

DAFTAR PUSTAKA

- Al-Obaidi, MMJ, Al-Bayat, FH, Al-Batran, R, Hussaini, J & Khor, GH 2014, Impact of Ellagic Acid in Bone Formation after Tooth Extraction: An Experimental Study on Diabetic Rats. *The Scientific World Journal*. pp. 1-14.
- Al-Obaidi, MMJ, Al-Bayat, FH, Al-Batran, R, Pouya, H & Rouhollahi, E 2014, Protective Effect of Ellagic Acid on healing alveolar bone after tooth extraction in Rat-A Histological and Immunohistochemical study. *Archives of Oral Biology*. pp. 987-999.
- Alwahaibi, N, Aljaradi, S & Alazri, H 2018, Alternative to xylene as a clearing agent in histopathology. *Journal of Laboratory Physicians*, vol. 10, no. 2. pp. 189–193.
- An, S, Huang, X, Gao, Y, Ling, J, Huang Y & Xiao, Y 2015, FGF-2 induces the proliferation of human periodontal ligament cells and modulates their osteoblastic phenotype by affecting Runx2 expression in the presence and absence of osteogenic inducers. *International Journal of Molecular Medicine*, vol. 46. pp. 705-711.
- Ansari, M 2019, Bone tissue regeneration: biology, strategies and interface studies. *Progress in biomaterials*, vol. 8, no. 4. pp. 223-237.
- Ardhiyanto, HB, Siswomihardjo, W & Haniastuti, T 2012, Jumlah Osteoblas pada Proses Penyembuhan Tulang Pasca Implantasi Hidroksiapatit Sintesis dari Kalsit. *Dentika Dental Journal*, vol. 17, no. 2. pp. 145-149.
- Asgary, S, Javanmard, S & Zarfeshany, A 2014, *Potent health effects of pomegranate*. *Advanced Biomedical Research*, vol. 3, no. 1. pp. 1-8.

- Asmara, MA, Rahardjo, Dwirahardjo 2015, Pengaruh Aplikasi Topikal Simvastatin Terhadap Ekspresi Osteokalsin Pada Proses Penyembuhan Tulang Tikus Model Diabetes Melitus. *J Ked Gi*, vol. 6, no. 4. pp. 354-360.
- Baht, GS, Vi, L & Alman, BA 2018, The Role of the Immune Cells in Fracture Healing. *Current Osteoporosis Reports*, vol. 16, no. 2. pp. 138-145.
- Bahtiar, A, Arifin, S, Razalifha, A, Qomariah, N, Wuyung, PE, Arsianti, A 2014, Polar Fraction of Punica granatum L. peel extract increased osteoblast number on ovariectomized rat bone. *International Journal of Herbal Medicine*, vol. 2, no. 1. pp. 65-70.
- Bai, Y, Bai, L, Zhou, J, Chen, H & Zhang, L 2018. Sequential delivery of VEGF, FGF-2 and PDGF from the polymeric system enhance HUVECs angiogenesis in vitro and CAM angiogenesis. *Cellular Immunology*. pp. 19-32.
- Charoenlarp, P, Rajendran, AK & Iseki, S 2017, Role of fibroblast growth factors in bone regeneration. *Inflammation and Regeneration*, vol. 37, no. 10. pp. 1-7.
- Chatterjee, A, Chatterjee, S, Das, S, Saha, A, Chattopadhyay, S & Bandyopadhyay, SK 2012, Ellagic acid facilitates indomethacin-induced gastric ulcer healing via COX-2 up-regulation. *Acta Biochim Biophys Sin*, vol. 44. pp. 565-576.
- Chim, SM, Tickner, J, Chow, ST, Kuek, V, Guo, B, Zhang, G, Rosen, V, Erber, W & Xu, J 2013, Angiogenic factors in bone local environment. *Cytokine & Growth Factor Reviews*. pp. 1-14.
- Corrales, LP, Esteves ML & Vick, ER 2014, Scaffold Design for Bone Regeneration. *J Nanosci Nanotechnol*, vol. 14, no. 1. pp. 1-79.

