

DAFTAR PUSTAKA

- Ali, F.E., Abo-Youssef, A.M., Messiha, B.A., & Hemed, R.A. 2015. Protective Effects of quercetin and ursodeoxycholic acid on hepatic ischemia-reperfusion injury in rats. *Clinical Pharmacology Biopharmacy*, 3, pp. 128.
- Amalia, P.M., Possa, N., Liesuy, A., & Francisca, S., 2007. Quercetin prevents oxidative stress in cirrhotic rats. *Digestive Diseases Sciences*, 52, pp. 2616–262.
- Badan Penelitian dan Pengembangan Kesehatan, 2014. *Pokok-Pokok Hasil Risesdas Indonesia tahun 2013*. Jakarta: Lembaga Penerbit Balitbangkes.
- Bounameaux, H., Cornuz, J., Darioli, R., Le Floch-Rohr, J., Lyrer, P., & Mattle, H., 1999. Introduction to the management of stroke in Bougousslavsky. *Cerebrovascular Diseases*, 9, pp. 1-68.
- Barrenetxe, J., Aranguren, P., Grijalba, A., Martinez-Penuela, J.M., Marzo, F., & Urdaneta, E. 2006. Effect of dietary quercetin and sphingomyelin on intestinal nutrient absorption and animal growth. *British Journal of Nutrition*, 95, pp. 455–61.
- Campbell, N.A., Jane, B.R., & Lawrence, G.M., 2008. *Biology 8th Edition*. California: Pearson International Edition.
- Caplan, L.R., 2000. *Stroke a Clinical Approach 3rd Edition*. Butterworth Heinemann: Boston.
- Casals, J.B., Pieri, N.C.G., Feitosa, M.L.T., Ercolin, A.C.M., Roballo, K.C.S., Barreto, R.S.N., & Ambrósio, C.E., 2011. The use of animal models for stroke research: a review. *Comparative Medicine*, 61(4), pp.305–313.
- Catania, A., Gatti, S., Colombo, G., & Lipton, J.M., 2004. Targeting melanocortin receptors as a novel strategy to control inflammation. *Pharmacology Review*, 56, pp. 1–29.

- Chen, M.M., Qin, J., Chen, S.J., Yao L.M., Zhang, L.Y., Yin, Z.Q., L, H., 2017. Quercetin promotes motor and sensory function recovery following sciatic nerve-crush injury in C57BL/6 J mice. *The Journal of Nutritional Biochemistry*, pp 1-36.
- Cherubini, A., Polidori, C., Benedetti, C., Ercolani, S., Senin, U., & Mecocci, P., 2002. *Association Between Ischemic Stroke and Increase Oxidative Stres*. America: Southside Virginia Community College.
- Cherubini, A., Ruggiero, C., Polidori, M.C., & Mecocci, P., 2005. Potential markers of oxidative stress in stroke. *Free Radical Biology and Medicine*, 39, pp. 841-852.
- Choi, Y.J., Kang, J.S., Park, J.H., Lee, Y.J., Choi, J.S., & Kang, Y.H., 2003. Polyphenolic flavonoids differ in their antiapoptotic efficacy in hydrogen peroxide treated human vascular endothelial cells. *The Journal of Nutrition*, 133, pp. 985–991.
- Cleaver Scientific, CSL-JADNA. Diakses dari <https://www.cleaverscientific.com/wp-content/uploads/2016/03/CSL-JADNA.pdf>, pada tanggal 4 September 2018.
- Conklin, K.A., 2004. Chemotherapy-associated oxidative stress: impact on chemotherapeutic effectiveness. *Integrative Cancer Therapies*, 3(4), pp. 294-300.
- Cuzzocrea, S., Riley, D.P., Caputi, A. P., & Salvemini, D. 2001. Antioxidant therapy: a new pharmacological approach in shock, inflammation, and ischemia/reperfusion injury. *Pharmacology*, 53, pp. 135–159.
- Daniel, S., & Raj, G.A.G., 2014. Static quenching of ruthenium (11)-polypyridyl complexes by garlic acid and quercetin in aqueous and micellar media. *International Letters of Chemistry, Physics and Astronomy*, 13, pp. 21-31.

