DAFTAR PUSTAKA

Abbaoui, A. dan Gamrani, H., 2018. Neuronal, astroglial and locomotor injuries in subchronic copper intoxicated rats are repaired by curcumin: A possible link with Parkinson's disease. *Acta Histochemica*, **120**: 542–550.

Abel, T. dan Zukin, R., 2008. Epigenetic targets of HDAC inhibition in neurodegenerative and psychiatric disorders. *Current Opinion in Pharmacology*, **8**: 57–64.

Aggarwal, M.L., Chacko, K.M., dan Kuruvilla, B.T., 2016. Systematic and comprehensive investigation of the toxicity of curcuminoid-essential oil complex: A bioavailable turmeric formulation. *Molecular Medicine Reports*, **13**: 592–604.

Amer, M.G. dan Karam, R.A., 2018. Morphological and Biochemical Features of Cerebellar Cortex After Exposure to Zinc Oxide Nanoparticles: Possible Protective Role of Curcumin. *The Anatomical Record*, **301**: 1454–1466.

Ataei-Almanghadim, K., Farshbaf-Khalili, A., Ostadrahimi, A.R., Shaseb, E., dan Mirghafourvand, M., 2020. The effect of oral capsule of curcumin and vitamin E on the hot flashes and anxiety in postmenopausal women: A triple blind randomised controlled trial. *Complementary Therapies in Medicine*, **48**: 102267.

Azizah, U.L., Yuniarti, N., dan Murwanti, R., 2019. 'Pengaruh Nanoemulsi Kurkumin Terhadap Ekspresi Gen Histon Deasetilase 2, Tropomyosin Receptor Kinase B dan 5-Hydroxytryptamine Receptor 1B', , *Skripsi*, . Fakultas Farmasi Universitas Gadjah Mada, Yogyakarta.

Bassani, T.B., Turnes, J.M., Moura, E.L.R., Bonato, J.M., Cóppola-Segovia, V., Zanata, S.M., dkk., 2017. Effects of curcumin on short-term spatial and recognition memory, adult neurogenesis and neuroinflammation in a streptozotocin-induced rat model of dementia of Alzheimer's type. *Behavioural Brain Research*, **335**: 41–54.

Berry, K.P. dan Lu, Q.R., 2020. Chromatin modification and epigenetic control in functional nerve regeneration. *Seminars in Cell & Developmental Biology*, **97**: 74–83.

Bertogliat, M.J., Morris-Blanco, K.C., dan Vemuganti, R., 2020. Epigenetic mechanisms of neurodegenerative diseases and acute brain injury. *Neurochemistry International*, **133**: 104642.

Bondan, E., Cardoso, C., dan Martins, M. de F., 2017. Curcumin decreases astrocytic reaction after gliotoxic injury in the rat brainstem. *Arquivos de Neuro-Psiquiatria*, **75**: 546–552.

Cho, Y. dan Cavalli, V., 2014. HDAC signaling in neuronal development and axon regeneration. *Current Opinion in Neurobiology*, **27**: 118–126.

Colombo, E. dan Farina, C., 2016. Astrocytes: Key Regulators of Neuroinflammation. *Trends in Immunology*, **37**: 608–620.

Dai, J., Bercury, K.K., Ahrendsen, J.T., dan Macklin, W.B., 2015. Olig1 Function Is Required for Oligodendrocyte Differentiation in the Mouse Brain. *The Journal of Neuroscience*, **35**: 4386–4402.

Damarla, S.R., Komma, R., Bhatnagar, U., Rajesh, N., dan Mulla, S.M.A., 2018. An Evaluation of the Genotoxicity and Subchronic Oral Toxicity of Synthetic Curcumin. *Journal of Toxicology*, **2018**: 1–27.

de la Fuente Revenga, M., Ibi, D., Saunders, J.M., Cuddy, T., Ijaz, M.K., Toneatti, R., dkk., 2018. HDAC2-dependent Antipsychotic-like Effects of Chronic Treatment with the HDAC Inhibitor SAHA in Mice. *Neuroscience*, **388**: 102–117.

Dietz, K.C. dan Casaccia, P., 2010. HDAC inhibitors and neurodegeneration: At the edge between protection and damage. *Pharmacological Research*, **62**: 11–17.

