

DAFTAR PUSTAKA

- Aboutaleb, N., Faezi, M., Maleki, S.N., Nazarinia, D., Tousi, S.M.T.R., Hashemirad, N. 2019. Conditioned medium obtained from mesenchymal stem cells attenuates focal cerebral ischemia reperfusion injury through activation of ERK1/ ERK2-BDNF signaling pathway. *Journal of Chemical Neuroanatomy* 97: 87–98
- Ammann, K.R., DeCook, K.J., Li, M., Slepian, M.J. 2019. Migration versus proliferation as contributor to in vitro wound healing of vascular endothelial and smooth muscle cells. *Exp Cell Res.* 1;376(1):58-66.
- Andrzejewska, A., Dabrowska, S., Lukomska, B., Janowski, M. 2021. Mesenchymal Stem Cells for Neurological Disorders. *Adv. Sci.* 8 (2002944)
- Angeloni, C., Gatti, M., Prata, C., Hrelia, S., Maraldi, T. 2020. Role of Mesenchymal Stem Cells in Counteracting Oxidative Stress—Related Neurodegeneration. *Int. J. Mol. Sci.* 21(3299)
- Annuario, E., Ng, K.Y.W., Vagnoni, A. 2021. High-resolution imaging of mitochondria and mitochondrial nucleoids in differentiated SH-SY5Y cells. *Research Square Version 1*
- Aspamufita, N., Yuliani, S. 2013. Efek ekstrak etanol rimpang temulawak (*Curcuma xanthorrhiza Roxb*) terhadap memori spasial tikus model demensia yang diinduksi trimethyltin. *Pharmaciana* 3(2):57-62
- Atkinson, K. 2017. *The Biology and therapeutic application of mesenchymal cells.* New Jersey: John Wiley & Sons
- Avila, J. 2010. Common mechanisms in neurodegeneration. *Nature Medicine* 16(12)
- Azman, K.F., Zakaria, R. 2022. Recent Advances on the Role of Brain-Derived Neurotrophic Factor (BDNF) in Neurodegenerative Diseases. *Int. J. Mol. Sci.* 23 (6827)
- Bagher, Z., Ebrahimi-Barough, S., Azami, M., Mirzadeh, H., Soleimani, M., Ai, J., M.R. Nourani, M.T. Joghataei. 2015. Induction of human umbilical Wharton’s jelly-derived mesenchymal stem cells toward motor neuron-like cells. *In vitro Cell.Dev.Biol.—Animal*
- Baudin, B., Bruneel, A., Bosselut, N., Vaubourdolle, M. 2007. A protocol for isolation and culture of human umbilical vein endothelial cells. *Nature Protocols* 2(3): 481-485
- Bhang, S.H., Lee, S., Shin, J.Y., Lee, T.J., Jang, H.K., Kim, B.S. 2014. Efficacious and Clinically Relevant Conditioned Medium of Human Adipose-derived Stem Cells for Therapeutic Angiogenesis. *Molecular Therapy* 22(4):862-872

- Brentnall, M., Rodriguez-Menocal, L., Guevara, R.L.D., Cepero, E., Boise, L.H. 2013. Caspase-9, caspase-3 and caspase-7 have distinct roles during intrinsic apoptosis. *BMC Cell Biology* 14:32
- Cai, L., Qin, X., Xu, Z., Song, Y., Jiang, H., Wu, Y., Ruan, H., Chen, J. 2019. Comparison of Cytotoxicity Evaluation of Anticancer Drugs between Real-Time Cell Analysis and CCK-8 Method. *ACS Omega* 4(7):12036–12042
- Cajero-Juárez M, Avila B, Ochoa A, Garrido-Guerrero E, Varela-Echavarría A, Martínez de la Escalera G, Clapp C. Immortalization of bovine umbilical vein endothelial cells: a model for the study of vascular endothelium. 2002. *Eur J Cell Biol.* 81(1):1-8.