- Dinata, C.A., Safrita, Y., & Sastri, S., 2013. Artikel penelitian gambaran faktor risiko dan tipe stroke pada pasien rawat inap di bagian penyakit dalam rsud kabupaten solok selatan periode 1 januari 2010 - 31 juni 2012. *Jurnal Kesehatan Andalas*, 2(2), pp. 57–61.
- Dong, Y., Wang, J., Feng, D., Qin, H., Wen, H., Yin, Z., Gao, G., & Li, C., 2014. Protective effect of quersetin against oxidative stress and brain edema in an experimental rat model of subarachnoid hemorrhage. *Journal of Medical Science*, 11(3), pp. 282-290.
- Dong L., Bettinger P., Qin H., & Liu, Z., 2018. Reflections on the number of independent solutions for forest spatial harvest scheduling problems: a case of simulated annealing. *Silva Fennica*, 52(1), <https://doi.org/10.14214/sf.7803>.
- Du, G., Zhao, Z., Chen, Y., Li, Z., Tian, Y., Liu, Z., Liu, B., & Song, J., 2018. Quercetin protects rat cortical neurons against traumatic brain injury. *Molecular Medicine Report*, pp. 7859-7865.
- Feigin, V.L., Wiebers, D.O., Nikitin, Y.P., O’Fallon, W.M., & Whisnant, J.P., 2007. Risk factors for ischemic stroke in a russian community : a population-based case-control study. *Stroke*, 29, pp. 34-39.
- Fengling, Pu., Kenichi, Mishima., Keiichi, Irie., Kyouko, Motohashi., Yurika, Tanaka., Kensuke, Orito., Takashi, Egawa., Yoshihisa, Kitamura., Nobuaki, Egashira., Katsunori, Iwasaki., & Michihiro, Fujiwara., 2007. Neuroprotective effects of quercetin and rutin on spatial memory impairment in an 8-arm radial maze task and neuronal death induced by repeated cerebral ischemia in rats. *Journal of Pharmacological Sciences*, 104, pp. 329 – 334.
- Ferrali, M., Signorini, C., & Ciccoli, L., 2000. Protection of erythrocytes against oxidative damage and autologous immunoglobulin-G (IgG) binding by iron chelator fluor-benzoil-pyridoxal hydrazone. *Biochemical Pharmacology*, 59, pp. 1365–1373.

- Fischer, Y.W., 2008. *Manual of Stroke Models in Rat 1st edition*. Boca Raton: CRC Press. Chapter 1.
- Gantz, Ira., Hiroto, Miwall., Yoshitaka, Kondal., Yoshimasa, Shimotoq., Takao, Tashiroll., Stanley, J., Watsonll, John., Del, Vallell., & Tadataka, Yamada., 1993. Molecular cloning, expression, and gene localization of a fourth melanocortin receptor. *The Journal of Biological Chemistry*, 268(20), pp. 15174-15179.
- Garafutdinov, R.R., Galimova, A.A., & Sakhabutdinova, A.R., 2016. Polymerase chain reaction with nearby primers. *Analytical Biochemistry*, doi: 10.1016/j.ab.2016.11.017.
- Giuliani, D., Leone, S., Mioni, C., Bazzani, C., Zaffe, D., Botticelli, A.R., Altavilla, D., Galantucci, M., Minutoli, L., Bitto, A., Squadrito, F., & Guarini, S., 2006. Broad therapeutic treatment window of the alpha-melanocyte-stimulating hormone for long-lasting protection against ischemic stroke, in Mongolian gerbils. *Europe Jounal Pharmacology*. 538, pp. 48–56.
- Giuliani, D., Mioni, C., Altavilla, D., Leone, S., Bazzani, C., Minutoli, L., Bitto, A., Cainazzo, M.M., Marini, H., Zaffe, D., Botticelli, A.R., Pizzala, R., Savio, M., Necchi, D., Schiöth, H.B., Bertolini, A., Squadrito, F., & Guarini, S., 2006. Both early and delayed treatment with melanocortin 4 receptor-stimulating melanocortins produces neuroprotection in cerebral ischemia. *Endocrinology*, 147, pp. 1126–1135.
- Giuliani, D., Ottani, A., Mioni, C., Bazzani, C., Galantucci, M., Minutoli, L., Bitto, A., Zaffe, D., Botticelli, A.R., Squadrito, F., & Guarini, S., 2007. Neuroprotection in focal cerebral ischemia owing to delayed treatment with melanocortins. *Europe Journal Pharmacology*, 570, pp. 57–65.
- Giuliani, D., Ottani, A., Zaffe, D., Galantucci, M., Strinati, F., Lodi, R., & Guarini, S., 2013. Hydrogen sulfide slows down progression of experimental Alzheimer's disease by targeting multiple pathophysiological mechanisms. *Neurobiology*, 104, pp. 82–91.