Elbialy, N.S., Aboushoushah, S.F., dan Alshammari, W.W., 2019. Long-term biodistribution and toxicity of curcumin capped iron oxide nanoparticles after single-dose administration in mice. *Life Sciences*, **230**: 76–83.

Fan, C., Song, Q., Wang, P., Li, Y., Yang, M., dan Yu, S.Y., 2019. Neuroprotective Effects of Curcumin on IL-1β-Induced Neuronal Apoptosis and Depression-Like Behaviors Caused by Chronic Stress in Rats. *Frontiers in Cellular Neuroscience*, **12**: 516.

Faraco, G., Pittelli, M., Cavone, L., Fossati, S., Porcu, M., Mascagni, P., dkk., 2009. Histone deacetylase (HDAC) inhibitors reduce the glial inflammatory response in vitro and in vivo. *Neurobiology of Disease*, **36**: 269–279.

Fischer, A., Sananbenesi, F., Mungenast, A., dan Tsai, L.-H., 2010. Targeting the correct HDAC(s) to treat cognitive disorders. *Trends in Pharmacological Sciences*, **31**: 605–617.

Franco-Robles, E., Campos-Cervantes, A., Murillo-Ortiz, B.O., Segovia, J., López-Briones, S., Vergara, P., dkk., 2014. Effects of curcumin on brain-derived neurotrophic factor levels and oxidative damage in obesity and diabetes. *Applied Physiology, Nutrition, and Metabolism*, **39**: 211–218.

Gallo, V. dan Deneen, B., 2014. Glial Development: The Crossroads of Regeneration and Repair in the CNS. *Neuron*, **83**: 283–308.

Gupta, R., Ambasta, R.K., dan Kumar, P., 2020. Pharmacological intervention of histone deacetylase enzymes in the neurodegenerative disorders. *Life Sciences*, **243**: 117278.

He, X., Yang, L., Wang, M., Zhuang, X., Huang, R., Zhu, R., dkk., 2017. Targeting the Endocannabinoid/CB1 Receptor System For Treating Major Depression Through Antidepressant Activities of Curcumin and Dexanabinol-Loaded Solid Lipid Nanoparticles. *Cellular Physiology and Biochemistry*, **42**: 2281–2294.

He, X.-J., Uchida, K., Megumi, C., Tsuge, N., dan Nakayama, H., 2015. Dietary curcumin supplementation attenuates 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) neurotoxicity in C57BL mice. *Journal of Toxicologic Pathology*, **28**: 197–206.

Hoppe, J.B., Coradini, K., Frozza, R.L., Oliveira, C.M., Meneghetti, A.B., Bernardi, A., dkk., 2013. Free and nanoencapsulated curcumin suppress β-amyloid-induced cognitive impairments in rats: Involvement of BDNF and Akt/GSK-3β signaling pathway. *Neurobiology of Learning and Memory*, **106**: 134–144.

Hsieh, J. dan Eisch, A.J., 2010. Epigenetics, hippocampal neurogenesis, and neuropsychiatric disorders: Unraveling the genome to understand the mind. *Neurobiology of Disease*, **39**: 73–84.

Huang, J., Zhang, L., Qu, Y., Zhou, Y., Zhu, J., Li, Y., dkk., 2018. Histone acetylation of oligodendrocytes protects against white matter injury induced by inflammation and hypoxia-ischemia through activation of BDNF-TrkB signaling pathway in neonatal rats. *Brain Research*, **1688**: 33–46.

Hwang, J.-Y., Aromolaran, K.A., dan Zukin, R.S., 2017. The emerging field of epigenetics in neurodegeneration and neuroprotection. *Nature Reviews Neuroscience*, **18**: 347–361.

Ikram, M., Saeed, K., Khan, A., Muhammad, T., Khan, M.S., Jo, M.G., dkk., 2019. Natural Dietary Supplementation of Curcumin Protects Mice Brains against Ethanol-Induced Oxidative Stress-Mediated Neurodegeneration and Memory Impairment via Nrf2/TLR4/RAGE Signaling. *Nutrients*, **11**: 1082.