- Chang, C., Yan, J., Yao, Z., Zhang, C., Li, X., Mao, H.Q. 2021. Effects of Mesenchymal Stem Cell-Derived Paracrine Signals and Their Delivery Strategies. *Adv. Healthcare Mater.* 2021, 10 (2001689)
- Chen, C., Skog, J., Hsu, C.H., Lessard, R.T., Balaj, L., Wurdinger, T., Carter, B.S., Breakefield, X.O., Toner, M., Irimia, D. 2010. Microfluidic isolation and transcriptome analysis of serum Microvesicles. *Lab Chip* 10(4): 505-511
- Chen, Y.T., Tsai, M.J., Hsieh, N., Lo, M.J., Lee, M.J., Cheng, H., Huang, W.C. 2019. The superiority of conditioned medium derived from rapidly expanded mesenchymal stem cells for neural repair. *Stem Cell Research & Therapy* 10:390
- Chistiakov, D.A., Killingsworth, M.C., Myasoedova, V.A., Orekhov, A.N., Bobryshev, Y.V. 2017. CD68/macrosialin: not just a histochemical marker. *Laboratory Investigation* 97: 4–13
- Chotimah, C., Rahayu, M., Ciptadi, G., Fatchiyah, F. 2014. Optimization of Neuron cells Maturation and Differentiation. *Jurnal Biotropika* 2(4):191-197
- Colucci-D'Amato, L., Speranza, L., Volpicelli, F. 2020. Neurotrophic Factor BDNF, Physiological Functions and Therapeutic Potential in Depression, Neurodegeneration and Brain Cancer. *Int. J. Mol. Sci.* 21:7777
- Constantinescu, R., Constantinescu, A.T., Reichmann, H., Janetzky, B. 2007. Neuronal differentiation and long-term culture of the human neuroblastoma line SH-SY5Y. *J Neural Transm* 72: 17-28
- Crowley, L.C., Marfell, B.J., Waterhouse, N.J. 2016. Analyzing Cell Death by Nuclear Staining with Hoechst 33342. *Cold Spring Harbor Protocols*
- Das, J. R., Tizabi, Y. 2009. Additive protective effects of donepezil and nicotine against salsolinol-induced cytotoxicity in SH-SY5Y cells. *Neurotoxicity research* 16: 194-204.
- Edinger, A.L., Thompson, C.B. 2004. Death by design: apoptosis, nekrosis and autophagy. *Current Opinion in Cell Biology* 16(6):663-9
- Ellistasari, E. Y., Kariosentono, H., Purwanto, B., Wasita, B., Riswiyant, R. C. A., Pamungkasari, E. P., & Soetrisno, S. (2022). Exosomes Derived from Secretome Human Umbilical Vein Endothelial Cells (Exo-HUVEC)

Ameliorate the Photo-Aging of Skin Fibroblast. *Clinical, Cosmetic and Investigational Dermatology* 1583-1591

- Feigin, V.L., Vos, T., Nichols, E., Owolabi, M.O. Carroll, W.M., Dichgans, M., Deuschl, G., Parmar, P., Brainin, M., Murray, C. 2004. The global burden of neurological disorders: translating evidence into policy. *The Lancet Neurology* 19(3):255-265
- Ferlemann, F.C., Menon, V., Condurat, A.L., Rößler, J., Pruszek, J. 2017. Surface marker profiling of SH-SY5Y cells enables small molecule screens identifying BMP4 as a modulator of neuroblastoma differentiation. *Sci Rep.* 7(1):13612.
- Flora, R., Juhaina, E., Faisya, A.F., Fajar, N.A., Appulembang, Y.A., Zulkarnain, M. 2021. Brain-Derived Neurotrophic Factor (BDNF) Serum and Intelligence Levels of Elementary School Children in Rural Areas, Seruma Regency. *Jurnal Ilmu Kesehatan Masyarakat* 12(1):60-68
- Fui, L.W., Lok, M.P.W., Govindasamy, V., Yong, T.K., Lek, T.K., Das, A.K. 2019. Understanding the multifaceted mechanisms of diabetic wound healing and therapeutic application of stem cells conditioned medium in the healing process. *Tissue Engineering and Regenerative Medicine* 13(12): 2218-2233
- Fromer, M. W., Chang, S., Hagaman, A. L., Koko, K. R., Nolan, R. S., Zhang, P., Caputo, F. J. (2018). The endothelial cell secretome as a novel treatment to prime adipose-derived stem cells for improved wound healing in diabetes. *Journal of Vascular Surgery* 68(1), 234-244.
