

DAFTAR PUSTAKA

- Abraham KE, McMillen D, Brewer KL, 2004. The effects of endogenous interleukin-10 on gray matter damage and the development of pain behaviors following excitotoxic spinal cord injury in the mouse, *Neuroscience*, 124, pp. 945–52, doi: [10.1016/j.neuroscience.2004.01.004](https://doi.org/10.1016/j.neuroscience.2004.01.004).
- Agapova TY, Agniullin YV, Silachev DN, Shadrina MI, Slominsky PA, Shram SI, Limborskaya SA, Myasoedov NF, 2007. Expression changes caused by the peptide semax in the intracellular signal pathway genes in rat hippocamp, *Doklady Biochemistry and Biophysics*, 417(1), pp. 334–336. doi: [10.1134/S1607672907060129](https://doi.org/10.1134/S1607672907060129).
- Allison DJ, Thomas A, Beaudry K, Ditor DS, 2016. Targeting inflammation as a treatment modality for neuropathic pain in spinal cord injury: A randomized clinical trial, *Journal of Neuroinflammation*, 13(1), pp. 4–13, doi: [10.1186/s12974-016-0625-4](https://doi.org/10.1186/s12974-016-0625-4).
- Alizadeh A, Dyck SM, Karimi-Abdolrezaee S, 2019. Traumatic Spinal Cord Injury: An Overview of Pathophysiology, Models and Acute Injury Mechanisms, *Frontiers in Neurology*. Frontiers Media SA, 10. doi: [10.3389/fneur.2019.00282](https://doi.org/10.3389/fneur.2019.00282).
- Anwar MA, Shehabi TS, Eid AH, 2016. Inflammogenesis of Secondary Spinal Cord Injury, *Front. Cell. Neurosci*, 10, pp. 98, doi: [10.3389/fncel.2016.00098](https://doi.org/10.3389/fncel.2016.00098).
- Atzeni F, Straub RH, Cutolo M, Sarzi-Puttini P, 2010. Anti-TNF therapy restores the hypothalamic-pituitary-adrenal axis: Annals of the New York Academy of Sciences, in *Annals of the New York Academy of Sciences*. Blackwell Publishing Inc., pp. 179–181. doi: [10.1111/j.1749-6632.2009.05366.x](https://doi.org/10.1111/j.1749-6632.2009.05366.x).
- Barakat DJ, Dvorientchikova G, Ivanov D, Shestopalov VI, 2012. Astroglial NF- κ B mediates oxidative stress by regulation of NADPH oxidase in a model of retinal ischemia reperfusion injury, *Journal of Neurochemistry*, 120(4), pp. 586–597. doi: [10.1111/j.1471-4159.2011.07595.x](https://doi.org/10.1111/j.1471-4159.2011.07595.x).
- Batchelor PE, Wills TE, Skeers P, Battistuzzo CR, Macleod MR, Howells DW, Sena ES, 2013. Meta-Analysis of Pre-Clinical Studies of Early Decompression in Acute Spinal Cord Injury: A Battle of Time and Pressure, *PLoS ONE*, 8(8), pp. 1–12. doi: [10.1371/journal.pone.0072659](https://doi.org/10.1371/journal.pone.0072659).
- Bareyre FM, Schwab ME, 2003. Inflammation, degeneration and regeneration in the injured spinal cord: insights from DNA microarrays, *Review Trends in Neurosciences*, 26(10), doi: [10.1016/j.tins.2003.08.004](https://doi.org/10.1016/j.tins.2003.08.004).

- Beattie MS, Farooqui AA, and Bresnahan JC, 2000. Review of current evidence for apoptosis after spinal cord injury, *Journal of Neurotrauma*, 17(10), pp. 915–925. doi: 10.1089/neu.2000.17.915.
- Berthold-Losleben M and Himmerich H, 2008. The TNF- α System: Functional Aspects in Depression, Narcolepsy and Psychopharmacology, *Current Neuropharmacology*, Bentham Science Publishers Ltd., 6(3), pp. 193–202. doi: 10.2174/157015908785777238.
- Bethea JR, 2000. Spinal cord injury-induced inflammation: a dual-edged sword, *Progress in Brain Research*, 12, doi: [10.1016/S0079-6123\(00\)28005-9](https://doi.org/10.1016/S0079-6123(00)28005-9).