Istyastono, E., Nurrochmad, A., Nurrochmad, A., dan Yuniarti, N., 2016. Structure-based virtual screening campaigns on curcuminoids as potent ligands for histone deacetylase-2. *Oriental Journal of Chemistry*, **32**: 275–282.

Itoh, K., Maki, T., Lok, J., dan Arai, K., 2015. Mechanisms of cell–cell interaction in oligodendrogenesis and remyelination after stroke. *Brain Research*, **1623**: 135–149.

Jangra, A., Kwatra, M., Singh, T., Pant, R., Kushwah, P., Sharma, Y., dkk., 2016. Piperine Augments the Protective Effect of Curcumin Against Lipopolysaccharide-Induced Neurobehavioral and Neurochemical Deficits in Mice. *Inflammation*, .

Ji, M.-H., Qiu, L.-L., Yang, Jiao-Jiao, Zhang, H., Sun, X.-R., Zhu, S.-H., dkk., 2015. Pre-administration of curcumin prevents neonatal sevoflurane exposure-induced neurobehavioral abnormalities in mice. *NeuroToxicology*, **46**: 155–164.

Kanski, R., Sneeboer, M.A.M., van Bodegraven, E.J., Sluijs, J.A., Kropff, W., Vermunt, M.W., dkk., 2014. Histone acetylation in astrocytes suppresses GFAP and stimulates a reorganization of the intermediate filament network. *Journal of Cell Science*, **127**: 4368–4380.

Karami, Z., Saghatchi Zanjani, M.R., dan Hamidi, M., 2019. Nanoemulsions in CNS drug delivery: recent developments, impacts and challenges. *Drug Discovery Today*, **24**: 1104–1115.

Katsimpardi, L. dan Lledo, P.-M., 2018. Regulation of neurogenesis in the adult and aging brain. *Current Opinion in Neurobiology*, **53**: 131–138.

Kaufmann, F.N., Gazal, M., Bastos, C.R., Kaster, M.P., dan Ghisleni, G., 2016. Curcumin in depressive disorders: An overview of potential mechanisms, preclinical and clinical findings. *European Journal of Pharmacology*, **784**: 192–198.

Kaur, H., Patro, I., Tikoo, K., dan Sandhir, R., 2015. Curcumin attenuates inflammatory response and cognitive deficits in experimental model of chronic epilepsy. *Neurochemistry International*, **89**: 40–50.

Kawamoto, E.M., Scavone, C., Mattson, M.P., dan Camandola, S., 2013. Curcumin Requires Tumor Necrosis Factor α Signaling to Alleviate Cognitive Impairment Elicited by Lipopolysaccharide **21**: 75–88.

Ketllyn, S.V., Raissa, H. de M., Weber, C.F.N. da S., Guilherme, B.L. de F., Timothy, G.C., Joao, B.T. da R., dkk., 2015. Evaluation of curcumin toxicity in rats through biochemical and hematological parameters. *African Journal of Pharmacy and Pharmacology*, **9**: 711–716.

Kim, R., Healey, K.L., Sepulveda-Orengo, M.T., dan Reissner, K.J., 2018. Astroglial correlates of neuropsychiatric disease: From astrocytopathy to astrogliosis. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, **87**: 126–146.

Krämer, O.H., 2009. HDAC2: a critical factor in health and disease. *Trends in Pharmacological Sciences*, **30**: 647–655.

Laird, M.D., Sukumari-Ramesh, S., Swift, A.E.B., Meiler, S.E., Vender, J.R., dan Dhandapani, K.M., 2010. Curcumin attenuates cerebral edema following traumatic brain injury in mice: a possible role for aquaporin-4? **113**: 637–648.

Lee, S., Park, S., Won, J., Lee, S.-R., Chang, K.-T., dan Hong, Y., 2015. The Incremental Induction of Neuroprotective Properties by Multiple Therapeutic Strategies for Primary and Secondary Neural Injury. *International Journal of Molecular Sciences*, **16**: 19657–19670.

Lin, Y.-H., Dong, J., Tang, Y., Ni, H.-Y., Zhang, Y., Su, P., dkk., 2017. Opening a New Time Window for Treatment of Stroke by Targeting HDAC2. *The Journal of Neuroscience*, **37**: 6712–6728.

