

DAFTAR PUSTAKA

- Abouelnaga, H., El-Khateeb, D., Moemen, Y., El-Fert, A., Elgazzar, M., Khalil, A. (2022). Characterization of Mesenchymal Stem Cells Isolated from Wharton's jelly of The Human Umbilical Cord. *Egypt Liver Journal*, 12 (2): 1-9.
- Az Azahra, A.P., Listanto, P., Ramadhani, K.N., Indriansyah, T.A.G., Khairunnisa, L.A., Arini, L.D.D. (2025). Peran Asam Nukleat dalam Proses Sintesis Protein: Analisis Mekanisme DNA, RNA, dan Ribosom dalam Regulasi Genetik. *Student Scientific Creativity Journal*, 3 (2): 15-24.
- Banyatworakul, P., Osathanon, T., Chumprasert, S., Pavasant, P., Pirarat, N. (2021). Responses of canine periodontal ligament cells to bubaline blood derived platelet rich fibrin in vitro. *Scientific Reports*, 11(1), 11409.
- Bar, J.K., Nawara, A.L., Grelewski, P.G. (2021). Dental Pulp Stem Cell-Derived Secretome and Its Regenerative Potential. *International Journal of Molecular Science*, 22 (12018): 1-39.
- Budinegara, S. (2018). Kasih tak Bersyarat: Konstruksi Pemaknaan Hubungan Manusia-Anjing Peliharaan. *Jurnal Ilmiah Mahasiswa Universitas Surabaya*, 7 (1): 2554-2570.
- Chen, F. M., Sun, H. H., Lu, H., & Yu, Q. (2012). Stem cell-delivery therapeutics for periodontal tissue regeneration. *Biomaterials*, 33 (27): 6320–6344.
- Cohrs, R.J., Martin, T., Ghahramani, P., Bidaut, L., Higgins, P.J., Shahzad, A. (2014). Translational Medicine definition by the European Society for Translational Medicine. *New Horizons in Translational Medicine*, 2 (3): 86–88.
- Cooper, G.M. (2000). *The Cell: A Molecular Approach Second Edition*. Boston: Sinauer Associates.
- Dai, P., Qi, G., Zhu, M., Du, Q., Wang, K., Gao, Y., Li, M., Feng, X., and Zhang, X. (2024). Periodontal Ligament Stem Cell Tissue Engineering Scaffolds can Guide and Promote Canine Periodontal Tissue Regeneration. *Frontiers in Veterinary Science*, 11: 1-17.
- Dorotheou, D., Bochaton-Piallat, M. L., Giannopoulou, C., & Kiliaridis, S. (2018). Expression of α -Smooth Muscle Actin in The Periodontal Ligament during Post-emergent Tooth Eruption. *The Journal of international medical research*, 46(6): 2423–2435.
- Djuwantono, T., Wirakusumah, F.F., Septiani, L., Kristina, I., Natalia, D., Halim, D., Faried, A. (2011). Uji Fungsional dan Karakteristik Sel Punca Hematopoetik Hasil Isolasi dari Darah Tali Pusat Manusia menggunakan Metode Modifikasi Unpad-Aster. *Majalah Kedokteran Bandung*, 43 (4): 171-177.



