

DAFTAR PUSTAKA

- Anand, P., Kunnumakkara, A. B., Newman, R. A., & Aggarwal, B. B. (2007). Bioavailability of Curcumin: Problems and Promises. *Molecular Pharmaceutics*, 4(6), 807–818.
- Aluclu, M. U., Acar, A., Guzel, A., Bahceci, S., Yaldiz, M. (2007). Evaluation of erythropoietin effects on cerebral ischemia in rats. *Neuroendocrinol Lett*, 28, 170.
- Barreto, G., E. White, R., Ouyang, Y., Xu, L., G. Giffard, R. (2011). Astrocytes: Targets for Neuroprotection in Stroke. *Central Nervous System Agents in Medicinal Chemistry*, 11(2), 164–173.
- Belayev, L., Khoutorova, L., Zhao, W., Vignatelli, A., Belayev, A., Busto, R. (2005). Neuroprotective effect of darbepoetin alfa, a novel recombinant erythropoietic protein, in focal cerebral ischemia in rats. *American Heart Association*, 36, 1071–1076.
- Benjamin, E. J., Virani, S. S., Callaway, C. W., Chamberlain, A. M., Chang, A. R., Cheng, S., Muntner, P. (2018). *Heart disease and stroke statistics - 2018 update: A report from the American Heart Association. Circulation*, 137, 114-121.
- Calabrese, V., Cornelius, C., Mancuso, C., Pennisi, G., Calafato, S. (2008). Cellular Stress Response: A Novel Target for Chemoprevention and Nutritional Neuroprotection in Aging, Neurodegenerative Disorders and Longevity. *Neurochem Research*, 33: 2444–2471.
- Chen Z & Zhong C. (2013). Decoding Alzheimer’s Disease from Perturbed Cerebral Glucose Metabolism: Implications for Diagnostic and Therapeutic Strategies. *Progr Neurobiol* 108, 21-43.
- Christakis, D. A., Ramirez, J. S. B., Ramirez, J. M. (2012). Overstimulated of newborn mice leads to behavioral differences and deficits in

- cognitive performance. *Scientific Reports* (2), 546.
- Das, T. K., Chakrabarti, S.K., Zulkipli, I. N., Hamid, M. R. W. (2019). Curcumin Ameliorates The Impaired Insulin Signaling Involved in The Pathogenesis of Alzheimer's Disease in Rats. *Journal of Alzheimer's Disease Reports* 3 (2019) 59-70.
- Dipiro, J.T. et al. (2015). Pharmacotherapy Handbook 9th Edition. *The McGraw-Hill Companies*. USA. Eknoyan, G., Lameire, N, 193-200.
- Dong, S., Zeng, Q., Mitchell, E.S., Xiu, J., Duan, Y., Li, C., Tiwari, J.K., Hu, Y., Cao, X., Zhao, Z. (2012). Curcumin Enhances Neurogenesis and Cognition in Aged Rats : Implications of Transcriptional Interactions Related to Growth and Synaptic Plasticity. *PLoS One*, 7(2), 1-12.
- Ejaz, A., Wu, D., Kwan, P., Meydani, M. (2009). Curcumin Inhibits Adipogenesis in 3T3-L1 Adipocytes and Angiogenesis and Obesity in C57/BL Mice. *Journal Nutr* 2009; 139: 919-25.
- Faure, S., Oudart, N., Javellaud, J., Fournier, A., & David, G. (n.d.). (2006). Synergistic Protective Effects of Erythropoietin and Olmesartan on Ischemic Stroke Survival and Post-Stroke Memory Dysfunctions in The Gerbil. *Journal of Hypertension*, 24(11), 2255–2261.
- Funk, J. L., Frye, J. B., Davis-gorman, G., Spera, A. L., Bernas, M. J., Witte, M. H., Ritter, L. (2013). Curcuminoids Limit Neutrophil-Mediated Reperfusion Injury in Experimental Stroke by Targeting the Endothelium. *Microcirculation*, 20(6), 544–554.
- Galvao, J., Davis, B., Tilley, M., Normando, E., Duchon, M. R., Cordeiro, M. F. (2013). Unexpected low-dose toxicity of the universal solvent DMSO. *The FASEB Journal article* (13), 1–14.
- Gilgun-sherki, Y., Rosenbaum, Z. I. V, Melamed, E., & Offen, D. (2002).

