

DAFTAR PUSTAKA

- Adhyaru, B. B., dan Jacobson, T. A., (2018) Safety and efficacy of statin therapy. *Nature Reviews Cardiology*. 15(12): 757–769.
- Alhasyimi, A. A., Rosyida, N. F., dan Rihadini, M. S., (2019) Postorthodontic Relapse Prevention by Administration of Grape Seed (*Vitis vinifera*) Extract Containing Cyanidine in Rats. *European Journal of Dentistry*. 13(4): 629–634.
- AlQranei, M. S., dan Chellaiah, M. A., (2020) Osteoclastogenesis in periodontal diseases: Possible mediators and mechanisms. *Journal of Oral Biosciences*. 62(2): 123–130.
- AlSwafeeri, H., ElKenany, W., Mowafy, M., dan Karam, S., (2019) Effect of local administration of simvastatin on orthodontic tooth movement in rabbits. *American Journal of Orthodontics and Dentofacial Orthopedics*. 156(1): 75–86.
- Amoozegar, H., Ghaffari, A., Keramati, M., Ahmadi, S., Dizaji, S., Moayer, F., Akbarzadeh, I., Abazari, M., razzaghi-abyaneh, M., dan Bakhshandeh, H., (2022) A novel formulation of simvastatin nanoemulsion gel for infected wound therapy: In vitro and in vivo assessment. *Journal of Drug Delivery Science and Technology*, 72: 1-11.
- Antony, M., Varghese, R. M., dan Leelavathi, L., (2021) A Retrospective Analysis Assessing the Frequency of Patients Willing to Undergo Retreatment of Orthodontic Treatment after Relapse. *Annals of R.S.C.B* 25(3): 6310-6322.
- Arnett, T. R., dan Orriss, I. R., (2018). Metabolic properties of the osteoclast. *Bone*. 115: 25–30.
- Baddam, H., Vivekanandan, G., Kondreddy, K., Peddi, S., Chitnis, P., Singh, Y., dan Tiwar, R. C., (2021) Evaluation of gingival crevicular fluid and serum tartrate-resistant acid phosphatase levels in subjects with clinically healthy periodontium and chronic periodontitis – A clinico-biochemical study. *Journal of Pharmacy And Bioallied Sciences*. 13(6): 1275-1279.
- Bhardwaj, P., (2019) Types of sampling in research. *Journal of the Practice of Cardiovascular Sciences*. 5(3): 157-163.
- Bhave, N. M., Shinde, D. G., Patil, P. B., dan Bachhav, R. S., (2015) Nanoemulgel: A Novel Emerging Tool. *World Journal of Pharmaceutical Research*. 12(5): 1783-1802.
- Budiman, J. A., Sudiono, J., Amin, M. F., Audr, S. P., Arifin, A., Haerunnisah, S., Saraswati, S., Rasya, Z., dan Arda, A., (2022) Pemeliharaan Kesehatan Gigi dan Mulut dalam Rangka Pencegahan Kelainan Maloklusi di Masa Pandemi Covid-19. *Abdimas Dan Kearifan Lokal*. 3(1): 100–109.
- Chamani, S., Liberale, L., Mobasher, L., Montecucco, F., Al-Rasadi, K., Jamialahmadi, T., dan Sahebkar, A., (2021) The role of statins in the

