

DAFTAR PUSTAKA

- Angelopoulos, I., Brizuela, C., & Khoury, M. (2018). Gingival Mesenchymal Stem Cells Outperform Haploidentical Dental Pulp-derived Mesenchymal Stem Cells in Proliferation Rate, Migration Ability, and Angiogenic Potential. *Cell Transplantation*, 27(6), 967–978. <https://doi.org/10.1177/0963689718759649>
- Arora, M. (2013). Cell Culture Media: A Review. *Materials and Methods*, 3. <https://doi.org/10.13070/mm.en.3.175>
- Ayala-Cuellar, A. P., Kang, J. H., Jeung, E. B., & Choi, K. C. (2019). Roles of mesenchymal stem cells in tissue regeneration and immunomodulation. *Biomolecules and Therapeutics*, 27(1), 25–33. <https://doi.org/10.4062/biomolther.2017.260>
- Baer, P. C. (2014). Adipose-derived mesenchymal stromal/stem cells: An update on their phenotype in vivo and in vitro. *World Journal of Stem Cells*, 6(3), 256. <https://doi.org/10.4252/wjsc.v6.i3.256>
- Cao, Y., Boss, A. L., Bolam, S. M., Munro, J. T., Crawford, H., Dalbeth, N., Poulsen, R. C., & Matthews, B. G. (2024). In Vitro Cell Surface Marker Expression on Mesenchymal Stem Cell Cultures does not Reflect Their Ex Vivo Phenotype. *Stem Cell Reviews and Reports*, 20(6), 1656–1666. <https://doi.org/10.1007/s12015-024-10743-1>
- Chang, Y., Li, H., & Guo, Z. (2014). Mesenchymal stem cell-like properties in fibroblasts. *Cellular Physiology and Biochemistry*, 34(3), 703–714. <https://doi.org/10.1159/000363035>
- Chase, L. G., Lakshmipathy, U., Solchaga, L. A., Rao, M. S., & Vemuri, M. C. (2010). *Chase 2010 serum free media and additive factors for ASC growth*. 1–11.
- Ciuffreda, M. C., Malpasso, G., Musarò, P., Turco, V., & Gnecci, M. (2016). Protocols for in vitro Differentiation of Human Mesenchymal Stem Cells into Osteogenic, Chondrogenic and Adipogenic Lineages. In *Tissue Engineering: Principles and Practices* (Vol. 1416, pp. 149–158). https://doi.org/10.1007/978-1-4939-3584-0_8
- Dave, J. R., Chandekar, S. S., Behera, S., Desai, K. U., Salve, P. M., Sapkal, N. B., Mhaske, S. T., Dewle, A. M., Pokare, P. S., Page, M., Jog, A., Chivte, P. A., Srivastava, R. K., & Tomar, G. B. (2022). Human gingival mesenchymal stem cells retain their growth and immunomodulatory characteristics independent of donor age. *Science Advances*, 8(25). <https://doi.org/10.1126/sciadv.abm6504>