- Antioxidant Therapy in Acute Central Nervous System Injury: Current State. *Pharmacol Rev*, 54(2), 271–284.
- Giuliani, D., Ottani, A., Minutoli, L., Stefano, V. Di., Galantucci, M., Bitto, A., Zaffe, D., Altavilla, D., Botticelli, A. R., Squadrito, F., Guarini, S. (2009). Functional Recovery After Delayed Treatment of Ischemic Stroke with Melanocortins is Associated with Overexpression of The Activity-Dependent Gene Zif268. *Brain Behavior Immun.* 23, 844-850.
- Goel, A.; Aggarwal, B.B. (2010). Curcumin, the golden spice from Indian saffron, is a chemosensitizer and radiosensitizer for tumors and chemoprotector and radioprotector for normal organs. *Nutr. Cancer*, 62(7), 919-930.
- Gursoy-Ozdemir Y, Can A, Dalkara T. (2004). Reperfusion-induced oxidative/nitrative injury to neurovascular unit after focal cerebral ischemia. *Stroke Epub*, 35(6), 1449-1453.
- Hagl, S., Kocher, A., Schiborr, C., Kolesova, N., Frank, J., Eckert, G. P. (2015). Curcumin micelles improve mitochondrial function in neuronal PC12 cells and brains of NMRI mice - Impact on bioavailability. *Neurochemistry international*, 45, 111-124.
- Hasan, S. T., Zingg, J. M., Kwan, P., Noble, T., Smith, D., Meydani, M. (2013). Curcumin Modulation of High Fat Diet-Induced Atherosclerosis and Steatohepatosis in LDL Receptor Deficient Mice. *Elsevier: Atherosclerosis* 232 (2014) 40-51.
- Hassanzadeh, P., Arbabi, E., Atyabi, F., & Dinarvand, R. (2017). Ferulic acid exhibits antiepileptogenic effect and prevents oxidative stress and cognitive impairment in the kindling model of epilepsy. *Life Sciences*, 179, 9–14.
- Hatcher H, Planalp R, Cho J, Torti FM, Torti SV. (2008). Curcumin: From Ancient Medicine to Current Clinical Trials. *Cell Mol Life Sci*, 65:

1631–1652.

- Hughes, R. N . (2004). The Value of Spontaneous Alternation Behavior (SAB) as A Test of Retention in Pharmacological Investigations of Memory. *Neurosci Biobehav Rev*, 28, 497–505.
- Huppert, F. A. (2003). Designing for Older Users, ini P. J. Clarkson, R. Coleman, S. Keates and C. Lebbon (eds). Inclusive Design: design for the whole population. london: *Springer Verlag*, 217-229.
- Kim, M., Kim, Y. (2010). Hypocholesterolemic Effects of Curcumin via Up-Regulated of Cholesterol 7 α -Hydroxylase in Rats Fed a High Fat Diet. Departement of Nutritional Science and Food Management, Ewha Womans University, 11-1 Daehyn-dong, Seodaemun-gu, Seoul 120-750, Korea. *Nutrition Research and Practice*, 4(3): 191-195.
- Kim, S.J., Son, T.G., Park, H.R., Park, M., Kim, M.S., Kim,H.S., Chung, H. Y., Mattson, M. P., Lee, J. (2008). Curcumin Stimulates Proliferation of Embryonic Neural Progenitor Cells and Neurogenesis in the Adult Hippocampus. *J. Biology Chemistry*, 283, 14497–14505.
- Kim, Y. R., Kim, H. N., Ahn, S. M., Choi, Y. H., Shin, H. K., & Choi, B. T. (2014). Electroacupuncture Promotes Post-Stroke Functional Recovery via Enhancing Endogenous Neurogenesis in Mouse Focal Cerebral Ischemia. *PLoS ONE*, 9(2), 2-15.
- Koronowski, K. B., Perez-pinzon, M. A. (2016). Sirt1 in Cerebral Ischemia. *HHS Public Access Brain Circ*, 1(1), 69–78.
- Kulkarni, S., Dhir, A., Akula, K.K. (2009). Potentials of curcumin as an antidepressant. *The Scientific World Journal*, 9, 1233-1241.
- Lapchak, P. A. (2011). Neuroprotective and neurotrophic curcuminoids to treat stroke: a translational perspective. *Expert Opinion on Investigational Drugs*, 20(1), 13–22.