Liu, D., Wang, Z., Gao, Z., Xie, K., Zhang, Q., Jiang, H., dkk., 2014. Effects of curcumin on learning and memory deficits, BDNF, and ERK protein expression in rats exposed to chronic unpredictable stress. *Behavioural Brain Research*, **271**: 116–121.

Liu, Z., Jiang, Y., Wang, Y., Gao, H., Chen, Z., dan Fang, L., 2018. Curcumin improves learning and memory ability via inhibiting activated microglia-mediated **11**: 12204–12210.

Magaki, S.D., Williams, C.K., dan Vinters, H.V., 2018. Glial function (and dysfunction) in the normal & ischemic brain. *Neuropharmacology*, **134**: 218–225.

Marchiani, A., Mammi, S., Siligardi, G., Hussain, R., Tessari, I., Bubacco, L., dkk., 2013. Small molecules interacting with α-synuclein: antiaggregating and cytoprotective properties. *Amino Acids*, **45**: 327–338.

Meijer, D.H., Kane, M.F., Mehta, S., Liu, H., Harrington, E., Taylor, C.M., dkk., 2012. Separated at birth? The functional and molecular divergence of OLIG1 and OLIG2. *Nature Reviews Neuroscience*, **13**: 819–831.

Meja, K.K., Rajendrasozhan, S., Adenuga, D., Biswas, S.K., Sundar, I.K., Spooner, G., dkk., 2008. Curcumin Restores Corticosteroid Function in Monocytes Exposed to Oxidants by Maintaining HDAC2. *American Journal of Respiratory Cell and Molecular Biology*, **39**: 312–323.

Middeldorp, J. dan Hol, E.M., 2011. GFAP in health and disease. *Progress in Neurobiology*, **93**: 421–443.

Mitew, S., Hay, C.M., Peckham, H., Xiao, J., Koenning, M., dan Emery, B., 2014. Mechanisms regulating the development of oligodendrocytes and central nervous system myelin. *Neuroscience*, **276**: 29–47.

Mohajeri, M., Sadeghizadeh, M., Najafi, F., dan Javan, M., 2015. Polymerized nano-curcumin attenuates neurological symptoms in EAE model of multiple

sclerosis through down regulation of inflammatory and oxidative processes and enhancing neuroprotection and myelin repair. *Neuropharmacology*, **99**: 156–167.

Motaghinejad, M., Motevalian, M., Fatima, S., Hashemi, H., dan Gholami, M., 2017. Curcumin confers neuroprotection against alcohol-induced hippocampal neurodegeneration via CREB-BDNF pathway in rats. *Biomedicine & Pharmacotherapy*, **87**: 721–740.

Murao, N., Noguchi, H., dan Nakashima, K., 2016. Epigenetic regulation of neural stem cell property from embryo to adult. *Neuroepigenetics*, **5**: 1–10.

Neal, M. dan Richardson, J.R., 2018. Epigenetic regulation of astrocyte function in neuroinflammation and neurodegeneration. *Biochimica et Biophysica Acta (BBA) - Molecular Basis of Disease*, **1864**: 432–443.

Pasyukova, E.G. dan Vaiserman, A.M., 2017. HDAC inhibitors: A new promising drug class in anti-aging research. *Mechanisms of Ageing and Development*, **166**: 6–15.

Pekny, M., Wilhelmsson, U., dan Pekna, M., 2014. The dual role of astrocyte activation and reactive gliosis. *Neuroscience Letters*, **565**: 30–38.

Peng, S., Zhao, S., Yan, F., Cheng, J., Huang, L., Chen, H., dkk., 2015. HDAC2 Selectively Regulates FOXO3a-Mediated Gene Transcription during Oxidative Stress-Induced Neuronal Cell Death. *Journal of Neuroscience*, **35**: 1250–1259.

Penney, J. dan Tsai, L.-H., 2014. Histone deacetylases in memory and cognition. *Science Signaling*, **7**: re12–re12.

Pulido-Moran, M., Moreno-Fernandez, J., Ramirez-Tortosa, C., dan Ramirez-Tortosa, Mc., 2016. Curcumin and Health. *Molecules*, **21**: 264.

Qiu, P., Man, S., Li, J., Liu, J., Zhang, L., Yu, P., dkk., 2016. Overdose Intake of Curcumin Initiates the Unbalanced State of Bodies. *Journal of Agricultural and Food Chemistry*, **64**: 2765–2771.