- Dominici, M., Le Blanc, K., Mueller, I., Slaper-Cortenbach, I., Marini, F. C., Krause, D. S., Deans, R. J., Keating, A., Prockop, D. J., & Horwitz, E. M. (2006). Minimal criteria for defining multipotent mesenchymal stromal cells. The International Society for Cellular Therapy position statement. *Cytotherapy*, 8(4), 315–317. <https://doi.org/10.1080/14653240600855905>
- Fonseca, L. N., Bolívar-Moná, S., Agudelo, T., Beltrán, L. D., Camargo, D., Correa, N., Del Castillo, M. A., Fernández de Castro, S., Fula, V., García, G., Guarnizo, N., Lugo, V., Martínez, L. M., Melgar, V., Peña, M. C., Pérez, W. A., Rodríguez, N., Pinzón, A., Albarracín, S. L., ... Gutiérrez-Gómez, M. L. (2023). Cell surface markers for mesenchymal stem cells related to the skeletal system: A scoping review. *Heliyon*, 9(2). <https://doi.org/10.1016/j.heliyon.2023.e13464>
- Fonticoli, L., Della Rocca, Y., Rajan, T. S., Murmura, G., Trubiani, O., Oliva, S., Pizzicannella, J., Marconi, G. D., & Diomede, F. (2022). A Narrative Review: Gingival Stem Cells as a Limitless Reservoir for Regenerative Medicine. *International Journal of Molecular Sciences*, 23(8). <https://doi.org/10.3390/ijms23084135>
- Gabr, H. M., & El-Kheir, W. A. (2023). Stem cells: definition, biological types, classifications, and properties. In *Stem Cell Therapy* (pp. 21–33). Elsevier. <https://doi.org/10.1016/B978-0-12-821569-2.00003-X>
- Gariyban, L., & Avashia, N. (2013). Polymerase Chain Reaction. *Journal of Investigative Dermatology*, 133(3), 1–4. <https://doi.org/10.1038/jid.2013.1>
- Giri Putra, L. A., Yonathan, C. J., Niedhatrata, N. I., Rizka Firdaus, M. H., & Yoewono, J. R. (2020). A review of the development of Polymerase Chain Reaction technique and its uses in Scientific field. *Stannum : Jurnal Sains Dan Terapan Kimia*, 2(1), 14–30. <https://doi.org/10.33019/jstk.v2i1.1619>
- Grawish, M. E. (2018). Gingival-derived mesenchymal stem cells: An endless resource for regenerative dentistry. *World Journal of Stem Cells*, 10(9), 116–118. <https://doi.org/10.4252/wjsc.v10.i9.116>
- 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. <https://doi.org/10.1073/pnas.240309797>
- Gugjoo, M. B., & Pal, A. (2020). Mesenchymal Stem Cell in Veterinary Sciences. In *Mesenchymal Stem Cell in Veterinary Sciences*. <https://doi.org/10.1007/978-981-15-6037-8>
- Han, J., Mistriotis, P., Lei, P., Wang, D., Liu, S., & Andreadis, S. T. (2012). Nanog reverses the effects of organismal aging on mesenchymal stem cell

- proliferation and myogenic differentiation potential. *Stem Cells*, 30(12), 2746–2759. <https://doi.org/10.1002/stem.1223>
- He, S., Nakada, D., & Morrison, S. J. (2009). Mechanisms of stem cell self-renewal. *Annual Review of Cell and Developmental Biology*, 25, 377–406. <https://doi.org/10.1146/annurev.cellbio.042308.113248>
- Horbach, S. P. J. M., & Halffman, W. (2017). The ghosts of HeLa: How cell line misidentification contaminates the scientific literature. *PLoS ONE*, 12(10), 1–16. <https://doi.org/10.1371/journal.pone.0186281>
- Huang, G. T. J., Gronthos, S., & Shi, S. (2009). Critical reviews in oral biology & medicine: Mesenchymal stem cells derived from dental tissues vs. those from other sources: Their biology and role in Regenerative Medicine. *Journal of Dental Research*, 88(9), 792–806. <https://doi.org/10.1177/0022034509340867>
- Hubrecht, R. C., & Carter, E. (2019). The 3Rs and humane experimental technique: Implementing change. *Animals*, 9(10). <https://doi.org/10.3390/ani9100754>
- Jaiswal, N., Haynesworth, S. E., Caplan, A. I., & Bruder, S. P. (1997). Osteogenic differentiation of purified, culture-expanded human mesenchymal stem cells in vitro. *Journal of Cellular Biochemistry*, 64(2), 295–312. [https://doi.org/10.1002/\(SICI\)1097-4644\(199702\)64:2<295::AID-JCB12>3.0.CO;2-I](https://doi.org/10.1002/(SICI)1097-4644(199702)64:2<295::AID-JCB12>3.0.CO;2-I)
- Ji, Y., Jiang, W., Zeng, F., Zou, D., Li, S., Zhang, X., Zhu, Q., Liang, Q., Li, M., & Li, D. (2023). Characterization of Canine Gingival-Derived Mesenchymal Stem Cells and Their Exosomes. *Journal of Veterinary Dentistry*, 41(6), 596–601. <https://doi.org/10.1177/08987564231206459>
- Jo, A., Denduluri, S., Zhang, B., Wang, Z., Yin, L., Yan, Z., Kang, R., Shi, L. L., Mok, J., Lee, M. J., & Haydon, R. C. (2014). The versatile functions of Sox9 in development, stem cells, and human diseases. *Genes & Diseases*, 1(2), 149–161. <https://doi.org/10.1016/j.gendis.2014.09.004>
- Johnson, M. (2012). Fetal Bovine Serum. *Materials and Methods*, 2. <https://doi.org/10.13070/mm.en.2.117>
- Jones, D. L., & Fuller, M. T. (2012). Stem Cell Niches. In *Handbook of Stem Cells, Second Edition: Volume 1-2* (Second Edi, Vol. 1). Elsevier Inc. <https://doi.org/10.1016/B978-0-12-385942-6.00007-X>
- Joshi, M., & Deshpande, J. D. (2011). Polymerase Chain Reaction: Methods, Principles and Application. *International Journal of Biomedical Research*, 2(1). <https://doi.org/10.7439/ijbr.v2i1.83>
- Kim, D., Lee, A. E., Xu, Q., Zhang, Q., & Le, A. D. (2021). Gingiva-Derived