- Giuliani, D., Ottani, A., Neri, L., Zaffe, D., Grieco, P., Jochem, J., & Guarini, S., 2017. Progress in Neurobiology Multiple beneficial effects of melanocortin MC-4 receptor agonists in experimental neurodegenerative disorders: Therapeutic perspectives. *Neurobiology*, 148, pp. 40–56.
- Ghani, L., & Laurentia, M.D., 2015. Dominant Risk Factors of Stroke in Indonesia. *Buletin Penelitian Kesehatan*, 44(1), pp. 49–58.
- Glare, E.M., Divjak, M., Bailey, M.J., & Walters, E.H., 2000. β -Actin and GAPDH housekeeping gene expression in asthmatic airways is variable and not suitable for normalising mRNA levels. *Thorax*, 57, pp. 765–770.
- Goldszmidt, A.J., & Caplan, L.R., 2010. *Stroke Essentials 2nd edition*. Burlington: Jones and Bartlett Publisher.
- Hall, N.C., Packard, B.A., & Hall, C.L., 2000. Protein oxidation and enzyme susceptibility in white and gray matter with in vitro oxidative stress: relevance to brain injury from intracerebral hemorrhage. *Cellular and Molecular Biology*, 46, pp. 673–683.
- Hankey, G.J., 2002. *Stroke: Your Questions Answered*. Edinburg: Churchill Livingstone.
- Hasyim, F., & Setiawan, B., 2005. Stres oksidatif dan nitrosatif pada berbagai faktor resiko stroke. *Berkala Ilmu Kedokteran*, 37(2), pp. 94-99.
- Heitzer, T., Yla-Herttula, S., Luoma, J., Kurz, S., Munzel, T., Just, H., Olschewski, M., & Drexler, H., 1996. Cigarette smoking potentiates endothelial dysfunction of forearm resistance vessels in patient with hypercholesterolemia: role of oxidized LDL. *Circulation*, 93(7), pp. 1346-1353.
- Joshi, M., & Deshpande, J.D., 2010. Polymerase chain reaction: methods, principles and application. *International Journal of Biomedical Research*, 1(5), pp. 81-97.

- Joy, K.G.M., Guan, J., Elia, C.J., Sirimanne, E.S., & Williams, C.E., 1999. Melanocortin-4 receptor messenger rna expression is up-regulated in the non damaged striatum following unilateral hypoxic-ischaemic brain injury. *Neuroscience*, 89(1), pp. 183-190.
- Kaur, H., & Kaur, G., 2014. A critical appraisal of solubility enhancement techniques of polyphenols. *Journal of Pharmaceutics*, 2014, pp. 1-14.
- Kapiszewska, M., Cierniak, A., Papiez, M.A., Pietrzycka, A., Stepniewski, M., & Lomnicki, A., 2007. Administration diminishes the etoposide-induced dna damage in bone marrow cells. *Drug and Chemical Toxicology*, 30, pp. 67–81.
- Kelly, G.S., 2011. Quercetin monograph. *Alternative Medicine Review*. 16(2), pp. 172-176.
- Kheirabad, M.K., Jahromi, B.N., Tamadon, A., Ramezani, A., Ahmadloo, S., Sarvestani, F.S., & Koochi-Hosseiniabadi, O., 2015. Expression of melanocortin-4 receptor mrna in male rat hypothalamus during chronic stress. *Journal Molecular cellular Medical*, 4(3), pp. 182–187.
- Klawonn, A.M., Michael, Fritz., Nilsson, A., Bonaventura, J., Kiseko, Shionoya., Elahe, Mirrasekhian., Urban, Karlsson., Maarit, Jaarola., Bjorn, Granseth., Anders, Blomqvist., & David, Engblom., 2018. Motivational valence is determined by striatal melanocortin 4 receptors. *The Journal of Clinical Investigation*, doi: 10.1172/JCI97854.
- Kroemer, B., Burrasch, C., & Hellrung, L., 2016. To work or not to work: neural representation of cost and benefit of instrumental action. *Progress in Brain Research*, pp. 125-157.
- Lasaga, M., Debeljuk, L., Durand, D., Scimonelli, T. N., & Caruso, C., 2008. Role of a -melanocyte stimulating hormone and melanocortin 4 receptor in brain inflammation. *Peptides*, 29, pp. 1825–1835.