- Bracken MB, Collins WF, Freeman DF, Shepard MJ, Wagner FW, Silten RM, *et al.*, 1984. Efficacy of Methylprednisolone in Acute Spinal Cord Injury, *JAMA: The Journal of the American Medical Association*, 251(1), pp. 45–52. doi: 10.1001/jama.1984.03340250025015.
- Bracken MB, 2012. Steroids for acute spinal cord injury, *Cochrane Database of Systematic Reviews*, 4(3), pp. 179–180. doi: 10.1002/14651858.CD001046.pub2.
- Brambilla R, Bracchi-Ricard V, Hu WH, Frydel B, Bramwell A, Karmally S, Green EJ, Bethea JR, 2005. Inhibition of astroglial nuclear factor κ B reduces inflammation and improves functional recovery after spinal cord injury, *Journal of Experimental Medicine*, 202(1), pp. 145–156. doi: 10.1084/jem.20041918.
- Brandtzaeg P, Osnes L, Ovstebo R, 1996. Net inflammatory capacity of human septic shock plasma evaluated by a monocyte-based target cell assay: identification of interleukin-10 as a major functional deactivator of human monocytes, *J Exp Med*, 184, pp. 51–60.
- Brown MA, Hural J., 1997, Functions of IL-4 and control of its expression, *Crit Rev Immunol*, 17, pp. 1–32.
- Brzoska T, Luger TA, Maaser C, Abels C, Böhm M, 2008. α -melanocyte-stimulating hormone and related tripeptides: Biochemistry, antiinflammatory and protective effects in vitro and in vivo, and future perspectives for the treatment of immune-mediated inflammatory diseases, *Endocrine Reviews*, pp. 581–602. doi: 10.1210/er.2007-0027.
- Capsoni F, Ongari AM, Reali E, Catania A, 2009. Melanocortin peptides inhibit urate crystal-induced activation of phagocytic cells, *Arthritis Research and Therapy*, 11(5). doi: 10.1186/ar2827.
- Catania A, Gatti S, Colombo G, Lipton JM, 2004. Targeting melanocortin receptors as a novel strategy to control inflammation, *Pharmacol. Rev.* 56, 1–29.
- Catania A, 2007. The melanocortin system in leukocyte biology, *Journal of Leukocyte Biology*, 81, pp. 383–392, doi 10.1189/jlb.0706426.
- Cavaillon J, 2018 Damage-associated molecular patterns, *Inflammation: From Molecular and Cellular Mechanism to The Clinic*, 1, pp. 57–80.

- Cho N, Nguyen DH, Satkunendrarajah K, Branch DR, Fehlings MG, 2012. Evaluating the role of IL-11, a novel cytokine in the IL-6 family, in a mouse model of spinal cord injury, *J Neuroinflammation*, 20(9), pp. 134, doi: 10.1186/1742-2094-9-134.
- Chen XG, Hua F, Wang SG, Xu YY, Yue HT, Sun J, 2018. Zafirlukast in combination with pseudohypericin attenuates spinal cord injury and motor function in experimental mice, *Drug Design, Development and Therapy*, 12, pp. 2389–402, doi: 10.2147/DDDT.S154814.
- Clarke CJP, Hales A, Hunt A, 1998. IL-10 mediated suppression of TNF- α production is independent of its ability to inhibit NF- κ B activity, *Eur J Immunol*, 28, pp. 1719–26, doi: [10.1002/\(SICI\)1521-4141\(199805\)28:05<1719::AID-IMMU1719>3.0.CO;2-Q](https://doi.org/10.1002/(SICI)1521-4141(199805)28:05<1719::AID-IMMU1719>3.0.CO;2-Q).
- Daley JM, Brancato SK, Thomay AA, Reichner JS, Albina JE, 2010. The phenotype of murine wound macrophages, *Journal of Leukocyte Biology*, 87(1), pp. 59–67. doi: 10.1189/jlb.0409236.
- David S, Greenhalgh AD, Kroner A, 2015. Neuroscience Forefront Review Macrophage And Microglial Plasticity In The Injured Spinal Cord, *Neuroscience*, 307, pp. 311-8, doi: [10.1016/j.neuroscience.2015.08.064](https://doi.org/10.1016/j.neuroscience.2015.08.064).