Mesenchymal Stem Cells: Potential Application in Tissue Engineering and Regenerative Medicine - A Comprehensive Review. *Frontiers in Immunology*, 12(April), 1–25. <https://doi.org/10.3389/fimmu.2021.667221>

Kolf, C. M., Cho, E., & Tuan, R. S. (2007). Mesenchymal stromal cells. Biology of adult mesenchymal stem cells: Regulation of niche, self-renewal and differentiation. *Arthritis Research and Therapy*, 9(1), 1–10. <https://doi.org/10.1186/ar2116>

Komor, T. (2010). Regulation of osteoblast and odontoblast differentiation by RUNX2. *Journal of Oral Biosciences*, 52(1), 22–25. <https://doi.org/10.2330/joralbiosci.52.22>

König, H. E., & Liebich, H.-G. (2020). *Veterinary Anatomy of Domestic Animals* (H. E. König & H.-G. Liebich (eds.); 7th ed.). Georg Thieme Verlag KG. <https://doi.org/10.1055/b-007-167437>

KUNDROTAS, G. (2012). Surface markers distinguishing mesenchymal stem cells from fibroblasts. *Acta Medica Lituanica*, 19(2), 75–79. <https://doi.org/10.6001/actamedica.v19i2.2313>

Li, J., Wu, Z., Zhao, L., Liu, Y., Su, Y., Gong, X., Liu, F., & Zhang, L. (2023). The heterogeneity of mesenchymal stem cells: an important issue to be addressed in cell therapy. *Stem Cell Research and Therapy*, 14(1), 1–14. <https://doi.org/10.1186/s13287-023-03587-y>

Lin, C. S., Xin, Z. C., Dai, J., & Lue, T. F. (2013). Commonly used mesenchymal stem cell markers and tracking labels: Limitations and challenges. *Histology and Histopathology*, 28(9), 1109–1116. <https://doi.org/10.14670/HH-28.1109>

Margiana, R., Markov, A., Zekiy, A. O., Hamza, M. U., Al-Dabbagh, K. A., Al-Zubaidi, S. H., Hameed, N. M., Ahmad, I., Sivaraman, R., Kzar, H. H., Al-Gazally, M. E., Mustafa, Y. F., & Siahmansouri, H. (2022). Clinical application of mesenchymal stem cell in regenerative medicine: a narrative review. *Stem Cell Research and Therapy*, 13(1), 1–22. <https://doi.org/10.1186/s13287-022-03054-0>

Mensing, N., Gasse, H., Hambruch, N., Haeger, J. D., Pfarrer, C., & Staszky, C. (2011). Isolation and characterization of multipotent mesenchymal stromal cells from the gingiva and the periodontal ligament of the horse. *BMC Veterinary Research*, 7, 1–13. <https://doi.org/10.1186/1746-6148-7-42>

Miura, M., Gronthos, S., Zhao, M., Lu, B., Fisher, L. W., Robey, P. G., & Shi, S. (2003). SHED: Stem cells from human exfoliated deciduous teeth. *Proceedings of the National Academy of Sciences of the United States of America*, 100(10), 5807–5812. <https://doi.org/10.1073/pnas.0937635100>