- Lasaga, M., Debeljuk, L., Durand, D., Scimonelli, T.N., Caruso, C. (2008). Role of α -Melanocyte Stimulating Hormone and Melanocortin 4 Receptor in Brain Inflammation. *Peptides*, 2008, 29, 1825-1835.
- Li, W., Suwanwela, N. C., Patumraj, S. (2016). Curcumin by Down-Regulating NF-Kb and Elevating Nrf2, Reduces Brain Edema and Neurological Dysfunction Aftercerebrali. *R. Microvascular Res.*106,117–127.
- Li, Y., Xu, L., Zeng, K., Xu, Z., Suo, D., Peng, L., Yang, L. (2017). Propane-2-sulfonic acid octadec-9-enyl-amide, a novel PPAR α / γ dual agonist, protects against ischemia-induced brain damage in mice by inhibiting inflammatory responses. *Brain, Behavior, and Immunity*, 66, 289–301.
- Liao, K.K., Wu, M.J., Chen, P.Y., Huang, S.W., Chiu, S.J., Ho, C.T., Yen, J.H. (2012). Curcuminoids Promote Neurite Outgrowth in Pc12 Cells through Mapk/Erk- and Pkc-Dependent Pathways. *J. Agric. Food Chem*, 60, 433–443.
- Lingga, L. (2013). All About Stroke: Hidup Sebelum dan Pascastroke. Jakarta: *Elex Media Komputindo*.
- Liu, D., Wang, Z., Gao, Z., Xie, K., Zhang, Q., Jiang, H., Pang, Q. (2014). Effects of Curcumin on Learning and Memory Deficits, BDNF, and ERK Protein Expression in Rats Exposed to Chronic Unpredictable Stress. *Behavioral Brain Research* 50, 166-178.
- Liu, L., Zhang, W., Wang, L., Li, Y., Tan, B., Lu, X., Deng, Y., Zhang, Y., Guo, X., Mu, J., Yu, G. (2014). Curcumin Prevents Cerebral Ischemia Reperfusion Injury Via Increase of Mitochondrial Biogenesis. *Neurochemical research*, 39, 1322-1331.
- Liu, S., Cao, Y., Qu, M., Zhang, Z., Feng, L., Ye, Z. (2016). Curcumin Protects Against Stroke and Increases Levels of Notch Intracellular Domain. *Neural Research*, 38(6), 6412.