- Duff, S.E., Li, C., Garland, J.M., Kumar, S. (2003). CD105 is Important for Angiogenesis: Evidence and Potential Applications. *FASEB Journal: Official Publication of The Federation of American Societies for Experimental Biology*, 17(9), 984–992.
- Garant, P. R. (2003). *Oral Cells and Tissues*. Chicago: Quintessence Publishing.
- Glauche, I., Herberg, M., Roeder, I. (2010). Nanog Variability and Pluripotency Regulation of Embryonic Stem Cells - Insights from a Mathematical Model Analysis. *PLoS ONE*, 5(6): 1-12.
- Gronthos, S., Mankani, M., Brahimi, J., Robey, P. G., & Shi, S. (2000). Postnatal human dental pulp stem cells (DPSCs) in vitro and in vivo. *Proceedings of the National Academy of Sciences of the United States of America*, 97 (25): 13625–13630.
- Gugjoo, M.B., Pal, A. (2020). *Mesenchymal Stem Cell in Veterinary Sciences*. Singapore: Springer Nature.
- Halim, D., Murti, H., Sandra, F., Boediono, A., Djuwantono, T., Setiawan, B. (2010). *Stem cell: Dasar Teori dan Aplikasi Klinis*. Penerbit Erlangga, Jakarta.
- Hartono, B. (2016). Sel Punca: Karakterisasi, Potensi dan Aplikasinya. *Jurnal Kedokteran Medik*, 22 (60): 72-75.
- Hasirci, V., Hasirci, N. (2024). *Fundamentals of Biomaterials 2nd Edition*. Turki: Spinger.
- Hendijani, F. (2017). Explant culture: An Advantageous Method for Isolation of Mesenchymal Stem Cells from Human Tissues. *Cell Proliferation*, 50 (2): 1-14.
- Hidayat, M., Paskaria, C., Gunawan, D. (2020). *Penelitian Biomedis dan Ilmu Kedokteran*. Bandung: Penerbit Alfabeta.
- Humaryanto. (2016). The Regulation of KLF4, CMYC, miR-302b, Aurka, Ascl2, Mdm2 and NFKB Gene Expressions in Low-, Intermediate-, High Grade Soft Tissue Sarcomas at Formalin Fixed Paraffin Embedded (FFPE). Tesis. Program Studi Ilmu Keperawatan. Fakultas Kedokteran dan Ilmu Kesehatan, Universitas Jambi, Jambi.
- Humaryanto, M., Shahib, N., Syukrani, Y.F., Hidayat, N.N. (2017). Profil Ekspresi mRNA Gen Murine Double Minute 2, Krüppel-like Factor 4, dan c-Myc pada Fibrosarkoma. *Global Medical and Health Communication*, 5 (1): 13-18.
- Klincumhom, N., Chaikawkaew, D., Adulheem, S., Pavasant, P. (2017). Activation of TLR3 Enhance Stemness and Immunomodulatory Properties of Periodontal Ligament Stem Cells (PDLSCs). In: Sasaki, K., Suzuki, O.,



- Takahashi, N. (eds), *Interface Oral Health Science 2016*. Springer, Singapore.
- Kurniawati, Y., Adi, S., Achadiyani, Suwarsa, O., Erlangga, D., dan Putri, T. (2015). Kultur Primer Fibroblas: Penelitian Pendahuluan. *Jurnal MKA*, 38 (1): 33-40.
- Lazăr, L., Dako, T., Bortoc, R., Luchian, I., Martu, M.A., Lazăr, A.P. (2022). Periostin as A Marker of Periodontal Status. *Romanian Journal of Oral Rehabilitation*, 14 (4): 228-238.
- Matic, I., Antunovic, M., Brkic, S., Josipovic, P., Mihalic, K. C., Karlak, I., Ivkovic, A., & Marijanovic, I. (2016). Expression of OCT-4 and SOX-2 in Bone Marrow-Derived Human Mesenchymal Stem Cells during Osteogenic Differentiation. *Macedonian journal of medical sciences*, 4(1), 9–16.
- Matlock, B. (2015). *Assessment of Nucleic Acid Purity*. USA: Thermo Fisher Scientific.
- Moraes, D.A., Sibov, T.T., Pavon, L.F., Alvin, P.Q., Bonadio, R.S., Da Silva, J.R. (2016). A Reduction in CD90 (THY-1) Expression Result in Increased Differentiation of Mesenchymal Stromal Cells. *Stem cell research & therapy*, 7 (1): 1-14.
- Mulki, M.A., Milanda, T., Barliana, M.I. (2020). Aplikasi Flow Cytometry dalam Bidang Imunologi: Review. *Jurnal Kesehatan*, 8 (2), 36–47.
- Nanci, A. (2018). *Ten Cate's Oral Histology 9 th edition*. St. Louis: Elsevier.
- Niemiec, B., Gawor, J., Nemeč, A., Clarke, D., McLeod, K., Tutt, C., Gioso, M., Steagall, P.V., Chandler, M., Morgenegg, G. and Jouppi, R. (2020). World Small Animal Veterinary Association Global Dental Guidelines. *Journal Small Anim Practice*, 61: E36-E161.
- Noviantari, A., Febrianti, T. (2021). Kajian: Alternatif Pengganti Trypsin pada Kultur Sel Punca Mesenkim. *Seminar Nasional Riset Kedokteran (SENSORIK II)*, 2 (1): 73-80.
- O'Neill, D. G., Mitchell, C. E., Humphrey, J., Church, D. B., Brodbelt, D. C., & Pegram, C. (2021). Epidemiology of periodontal disease in dogs in the UK primary-care veterinary setting. *The Journal of small animal practice*, 62 (12), 1051–1061.
- Pfaffl, M. W., Tichopad, A., Prgomet, C., Neuvians, T. P. (2004). Determination of stable housekeeping genes, differentially regulated target genes and sample integrity: Best Keeper – Excel-based tool using pair-wise correlations. *Biotechnology Letters*, 26:509–515.
- Penforis, P., Pochampally, R. (2016). Colony Forming Unit Assays. In: *Mesenchymal Stem Cells. Methods in Molecular Biology*. Vol 1416. Gnechi, M. Humana Press. New York. 83-95.