- De Rivero Vaccari JP, Lotocki G, Marcillo AE, Dietrich WD, Keane RW, 2008. A molecular platform in neurons regulates inflammation after spinal cord injury, *J Neurosci*, 28, pp. 3404–14, doi: 10.1523/JNEUROSCI.0157-08.2008.
- De Backer T, Vander Stichele R, Lehert, P, Van Bortel L, 2009. Naftidrofuryl for intermittent claudication: meta-analysis based on individual patient data, *BMJ*, 338(mar10 1), pp. b603–b603. doi: 10.1136/bmj.b603.
- Dinarello CA, 2000. Proinflammatory Cytokines, *Chest*, 118, pp. 503-8, doi: [10.1378/chest.118.2.503](https://doi.org/10.1378/chest.118.2.503).
- Dizdaroglu M, Jaruga P, Birincioglu M, Rodriguez H, 2002. Serial Review : Oxidative DNA Damage and Repair, *Science*, 32(7), pp. 1102–1115. doi: 10.1016/S0891-5849(02)00902-4.
- Dong H, Fazzaro A, Xiang C, Korsmeyer SJ, Jacquin, MF, McDonald JW, 2003. Enhanced oligodendrocyte survival after spinal cord injury in bax-deficient mice and mice with delayed Wallerian degeneration, *Journal of Neuroscience*, 23(25), pp. 8682–8691. doi: 10.1523/jneurosci.23-25-08682.2003.
- Donnelly DJ, Popovich PG, 2008. Inflammation and its role in neuroprotection, axonal regeneration and functional recovery after spinal cord injury, *Experimental Neurology*, 209, pp. 378–88, doi: [10.1016/j.expneurol.2007.06.009](https://doi.org/10.1016/j.expneurol.2007.06.009).
- Dumont RJ, 2012. Acute Spinal Cord Injury, Part 1: Pathophysiologic Mechanism, *Clinical Neuropharmacology*, 24, pp. 254-64.

- Erny E, 2013. The Effect of ACTH4-10 synthetic on separated junction formation and CSF leukocyte number in LPS-induced meningitis, *IOSR Journal of Pharmacy and Biological Sciences*, 5(5), pp. 40–46. doi: 10.9790/3008-0554046.
- Fleming JC, Norenberg MD, Ramsay DA, Dekaban GA, Marcillo AE, Saenz AD, Styles MP, 2006. The cellular inflammatory response in human spinal cords after injury, *Brain*, 129, pp. 3249–69, doi: [10.1093/brain/awl296](https://doi.org/10.1093/brain/awl296).
- Fehlings MG, and Perrin RG, 2006. The timing of surgical intervention in the treatment of spinal cord injury: A systematic review of recent clinical evidence, *Spine*, 31(11), pp. 28–35. doi: 10.1097/01.brs.0000217973.11402.7f.
- Fehlings MG, Vaccaro A, Wilson JR, Singh AW, Cadotte D, Harrop JS, *et al*, 2012. Early versus Delayed Decompression for Traumatic Cervical Spinal Cord Injury: Results of the Surgical Timing in Acute Spinal Cord Injury Study (STASCIS), *PLoS One*, 12(6), p. 540. doi: 0.1371/journal.pone.0032037.
- Fehlings MG, Tetreault LA, Wilson JR, Kwon BK, Burns AS, Martin AR, Harrop JS, 2017. A Clinical Practice Guideline for the Management of Acute Spinal Cord Injury: Introduction, Rationale, and Scope, *Global spine journal*, 7(3 Suppl), 84S–94S. doi:10.1177/2192568217703387
- Francos-Quijorna, I, Amo-Aparicio J, Martinez-Muriana A, Lopez-Vales R, 2016. IL-4 drives microglia and macrophages toward a phenotype conducive for tissue repair and functional recovery after spinal cord injury, *Glia*, 64, pp. 2079–92, doi: 10.1002/glia.23041.
- Freria CM, Velloso LA, and Oliveira AL, 2012. Opposing effects of Toll-like receptors 2 and 4 on synaptic stability in the spinal cord after peripheral nerve injury, *Journal of Neuroinflammation*, 9(1), p. 746. doi: 10.1186/1742-2094-9-240.
- Friesenecker B, Tsai AG, and Intaglietta M, 1995. Cellular Basis of Inflammation, Edema and the Activity of Daflon 500 mg, *International Journal of Microcirculation*, 15(1), pp. 17–21. doi: 10.1159/000179090.