- Liu, Z., Ran, Y., Huang, S., Wen, S., Zhang, W., Liu, X., Ji, Z., Geng, X., Ji, X., Du, H., Leak, R. K., Hu, X. (2017). Curcumin Protects Against Ischemic Stroke by Titrating Microglia/Macrophage Polarization. *Frontiers in Aging Neuroscience*, 9:233.
- M. Hernandez-Jimenez., O. Hurtado., M.I. Cuartero., I. Ballesteros., A. Moraga., J.M. Pradillo., M.W. McBurney., I. Lizasoain., M.A. Moro. (2013). Silent Information Regulator-1 Protects The Brain Against Cerebral Ischemic Damage. *Stroke: a journal of cerebral circulation*, 44, 2333-2337.
- Machado, I., Gonzalez, P. V., Carniglia, L., Schioth, H. B., Lasaga, M., Scimonelli, T. N. (2015). Interleukin-1 β -induced Memory Reconsolidation Impairment is Mediated by A Reduction in Glutamate Release and zif268 Expression and α -Melanocyte-Stimulating Hormone Prevented These Effects. *Elsevier: Brain, Behavior, and Immunity* 121-130.
- Manca, M. L., Castangia, I., Zaru, M., Nacher, A., Valenti, D., Fernandez, B. X., Fadda, A. M., Manconi, M. (2015). Development of Curcumin Loaded Sodium Hyaluronate Immobilized Vesicles (Hyalurosomes) and Their Potential on Skin Inflammation and Wound Restoring. *Biomaterials*, 71, 100-109.
- Manolova, Y., Deneva, V., Antonov, L., Drakalska, E., Momekova, D., Lambov, N. (2014). The effect of the water on the curcumin tautomerism: A quantitative approach. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, 132, 815–820.
- Matteucci, A., Cammarota, R., Paradisi, S., Varano, M., Balduzzi, M., Leo, L., Bellenchi, G. C., Nuccio, C. D., Carnovale-Scalzo, G., Scordia, G., Frank, C., Mallozzi, C., Stasi, A., Visentin, S., Malchiodi-Albedi, F. (2011). Curcumin Protects Against NMDA-Induced Toxicity: A Possible Role for NR2A Subunit. *Investigative Ophthalmology and*

- Visual Science*, volume 52, number 2, pp.1070–1077.
- Miao, Y., Zhao, S., Gao, Y., Wang, R., Wu, Q., Wu, H., & Luo, T. (2016). Curcumin Pretreatment Attenuates Inflammation and Mitochondrial Dysfunction in Experimental Stroke: The Possible Role Of Sirt1 Signaling. *Brain Research Bulletin*, 121, 9–15.
- Michan, S., Li, Y., Chou, M. M.-H., Parrella, E., Ge, H., Long, J. M., Allard, J. S., Lewis, K., Miller, M., Xu, W., Mervis, R. F., Chen, J., Guerin, K. I., Smith, L. E. H., McBurney, M. W., Sinclisr, D. A., Baudry, M., Cabo, R. D., Longo, V. D. (2010). SIRT1 Is Essential for Normal Cognitive Function and Synaptic Plasticity. *Journal of Neuroscience*, 30(29), 9695–9707.
- Ming, G.L., Song, H. (2005). Adult Neurogenesis in the Mammalian Central Nervous System. *Annual Review of Neuroscience*, 28, 223–250.
- Oomen, C. A., Farkas, E., Roman, V., van der Beek, E. M., Luiten, P. G. M., & Meerlo, P. (2009). Resveratrol preserves cerebrovascular density and cognitive function in aging mice. *Frontiers in Aging Neuroscience*, 1(DEC), 1–9.
- Orteca, G., Tavanti, F., Bednarikova, Z., Gazova, Z., Rigillo, G., Imbriano, C., Basile, V., Asti, M., Rigamonti, L., Saladini, M., Ferrari, E., Menziani, M. C. (2018). Curcumin Derivates and A β -Fibrillar Aggregates: An Interactions' Study for Diagnostic/Therapeutic Purposes in Neurodegenerative Diseases. *Elsevier: Bioorganic and Medicinal Chemistry*, 26 (2018) 4288-4300.
- Ramagiri, S., Taliyan, R. (2017). Remote Limb Ischemic Post Conditioning During Early Reperfusion Alleviates Cerebral Ischemic Reperfusion Injury Via GSK-3 β /CREB/ BDNF Pathway. *European Journal of Pharmacology*, 803, 84–93.

