell Death in Monolayer Cultures of Neural Precursor Cells. *Biotechnol Bioeng*, 2009; 103 (6): 1214-1223.



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; 1-9.

Lockman PR, Mumper RJ, Khan MA, Allen DD. Nanoparticle Technology for Drug Delivery Across the Blood-Brain Barrier. *Drug Development and Industrial Pharmacy*, 2002; 28 (1): 1-13.

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.

Makadia HK and Siegel SJ. Review. Poly Lactic-co-Glycolic Acid (PLGA) as Biodegradable Controlled Drug Delivery Carrier. *Polymers*, 2011; 3: 1377-1397.

Margout D, Kelly MT, Meunier A. Morphological, microscopic and chemical comparison between *Nigella sativa* L. Cv (black cumin) and *Nigella damascene* L. Cv. *Journal of Food Agriculture & Environment*, 2013; 11 (1): 165-171.

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.

Marnett LJ. Lipid Peroxidation-DNA Damage by Malondyaldehyde. *Mutat Res.*, 1999; 424 (1-2): 83-95.

Mathur ML, Gaur J, Sharma R. Antidiabetic Properties of a Spice Plant *Nigella sativa*. *Journal of Endocrinol and Metabolism*, 2011; 1 (1): 1-8

McPhee SJ. Disorders of the Endocrine Pancreas: Introduction, 2006. In: S.J. McPhee, and M. William F. Ganong, *Pathophysiology of Disease*, The McGraw-Hill Companies, California.

Memisoğulları R, Tasyı S, Bakan E, and Capoglu I. Antioxidant Status and Lipid Peroxidation in Type II Diabetes Mellitus. *Cell Biochem Funct*, 2003; 21: 291–296.

Meral I, Yener Z, Kahraman T, and Mert N. Effect of *Nigella sativa* on Glucose Concentration, Lipid Peroxidation, Antioxidant Defence System and Liver Damage in Experimentally-Induced Diabetic Rabbits. *Journal of Veterinary Medical A Physiology Pathology Clinical Medicine*, 2001; 48 (10): 593-599.

Nakhjavani M, Esteghamati A, Nowroozi S, Asgarani F, Rashidi A, Khalilzadeh O. Type 2 Diabetes Mellitus Duration: An Independent Predictor of Serum Malondialdehyde Levels. *Singapore Med J*, 2010; 51 (7): 582.

Nathan DM, John BB, Mayer BD, Ele F, Rury RH, Robert S, et al. Medical Management of Hyperglycemia in Type 2 Diabetes: A Consensus Algorithm for the Initiation and Adjustment of Therapy: A Consensus

- Statement of the American Diabetes Association and the European Association for the Study of Diabetes. *Diabetes care*, 2009; 32 (1): 193-203.
- National Institute of Standards and Technology. 2011. *Thymoquinone.*, (online), (<http://webbook.nist.gov/cgi/cbook.cgi?ID=C490915&Mask=200>, diakses 15 November 2014).
- Owu DU, Orie NN, Nwokocha CR, Clapp LH, and Osim EE. Comparative Effect of Type 1 and Type 2 Diabetes Mellitus on Vascular Responses of Rat Thoracic Aorta to Potassium Ion Channel Openers. *British Journal of Medicine & Medical Research*, 2013; 3 (3): 748-759.
- Ozkaya YG. 2012. The Role of Physical Exercise on Lipid Peroxidation in Diabetic Complications. In: Catala (Ed), *Lipid Peroxidation*, I, Tech Prepress, Croatia, p. 293-314.
- Paarakh PM. *Nigella sativa* Linn. - A comprehensive Review. *Indian Journal of Natural Products and Resources*, 2010; 1 (4): 409-429.
- Paget G and Barnes J. 1964. Toxicity Test in Laurence DR and Bacharach AL (Eds), *Evaluation of Drug Activities: Pharmacometrics*, Academic Press, New York, p. 161-2.
- Patidar D and Dwivedi SK. Diabetes Mellitus: An Update. *International Journal of Pharmaceutical & Research Sciences*, 2012; 1 (4): 259-276.
- Patočková J, Marhol P, E. Tůmová, M. Krsiak, R. Rokyta, S. Stípek, et al. Oxidative Stress in the Brain Tissue of Laboratory Mice with Acute Post Insulin Hypoglycemia. *Physiological Research*, 2003; 52: 131-135.
- Paul S, Soumya SB, Naoual B, and Anisur RK. Anticancer Potentials of Root Extract of *Polygala senega* and Its PLGA Nanoparticle-Encapsulated Form. *Evidence Based Complementary and Alternative Medicine*, 2011; 13 pages.
- Peraturan Menteri Kesehatan Republik Indonesia Nomor 006 Tahun 2012 Tentang Industri Dan Usaha Obat Tradisional. 2012. Jakarta.
- PERKENI. 2011. *Konsensus Pengelolaan dan Pencegahan Diabetes Mellitus Tipe 2 di Indonesia*. Perkumpulan Endokrinologi Indonesia: Jakarta.
- Powers AC. 2010. Diabetes Mellitus. In: Jameson JL, (Ed), *Harrison's Endocrinology Second Edition*, Mc Graw-Hill Companies, Inc, USA, p.267-313.
- Pranata FJ. 2010. *Pengaruh Pemberian Ekstrak Daun Pare Terhadap Kadar Insulin Pada Tikus Putih Strain Wistar Model Diabetes Mellitus Tipe 2 Dengan Hiperinsulinemia*. Tugas Akhir. Tidak Diterbitkan, Fakultas Kedokteran Universitas Brawijaya, Malang.
- Prince, P.S.M., Kumar, M.R., and Selvakumari, C.J. 2011. Effects of Gallic Acid on Brain Lipid Peroxide and Lipid Metabolism in Streptozotocin-Induced