- differentiation and function of bone cells. *European Journal of Clinical Investigation*. 51(7): 1-10.
- Chaushu, S., Klein, Y., Mandelboim, O., Barenholz, Y., dan Fleissig, O. (2022) Immune Changes Induced by Orthodontic Forces: A Critical Review. *Journal of Dental Research*. 101(1): 11–20.
- Climent, E., Benaiges, D., dan Pedro-Botet, J., (2021). Hydrophilic or Lipophilic Statins?. *Frontiers in Cardiovascular Medicine*. 8: 1-11.
- Dasgupta, N., Ranjan, S., dan Gandhi, M., (2019) Nanoemulsion ingredients and components. *Environmental Chemistry Letters*. 17(2): 917–928.
- Dogramaci, E. J., dan Littlewood, S. J., (2021). Removable orthodontic retainers: practical considerations. *British Dental Journal*, 230(11): 723–730.
- Fu, C., dan Shi, R., (2020) Osteoclast biology in bone resorption: a review. *STEMedicine*, 1(4): 57-61.
- Granat, M. M., Eifler-Zydel, J., dan Kolmas, J., (2024) Statins—Their Role in Bone Tissue Metabolism and Local Applications with Different Carriers. *International Journal of Molecular Sciences*. 25(4): 2378-2398.
- Halnor, V. V., Pande, V. V., Borawake D. D., dan Nagare H. S., (2018) Nanoemulsion: A Novel Platform for Drug Delivery System. *Journal of Materials Science dan Nanotechnology*. 6(1): 104–113.
- Haryanti, N., Wibowo, D., Wardani, I. K., (2020) Hubungan Status Sosial Ekonomi Orang Tua dengan Tingkat Kebutuhan Perawatan Ortodonti Siswa SMPN 1 Marabahan. *Dentin*. 4(2): 27-31.
- Hedrich, H. J. (2019). Taxonomy and stocks and strains. Dalam: Suckow, M. A., hankenson, F. C., Wilson, R.P., dan Foley, P.L., ed. *The Laboratory Rat*, 3rd ed. Philadelphia: Elsevier. pp. 47–48.
- Hikmah, N., Dewi, A., dan Maulana, H., (2016) Rasio Ostoklas dan Osteoblas pada Tulang Alveolar Model Tikus Diabetes dengan Aplikasi Gaya Ortodonti. *Jurnal Kedokteran Brawijaya*. 29(1):54-58.
- Kabra, S., Thosar, N. R., dan Malviya, N. S. (2023) Exploring the Synergistic Effect of Simvastatin in Oral Health Applications: A Literature Review. *Cureus*. 15(8): 1-5.
- Kakali, L., Giantikidis, I., Sifakakis, I., Kalimeri, E., Karamani, I., Mavrogonatou, E., dan Kloukos, D., (2022) Fluctuation of bone turnover markers' levels in samples of gingival crevicular fluid after orthodontic stimulus: a systematic review. *Systematic Reviews*. 11(3): 1-20.
- Karanikola, T., Cheva, A., Sarafidou, K., Myronidou-Tzouveleki, M., Tsavdaridis, I., Kontonasaki, E., dan Tsirlis, A. (2022) Effect of Diclofenac and Simvastatin on Bone Defect Healing—An In Vivo Animal Study. *Biomimetics*. 7(4): 143-158.

- Karnina, R., Arif, S. K., Hatta, M., Bukhari, A., Natzir, R., Hisbullah, Patellongi, I., dan Kaelan, C., (2021) Systemic lidocaine administration influences NF- κ B gene expression, NF- κ B and TNF- α protein levels on BALB/c mice with musculoskeletal injury. *Annals of Medicine and Surgery*. 69: 1-5.
- Kartal, Y., dan Kaya, B., (2019) Fixed orthodontic retainers: A review. *Turkish Journal of Orthodontics*. 32(2): 110–114.
- Kenkre, J. S., dan Bassett, J. H. D., (2018) The bone remodelling cycle. *Annals of Clinical Biochemistry*. 55(3): 308–327.
- Kim, A. S., Girgis, C. M., dan McDonald, M. M., (2022) Osteoclast Recycling and the Rebound Phenomenon Following Denosumab Discontinuation. *Current Osteoporosis Reports*. 20(6): 505–515.
- Kim, A. S., Taylor, V. E., Castro-Marrnez, A., Dhakal, S., Zamerli, A., Mohanty, S., Xiao, Y., Simic, M. K., Wen, J., Chai, R., Croucher, P. I., Center, J. R., Girgis, C. M., dan McDonald, M. M., (2024) Temporal patterns of osteoclast formation and activity following withdrawal of RANKL inhibition. *Journal of Bone and Mineral Research*. 1(1): 1–31.
- Kim, J. M., Lin, C., Stavre, Z., Greenblatt, M. B., dan Shim, J. H., (2020) Osteoblast-Osteoclast Communication and Bone Homeostasis. *Cells*. 9(9): 2073-2086.
- Koçer, A., Öner, M., Karaman, I., Koçer, D., Kafadar, I. H., Güney, A., dan Karaman, Z. F., (2014) The effects of locally applied simvastatin on an experimental mouse femur nonunion model. *Acta Orthopaedica et Traumatologica Turcica*. 48(6): 679–684.
- Kohli, N., Ho, S., Brown, S. J., Sawadkar, P., Sharma, V., Snow, M., dan García-Gareta, E., (2018) Bone remodelling in vitro: Where are we headed?: -A review on the current understanding of physiological bone remodelling and inflammation and the strategies for testing biomaterials in vitro. *Bone*. 110: 38–46.
- Korani, S., Bahrami, S., Korani, M., Banach, M., Johnston, T. P., dan Sahebkar, A. (2019) Parenteral systems for statin delivery: A review. In *Lipids in Health and Disease*. 18(1): 193-201.
- Kupikowska-Stobba, B., dan Kasprzak, M., (2021) Fabrication of nanoparticles for bone regeneration: new insight into applications of nanoemulsion technology. *Journal of Materials Chemistry B*. 9(26): 5221–5244.
- Ladang, A., Rauch, F., Delvin, E., dan Cavalier, E., (2023) Bone Turnover Markers in Children: From Laboratory Challenges to Clinical Interpretation. *Calcified Tissue International*. 112: 218-232.
- Lin, F., Sun, H., Ni, Z., Zheng, M., dan Yao, L., (2015) A feasible method to improve adherence of Hawley retainer in adolescent orthodontic patients: A randomized controlled trial. *Patient Preference and Adherence*. 9:1525–1530.