- Laurencius, U.N., 2013. Macam-macam tipe per dan teknik pemotongan protein dengan metode edman sebagai dasar kerja analisis sekuensing. *Tugas Genetika Molekuler Universitas Negeri Jakarta*, pp. 2-8.
- Lewis, R.J.S., 2001. *Hawley's Condensed Chemical Dictionary 14th Edition*. New York: John Wiley and Sons, pp. 945.
- Li, Y., Zhou, S., Li, J., Sun, Y., Hasimu, H., Liu, R., & Zhang, T., 2014. Quercetin protects human brain microvascular endothelial cells from fibrillar β -amyloid 1–40-induced toxicity. *Acta Pharmaceutica Sinica B*, 5(1), pp. 47-54.
- Li, Zhi-Xiao., Liu, Bao-Wen., He, Zhi-Gang., & Xiang, Hong-Bing., 2017. Melanocortin-4 receptor regulation of pain. *Molecular Basis of Disease*, 1863, pp. 2515–2522.
- Life Technologies, PureLink^(R) RNA Mini Kit. Diakses dari https://assets.thermofisher.com/TFS-Assets/LSG/manuals/purelink_rna_mini_kit_man.pdf, pada tanggal 4 September 2018.
- Lima, R.R., Santana, L.N.S., Fernandes, R.M., Nascimento, E.M., Oliveira, A.C.A., Fernandes, L.M.P., Santos, E.M.N., Tavares, P.A.N., Santos, I.R., Santos, A.G., & Leal, W.G., 2016. Neurodegeneration and glial response after acute striatal stroke: histological basis for neuroprotective studies. *Oxidative Medicine and Cellular Longevity*, 2016, pp. 1-16.
- Madaan, K., Lather, V., & Pandita, D., 2014. Evaluation of polyamidoamine dendrimers as potential carriers for quercetin, a versatile flavonoid. *Drug Delivery*, 23(1), pp. 254-262.
- Michalski, D., Grosche, J., Pelz, J., Schneider, D., Weise, C., Bauer, U., Kacza, J., Gartner, U., Hobohm, C., Hartig, W., 2010. A novel quantification of blood-brain barrier damage and histochemical typing after embolic stroke in rats. *Brain Respiratory*, 1359, pp. 186-200.
- Misbach, J., 2011. *Stroke, Aspek Diagnostik, Patofisiologi, Manajemen*. Jakarta: Balai Penerbit FKUI.

- Mountjoy, M., Junge, A., Alonso, J.M., Engebretsen, L., Dragan, I., Gerrard, D., Kouidri, M., Luebs, E., Moradi, F., Shahpar., & Dvorak, J., 2010. Sports injuries and illnesses in the 2009 FINA World Championships (Aquatics). *British Journal of Sports Medical*, 44, pp. 522–527.
- Mozaffarian, D., Benyamin, E.J., Go, A.S., Amett, D.K., Blaha, M.J., & Cushman, M., 2015. Heart disease and stroke statistics 2015, update : a report from the American Heart Association. *Circulation*, 131(4), pp. 29-32.
- Murphy, M.P., 2009. How mitochondria produce reactive oxygen species. *Biochemical*, 13, pp. 1–13.
- NextGen RT-PCR, Reverse Transcription & RT-PCR. Diakses dari <https://www.abmgood.com/PCR/pdfs/NextGen%20RT-PCR-Brochure-OneScript.pdf>, pada tanggal 4 September 2018.
- Ogundajo, A.T., Imoru, J.O., & Asaolu, F.M., 2014. Quercetin potentiates hepatoprotective and antioxidant response to intraperitoneal, intravenous, subcutaneous and oral administration in wistar rats. *Asian Journal of Biomedical and Pharmaceutical Sciences*, 4(38), pp. 57-61.
- Okamoto, T., 2005. Safety of quercetin for clinical application. *International Journal of Molecular Medicine*, 16, pp. 275-278.
- Pavanato, A., Tunon, M.J., & Camposs, S., 2003. Effects of quercetin on liver damage in rats with carbon tetrachloride-induced cirrhosis. *Digestive Diseases Sciences*, 48, pp. 824–829.
- Price, S.A., & Wilson, L.M., 1986. Pathophysiology clinical concepts of diseases process. *Journal of Pathology*, 150(3), pp. 223.
- Promega, GoScriptTM Reverse Transcription System. Diakses dari <https://www.promega.com/-/media/files/resources/protocols/technical-manuals/101/goscript-reverse-transcription-system-protocol.pdf>, pada tanggal 4 September 2018.