Diabetic Wistar Rats. (Abstract). *Journal of Biocijem Molecular Toxicology*, 25 (2).

Rahmatullah M, Ishika T, Rahman M, Swarna A, Khan T, Monalisa MN, et al. 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.

Rains JL and Sushil KJ. Oxidative Stress, Insulin Signaling and Diabetes. *Free Radic Biol Med*, 2010; 50 (5): 567-575.

Rajsekhar S and Bhupendar K. Pharmacognosy and Pharmacology of *Nigella sativa*-A Review. *International Research Journal of Pharmacy*, 2011; 2 (11): 36-39.

Ramachandran A, Ronald CW, Chamukuttan S. Diabetes in Asia. *Lancet*, 2010; 375: 408-418.

Ravindran J, Nair HB, Sung B, Prasad S, Tekmal R.R, and Aggarwal B.B. Thymoquinone poly(lactide-co-glycolide) Nanoparticles Exhibit Enhanced Anti-Proliferative, Anti-Inflammatory and Chemosensitization Potential. *Biochemistry Pharmacology*, 2010; 79 (11): 1640–1647.

Repetto M, Semprine J, and Boveris A. 2012. Lipid Peroxidation: Chemical Mechanism, Biological Implications and Analytical Determination. In: Catala (Ed), *Lipid Peroxidation*, I, Tech Prepress, Croatia, p. 3-30.

Ridwan E. Etika Pemanfaatan Hewan Percobaan dalam Penelitian Kesehatan. *Journal Indonesian Medical Association*, 2013, 63 (3).

Rispin CM, Helen K, and Randall JU. Management of Blood Glucose in Type 2 Diabetes Mellitus. *American Family Physician*, 2009; 79 (1): 29-36.

Robinson T. 1991. *Kandungan Organik Tumbuhan Tingkat Tinggi*. Bandung. Penerbit ITB. pp. 152-196.

Rodbard HW, Paul SJ, Jaime AD, Daniel E, Alan JG, George G, et al. AACE/ACE Consensus Statement by an American Association of Clinical Endocrinologists/American College of Endocrinology Consensus Panel on Type 2 Diabetes Mellitus: An Algorithm Glycemic Control AACE/ACE Glycemic Control Algorithm Consensus Panel. *Endocrine Practice*, 2009; 15 (6).

Rohman, A. 2009. *Kromatografi untuk Analisis Obat*. Yogyakarta: Graha Ilmu.

Salama RHM. Clinical and Therapeutic Trials of *Nigella sativa*. *TAF Preventive Medicine Bulletin*, 2010; 9 (5): 513-522.