- Liu, X., Muhammed, F. K., dan Liu, Y., (2022) Simvastatin encapsulated in exosomes can enhance its inhibition of relapse after orthodontic tooth movement. *American Journal of Orthodontics and Dentofacial Orthopedics*. 162(6): 881–889.
- Lu, W., Zhang, X., Firth, F., Mei, L., Yi, J., Gong, C., Li, H., Zheng, W., dan Li, Y., (2019) Sclerostin injection enhances orthodontic tooth movement in rats. *Archives of Oral Biology*. 99: 43-50.
- Maruotti, N., Grano, M., Colucci, S., D'Onofrio, F., dan Cantatore, F. P., (2011) Osteoclastogenesis and arthritis. *Clinical and Experimental Medicine*. 11(3): 137–145.
- Meade, M. J., dan Dreyer, C. W., (2019) Evaluation of treatment risks and the quality of information contained within the websites of specialist orthodontists. *Australasian Orthodontic Journal*. 35(2): 143-151.
- Mira-Pascual, L., Patlaka, C., Desai, S., Paulie, S., Näreoja, T., Lång, P., dan Andersson, G. (2020) A Novel Sandwich ELISA for Tartrate-Resistant Acid Phosphatase 5a and 5b Protein Reveals that Both Isoforms are Secreted by Differentiating Osteoclasts and Correlate to the Type I Collagen Degradation Marker CTX-I In Vivo and In Vitro. *Calcified Tissue International*. 106(2): 194–207.
- Moon, H. J., Kim, S. E., Yun, Y. P., Hwang, Y. S., Bang, J. B., Park, J. H., dan Kwon, I. K., (2011) Simvastatin inhibits osteoclast differentiation by scavenging reactive oxygen species. *Experimental and Molecular Medicine*. 43(11): 605–612.
- Littlewood, S. J., (2022) Retention. Dalam: Naini, F. B., dan Gill, D. S., ed. *Preadjusted Edgewise Fixed Orthodontic Appliances*. Oxford: John Wiley & Sons Ltd. pp.324-327.
- Omi, M. dan Mishina, Y., (2022) Roles of osteoclasts in alveolar bone remodel. *Genesis*. 60(8-9): 1-18.
- Ono, T., dan Nakashima, T., (2018) Recent advances in osteoclast biology. *Histochemistry and Cell Biology*. 149(4): 325–341.
- Owen, R., dan Reilly, G. C., (2018) In vitro models of bone remodelling and associated disorders. *Frontiers in Bioengineering and Biotechnology*. 6: 134-155.
- Park-Min, K. H., (2018) Mechanisms involved in normal and pathological osteoclastogenesis. *Cellular and Molecular Life Sciences*. 75(14): 2519–2528.
- Pereira, D. de M., Davison, N., dan Habibović, P., (2022) Human osteoclast formation and resorptive function on biomineralized collagen. *Bioactive Materials*. 8: 241–252.
- Prayogo, R. D., Sandy, B. N., Sujarwo, H., Fitri, K., Brahmanta, A., Rahardjo, P., dan Handayani, B., (2020) The changes of fibroblast and periodontal ligament

characteristics in orthodontic tooth movement with adjuvant HBOT and propolis: A study in Guinea pigs. *Padjadjaran Journal of Dentistry*. 32(1): 48-56.

Proffit, W. R., Field, H. W., Larson, B. E., dan Sarve, D. M., (2019). *Contemporary Orthodontics*. Philadelphia: Elsevier. pp. 253.

Qi, J., Kitauro, H., Shen, W. R., Kishikawa, A., Ogawa, S., Ohori, F., Noguchi, T., Marahleh, A., Nara, Y., dan Mizoguchi, I., (2019) Establishment of an orthodontic retention mouse model and the effect of anti-c-Fms antibody on orthodontic relapse. *PLoS ONE*. 14(6): 1-14.

Rosyida, N. F., (2020) *Formulasi Hidrogel Gelatin-Simvastatin dengan Penambahan Surfaktan Polisorbat-80 dan Aplikasinya dalam Proses Remodeling Tulang Alveolar pada Periode Retensi Perawatan Ortodonti (Kajian in vivo pada Kelinci)*. Yogyakarta: Tesis Fakultas Kedokteran Gigi. pp. 126.