Rajasekar, N., Dwivedi, S., Tota, S. kumar, Kamat, P.K., Hanif, K., Nath, C., dkk., 2013. Neuroprotective effect of curcumin on okadaic acid induced memory impairment in mice. *European Journal of Pharmacology*, **715**: 381–394.

Rajkowska, G. dan Miguel-Hidalgo, J., 2007. Gliogenesis and Glial Pathology in Depression. *CNS & Neurological Disorders - Drug Targets*, **6**: 219–233.

Sanei, M. dan Saberi-Demneh, A., 2019. Effect of curcumin on memory impairment: A systematic review. *Phytomedicine*, **52**: 98–106.

Schapira, A.H.V., 2010. Neuroprotection in Parkinson's Disease, dalam: *Blue Books of Neurology*. Elsevier, hal. 301–320.

Sebastià, N., Soriano, J.M., Barquinero, J.F., Villaescusa, J.I., Almonacid, M., Cervera, J., dkk., 2012. In vitro cytogenetic and genotoxic effects of curcumin on human peripheral blood lymphocytes. *Food and Chemical Toxicology*, **50**: 3229–3233.

Serafini, M.M., Catanzaro, M., Rosini, M., Racchi, M., dan Lanni, C., 2017. Curcumin in Alzheimer's disease: Can we think to new strategies and perspectives for this molecule? *Pharmacological Research*, **124**: 146–155.

Seto, E. dan Yoshida, M., 2014. Erasers of Histone Acetylation: The Histone Deacetylase Enzymes. *Cold Spring Harbor Perspectives in Biology*, **6**: a018713–a018713.

Sharma, N. dan Nehru, B., 2018. Curcumin Affords Neuroprotection and Inhibits α-Synuclein Aggregation in Lipopolysaccharide-Induced Parkinson's Disease Model **26**: 349–360.

Sharma, N., Sharma, S., dan Nehru, B., 2017. Curcumin protects dopaminergic neurons against inflammation-mediated damage and improves motor dysfunction induced by single intranigral lipopolysaccharide injection. *Inflammopharmacology*, **25**: 351–368.

Sherwood, L., 2010. *Human Physiology, from Cells to Systems*, 7th ed. Brooks/Cole, Belmont.

Shin, H.J., Lee, J.Y., Son, E., Lee, D.H., Kim, H.J., Kang, S.S., dkk., 2007. Curcumin attenuates the kainic acid-induced hippocampal cell death in the mice. *Neuroscience Letters*, **416**: 49–54.

Small, G.W., Siddarth, P., Li, Z., Miller, K.J., Ercoli, L., Emerson, N.D., dkk., 2018. Memory and Brain Amyloid and Tau Effects of a Bioavailable Form of Curcumin in Non-Demented Adults: A Double-Blind, Placebo-Controlled 18-Month Trial. *The American Journal of Geriatric Psychiatry*, **26**: 266–277.

Stogsdill, J.A. dan Eroglu, C., 2017. The interplay between neurons and glia in synapse development and plasticity. *Current Opinion in Neurobiology*, **42**: 1–8.

Tandon, A., Singh, S.J., Gupta, M., Singh, N., Shankar, J., Arjaria, N., dkk., 2020. Notch pathway up-regulation via curcumin mitigates bisphenol-A (BPA) induced alterations in hippocampal oligodendrogenesis. *Journal of Hazardous Materials*, **392**: 122052.

Tang, H., Lu, D., Pan, R., Qin, X., Xiong, H., dan Dong, J., 2009. Curcumin improves spatial memory impairment induced by human immunodeficiency virus type 1 glycoprotein 120 V3 loop peptide in rats. *Life Sciences*, **85**: 1–10.

Tang, Y., Lin, Y., Ni, H., Dong, J., Yuan, H., Zhang, Y., dkk., 2017. Inhibiting Histone Deacetylase 2 (HDAC2) Promotes Functional Recovery From Stroke. *Journal of the American Heart Association*, **6**: .