De Souza Nunes, LS, De Oliveira, RV, Holgado, LA, Nary Filho, H, Ribeiro, DA & Matsumoto, MA 2011, Use of Bovine Hydroxyapatite With or Without Biomembrane in Sinus Lift in Rabbits: Histopathologic Analysis and Immune Expression of Core Binding Factor 1 and Vascular Endothelium Growth Factor. *Journal of Oral and Maxillofacial Surgery*, vol. 69, no. 4. pp. 1064-1069.

Domazetovic, V 2017, Oxidative stress in bone remodeling: role of antioxidants. *Clinical Cases in Mineral and Bone Metabolism*, vol. 14, no. 2. pp. 209-216.

Duraiyan, J, Govindarajan, R, Kaliyappan, K & Palanisamy, M 2012, Applications of immunohistochemistry. *Journal of Pharmacy and Bioallied Sciences*, vol. 4, no. 6. pp. 307-309.

Ellis, S, Lin, EJ & Tartar, D 2018, Immunology of Wound Healing. *Current Dermatology Reports*, vol. 7, no. 4. pp. 350-358.

Fei, Y, Xiao, L, Doetschman, T, Coffin, DJ & Hurley, MM 2011, Fibroblast Growth Factor 2 Stimulation of Osteoblast Differentiation and Bone Formation Is Mediated by Modulation of the Wnt Signaling Pathway. *Journal of Biological Chemistry*, vol. 286, no. 47. pp. 40575-40583.

Feng, X & McDonald, MJ 2011, Disorders of Bone Remodeling. *Annu Rev Pathol*, vol. 6. pp. 1-34.

Fernandez de Grado, G, Keller, L, Idoux, GY, Wagner, Q, Musset, AM, Benkirane JN & Offner, D 2018, Bone Substitutes: a review of their characteristics, clinical use, and perspectives for large bone defects management. *Journal of Tissue Engineering*, vol. 9. pp. 1-18.

Fitria, L, Mulyati, Tiraya, CM & Budi, AS 2015, Profil Reproduksi Jantan Tikus

- (*Rattus norvegicus* Berkenhout, 1769) Galur Wistar Stadia Muda, Pradewasa, dan Dewasa. *Jurnal Biologi Papua*, vol 7, no. 1. pp. 29–36.
- Florencio-Silva, R, Sasso, GR, Sasso-Cerri, E, Simões, MJ & Cerri, PS 2015, Biology of Bone Tissue: Structure, Function, and Factors That Influence Bone Cells. *BioMed research international*. pp. 1-17.
- Frisca, Sardjono, T & Sandra, F 2009, ANGIOGENESIS: Patofisiologi dan Aplikasi Klinis. *JKM*, vol. 8, no. 2. pp. 174-187.
- Fröhlich, L 2019, Micrnas at the Interface between Osteogenesis and Angiogenesis as Targets for Bone Regeneration. *Cells*, vol. 8, no. 2. pp. 1-33.
- García-Niño, WR & Zazueta, C 2015, Ellagic acid: Pharmacological activities and molecular mechanisms involved in liver protection. *Pharmacological Research*, vol. 97. pp. 1-20.
- Ghiasi, MS, Chen, J, Vaziri, A, Rodriguez, EK & Nazarian, A 2017, Bone fracture healing in mechanobiological modeling: A review of principles and methods. *Bone Reports*, vol. 6. pp. 87-100.
- Ginwala R, Bhavsar R, Chigbu DI, Jain P & Khan ZK 2019, Potential Role of Flavonoids in Treating Chronic Inflammatory Diseases with a Special Focus on the Anti-Inflammatory Activity of Apigenin. *Antioxidants*, vol. 8, no. 35. pp. 1-30.
- Granchi, D, Devescovi, V, Pratelli, L, Verri, E, Magnani, M, Donzelli, O & Baldini, N 2012, Serum levels of fibroblast growth factor 2 in children with orthopedic diseases: Potential role in predicting bone healing. *Journal of Orthopaedic Research*, vol. 31, no. 2. pp. 249–256.