- Gadani SP, Walsh JT, Lukens JR, Kipnis J, 2016. System to Injury, *Neuron*, 87(1), pp. 47–62.
- Gál P, Kravcuková P, Mokry M, Kluchová D, 2009. Chemokines as possible targets in modulation of the secondary damage after acute spinal cord injury: a review, *Cell Mol Neurobiol*, 29, pp. 1025–35, doi: 10.1007/s10571-009-9392-4.
- Genovese T, Mazzon E, Mariotto S, Menegazzi M, Cardali S, Conti A, *et al*, 2006. Modulation of nitric oxide homeostasis in a mouse model of spinal cord injury, *Journal of Neurosurgery: Spine*, 4(2), pp. 145–153. doi: 10.3171/spi.2006.4.2.145.

- Genovese T, Mazzon E, Crisafulli C, 2008. TNF- α blockage in a mouse model of SCI: Evidence for improved outcome, *Shock*, 29(1), pp. 32–41. doi: 10.1097/shk.0b013e318059053a.
- Genovese T, Mazzon E, Crisafulli C, Paola D, 2009. Absence of endogenous interleukin-10 enhances secondary inflammatory process after spinal cord compression injury in mice, *Journal of Neurochemistry*, 108(6), pp. 1360–1372. doi: 10.1111/j.1471-4159.2009.05899.x.
- Gensel JC, and Zhang B, 2015. Macrophage activation and its role in repair and pathology after spinal cord injury, *Brain Research*. Elsevier, 1619, pp. 1–11. doi: 10.1016/j.brainres.2014.12.045.
- Glaser J, Gonzalez R, Sadr E, Keirstead HS, 2006. Neutralization of the chemokine CXCL10 reduces apoptosis and increases axon sprouting after spinal cord injury, *J Neurosci Res*, 84, pp. 724–34, doi: 10.1002/jnr.20982.
- Guarini S, 1998. Adrenocorticotropin counteracts the increase in free radical blood levels, detected by electron spin resonance spectrometry, in rats subjected to prolonged asphyxia., *Life sciences*, 63(2), pp. 97–104. doi: 10.1016/s0024-3205(98)00244-6.
- Gurtner GC, Werner S, Barrandon Y, Longaker MT, 2008. Wound repair and regeneration, *Nature*. Nature Publishing Group, pp. 314–321. doi: 10.1038/nature07039.
- Habgood MD, Bye N, Dziegielewska KM, Ek CJ, Lane MA, Potter A, 2007. Changes in blood-brain barrier permeability to large and small molecules following traumatic brain injury in mice, *Eur J Neurosci*, 25, pp. 231–8, doi: 10.1111/j.1460-9568.2006.05275.x.
- Hardley M, Grabb P, Oyesiku N, Resnick D, Timothy R, 2001. Guideline for The Management of Acute Spine and Spinal Cord Injuries, USA: AANS.
- Hart PH, Vitti GF, Burgess DR, 1989. Potential anti-inflammatory effects of interleukin 4: suppression of human monocyte tumor necrosis factor alpha, interleukin 1, and prostaglandin E2, *Proc Natl Acad Sci USA*, 86, pp. 3803–07.
- Hausmann ON, 2003. Post-traumatic inflammation following spinal cord injury, *Nature Spinal Cord*, 41, pp. 369-78, doi: 10.1038/sj.sc.3101483.
- Hermoso M, and Cidlowski J, 2003. Putting the Brake on Inflammatory Responses: the Role of Glucocorticoids, *IUBMB Life (International Union of Biochemistry and Molecular Biology: Life)*, 55(9), pp. 497–504. doi: 10.1080/15216540310001642072.
- Hilário MOE, Terreri MT, and Len CA, 2006. Antiinflamatórios não-hormonais: inibidores da ciclooxigenase 2, *Jornal de Pediatria*. FapUNIFESP (SciELO), 82(5), pp. S206–S212. doi: 10.1590/s0021-75572006000700011.
- Holder JR, Haskell-Luevano C, 2004. Melanocortin ligands: 30 years of structure-activity relationship (SAR) studies, *Med. Res. Rev.* 24, 325– 356.