- Purwaningrum, M., Giachelli, C.M., Osathanon, T., Rattanapuchpong, S., Sawangmake, C. (2023). Dissecting specific Wnt Components Governing Osteogenic Differentiation Potential by Human Periodontal Ligament Stem Cells through Interleukin-6. *Scientific Reports* 13, 9055.
- Qu, G., Li, Y., Chen, L., Chen, Q., Zou, D., Yang, C., & Zhou, Q. (2021). Comparison of Osteogenic Differentiation Potential of Human Dental-Derived Stem Cells Isolated from Dental Pulp, Periodontal Ligament, Dental Follicle, and Alveolar Bone. *Stem cells international*, Vol 2021: 1-12.
- Queiroz, A., Albuquerque-Souza, E., Gasparoni, L. M., de França, B. N., Pelissari, C., Trierweiler, M., & Holzhausen, M. (2021). Therapeutic Potential of Periodontal Ligament Stem Cells. *World journal of stem cells*, 13(6), 605–618.
- Rakuten Insight. (2021). *Pet Ownership in Asia*. Diakses pada 12 April 2025 pada <https://insight.rakuten.com/pet-ownership-in-asia/>
- Rantam, F.A., Ferdiansyah, Purwati. (2014). *Stem Cell Mesenchymal, Hematopoetik dan Model Aplikasi Edisi Kedua*. Surabaya: Universitas Airlangga.
- Reiter, A.M., Gracis, M. (2018). *BSAVA Manual of Canine and Feline Dentistry and Oral Surgery fourth edition*. England: British Small Animal Veterinary Association.
- Reichard, A., & Asosingh, K. (2019). Best Practices for Preparing a Single Cell Suspension from Solid Tissues for Flow Cytometry. *Cytometry. Part A: The Journal of The International Society for Analytical Cytology*, 95(2), 219–226.
- Rinendyaputri, R., Noviantari, A. (2015). Produksi Mesenchymal Stem Cell (MSC) dari Sumsum Tulang Belakang Mencit. *Jurnal Biotek Medisiana Indonesia*, 4 (1): 33-41.
- Rohmawati, N., Santik, Y.D.P. (2019). Status Penyakit Periodontal pada Pria Perokok Dewasa. *Higeia Journal of Public Health Research and Development*, 3 (2): 286-297.
- Rosadi, I., Karina, Rosliana, I., Sobariah, S., Afini, I., Widyastuti, T., Berlian, A. (2019). Ekspresi Protein CD73/CD90/CD105/CD34/CD45/CD11b/CD19/HLA-DR. pada Sel Punca Asal Jaringan Lemak Manusia Menggunakan Flow Cytometry. *AL-KAUNIYAH: Jurnal Biologi*, 12 (2): 133-141.
- Rosdiana, A., Hadisaputri, Y.E. (2016). Review Artikel: Studi Pustaka tentang Prosedur Kultur Sel. *Farmaka*, 14 (1): 236-249.
- Salazar, A., Keusgen, M. & von Hagen, J. (2016). Amino Acids in The Cultivation of Mammalian Cells. *Amino Acids*, 48: 1161–1171.