- Granito, NR, Renno, ACM, Yamamura, H, de Almeida, MC, Ruiz, PLM & Ribeiro, DA 2018, Hydroxyapatite from Fish for Bone Tissue Engineering: A Promising Approach. *Int J Mol Cell Med Spring*, vol. 7, no. 2. pp. 80-90.
- Grosso, A, Burger, MG, Lunger, A, Schaefer, DJ, Banfi, A & Di Maggio N 2017, *It Takes Two to Tango: Coupling of Angiogenesis and Osteogenesis for Bone Regeneration. Frontiers in Bioengineering and Biotechnology*, vol. 5, no. 86. pp. 1-7.
- Ho, MH, Liao, MH, Lin, YL, Lai, CH, Lin, PI & Chen, RM 2014, Improving effects of chitosan nanofiber scaffolds on osteoblast proliferation and maturation. *International Journal of Nanomedicine*, vol. 9. pp. 4293-4304.
- Hong, H & Tian, XY 2020, The Role of Macrophages in Vascular Repair and Regeneration after Ischemic Injury. *International Journal of Molecular Sciences*, vol. 21. pp. 1-12.
- Hu, K & Olsen, BR 2016, The roles of vascular endothelial growth factor in bone repair and regeneration. *Bone*, vol. 91. pp. 1-39.
- Huang, Z, Ren, PG, Ma, T, Smith, RL & Goodman, SB 2010, Modulating osteogenesis of mesenchymal stem cells by modifying growth factor availability. *Cytokine*, vol. 51, no. 3. pp. 305–310.
- Ikedo, K & Takeshita, S 2015, The role of osteoclast differentiation and function in skeletal homeostasis. *Journal of Biochemistry*, vol. 159, no. 1. pp. 1-8.
- Im, K, Mareninov, S, Diaz, MF, & Yong, WH 2018, An Introduction to Performing Immunofluorescence Staining. *Biobanking*, vol. 1897. pp. 299-311.

- Ioyah, BR, Djohan, W & Idrus, E 2019, Effect of mangosteen peel extract on bone fracture healing. *International Journal of Applied Pharmaceutics*, vol. 11. pp. 100-102.
- Janardhan, KS, Jensen, H, Clayton, NP & Herbert, RA 2018, *Immunohistochemistry in Investigative and Toxicologic Pathology. Toxicologic Pathology*, vol. 46, no. 5. pp. 488–510.
- Jia, L, Shi, L, Li, J, Zeng, Y, Tang, S, Liu, W, Mo, X & Li, X 2020, Total flavonoids from celery suppresses RANKL-induced osteoclast differentiation and bone resorption function via attenuating NF- κ B and p38 pathways in RAW264.7 cells. *Journal of Functional Foods*, vol 69. pp. 1-9.
- Jin, L, Nonaka, Y, Miyakawa, S, Fujiwara, M & Nakamura, Y 2016, Dual Therapeutic Action of a Neutralizing Anti-FGF2 Aptamer in Bone Disease and Bone Cancer Pain. *Molecular Therapy*, vol 24, no.11. pp. 1-13.
- Johnson, KE & Wilgus, TA 2014, Vascular Endothelial Growth Factor and Angiogenesis in the Regulation of Cutaneous Wound Repair. *Advances in Wound Care*, vol. 3, no. 10. pp. 647–661.
- Karpiński, R, Jaworski, Ł & Czubacka, P 2017, The structural and mechanical properties of the bone. *Journal of Technology and Exploitation in Mechanical Engineering*, vol. 3, no. 1. pp. 43-50.
- Karunaweera, N, Raju, R, Gyengesi, E & Münch, G 2015, Plant polyphenols as inhibitors of NF- κ B induced cytokine production—a potential anti-inflammatory treatment for Alzheimer’s disease?. *Frontiers in Molecular Neuroscience*, vol. 8, no. 24. pp. 1-5.