- Furno, D.L., Mannino, G., Giuffrida, R. 2017. Functional role of mesenchymal stem cells in the treatment of chronic neurodegenerative diseases. *Journal of Cellular Physiology* 233(5):3982-3999
- Geloso, M.C., Corvino, V., Michetti, F. 2011. Trimethyltin-induced hippocampal degeneration as a tool to investigate neurodegenerative processes. *Neurochemistry International* 58: 729–738
- George, S.J., Dwivedi, A. 2014. MMPs, cadherins, and cell proliferation. *Trends Cardiovasc Med.* 14(3):100-5.
- Goedert, M. 2017. *Neurodegeneration*. Hoboken: John Wiley & Sons
- Gomzikova, M. O., James, V., Rizvanov, A. A. 2019. Therapeutic Application of Mesenchymal Stem Cells Derived Extracellular Vesicles for Immunomodulation. *Frontiers in immunology* 10: 2663.
- Guy JB, Espenel S, Vallard A, Battiston-Montagne P, Wozny AS, Ardail D, Alphonse G, Rancoule C, Rodriguez-Lafrasse C, Magne N. 2017. Evaluation of the Cell Invasion and Migration Process: A Comparison of the Video Microscope-based Scratch Wound Assay and the Boyden Chamber Assay. *J Vis Exp.* 17(129):56337.
- Han, F., Lu, P. 2020. *Stem Cell-based Therapy for Neurodegenerative Diseases*. Singapore: Springer
- Herberts, C.A., Kwa, M.S.G., Hermsen, H.P.H. 2011. Risk factors in the development of stem cell therapy. *Journal of Translational Medicine* 9:29

- Hilmawan, Y. 2104. Tinjauan Yuridis Terapi Medis Sel Punca (Stem Cell) dalam Pelayanan Kesehatan di Indonesia Berdasarkan Undang-Undang Nomor 36 Tahun 2007 Tentang Kesehatan. Universitas Padjajaran
- Ikawati, Z. 2018. *Farmakologi Molekuler: Target Aksi Obat dan Mekanisme Molekulernya*. Yogyakarta: Gadjah Mada University Press
- Jellinger, K.A. 2001. Cell death mechanisms in neurodegeneration. *J.Cell.Mol.Med.* 5(1):1-17
- Jellinger, K.A. 2010. Basic mechanisms of neurodegeneration: a critical update. *J. Cell. Mol. Med.* 14(3):457-487
- Jurga, A.M., Paleczna, M., Kuter, K.Z. 2020. Overview of General and Discriminating Markers of Differential Microglia Phenotypes. *Frontiers in Cellular Neuroscience* 14:198
- Kichenbrand, C., Velot, E., Menu, P., Moby, V., 2019. Dental pulp stem cell-derived conditioned medium: an attractive alternative for regenerative therapy. *Tissue Engineering* 25(1)
- Kovalevich, J., Langford, D. 2013. Considerations for the Use of SH-SY5Y Neuroblastoma Cells in Neurobiology. *Methods Mol Biol.* 1078: 9–21
- Kristianingrum, Y.P., Widyarini, S., Kurniasih, Sutrisno, B., Tabbu, C.R., Sugiyono. 2016. Gambaran Histopatologi Otak Tikus Akibat Injeksi Trimetyltin sebagai Model Penyakit Alzheimer. *Jurnal Sain Veteriner* 34(1): 84-91
- Kumar, A., Kumar, V., Rattan, V., Jha, V., Pal, A., Bhattacharyya, S. 2017. Molecular spectrum of secretome regulates the relative hepatogenic potential of mesenchymal stem cells from bone marrow and dental tissue. *Sci Rep* 7 (15015)
- Kusindarta, D.L., Wihadmadyatami, H., Fibrianto, Y.H., Nugroho, W.S., Susetya, H., Musana, D.K., Wijayanto, H., Prihatna, S.A., Wahyuni, A.E.T.H. 2016. Human umbilical mesenchymal stem cells conditioned medium promote primary wound healing regeneration. *Veterinary World* 9(12):605-610