- Ravindranath V & Chandrasekhara N. (1981). In Vitro Studies on The Intestinal Absorption of Curcumin in Rats. *Toxicology* 20: 251-257.
- Richter, K., Wolf, G., Engelmann, M. (2005). Social Recognition Memory Requires Two Stages of Protein Synthesis in Mice. *Cold Spring Harbor Laboratory Press* (12), 407-413.
- Şahin, T. D., Karson, A., Balci, F., Yazir, Y., Bayramgürler, D., & Utkan, T. (2015). TNF-Alpha Inhibition Prevents Cognitive Decline and Maintains Hippocampal BDNF Levels in The Unpredictable Chronic Mild Stress Rat Model of Depression. *Behavioural Brain Research*, 292, 233-240.
- Sanderson, T. H., Reynolds, C. A., Kumar, R., Przyklenk, K., Huttemann, M. (2013). Molecular Mechanisms of Ischemia-Reperfusion Injury in Brain: Pivotal Role of The Mitochondrial Membrane Potential in Reactive Oxygen Species Generation. *Molecular Neurobiology*, 47, 9-23.
- Seo, K., Choi, M., Jung, U., Kim, H., Yeo, J., Jeon, S., Lee, M. (2008). Effect of Curcumin Supplementation on Blood Glucose, Plasma Insulin, and Glucose Homeostasis Related Enzyme Activities in Diabetic db/db Mice. *Molecular Nutrition Food Res*, 52, 995-1004.
- Shirley, R., Ord, E. N. J., Work, L. M. (2014). Oxidative Stress and The Use of Antioxidants in Stroke. *Antioxidants* 3, 472-501.
- Su, J., Sripanidkulchai, K., Wyss, J. M., & Sripanidkulchai, B. (2010). Curcuma Comosa Improves Learning and Memory Function on Ovariectomized Rats in A Long-Term Morris Water Maze Test. *Journal of Ethnopharmacology*, 130(1), 70-75.
- Shukla, P. K., Khanna, V. K., Ali, M. M., Khan, M. Y., Srimal, R. C. (2008). Anti-Ischemic Effect of Curcumin in Rat Brain. *Neurochem Res* 33: 1036-1043.

- Subramanian, M., Sreejayan, Riao, M.N., Devasagayam, T.P., Singh, B.B. (1994). Diminution of Singlet Oxygen-Induced DNA Damage by Curcumin and Related Antioxidants. *Mutation Research*, 311 (2), 249-25.
- Sun, J., Tan, L., Yu, J. (2014). Post-Stroke Cognitive Impairment: Epidemiology, Mechanisms and Management. *Annals of Translational Medicine* 2(8), 80.
- Strimpakos, A. S., Sharma, R. A. (2008). Curcumin: Preventive and Therapeutic Properties in Laboratory Studies and Clinical Trials. *Antioxidants & Redox Signaling*, 10(3), 511–546.
- Telles, M. V. L., Nobre, M. E. P., Alencar, L. P., Siqueira, K. P., Borges, A. M. F. S., Tavares, M. W. L., Alves, I. B., Duarte, L. S., Lacerda, N. K. R., Alcantara, G. F. T., Scerni, D. A., Neves, K. R. T., Viana, G. S. B. (2014). Prenatal Curcumin Administration Reverses Behavioral and Neurochemical Effects and Decreases iNOS and COX-2 Expressions in Ischemic Rat Pups. *Hindawi Publishing Corporation International Journal of Brain Science*, Volume 2014, 10.
- Thiyagarajan, M., Sharma, S. S. (2004). Neuroprotective Effect of Curcumin in Middle Cerebral Artery Occlusion Induced Focal Cerebral Ischemia in Rats. *Life Sciences*, 74(8), 969–985.
- Tiwari, S. K., Agarwal, S., Seth, B., Yadav, A., Nair, S., Bhatnagar, P., Karmakar, M., Kumari, M., Chauhan, L. K., Patel, D. K. (2014). Curcumin-Loaded Nanoparticles Potently Induce Adult Neurogenesis and Reverse Cognitive Deficits in Alzheimer ' s Disease Model via Canonical Wnt / β -Catenin Pathway. *American Chemical Society Nano*, 76–103.
- Tu, Q., Ding, B., Yang, X., Bai, S., Tu, J., Liu, X., Wang, R., Tao, J., Jin, H., Wang, Y., Tang, X. (2014). The Current Situation in Vascular