Rosyida, N. F., Ana, I. D., dan Alhasyimi, A. A., (2023) The Use of Polymers to Enhance Post-Orthodontic Tooth Stability. *Polymers*. 15(1): 103-116.

Rosyida, N. F., Pudyani, P. S., Nugroho, A. K., Ana, I. D., dan Ariyanto, T., (2019) Solubility enhancement of simvastatin through surfactant addition for development of hydrophobic drug-loaded gelatin hydrogel. *Indonesian Journal of Chemistry*. 19(4): 920-927.

Saafan, A., Al-Halbosi, M., El-Beialy, A., SOthman, S., Al-Halbosi, M. M., El-Beialy, A. R., dan Fathy, I., (2020) Effect of Photobiomodulation and Stem Cells Application on the Expression of Matrix Metalloproteinase (MMP) and its Inhibitor During Orthodontic Relaps. *Journal of Critical Reviews*. 7(19): 3307-3316.

Sabjan, K. B., Munawar, S. M., Rajendiran, D., Vinoji, S. K., dan Kasinathan, K., (2019) Nanoemulsion as Oral Drug Delivery - A Review. *Current Drug Research Reviews*. 12(1): 4-15.

Schneider-Moser, U. E. M., dan Moser, L., (2022) Very early orthodontic treatment: when, why and how?. *Dental Press Journal of Orthodontics*. 27(2): 1-47.

Singh, Y., Meher, J. G., Raval, K., Khan, F. A., Chaurasia, M., Jain, N. K., dan Chourasia, M. K., (2017) Nanoemulsion: Concepts, development and applications in drug delivery. *Journal of Controlled Release*. 252: 28-49.

Srivastava, R. K., Tandon, R., Singh, K., Chandra, P., dan Rohmetra, A., (2020) Retention and relapse: An anamnesis. *IP Indian Journal of Orthodontics and Dentofacial Research*. 4(1): 13-20.

Sureshkumar, A., dan Nagappan, K. V., (2020) A Comprehensive Review On The Biomarkers Of Bone Remodeling In Vitamin D Deficiency. *Indonesian J Pharm*. 32(3): 280-290.

- Veginadu, P., Tavva, S. R., Muddada, V., dan Gorantla, S., (2020) Effect of pharmacological agents on relapse following orthodontic tooth movement: A systematic review of animal studies. In *Angle Orthodontist*. 90(4): 598–606.
- Venkatesan, N., Liyanage, A. D. T., Castro-Núñez, J., Asafo-Adjei, T., Cunningham, L. L., Dziubla, T. D., dan Puleo, D. A., (2019) Biodegradable polymerized simvastatin stimulates bone formation. *Acta Biomaterialia*. 93: 192–199.
- Ward, N. C., Watts, G. F., dan Eckel, R. H. (2019). Statin Toxicity: Mechanistic Insights and Clinical Implications. In *Circulation Research*. 124(2): 328–350.
- Wilson, R. J., Li, Y., Yang, G., dan Zhao, C. X., (2022) Nanoemulsions for drug delivery. *Particuology*. 64: 85–97.
- Xu, R., Shi, G., Xu, L., Gu, Q., Fu, Y., Zhang, P., Cheng, J., dan Jiang, H., (2018) Simvastatin improves oral implant osseointegration via enhanced autophagy and osteogenesis of BMSCs and inhibited osteoclast activity. *Journal of Tissue Engineering and Regenerative Medicine*. 12(5): 1209–1219.
- Yaghobee, S., Panjnoush, M., Chokami Rafiei, S., Amini Shakib, P., Mahmoodi, S., Rasouli-Ghahroudi, A. A. R., dan Poursafar, F., (2020) Effect of Simvastatin on Bone Regeneration: A Histologic and Histomorphometric Analysis. *Journal of Oral and Maxillofacial Surgery*. 78(6): 927–934.
- Yang, C. N., Kok, S. H., Wang, H. W., Chang, J. Z. C., Lai, E. H. H., Shun, C. T., Yang, H., Chen, M. H., Hong, C. Y., dan Lin, S. K., (2019) Simvastatin alleviates bone resorption in apical periodontitis possibly by inhibition of mitophagy-related osteoblast apoptosis. *International Endodontic Journal*. 52(5): 676–688.
- Yang, F., Wang, X. X., Ma, D., Cui, Q., De Zheng, H., Liu, X. C., dan Zhang, J. (2019) Effects of triptolide on tooth movement and root Resorption in rats. *Drug Design, Development and Therapy*. 13(1): 3963–3975.
- Yasuda, K., Matsubara, T., Shirakawa, T., Kawamoto, T., dan Kokabu, S., (2021) Protein phosphatase 1 regulatory subunit 18 suppresses the transcriptional activity of NFATc1 via regulation of c-fos. *Bone Reports*. 15: 1-10.