- Kusindarta, D.L., Wihadmadyatami, H., 2021. Conditioned medium derived from bovine umbilical mesenchymal stem cells as an alternative source of cell-free therapy. *Veterinary World* 14(2)
- Kwon, S., Yoo, K.H., Sym, S.J., Khang, D. 2019. Mesenchymal stem cell therapy assisted by nanotechnology: a possible combinational treatment for brain tumor and central nerve regeneration. *International Journal of Nanomedicine* 2019 (14):5925–5942
- Laila, F., Fardiaz, D., Yuliana, N.D., Damanik, M.R.M., Dewi, F.N.A. 2020. Methanol Extract of *Coleus amboinicus* (Lour) Exhibited Antiproliferative Activity and Induced Programmed Cell Death in Colon Cancer Cell WiDr. *International Journal of Food Science* 2020
- Larasati, V.A., Lembang, G.V., Tjahjono, Y., Winarsih, S., Ana, I.D., Wihadmadyatami, H., Kusindarta, D.L. 2022. *In vitro* Neuroprotective Effect of the Bovine Umbilical Vein Endothelial Cell Conditioned

Medium Mediated by Downregulation of IL-1 β , Caspase-3, and Caspase-9 Expression. *Vet. Sci.* 9 (48).

- Leng, F., Edison, P. 2020. Neuroinflammation and microglial activation in Alzheimer disease: where do we go from here?. *Nature Reviews Neurology* 17: 157–172
- Liang, M., Liu, W., Peng, Z., Lv, S., Guan, Y., An, G., Wang, Y. (2019). The therapeutic effect of secretome from human umbilical cord-derived mesenchymal stem cells in age-related osteoporosis. *Artificial Cells, Nanomedicine, and Biotechnology* 47(1), 1357-1366.
- Lok GT, Chan DW, Liu VW, Hui WW, Leung TH, Yao KM, Ngan HY. 2011. Aberrant activation of ERK/FOXO1 signaling cascade triggers the cell migration/invasion in ovarian cancer cells. *PLoS One.* 6(8):e23790.
- Mascotti, K., McCullough, J., Burger, S.R. 2000. HPC Viability Measurement: Trypan Blue Versus Acridine Orange And Propidium Iodide. *Transfusion* 40: 693-696
- Medina-Leyte DJ, Domínguez-Pérez M, Mercado I, Villarreal-Molina MT, Jacobo-Albavera L. Use of Human Umbilical Vein Endothelial Cells (HUVEC) as a Model to Study Cardiovascular Disease: A Review. *Applied Sciences.* 2020; 10(3):938.
- Meola, D., Huang, Z., Ha, G.K., Petito, J.M. 2012. Loss of Neuronal Phenotype and Neurodegeneration: Effects of T Lymphocytes and Brain Interleukin-2. *J Alzheimers Dis Parkinsonism* 10
- Meyer, G., Shelden, E., Kim, B., Feldman, E.L. 2001. Insulin-like growth factor I stimulates motility in human neuroblastoma cells. *Oncogene* 20: 7542-7550
- Mocchi, M., Grolli, S., Dotti, S., Di Silvestre, D., Villa, R., Berni, P., Conti, V., Passignani, G., Brambilla, F., Del Bue, M., Catenacci, L., Sorrenti, M., Segale, L., Bari, E., Mauri, P., Torre, M.L., Perteghella, S. 2021. Equine Mesenchymal Stem/Stromal Cells Freeze-Dried Secretome (Lyosecretome) for the Treatment of Musculoskeletal Diseases: Production Process Validation and Batch Release Test for Clinical Use. *Pharmaceuticals* 14 (553)
- Muniswami, D. M., Reddy, L. V. K., Venkatesh, K., Babu, S., & Sen, D. (2019). Neuropotency and Neurotherapeutic Potential of Human Umbilical Cord Stem Cell's Secretome. *Regenerative Engineering and Translational Medicine* 5, 420-434.