- Cognitive Impairment After Ischemic Stroke in Changsha. *Archives of Gerontology and Geriatrics*, 58(2), 236–247.
- Van Praag, H., Schinder, A.F., Christie, B.R., Toni, N., Palmer, T.D., Gage, F.H. (2002). Functional Neurogenesis in The Adult Hippocampus. *Nature*, 415, 1030–1034.
- Vorhees, C. V., Williams, M. T. (2006). Morris Water Maze: Procedures for Assessing Spatial and Related Forms of Learning and Memory. *National Institutes of Health* 1(2), 848-858.
- Wahl, D., Coogan, S. CP., Soloon-Biet, S. M., Cabo, R., Raubenheimer, D., Cogger, V. C., Mattson, M. P., Simpson, S. J., Couteur, D. G. L. (2017). Cognitive and Behavioral Evaluation of Nutritional Interventions in Rodent Models of Brain Aging and Dementia. *Clinical Interventions in Aging*, 12, 1419-1428.
- Wang, Y., Galvan, V., Gorostiza, O., Ataie, M., Jin, K., Greenberg, D. A. (2006). Vascular Endothelial Growth Factor Improves Recovery of Sensorimotor and Cognitive Deficits After Focal Cerebral Ischemia in The Rat. *Brain Research*, 1115(1), 186–193.
- Witkin, J. M., Li, X. (2013). Curcumin an Active Constiuent of the Ancient Medicinal Herb *Curcuma longa* L .: Some Uses and the Establishment and Biological Basis of Medical Efficacy. *CNS & Neurological Disorders - Drug Targets*, 12, 487–497.
- Xie, C., Gu, A., Cai, J., Wu, Y., Chen, R. (2017). Curcumin Protects Neural Cells Against Ischemic Injury in N2a Cells and Mouse Brain with Ischemic Stroke. Departement of Neurosurgery, Guangdong Provincial Hospital of Chinese Medicine, Guangzhou, China. *Wiley Brain and Behavior*, 21 Desember 2017.
- Xu, Y., Ku, B., Cui, L., Li, X., Barish, P. A.; Foster, T. C.; Ogle, W. O. (2007). Curcumin Reverses Impaired Hippocampal Neurogenesis and Increases Serotonin Receptor 1a mRNA and Brain-Derived

- Neurotrophic Factor Expression in Chronically Stressed Rats. *Brain Research*, 1162,9–18. 23.
- Yu, Y., Shen, Q., Lai, Y., Park, S. Y., Ou, X., Lin, D., Jin, M., Zhang, W. (2018). Anti-inflammatory Effects of Curcumin in Microglial Cells. *Frontiers in Pharmacology*, 9: 386.
- Yue, G. G. L., Chan, B. C. L., Hon, P., Kennelly, E. J., Yeung, S. K., Cassileth, B. R., Fung, K. P., Leung, P. C., Lau, C. B. S. (2010). International Journal of Biological Macromolecules Immunostimulatory Activities of Polysaccharide Extract Isolated from *Curcuma longa*. *International Journal of Biological Macromolecules*, 47(3), 342–347.
- Zhang, W., Zhao, H., Wu, Q., Xu, W., & Xia, M. (2018). Knockdown of BACE1-AS by siRNA Improves Memory and Learning Behaviors in Alzheimer's Disease Animal Model. *Experimental and Therapeutic Medicine*, 16(3), 2080–2086.
- Zhang, Y., Yan, Y., Cao, Y., Yang, Y., Zhao, Q., Jing, R., Bao, J. (2017). Potential Therapeutic and Protective Effect of Curcumin Against Stroke in The Male Albino Stroke-Induced Model Rats. *Life Sciences*, 183, 45–49.
- Zhao, C., Deng, W., Gage, F.H. (2008). Mechanisms and Functional Implications of Adult Neurogenesis. *Cell Press*, 132, 645–660.
- Zhou, J., Miao, H., Li, X., Hu, Y., Sun, H., and Hou, Y. (2017). Curcumin Inhibits Placental Inflammation to Ameliorate LPS-induced Adverse Pregnancy Outcomes in Mice Via Upregulation of Phosphorylated. *Akt. Inflammation Res.* 66, 177–185.