- Sedigh, H.S., Saffarpour, A., Jamshidi, S., Ashouri, M., Nassiri, S.M., Dehghan, M.M., Ranjbar, E., Shafieian, R. (2023). *In vitro* Investigation of Canine Periodontal Ligament-Derived Mesenchymal Stem Cells: A possibility of Promising Tool for Periodontal Regeneration. *Journal Oral Biol Craniofac Research*, 13(3): 403-411.
- Shariati, F., Favaedi, R., Ramazanali, F., Ghoraeian, P., Afsharian, P., Aflatoonian, B., Aflatoonian, R., & Shahhoseini, M. (2019). Increased Expression of Stemness Genes REX-1, OCT-4, NANOG, and SOX-2 in Women with Ovarian Endometriosis versus Normal Endometrium: A case-control study. *International journal of reproductive biomedicine*, 16 (12): 783-790.
- Shi, W., Wang, H., Pan, G., Geng, Y., Guo, Y., & Pei, D. (2006). Regulation of the pluripotency marker Rex-1 by Nanog and Sox2. *The Journal of biological chemistry*, 281(33): 23319–23325.
- Shi, G., & Jin, Y. (2010). Role of Oct4 in Maintaining and Regaining Stem Cell Pluripotency. *Stem Cell Research & Therapy*, 1: 1-9.
- Shin, J. H. (2018). Nucleic Acid Extraction and Enrichment. *Advanced Techniques in Diagnostic Microbiology*, 1: 273–292.
- Stagg, J., Divisekara, U., McLaughlin, N., Sharkey, J., Pommey, S., Denoyer, D. (2010). Anti-CD73 Antibody Therapy Inhibits Breast Tumor Growth and Metastasis. *Proceedings of the National Academy of Sciences of the United States of America*. 107 (4): 1547-1552.
- Stańczaka, M., Kacprzakb, B., Gawda, P. 2024. Tendon Cell Biology: Effect of Mechanical Loading. *International Journal of Experimental Celluler Physiology, Biochemistry dan Pharmacology*, 58: 677-701.
- Syahidah, H.N., Hadisaputri, Y.E. (2016). Review Artikel: Media yang digunakan pada Kultur Sel. *Farmaka*, 14 (3): 27-36.
- Takebe, H., Sato, H., Mizoguchi, T., Hosoya, A. (2025). Localization of α -Smooth Muscle Actin in Osteoblast Differentiation during Periodontal Development. *Cell Tissue Research*, 399: 119–127
- Thermo Fisher Scientific. (2025). *The Essential Guide to Glutamine in Cell Culture*. Diakses pada 10 Maret 2025 dari <https://www.thermofisher.com/blog/life-in-the-lab/the-essential-guide-to-glutamine-in-cell-culture/>
- Uguten, M., van der Sluis, N., Vriend, L., Coert, J. H., Harmsen, M. C., van der Lei, B., & van Dongen, J. A. (2024). Comparing mechanical and enzymatic isolation procedures to isolate adipose-derived stromal vascular fraction: A systematic review. *Wound repair and regeneration: official publication of the Wound Healing Society [and] the European Tissue Repair Society*, 32(6), 1008–1021.



- Ullah, I., Subbarao, R.B., Rho, G.J. (2015). Human Mesenchymal Stem Cells - Current Trends and Future Prospective. *Bioscience Reports*, 35: 1-18.
- Valk, J.V.D., Brunner, D., Smet, K.D., Svenningsen, A.F., Honegger, P., Knudsen, L.E., Lindl, T., Noraberg, J., Price, A., Scarino, M.L., Gstraunthaler, G. (2010). Optimization of chemically defined cell culture media – Replacing fetal bovine serum in mammalian in vitro methods. In: *Toxicology in Vitro*. Vol 106. Jennings, P. Elsevier. Ltd. United Kingdom. 1053–1063.
- Wael, S., Watuguly, T.W. (2023). *Pengantar Biologi Molekuler*. Yogyakarta: Deepublish.
- Wangko, S., Karundeng, R. (2014). Komponen Sel Jaringan Ikat. *Jurnal Biomedik*, 6(3): 1-7.
- Yin, J. Y., Luo, X. H., Feng, W. Q., Miao, S. H., Ning, T. T., Lei, Q., Jiang, T., & Ma, D. D. (2021). Multidifferentiation potential of dental-derived stem cells. *World journal of stem cells*, 13 (5), 342–365.
- Yusuf, M., Indra, I., Juniati, S. H., & Afriani Dewi, Y. (2021). Correlation between CD44+ cancer stem cell expression and histopathological types of nasopharyngeal carcinoma. *F1000Research*, 10, 678.
- Yuwono, T. (2017). *Biologi Molekuler*. Jakarta: Penerbit Erlangga.
- Zhu, W., & Liang, M. (2015). Periodontal ligament stem cells: current status, concerns, and future prospects. *Stem cells international*, 1-11.
- Zomer, H. D., Vidane, A. S., Gonçalves, N. N., & Ambrósio, C. E. (2015). Mesenchymal and induced pluripotent stem cells: general insights and clinical perspectives. *Stem cells and cloning: advances and applications*, 8, 125–134.