Salmani JM, Asghar S, Lv H, and Zhou J. 2014. Aqueous Solubility and Degradation Kinetics of Phytochemical Anticancer Thymoquinone; Probing the Effect of Solvents, pH, and Light. *Molecule*, 19 (5): 5925-39.

- Sander D, Sander K, Poppert. Stroke in Type 2 Diabetes. *Journal of Diabetes & Vascular Dysfunction*, 2008; 8 (5): 222–229.
- Santander-Ortega MJ, Jódar-Reyes AB, Csaba N, Bastos-Gonzales D, and Ortega-Vinuesa JL. Colloidal Stability of Pluronic F68-coated PLGA Nanoparticles: A Variety of Stabilisation Mechanism. *Journal of Colloid and Interface Science* 302, 2006: 502-529.
- Schmidt L and Carrillo-Sepulveda MA. Toll-like receptor 2 mediates vascular contraction and activates RhoA signaling in vascular smooth muscle cells from STZ-induced type 1 diabetic rats. *Europen Journal of Physiology*, 2015.
- Setiawan B dan Suhartono E. Stres Oksidatif dan Peran Antioksidan pada Diabetes Mellitus. *Majalah Kedokteran Indonesia*, 2005, volume: 55, nomor: 2.
- Setiawan B dan Suhartono E. Peroksidasi Lipid dan Penyakit Terkait Stres Oksidatif pada Bayi Prematur. *Majalah Kedokteran Indonesia*, 2007, 57 (1).
- Sharma NK, Ahirwar D, Jhade D, and Gupta S. Medical and Pharmacological Potential of *Nigella sativa*: A Review. *Ethnobotanical Review*, 2009; 13: 946-955.
- Sheikh BY and Mohamadin AM. Thymoquinone A Potential Therapy for Cerebral Oxidative Stress. *Asian Journal of Natural and Applied Sciences*, 2012; 1 (2): 76–92.
- Shimizu S. 2004. *The Laboratory Mouse*, Elsevier, Jepang.
- Shubrook J, Randall C, Aili G, and Frank S. Saxagliptin: A Selective DPP-4 Inhibitor for The Treatment of Type 2 Diabetes Mellitus. *Clinical Medicine Insights. Endocrinology and Diabetes*, 2011; 4: 1-12.
- Slütter B, Bal S, Keijzer C, Mallants R, Hagenaars N, Gue I, et al. Nasal vaccination with N-trimethyl chitosan and PLGA based nanoparticles: Nanoparticle characteristics determine quality and strength of the antibody response in mice against the encapsulated antigen. *Vaccine*, 2010; 28: 6282-6291.
- Soewondo P. Current Practice in the Management of Type 2 Diabetes in Indonesia: Results from the International Diabetes Management Practices Study (IDMPS). *Journal of Indonesian Medical Association*, 2011; vol. 61, No. 12: 475-479.
- Song KC, Lee HS, Choung IY, Cho KI, Ahn Y, and Choi EJ. The Effect of Type of Organic Phase Solvents on the Particle Size of Poly(D,L-Lactide-co-Glycolide) Nanoparticles. *Colloids and Surface*, 2006: 162-167.
- Sousa DP, Nóbrega FF, Santos CC, Benedito RB, Vieira YW, Uliana MP, et al. Antinociceptive Activity of Thymoquinone and its Structural Analogues: A