- Hong J, Chang A, Zavvarian MM, Wang J, Liu Y, Fehlings MG, 2018. Level-specific differences in systemic expression of pro-and anti-inflammatory cytokines and chemokines after spinal cord injury, *International Journal of Molecular Sciences*. MDPI AG, 19(8). doi: 10.3390/ijms19082167.
- Hu Y, Zhang H, Lu Y, Bai H, Xu Y, Zhu X., *et al*, 2011. Class A scavenger receptor attenuates myocardial infarction-induced cardiomyocyte necrosis through suppressing M1 macrophage subset polarization, *Basic Research in Cardiology*. Dr. Dietrich Steinkopff Verlag GmbH and Co. KG, 106(6), pp. 1311–1328. doi: 10.1007/s00395-011-0204-x.
- Ichiyama T, Sakai T, Catania A, Barsh GS, Furukawa S, Lipton JM, 1999. Inhibition of peripheral NF- κ B activation by central action of α -melanocyte-stimulating hormone'. *J. Neuroimmunol.* 99, 211–217.
- Kang J, Jiang MJ, Min HJ, 2011. IKK- β -mediated myeloid cell activation exacerbates inflammation and inhibits recovery after spinal cord injury, *European Journal of Immunology*, 41(5), pp. 1266–1277. doi: 10.1002/eji.201040582.
- Kawai T, and Akira S, 2009. The roles of TLRs, RLRs and NLRs in pathogen recognition, *International Immunology*, pp. 317–337. doi: 10.1093/intimm/dxp017.
- Kawasaki T, and Kawai T, 2014. Toll-like receptor signaling pathways, *Frontiers in Immunology*. Frontiers Media S.A. doi: 10.3389/fimmu.2014.00461.
- Kertmen H, 2018. Comparative effects of methylprednisolone and tetracosactide (ACTH1-24) on ischemia/reperfusion injury of the rabbit spinal cord, *Archives of Medical Science*. Termedia Publishing House Ltd., 14(6), pp. 1459–1470. doi: 10.5114/aoms.2017.65650.
- Kigerl KA, and Popovich PG, 2009. Toll-like Receptor in Spinal Cord Injury, *Curr Top Microbiol Immunol*, pp. 123-36, doi: [10.1007/978-3-642-00549-7_7](https://doi.org/10.1007/978-3-642-00549-7_7).
- Klusman I, Schwab ME, 1997. Effects of pro-inflammatory cytokines in experimental spinal cord injury, *Brain Res*, 762, pp. 173–84, doi: [10.1016/S0006-8993\(97\)00381-8](https://doi.org/10.1016/S0006-8993(97)00381-8).
- Kramer J, Freund P, and Curt A, 2014. Traumatic Spinal Cord Injury: Chronic Spinal Cord Injury and Recovery, Quantitative MRI of the Spinal Cord, Elsevier Inc. doi: 10.1016/B978-0-12-396973-6.00004-6.
- Kronenberg G, and Endres M, 2010. Neuronal injury: folate to the rescue?, *Journal of Clinical Investigation*, 120(5), pp. 1383–1386. doi: 10.1172/JCI40764.
- Krueger H, NoonanVK, Trenaman L, Joshi P, 2013. The economic burden of traumatic spinal cord injury in Canada, *Chronic Diseases and Injuries in Canada*, 33(3), pp. 113–122.

- Kwon BK, Stammers AM, Belanger LM, Bernado A, Chan D, Bishop CM, Slobogen GP, 2010. Cerebrospinal Fluid Inflammatory Cytokines and Biomarkers of Injury Severity in Acute Human Spinal Cord Injury, *Journal of Neurotrauma*, 27, pp. 669–82, doi: 10.1089/neu.2009.1080.
- Land WG, 2015. The role of damage -associated molecular pattern (DAMPs) in human diseases part II: DAMP's as diagnostics, prognostics, and therapeutics in clinical medicine, *Sulthan Qaboos University Medical Journal*, 15(2), pp. 157–70.
- Macaluso A, McCoy D, Ceriani G, Watanabe T, Biltz J, Catania A, Lipton JM, 1994. Antiinflammatory influences of α -MSH molecules: central neurogenic and peripheral actions, *J. Neurosci.* 14, 2377–2382.
- Machado ID, 2014. Alterations in the profile of blood neutrophil membrane receptors caused by in vivo adrenocorticotrophic hormone actions, *American Journal of Physiology - Endocrinology and Metabolism*, 307(9), pp. E754–E763. doi: 10.1152/ajpendo.00227.2014.