- Nakayama, H., Iohara, K., Hayashi, Y., Okuwa, Y., Kurita, K., Nakashima, M. 2017. Enhanced regeneration potential of mobilized dental pulp stem cells from immature teeth. *Oral Dis* 23 (620)
- Naoi, M., Maruyama, W., Yi, H., Akao, Y., Yamaoka, Y., Shamoto-Nagai, M. 2007. Neuroprotection by propargylamines in Parkinson's disease: intracellular mechanism underlying the anti-apoptotic function and search for clinical markers. *J Neural Transm* 72: 121-131

- Nebie, O., Barro, L., Wu, Y.W., Knutson, F., Buee, L., Devos, D., Peng, C.W., Blum, D., Burnouf, T. 2020. Heat-treated human platelet pellet lysate modulates microglia activation, favors wound healing and promotes neuronal differentiation *in vitro*. *Platelets*, Early Online: 1–12
- Ni, J., Wu, Z., Meng, J., Zhu, A., Zhong, X., Wu, S., Nakanishi, H. 2017. The Neuroprotective Effects of Brazilian Green Propolis on Neurodegenerative Damage in Human Neuronal SH-SY5Y Cells. *Oxidative Medicine and Cellular Longevity* 2017 (7984327)
- Parvizi, M., Ryan, Z.C., Ebtehaj, S., Arendt, B.K., Lanza, I.R. 2021. The secretome of senescent preadipocytes influences the phenotype and function of cells of the vascular wall. *Biochimica et Biophysica (BBA) – Molecular Basis of Disease* 1867(1)
- Pawitan, J.A. 2014. Prospect of Stem Cell Conditioned Medium in Regenerative Medicine. *BioMed Research International* 2014
- Prabaningtyas, N. 2019. Pengaruh MSC-CM Terinduksi Serum Inflamasi Dosis Rendah Terhadap Diameter pada Penyembuhan Luka (Studi Eksperimental In Vivo Mesenchymal Stem Cell Conditioned Medium Terhadap Tikus Galur Wistar Model Luka Eksisi). Universitas Islam Sultan Agung.
- Prajapati, P., Sripada, L., Singh, K., Bhatelia, K., Singh, R., Singh, R. 2015. TNF- α regulates miRNA targeting mitochondrial complex-I and induces cell death in dopaminergic cells. *Biochimica et Biophysica Acta* 1852(2015):451–461
- Puspitasari, R.L., Boediono, A., Sandra, F. 2013. *Conditioned Medium* dari Kultur Primer Sel Syaraf *Mus musculus*. *Seminar Nasional X Pendidikan Biologi FKIP UNS*: 1-6
- Raoufi, M.F., Tajik, P., Dehghan, M.M., Eini, F., Barin, A. 2010. Isolation and Differentiation of Mesenchymal Stem Cells From Bovine Umbilical Cord Blood. *Reproduction in Domestic Animals* 46(1):95-99
- Rothaug, M., Becker-Paully, C., Rose-John, S. 2016. The role of interleukin-6 signaling in nervous tissue. *Biochimica et Biophysica Acta* 1863: 1218-1227
- Schmittgen, T.D., Livak, K.J. 2008. Analyzing real-time PCR data by the comparative CT method. *Nature Protocols* 3(6): 1101-1108
- Scopetti, M., Santurro, A., Gatto, V., La Russa, R., Manetti, F., D’Errico, S., Frati, P., Fineschi, V. 2020. Mesenchymal stem cells in neurodegenerative diseases: Opinion review on ethical dilemmas. *World J Stem Cells* 12(3): 168-177
- Seçme, M., Eroğlu, C., Dodurga, Y., Bağcı, G. 2016. Investigation of anticancer mechanism of oleuropein via cell cycle and apoptotic pathways in SH-SY5Y neuroblastoma cells. *Gene* 585: 93–99
- Tang, Y., Dawn, B. 2015. *Mesenchymal Stem Cell Derived Exosomes: The Potential for Translational Nanomedicine*. San Diego: Elsevier
- Teng, X., Hardwick, J.M. 2015. Caspases in Programmed Cell Death. *Reference Module in Biomedical Science* 2015

- Teppola, H., Sarkanen, J.R., Jalonen, T.O., Linne, M.L. 2018. Impacts of laminin and polyethyleneimine surface coatings on morphology of differentiating human SH-SY5Y cells and networks. *IFMBE Proceedings* 65: 298-301
- Trepat, X., Chen, Z., Jacobson, K. Cell migration. 2012. *Compr Physiol.* 2(4):2369-92.