- Promega, QuantiFluor^(R) RNA System. Diakses dari <https://www.promega.com/-/media/files/resources/protocols/technical-manuals/101/quantifluor-rna-system-protocol.pdf>, pada tanggal 4 September 2018.
- Pubchem, struktur quersetin. Diakses dari <https://pubchem.ncbi.nlm.nih.gov/compound/441203#section=Top>, pada tanggal 10 November 2018.
- Rami, A., 2008. Upregulation of beclin 1 in the ischemic penumbra. *Autophagy*, 4(2), pp. 1-3.
- Rodrigo, R., Gonzalez, J., & Paoletto, F., 2011. The role of oxidative stress in the pathophysiology of hypertension. *Hypertension Research*, pp. 1-10.
- Rodrigo, R., Gajardo, R.F., Gutierrez, R., Matamala, J.M., Carrasco, R., Merchak, A.M., & Feuerhake, W., 2013. Oxidative stress and pathophysiology of ischemic stroke: novel therapeutic opportunities. *CNS and Neurological Disorders-Drug Targets*, 12(2), pp.1-16.
- Rothwell, J.A., Day, A.J., & Morgan, M.R.A., 2005. Experimental determination of octanol – water partition coefficients of quercetin and related flavonoids. *Journal Agricultural and Food Chemistry*, 53, pp. 4355-4360.
- Schioth, H.B., Muceniece, R., & Wikberg, J.E., 1996. Characterisation of the melanocortin 4 receptor by radioligand binding. *Pharmacology Toxicology*, 79, pp. 161–165.
- Spaccapelo, L., Bitto, A., Galantucci, M., Ottani, A., Irrera, N., Minutoli, L., & Guarini, S., 2011. Melanocortin mc 4 receptor agonists counteract late inflammatory and apoptotic responses and improve neuronal functionality after cerebral ischemia. *European Journal of Pharmacology*, 670(2–3), pp. 479–486.

- Stewart, L.K., Soileau, J.L., Ribnicky, D., Wang, Z.Q., Raskin, I., Poulev A., Majewski, M., Cefalu, W.T., & Gettys, T.W., 2008. Quercetin transiently increases energy expenditure but persistently decreases circulating markers of inflammation in C57BL/6J mice fed a high-fat diet. *Metabolism Clinical and Experimental*, 57, pp. S39–S46.
- Sweetman, S.C., 2009. *Martindale 36th Edition*. London: Pharmaceutical Press, pp. 2305.
- Tao, Ya-Xiong., 2010. The melanocortin-4 receptor: physiology, pharmacology, and pathophysiology. *Endocrine Reviews*, 31, pp. 506–543.
- Thiel, A., & Heiss, W.D. 2011. Imaging of microglia activation in stroke. *Stroke*, 42(2), pp. 507–512.
- Tsai, N., Chang, Y., Huang, C., Lin, Y., Lin, W., Cheng, B., Su, C., Chiang, Y., Chen, S., Huang, C., Chang, W., & Lu, C., 2014. Association between oxidative stress and outcome in different subtypes of acute ischemic stroke. *Biomedical*, doi: 10.1155/2014/256879.
- Tsai, H.H., Kim, J.S., Jouvent, E., & Gurol M.E., 2018. Update on prevention of hemorrhagic and lacunar strokes. *Journal of Stroke*, 20(2), pp. 167-179.
- Uylas, M.U., Sahin, A., Sahinturk, V., & Alatas, I.O., 2018. Quercetin dose affects the fate of hepatic ischemia and reperfusion injury in rats: an experimental research. *International Journal of Surgery*, pp. 1-28.
- Webb, J.L., Ravikumar, B., & Atkins, J., 2003. Alpha-synuclein is degraded by both autophagy and the proteasome. *Journal of Biology Chemical*, 278(27), pp. 25009-25013.
- World Health Organization. 2013. Non Communicable Diseases. [updated 2013 March; cited 2018 Des 29]. Available from: <http://www.who.int/mediacentre/factsheets/fs355/en/>.

- Yamamoto, Y., & Oue, E. 2006. Antihypertensive effect of quercetin in rats fed with a high-fat high-sucrose diet. *Bioscience Biotechnology Biochemical*, 70, pp. 933–9.
- Youdim, K.A., Qaiser, M.Z., Begley, D.J., Rice-Evans, C.A., & Abbott N.J., 2004. Flavonoid permeability across an in situ model of the blood–brain barrier. *Free Radical Biology and Medicine*, 36(5), pp. 592–604.
- Zuhriana K.Y., 2010. Polymerase Chain Reaction (PCR). *Saintek*, 5(6), pp. 1-6.