- Masturoh I, Temesvari NA, 2018. Metodologi Penelitian Kesehatan'. Pusat Pendidikan Sumber Daya Manusia Kesehatan Kementerian Kesehatan RI. pp. 21-196.
- Mei J, 2012. Cxcr2 and Cxcl5 regulate the IL-17/G-CSF axis and neutrophil homeostasis in mice, *Journal of Clinical Investigation*, 122(3), pp. 974–986. doi: 10.1172/JCI60588.
- McDonald JW, Sandowsky C, 2002. Spinal-cord injury, *Lancet*, 359, pp. 417-25.
- Mioni C, Bazzani C, Giuliani D, Altavilla D, Leone S, Ferrari A, Minutoli L, Bitto A, Marini H, Zaffe D, Botticelli AR, Iannone A, Tomasi A, Bigiani A, Bertolini A, Squadrito F, Guarini S, 2005. Activation of an efferent cholinergic pathway produces strong protection against myocardial ischemia/reperfusion injury in rats'. *Crit. Care Med.* 33, 2621–2628.
- Mirza R, and Koh TJ, 2011. Dysregulation of monocyte/macrophage phenotype in wounds of diabetic mice, *Cytokine*, 56(2), pp. 256–264. doi: 10.1016/j.cyto.2011.06.016.
- Mosmann TR, Cherwinski H, Bond MW, 1986. Two types of murine helper T-cell clone: I. Definition according to profiles of lymphokine activities and secreted proteins, *J Immunol*; 136, pp. 2348–57.
- Ni H, Jin W, Yuan B, Zhu T, Wang J, Jiang, J, Liang W, 2014. Curcumin inhibits the increase of labile zinc and the expression of inflammatory cytokines after traumatic spinal cord injury in rats, *Journal of surgical research*, 187, pp. 646-52, doi: [10.1016/j.jss.2013.12.023](https://doi.org/10.1016/j.jss.2013.12.023).
- Novak ML, and Koh TJ, 2013. Phenotypic transitions of macrophages orchestrate tissue repair, *American Journal of Pathology*, pp. 1352–1363. doi: 10.1016/j.ajpath.2013.06.034.

- Okada S, Nakamura M, Mikami Y, Shimazaki T, Mihara M, Ohsugi Y, 2004. Blockade of interleukin-6 receptor suppresses reactive astrogliosis and ameliorates functional recovery in experimental spinal cord injury, *J Neurosci Res*, 76, pp. 265–76.
- Okada S, 2016. The pathophysiological role of acute inflammation after spinal cord injury, *Inflammation and Regeneration*, 36(1), doi: 20.10.1186/s41232-016-0026-1.
- Opal SM, DePalo VA, 2000. Anti-inflammatory cytokines, *Chest*, 117(4), pp. 1162–72, doi: 10.1378/chest.117.4.1162.
- Park J, Decker JT, Margul DJ, Smith DR, Cummings BJ, Anderson AJ, Shea LD, 2018. Local Immunomodulation with Anti-inflammatory Cytokine-Encoding Lentivirus Enhances Functional Recovery after Spinal Cord Injury, *Molecular Therapy*, 26(7), pp. 1756–70, doi: 10.1016/j.ymthe.2018.04.022.
- Paterniti I, Esposito E, Cuzzocrea S, 2016. Role of the Neuroinflammation in the Degree of Spinal Cord Injury: New Therapeutic Strategies, *Recovery of Motor Function Following Spinal Cord Injury*, doi: 10.5772/63222.
- Poon PC, Gupta D, Shoichet MS, Tator CH, 2007. Clip compression model is useful for thoracic spinal cord injuries: Histologic and functional correlates. *Spine (Phila Pa 1976)*, 32 (25) : 2853-2859. doi:10.1097/BRS.0b013e31815b7e6b
- Prawiros SR, 2013. Adrenocorticotrophin Hormone 4-10 synthetic inhibit ProstaglandinE 2 and IL- 1 β levels in LPS-induce meningitis, 2(3), pp. 1–5.
- Rabani R, Volchuk A, Jerkic M, Ormesher L, Garces-Ramirez L, Canton J, *et al*, 2018. Mesenchymal stem cells enhance NOX2-dependent reactive oxygen species production and bacterial killing in macrophages during sepsis, *European Respiratory Journal*, 51(4). doi: 10.1183/13993003.02021-2017.