- Tunica, D. G., Yin, X., Sidibe, A., Stegemann, C., Nissum, M., Zeng, L., Mayr, M. 2009. Proteomic analysis of the secretome of human umbilical vein endothelial cells using a combination of free-flow electrophoresis and nanoflow LC-MS/MS. *Proteomics* 9(21), 4991-4996.
- Tutar, Y., Tutar, L. 2018. *Current Understanding of Apoptosis – Programmed Cell Death*. London: IntechOpen
- Wakabayashi K, Mori F, Tanji K, Orimo S, Takahashi H. 2010. Involvement of the peripheral nervous system in synucleinopathies, tauopathies and other neurodegenerative proteinopathies of the brain. *Acta Neuropathol.* 120(1):1-12.
- Wu, K.C., Chang, Y.H., Liu, H.W., Ding, D.C. 2019. Transplanting human umbilical cord mesenchymal stem cells and hyaluronate hydrogel repairs cartilage of osteoarthritis in the minipig model. *Tzu Chi Medical Journal* 31(1): 11–19
- Xicoy, H., Wieringa, B., Martens, G.J.M., 2017. The SH-SY5Y cell line in Parkinson's disease research: a systematic review. *Molecular Neurodegeneration* : 12-10
- Xiong, Z.H., Wei, J., Lu, M.Q., Jin, M.Y., Geng, H.L. 2018. Protective effect of human umbilical cord mesenchymal stem cell exosomes on preserving the morphology and angiogenesis of placenta in rats with preeclampsia. *Biomedicine & Pharmacotherapy* 105:1240–1247
- Verhoeven, B.M., Mei, S., Olsen, T.K., Gustafsson, K., Valind, A., Lindström, A., Gisselsson, D., Fard, S.S., Hagerling, C., Kharchenko, P.V., Kogner, P., Johnsen, J.I., Baryawno, N. 2022. The immune cell atlas of human neuroblastoma. *Cell Rep Med.* 3(6):100657.
- Yee, J.Z., Oh, K.W., Kim, S.H. 2015. Stem Cell Therapy for Neurodegenerative Diseases. *Hanyang Med Rev* 35:229-235
- Zhang, J.M., An, J. 2007. Cytokines, Inflammation and Pain. *Int Anesthesiol Clin.* 45(2): 27–37
- Zhang, Q., Li, J., An, W., Fan, Y., Cao, Q. 2020. Neural stem cell secretome and its role in the treatment of neurodegenerative disorders. *J. Integr. Neurosci.* 19(1): 179–185.
- Zhang, J., Li, S., Liu, F., Yang, K. 2022. Role of CD68 in tumor immunity and prognosis prediction in pan-cancer. *Sci Rep.* 12(1):7844.
- Zhou, X., Ashford, J.W. 2019. Advances in screening instruments for Alzheimer's disease. *Aging Medicine* 2:88–93.