Tiwari, S.K., Agarwal, S., Seth, B., Yadav, A., Nair, S., Bhatnagar, P., dkk., 2014. Curcumin-Loaded Nanoparticles Potently Induce Adult Neurogenesis and Reverse Cognitive Deficits in Alzheimer's Disease Model *via* Canonical Wnt/β-Catenin Pathway. *ACS Nano*, **8**: 76–103.

Tripanichkul, W. dan Jaroensuppaperch, E.O., 2013. Ameliorating effects of curcumin on 6-OHDA-induced dopaminergic denervation, glial response, and SOD1 reduction in the striatum of hemiparkinsonian mice **17**: 1360–1368.

Tuladhar, A., Mitrousis, N., Fuhrmann, T., dan Shoichet, M., 2015. Central Nervous System, dalam: *Translational Regenerative Medicine, I*. Academic Press, hal. 415–435.

Ullah, F., Asgarov, R., Venigalla, M., Liang, H., Niedermayer, G., Münch, G., dkk., 2020a. Effects of a solid lipid curcumin particle formulation on chronic activation of microglia and astroglia in the GFAP-IL6 mouse model. *Scientific Reports*, **10**: 2365.

Ullah, F., Liang, H., Niedermayer, G., Münch, G., dan Gyengesi, E., 2020b. Evaluation of Phytosomal Curcumin as an Anti-inflammatory Agent for

Chronic Glial Activation in the GFAP-IL6 Mouse Model. *Frontiers in Neuroscience*, **14**: 170.

VandenBosch, L.S. dan Reh, T.A., 2020. Epigenetics in neuronal regeneration. *Seminars in Cell & Developmental Biology*, **97**: 63–73.

Verkhratsky, A., Steardo, L., Parpura, V., dan Montana, V., 2016. Translational potential of astrocytes in brain disorders. *Progress in Neurobiology*, **144**: 188–205.

Vieira, M.S., Goulart, V.A.M., Parreira, R.C., Oliveira-Lima, O.C., Glaser, T., Naaldijk, Y.M., dkk., 2019. Decoding epigenetic cell signaling in neuronal differentiation. *Seminars in Cell & Developmental Biology*, **95**: 12–24.

Volmar, C.-H. dan Wahlestedt, C., 2015. Histone deacetylases (HDACs) and brain function. *Neuroepigenetics*, **1**: 20–27.

Volterra, A. dan Meldolesi, J., 2005. Astrocytes, from brain glue to communication elements: the revolution continues **6**: 626–640.

Wang, R., Tian, S., Yang, X., Liu, J., Wang, Y., dan Sun, K., 2017. Celecoxib-induced inhibition of neurogenesis in fetal frontal cortex is attenuated by curcumin via Wnt/β-catenin pathway. *Life Sciences*, **185**: 95–102.

Wang, Y.-L., Ju, B., Zhang, Y.-Z., Yin, H.-L., Liu, Y.-J., Wang, S.-S., dkk., 2017. Protective Effect of Curcumin Against Oxidative Stress-Induced Injury in Rats with Parkinson's Disease Through the Wnt/ β-Catenin Signaling Pathway. *Cellular Physiology and Biochemistry*, **43**: 2226–2241.

Wong, H.L., Wu, X.Y., dan Bendayan, R., 2012. Nanotechnological advances for the delivery of CNS therapeutics. *Advanced Drug Delivery Reviews*, **64**: 686–700.

Wu, X., Chen, P.S., Dallas, S., Wilson, B., Block, M.L., Wang, C.-C., dkk., 2008. Histone deacetylase inhibitors up-regulate astrocyte GDNF and BDNF gene transcription and protect dopaminergic neurons **11**: 1123–1134.

Xu, M.-X., Yu, R., Shao, L.-F., Zhang, Y.-X., Ge, C.-X., Liu, X.-M., dkk., 2016. Up-regulated fractalkine (FKN) and its receptor CX3CR1 are involved in fructose-induced neuroinflammation: Suppression by curcumin. *Brain, Behavior, and Immunity*, **58**: 69–81.

Yamakawa, H., Cheng, J., Penney, J., Gao, F., Rueda, R., Wang, J., dkk., 2017. The Transcription Factor Sp3 Cooperates with HDAC2 to Regulate Synaptic Function and Plasticity in Neurons. *Cell Reports*, **20**: 1319–1334.