- Katsimbri, P. 2017, The biology of normal bone remodelling. *European Journal of Cancer Care*, vol. 26, no. 6. pp. 1-5.
- Kattimani, VS, Kondaka, S & Lingamaneni, KP 2016, Hydroxyapatite—Past, Present, and Future in Bone Regeneration. *Bone and Tissue Regeneration Insights*, vol. 7. pp. 9-19.
- Kenkre, J & Bassett, J 2018, The bone remodelling cycle. *Annals of Clinical Biochemistry: International Journal of Laboratory Medicine*, vol. 55, no. 3. pp. 1-44.
- Kolb, AD & Bussard, KM 2019, The Bone Extracellular Matrix as an Ideal Milieu for Cancer Cell Metastases. *Cancers*, vol. 11, no. 7. pp. 1-27.
- Langdahl, B, Ferrari, S & Dempster, DW 2016, Bone modeling and remodeling: potential as therapeutic targets for the treatment of osteoporosis. *Therapeutic Advances in Musculoskeletal Disease*, vol. 8, no. 6. pp. 225-235.
- Le, B, Nurcombe, V, Cool, S, van Blitterswijk, C, de Boer, J & LaPointe, V 2017, The Components of Bone and What They Can Teach Us about Regeneration. *Materials*, vol. 11, no. 1. pp. 1-16.
- Lerner, UH, Kindstedt, E & Lundberg, P 2019, The critical interplay between bone resorbing and bone forming cells. *Journal of Clinical Periodontology*, vol. 46. pp. 33-51.
- Li, B, Wang, H, Qiu, G, Su, X & Wu, Z 2016, Synergistic Effects of Vascular Endothelial Growth Factor on Bone Morphogenetic Proteins Induced Bone Formation In Vivo: Influencing Factors and Future Research Directions. *BioMed Research International*, pp. 1-11.

- Maruotti, N, Corrado, A & Cantatore, FP 2017, Osteoblast role in osteoarthritis pathogenesis. *Journal of Cellular Physiology*, vol. 232, no. 11. pp. 2957-2963.
- McPherson, RA, Vickers, PG & Slater, GL 2019, Hydroxyapatite from Fish for Bone Tissue Engineering: A Promising Approach. *EC Dental Science*, vol. 18, no. 10. pp. 2413-2423.
- Mirsane, SA & Mirsane, SM 2017, Benefits of Allagic Acid from Grapes and Pomegranates against Colorectal Cancer. *Caspian J Intern Med*, vol. 8, no. 3. pp. 226-227.
- Muncie, JM & Weaver, VM 2018, The Physical and Biochemical Properties of the Extracellular Matrix Regulate Cell Fate. *Current topics in developmental biology*, vol. 130. pp. 1-37.
- Murakami, M & Simons, M 2008, Fibroblast growth factor regulation of neovascularization. *Current Opinion in Hematology*, vol. 15, no. 3. pp., 215-220.
- Nofikasari, I, Rufaida, A, Aqmarina CD, Failasofia, Fauzia AR & Handajani, J 2016. Efek aplikasi topikal gel ekstrak pandan wangi terhadap penyembuhan luka gingiva. *Majalah Kedokteran Gigi Indonesia*, vol. 2, no. 2. pp. 53-59.
- Nugroho, F, Prasetyo, A & Hasan, M 2019, Analisis Jumlah Sel Osteoblas pada Fraktur Femur Tikus Wistar Jantan yang Diberi Ekstrak Etanol Daun Bayam Merah (*Amaranthus tricolor L.*). *Journal of Agromedicine and Medical Sciences*, vol. 5, no. 1. pp. 45-49.