- Rosseels V, Nazé F, De Craeye S, Francart A, Kalai M, Van Gucht S, 2011. A non-invasive intranasal inoculation technique using isoflurane anesthesia to infect the brain of mice with rabies virus, *Journal of Virological Methods*, 173(1), pp. 127–136. doi: 10.1016/j.jviromet.2011.01.019.
- Rowland JW, Hawryluk GW, Kwon B, Fehlings MG, 2008. Current status of acute spinal cord injury pathophysiology and emerging therapies: Promise on the horizon, *Neurosurgical Focus*, 25(5). doi: 10.3171/FOC.2008.25.11.E2.
- Schagen S, Perchuc AM, Voegeli R, Imfeld D, Schreier T, Zouboulis CC, 2009. Lipid regulation in SZ95 sebocytes by active and inactive phospholipases A 2 from Bothrops moojeni venom, *Dermato-Endocrinology*, 1(2), pp. 102–107. doi: 10.4161/derm.1.2.7820.

- Schwartz SI, Shires GT, Spencer FC, Daly JM, Fischer JE, Galloway AC, 2010. *Principles of Surgery Companion Handbook, USA: McGraw-Hill.*
- Shen LF, Cheng H, Tsai MC, Kuo HS, Chak KF, 2009. PAL31 may play an important role as inflammatory modulator in the repair process of the spinal cord injury rat, *J Neurochem*, 108, pp. 1187–97, doi: 10.1111/j.1471-4159.2008.05865.x.
- Shields AM, Panayi GS, Corrigan VM, 2011. Resolution-associated molecular patterns (RAMP): RAMParts defending immunological homeostasis?, *Clinical and Experimental Immunology*, 165(3), pp. 292–300, doi: 10.1111/j.1365-2249.2011.04433.x.
- Sim AS, Patellongi I, Yusuf I, As'ad S, Wahid S, Aulina S, Kabo P, Sajuthi D, Islam AA, 2017. The Effect of ACTH 4-10 ProGlyPro as Anti-inflammatory on Astrocyte Cell Repair in Spinal-Cord- Injured Mouse by Assessing Locomotor Function'. *International Journal of Sciences: Basic and Applied Research (IJSBAR)*, 33(3), pp. 31-41.
- Stammers AT, Liu J, Kwon BK, 2012. Expression of Inflammatory Cytokines Following Acute Spinal Cord Injury in a Rodent Model, *Journal of Neuroscience Research*, 90, pp. 782–90, doi: 10.1002/jnr.22820.
- Sudiana IK, 2017. *Hantaran Sinyal Pada Proses Inflamasi*, Surabaya: Airlangga University Press, pp. 54-8.
- Sultani M, Stringer M, Bowen JM, Gibson RJ, 2012. Anti-Inflammatory Cytokines: Important Immunoregulatory Factors Contributing to Chemotherapy-Induced Gastrointestinal Mucositis, *Chemotherapy Research and Practice*. Hindawi Limited, 2012, pp. 1–11. doi: 10.1155/2012/490804.
- Tan HY, Wang N, Li S, Hong M, Wang X, Feng Y, 2016. The Reactive Oxygen Species in Macrophage Polarization: Human Diseases, *Oxidative Medicine and Cellular Longevity*, 2016, pp. 1–16. doi: 10.1155/2016/2795090.
- Taylor AR, Welsh J, Young C, Spoor E, Kerwin SC, Griffin JF, Levine G, 2014. Cerebrospinal Fluid Inflammatory Cytokines and Chemokines in Naturally Occurring Canine Spinal Cord Injury, *Journal Of Neurotrauma*, 31, pp. 1561–9, doi: 10.1089/neu.2014.3405.
- Tian DS, Xie MJ, Yu ZY, Zhang Q, Wang YH, Chen B, 2007. Cycle inhibition attenuates microglia induced inflammatory response and alleviates neuronal cell death after spinal cord injury in rats, *Brain Res*, 1135, pp. 177–85, doi: 10.1016/j.brainres.2006.11.085.
- Tulaar ABM, Karyana M, Karunia WL, Paulus AFS, Tinduh D, Anestherita F, Wangge G, 2017. People with Spinal Cord Injury in Indonesia. *American Journal of Physical Medicine & Rehabilitation*, 96, S74–S77.