Yan, D., Yao, J., Liu, Y., Zhang, X., Wang, Y., Chen, X., dkk., 2018. Tau hyperphosphorylation and P-CREB reduction are involved in acrylamide-induced spatial memory impairment: Suppression by curcumin. *Brain, Behavior, and Immunity*, **71**: 66–80.

Yang, Z. dan Wang, K.K.W., 2015. Glial fibrillary acidic protein: from intermediate filament assembly and gliosis to neurobiomarker. *Trends in Neurosciences*, **38**: 364–374.

Yao, B., Christian, K.M., He, C., Jin, P., Ming, G., dan Song, H., 2016. Epigenetic mechanisms in neurogenesis. *Nature Reviews Neuroscience*, **17**: 537–549.

Yu, L.-H., Morimura, T., Numata, Y., Yamamoto, R., Inoue, N., Antalfy, B., dkk., 2012. Effect of curcumin in a mouse model of Pelizaeus–Merzbacher disease. *Molecular Genetics and Metabolism*, **106**: 108–114.

Yu, S.Y., Gao, R., Zhang, L., Luo, J., Jiang, H., dan Wang, S., 2013. Curcumin ameliorates ethanol-induced memory deficits and enhanced brain nitric

oxide synthase activity in mice. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, **44**: 210–216.

Yuan, J., Liu, W., Zhu, H., Chen, Y., Zhang, X., Li, L., dkk., 2017. Curcumin inhibits glial scar formation by suppressing astrocyte-induced inflammation and fibrosis in vitro and in vivo. *Brain Research*, **1655**: 90–103.

Yun, J.-M., Jialal, I., dan Devaraj, S., 2011. Epigenetic regulation of high glucose-induced proinflammatory cytokine production in monocytes by curcumin. *The Journal of Nutritional Biochemistry*, **22**: 450–458.

Yuniarti, N., Juliandi, B., MuhChyi, C., Noguchi, H., Sanosaka, T., dan Nakashima, K., 2013. Prenatal exposure to suberoylanilide hydroxamic acid perturbs corticogenesis. *Neuroscience Research*, **77**: 42–49.

Yuniarti, N., Juliandi, B., Sanosaka, T., dan Nakashima, K., 2017a. Mid-gestational exposure to histone deacetylase inhibitor suberoylanilide hydroxamic acid influence cortical interneuron and astrocyte in mouse brain. *Indonesian Journal of Biotechnology*, **22**: 32.

Yuniarti, N., Nurrochmad, A., dan Istyastono, E., 2015. 'Elusidasi Mekanisme Molekular Kurkumin dan Dietary Compounds Lain sebagai Brain Disorder Treatment Agents Baru melalui Uji Aktivitas In silico, In vitro, dan In vivo pada Target Enzim Histon Deasetilase', , Hibah Kompetensi 1st year Research Grant. Universitas Gadjah Mada, Yogyakarta.

Yuniarti, N., Nurrochmad, A., dan Istyastono, E., 2016. 'Elusidasi mekanisme molekular kurkumin dan dietary compound sebagai brain disorder treatment agents baru melalui uji aktivitas in silico, in vitro, dan in vivo pada target enzim histon deasetilase', , Hibah Kompetensi 2nd year Research Grant. Universitas Gadjah Mada, Yogyakarta.

Yuniarti, N., Nurrochmad, A., dan Istyastono, E., 2017b. 'Elusidasi Mekanisme Molekular Kurkumin dan Dietary Compounds Lain sebagai Brain Disorder Treatment Agents Baru melalui Uji Aktivitas In silico, In vitro, dan In vivo pada Target Enzim Histon Deasetilase', , Hibah Kompetensi 3rd year Research Grant. Universitas Gadjah Mada, Yogyakarta.

Zhang, L., Fang, Y., Xu, Y., Lian, Y., Xie, N., Wu, T., dkk., 2015. Curcumin Improves Amyloid β-Peptide (1-42) Induced Spatial Memory Deficits through BDNF-ERK Signaling Pathway. *PLOS ONE*, **10**: e0131525.

Zimmerman, M. dan Hummel, F.C., 2014. Brain Stimulation and its Role in Neurological Disease, dalam: *The Stimulated Brain*. Academic Press, Cambridge, hal. 333–369.