- Ornitz, DM & Marie, PJ 2015, Fibroblast growth factor signaling in skeletal development and disease. *Genes & Development*, vol. 29, no. 14. pp. 1463-1486.
- Oryan, A, Alidadi, A & Moshiri, A 2013, Current concerns regarding healing of bone defects. *Hard Tissue*, vol. 2, no. 2. pp. 1-12.
- Oryan, A, Alidadi, S, Moshiri, A & Maffulli, N 2014, Bone regenerative medicine: classic options, novel strategies, and future directions. *Journal of Orthopaedic Surgery and Research*, vol. 9, no. 18. pp. 1-27.
- Oryan, A, Monazzah, S & Sadegh, AB 2015. Bone Injury and Fracture Healing Biology. *Biomed Environ Sci*, vol. 28, no. 1. pp. 57-71.
- Osta, B, Benedetti, G & Miossec, P 2014, Classical and Paradoxical Effects of TNF- α on Bone Homeostasis. *Frontiers in Immunology*, vol. 5. pp. 1-9.
- Polo-Corrales, L, Latorre-Esteves, M & Ramirez-Vick, JE 2014, Scaffold design for bone regeneration. *Journal of nanoscience and nanotechnology*, vol. 14, no. 1. pp. 1-79.
- Portal-Núñez, S, Lozano, D & Esbrit, P 2012, Role of angiogenesis on bone formation. *Histology and Histopathology*, vol. 27, no. 5. pp. 559–566.
- Ralston, SH 2017, Bone structure and metabolism. *Medicine*. pp. 1-5.
- Ramadhani, T, Sari RP & Widyastuti 2016, Efektivitas Kombinasi Pemberian Minyak Ikan Lemuru (*Sardinella longiceps*) dan Aplikasi Hidroksiapatit terhadap Ekspresi FGF-2 pada Proses *Bone Healing*. *DENTA journal*, vol. 10, no. 1. pp. 20-30.

- Ratnayake, JTB, Mucalo, M & Dias, GJ 2016, Substituted hydroxyapatites for bone regeneration: A review of current trends. *Journal of Biomedical Materials Research Part B: Applied Biomaterials*, vol. 105, no. 5. pp. 1-15.
- Roberts, TT & Rosenbaum, AJ 2012, Bone grafts, bone substitutes and orthobiologics. *Organogenesis*, vol. 8, no. 4. pp. 114-124.
- Rujitanapanich, S, Kumpapan, P & Wanjanoi, P 2014, Synthesis of Hydroxyapatite from Oyster Shell via Precipitation. *Energy Procedia*, vol. 56. pp. 112-117.
- Saadeh, PB, Mehrara, BJ, Steinbrech, DS, Spector, JA, Greenwald, JA, Chin, GS, Ueno, H, Gittes, GK & Longaker, MT 2000, Mechanisms of Fibroblast Growth Factor-2 Modulation of Vascular Endothelial Growth Factor Expression by Osteoblastic Cells. *Endocrinology*, vol. 141, no. 6. pp. 2075-2083.
- Sabirin, IP, Maskoen, AM & Hernowo, BS 2013, Peran Ekstrak Etanol Topikal Daun Mengkudu (*Morinda citrifolia L.*) pada Penyembuhan Luka Ditinjau dari Imunoekspresi CD34 dan Kolagen pada Tikus Galur Wistar. *MKB*, vol. 45, no. 4. pp. 226-233.
- Sagalovsky, S 2015, Physiological role of growth factors and bone morphogenetic proteins in osteogenesis and bone fracture healing: a review. Vol. 38. pp. 113-126.
- Saran, U, Piperni, SG & Chatterjee, S 2014, Role of angiogenesis in bone repair. *Archives of Biochemistry and Biophysics*. pp. 1-9.
- Sathyendra, V & Darowish, M 2013, Basic Science of Bone Healing. *Hand Clinics*, vol. 29, no. 4. pp. 473-481.

- Schell, H, Duda, GN, Peters, A, Tsitsilonis, S, Johnson, KA & Schmidt-Bleek, K 2017, The Haematoma and its Role in Bone Healing. *Journal of Experimental Orthopaedics*, vol 4, no.1. pp. 1-11.
- Schlickewei, CW, Kleinertz, H, Thiesen, DM, Mader, K, Priemel, M, Frosch, KH & Keller, J 2019, Current and Future Concepts for the Treatment of Impaired Fracture Healing. *International Journal of Molecular Sciences*, vol. 20, no. 22. pp. 1-26.
- Silva, RF, Sasso, GR, Cerri, ES, Simões, MJ & Cerri, PS 2015, Biology of Bone Tissue: Structure, Function, and Factors That Influence Bone Cells. *BioMed Research International*. pp. 1-17.
- Sepúlveda, L, Ascacio, A, Herrera, RR, Carbo, AA & Aguilar, CN 2011, Ellagic acid: Biological properties and biotechnological development for production processes. *African Journal of Biotechnology*, vol. 10, no. 22. pp. 4518-4523.
- Seyler, TM, Bracey, DN, Plate, JF, Lively, MO, Mannava, S, Smith, TL & Whitlock, PW 2016, The Development of a Xenograft-Derived Scaffold for Tendon and Ligament Reconstruction Using a Decellularization and Oxidation Protocol. *Arthroscopy: The Journal of Arthroscopic & Related Surgery*, vol. 33, no. 3. pp. 1-13.
- Siddiqui, JA & Partridge, NC 2016, Physiological Bone Remodeling: Systemic Regulation and Growth Factor Involvement. *Physiology*, vol. 31, no. 3. pp. 233-245.
- Singh, V 2017, Medicinal plants and bone healing. *National journal of maxillofacial surgery*, vol.8, no. 1. pp. 4-11.