- Structure-Activity Relationship Study. *Tropical Journal of Pharmaceutical Research*, 2012; 11 (4): 605-610.
- Srinivasan B, Viswanad B, Asrat L, Kaul CL, Ramarao P. Combination of High-Fat Diet-Fed and Low-Dose Streptozotocin-Treated Rat: A Model for Type 2 Diabetes and Pharmacological Screening. *Pharmacological Research*, 2005; 52: 313–320.
- Stahl E. 1985. *Analisis Obat Secara Kromatografi dan Mikroskopi*, Kosasih P. dan Sudiro S. (penerjemah), 1985, Bandung, ITB.
- Standard Operating Procedure (SOP) Laboratory Animal Medicine*. 2010. *Oral gavage – Mouse & Rat*, Universitas Delaware, Korea Selatan.
- Sugiyono. 2007. *Statistika untuk Penelitian*, CV Alvabeta, Bandung.
- Sultan MT, Butt MS, Karim R, Zia-Ul-Haq M, Batool R, Ahmad S, et al. *Nigella sativa* Fixed and Essential Oil Supplementation Modulates Hyperglycemia and Allied Complications in Streptozotocin-Induced Diabetes Mellitus. *Evidence-Based Complementary and Alternative Medicine*, 2014; 1-8.
- Suthar MP, Patel PN, Shah TG, Patel RK. *In vitro Screening of Nigella sativa Seeds for Antifungal Activity*. *International Journal of Pharmaceutical and Applied Sciences*, 2010; 1 (2).
- Swinnen SG, Joost BH, J Hans DV. Insulin Therapy for Type 2 Diabetes. *Diabetes Care*, 2009; 32 (2): S253-9.
- Tandra H. 2007. *Segala Sesuatu yang Harus Anda Ketahui tentang Diabetes. Panduan Lengkap Mengenal dan Mengatasi Diabetes dengan Cepat dan Mudah*, PT Gramedia Pustaka Utama, Jakarta.
- Tosi G, Ruozzi B, Belletti D, Viella A, Zoli M, Vandelli MA, et al. Brain-targeted Polymeric Nanoparticles: in Vivo Evidence of Different Routes of Administration in Rodents. *Nanomedicine*, 2013; 8 (9): 1373–1383.
- Triplitt CL, Reasner CA, and Isley WL. 2008. Diabetes Mellitus. In Dipiro JT, Talbert RL, Yee GC et al., *Pharmacotherapy: A Pathophysiologic Approach* 7th Edition. United States of America: The McGraw-Hill Companies, Inc.
- Türk CT, Bayindir ZS, Badilli U. Preparation of Polymeric Nanoparticles Using Different Stabilizing Agents. *J. Fac. Pharm, Ankara*, 2009; 38 (4): 257-268.
- Ulusu NN, Sahilli M, Avci A, Canbolat O. Pentose Phosphate Pathway, Glutathione-Dependent Enzymes and Antioxidant Defense during Oxidative Stress in Diabetic Rodent Brain and Peripheral Organs: Effects of Stobadine and Vitamin E. *Neurochemical Research*, 2003; 28 (6): 815-823.
- Velho-Pereira RM, Barhate CR, Kurkarni SR, Jagtap AG. Validated High-Performance Thin-Layer Chromatographic Method For The Quantification

Of Thymoquinone In *Nigella Sativa* Extracts And Formulations. *Phytochemical Analysis*, 2011; 22 (4): 367-373.

Verma A, Ratnawat S, Gupta AK, Jain S. PLGA: A Polymer of Choice As Nanocarrier's to Achieve Effective Delivery of Medicinal Substances. *International Journal of Pharmaceutical Sciences and Research*, 2012; 3 (12): 5087-5096.

Vijay V, Vickram, and Kashinath. Effect of Diallyl Disulphide on Protein and Lipid Glycation, and Lipid Peroxidation in Brain of Alloxan Diabetic Rats. *Global Journal of Medical Research*, 2013; 13 (7).

WHO. 2012. *The Top 10 Causes of Death*, Media Centre, (online), (<http://www.who.int/mediacentre/factsheets/fs310/en/>, diakses 23 Oktober 2014).

WHO. 2013. *Diabetes Programme*, Geneva, (online), (<http://www.who.int/diabetes/en>, diakses 2 September 2014).

Wibowo, J.T., Djuwarno E.N., Hayati, F., Prabowo, H.. 2012. Standardization of kangkong (*Ipomoea reptans* Poir.) Ethanolic Extract (Ed), *Proc. First International Pharmacy Conference on Research and Practice "Toward Excellent In Natural Products: Preserving Traditions, Embracing Innovations"*, Yogyakarta, Indonesia.

Widad S. Hepatotoxicity and Langerhans Islets Regenerative Effects of Polar and Neutral Lipids of *Nigella sativa* L. in Nicotinamide/Streptozotocin Induced Diabetic Rats. *Pteridines*, 2011; 22: 97-104.

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

Yan F, Zhang C, Zheng Y, Mei L, Tang L, Song C, et al. The effect of poloxamer 188 on nanoparticle morphology, size, cancer cell uptake, and cytotoxicity. *Nanomedicine*, 2010; 6: 170–178.