- Ulndreaj A, Chio JCT, Ahuja CS, Fehlings MG, 2016. Modulating the immune response in spinal cord injury, *Expert Review of Neurotherapeutics*, 16(10), pp. 1127–1129. doi: 10.1080/14737175.2016.1207532.
- Van Woensel JBM, Biezeveld M, Biesterbos Alders AM, Eerenberg AJ, Endert, Hack EC, Kuijpers TW, 2001. Adrenocorticotrophic Hormone and Cortisol Levels in Relation to Inflammatory Response and Disease Severity in Children with Meningococcal Disease, *The Journal of Infectious Diseases*, 184(12), 1532–1537. doi:10.1086/324673
- velnar T, Bailey T, and Smrkolj V, 2009. The wound healing process: An overview of the cellular and molecular mechanisms, *Journal of International Medical Research. Field House Publishing LLP*, pp. 1528–1542. doi: 10.1177/147323000903700531.
- Vazir ND, 2004. NAD(P)H oxidase, superoxide dismutase, catalase, glutathione peroxidase and nitric oxide synthase expression in subacute spinal cord injury, *Brain Research. Elsevier*, 995(1), pp. 76–83. doi: 10.1016/j.brainres.2003.09.056.
- Wang Y, Wang YP, Zheng G, Lee VWS, Ouyang L, Chang DHH, *et al*, 2007. Ex vivo programmed macrophages ameliorate experimental chronic inflammatory renal disease, *Kidney International*, 72(3), pp. 290–299. doi: 10.1038/sj.ki.5002275.
- Wilson JR, and Fehlings MG, 2011. Emerging Approaches to the Surgical Management of Acute Traumatic Spinal Cord Injury, *Neurotherapeutics*, 8(2), pp. 187–194. doi: 10.1007/s13311-011-0027-3.
- Xiong J, Mao DA, and Liu LQ, 2015. Research Progress on the Role of ABC Transporters in the Drug Resistance Mechanism of Intractable Epilepsy, *BioMed Research International*. Hindawi Publishing Corporation. doi: 10.1155/2015/194541.
- Yang L, Jones NR, Blumbergs PC, Heuvel CV, MooreEJ, Manavis J, Sarvestani GT, Ghabriel MN, 2005. Severity-dependent expression of pro-inflammatory cytokines in traumatic spinal cord injury in the rat, *Journal of Clinical Neuroscience*, 12(3), pp. 276–84, doi: 10.1016/j.jocn.2004.06.011.
- Yilmaz ER, 2012. Effects of darbepoetin-alpha in spinal cord ischemia-reperfusion injury in the rabbit, *Acta Neurochirurgica*, 154(6), pp. 1037–1044. doi: 10.1007/s00701-012-1298-0.
- Zhai G, Pelletier JP, Liu M, Aitken D, Randell E, Rahman P, 2019. Activation of the phosphatidylcholine to Lysophosphatidylcholine pathway Is Associated with osteoarthritis Knee Cartilage Volume Loss over time'. doi: 10.1038/s41598-019-46185-w.
- Zhao Y, Zhao J, Zhang M, Zhao Y, Li J, Ma X. *et al*, 2017. Involvement of toll like receptor 2 signaling in secondary injury during experimental diffuse axonal injury in rats, *Mediators of Inflammation*. Hindawi Limited, 2017. doi: 10.1155/2017/1570917.

- Zhang YL, Xu JM, Zhou P, Zhong XL, Dai RP, 2012. Distinct activation of tumor necrosis factor- α and interleukin-6 in the spinal cord after surgical incision in rats, *Molecular Medicine Reports*, 5, pp. 1423-7, doi: 10.3892/mmr.2012.829.
- Zhou Z, Peng X, Insolera R, Fink DJ, Mata M, 2009. IL-10 promotes neuronal survival following spinal cord injury, *Exp Neurol*, 220(1), pp. 183-90, doi 10.1016/j.expneurol.2009.08.018.
- Zhu P, Li J, Fujino M, Zhuang J, Li XK, 2013. Development and Treatments of Inflammatory Cells and Cytokines in Spinal Cord Ischemia-Reperfusion Injury, *Mediators of Inflammation*, pp. 1-7, doi: 10.1155/2013/701970.