- Sotto-Maior, BS, Senna PM, Aarestrup BJV, Ribeiro RA, Assis NM, Cury, AA 2011, Effect of bovine hydroxyapatite on early stages of bone formation. *Rev Odonto Cienc*, vol. 26, no. 3. pp. 198-202.
- Stegen, S, van Gastel, N & Carmeliet, G 2015, Bringing new life to damaged bone: The importance of angiogenesis in bone repair and regeneration. *Bone*, vol. 70. pp. 19-27.
- Tambunan, S, Asni, E, Malik, Z & Isnawati 2014, Histopatologi Aorta Torasika Tikus Putih (*Rattus norvegicus Strain Wistar*) Jantan Setelah Pemberian Diet Aterogenik Selama 12 Minggu, *Jom FK*, vol 2, no. 1. pp. 1–14.
- Tan, YY, Yang, YQ, Chai, L, Wong, RWK, Rabie, ABM 2010, Effects of vascular endothelial growth factor (VEGF) on MC3T3-E1. *Orthod Craniofac Res*, vol. 13. pp. 223-228.
- Walsh, JS 2015, Normal bone physiology, remodelling and its hormonal regulation. *Surgery (Oxford)*, vol. 33, no. 1. pp. 1-6.
- Wardhana, AS, Nirwana, I, Setiabudi, HS, Condro Surboyo, MD 2020, Role of Hydroxyapatite and Ellagic Acid in the Osteogenesis. *European Journal of Dentistry*. pp. 1-6.
- Wittkowske, C, Reilly, GC, Lacroix, D & Perrault, CM 2016, In Vitro Bone Cell Models: Impact of Fluid Shear Stress on Bone Formation. *Frontiers in Bioengineering and Biotechnology*, vol. 4, no. 87. pp. 1-22.
- Wu, Y, Fu, R, Mohanty, S, Nasser, M, Guo, B & Ghosh, G 2019, Investigation of integrated effects of hydroxyapatite and VEGF on capillary morphogenesis of endothelial cells. *ACS Applied Bio Materials*, vol. 2. pp. 2339-2346.

- Wynn, TA & Vanella KM 2016, Macrophages in Tissue Repair, Regeneration, and Fibrosis. *Immunity*. pp. 450-462.
- Xiao, L, Du, Y, Shen, Y, He, Y, Zhao, H & Zhenhua, L 2012, TGF-Beta 1 Induced Fibroblast Proliferation is Mediated by The FGF-2/ERK Pathway. Shenyang: *Frontiers In Bioscience*, vol. 17. pp. 1-9.
- Yang, YQ, Tan, YY, Wong, R, Wenden, R, Zhang, LK, Rabie BM 2012, The role of vascular endothelial growth factor in ossification. *International Journal of Oral Science*, vol. 4. pp. 64-48.
- Zarfeshany, A, Asgary, S & Javanmard, SH 2014, Potent health effects of pomegranate. *Adv Biomed Res*, vol. 3. pp. 1-8.
- Zhang, H & Tsao, H 2016, Dietary polyphenols, oxidative stress and antioxidant and anti-inflammatory effects. *Current Opinion in Food Science*, vol. 8. pp. 33-42.