- Morsczeck, C., Götz, W., Schierholz, J., Zeilhofer, F., Kühn, U., Möhl, C., Sippel, C., & Hoffmann, K. H. (2005). Isolation of precursor cells (PCs) from human dental follicle of wisdom teeth. *Matrix Biology*, 24(2), 155–165. <https://doi.org/10.1016/j.matbio.2004.12.004>
- Mushahary, D., Spittler, A., Kasper, C., Weber, V., & Charwat, V. (2018). Isolation, cultivation, and characterization of human mesenchymal stem cells. *Cytometry Part A*, 93(1), 19–31. <https://doi.org/10.1002/cyto.a.23242>
- Nikiforova, M. N., & Nikiforov, Y. E. (2010). Molecular Anatomic Pathology: Principles, Techniques, and Application to Immunohistologic Diagnosis. *Diagnostic Immunohistochemistry: Theranostic and Genomic Applications, Expert Consult*, 42–57. <https://doi.org/10.1016/B978-1-4160-5766-6.00006-6>
- O'Connor, K. (2020). A cautionary tale about the use of colony-forming efficiency as a proxy for the survival of mesenchymal stem cells. *Stem Cell Research and Therapy*, 11(1), 10–12. <https://doi.org/10.1186/s13287-020-01805-5>
- Pamies, D., Leist, M., Coecke, S., Bowe, G., Allen, D. G., Gstraunthaler, G., Bal-Price, A., Pistollato, F., de Vries, R. B. M., Hogberg, H. T., Hartung, T., & Stacey, G. (2022). Guidance Document on Good Cell and Tissue Culture Practice 2.0 (GCCP 2.0). *Altex*, 39(1), 30–70. <https://doi.org/10.14573/altex.2111011>
- Pamphilon, D., Selogie, E., Mckenna, D., Cancelas-Peres, J. A., Szczepiorkowski, Z. M., Sacher, R., McMannis, J., Eichler, H., Garritsen, H., Takanashi, M., Van De Watering, L., Stroncek, D., & Reems, J. A. (2013). Current practices and prospects for standardization of the hematopoietic colony-forming unit assay: A report by the cellular therapy team of the Biomedical Excellence for Safer Transfusion (BEST) Collaborative. *Cytotherapy*, 15(3), 255–262. <https://doi.org/10.1016/j.jcyt.2012.11.013>
- Parker, R. (2019). *Equine Science* (5th ed.). Cengage.
- Peng, Y., Jaar, J., & Tran, S. D. (2024). Gingival mesenchymal stem cells: Biological properties and therapeutic applications. *Journal of Oral Biology and Craniofacial Research*, 14(5), 547–569. <https://doi.org/10.1016/j.jobcr.2024.07.003>
- Pittenger, M. F., Mackay, A. M., Beck, S. C., Jaiswal, R. K., Douglas, R., Mosca, J. D., Moorman, M. A., Simonetti, D. W., Craig, S., & Marshak, D. R. (1999). Multilineage Potential of Adult Mesenchymal Stem Cells. *Science*, 284(2), 143–146. <http://science.sciencemag.org/>
- R Maniarasu, & Mohan Kumar R. (2022). A Mini-Review on CO2 Role in Cell Culture and Medicinal Applications. *Journal of Cell Science & Therapy*, 13(3), 1–4. <https://doi.org/10.35248/2157-7013.22.13.346.Citation>

- Rivera, T., Zhao, Y., Ni, Y., & Wang, J. (2020). Human-Induced Pluripotent Stem Cell Culture Methods Under cGMP Conditions. *Current Protocols in Stem Cell Biology*, 54(1), 1–22. <https://doi.org/10.1002/cpsc.117>
- Schnabel, L. V., Fortier, L. A., Wayne McIlwraith, C., & Nobert, K. M. (2013). Therapeutic use of stem cells in horses: Which type, how, and when? *Veterinary Journal*, 197(3), 570–577. <https://doi.org/10.1016/j.tvjl.2013.04.018>
- Segeritz, C. P., & Vallier, L. (2017). Cell Culture: Growing Cells as Model Systems In Vitro. In *Basic Science Methods for Clinical Researchers*. Elsevier Inc. <https://doi.org/10.1016/B978-0-12-803077-6.00009-6>
- Seo, B. M., Miura, M., Gronthos, S., Bartold, P. M., Batouli, S., Brahim, J., Young, M., Robey, P. G., Wang, C. Y., & Shi, S. (2004). Investigation of multipotent postnatal stem cells from human periodontal ligament. *Lancet*, 364(9429), 149–155. [https://doi.org/10.1016/S0140-6736\(04\)16627-0](https://doi.org/10.1016/S0140-6736(04)16627-0)
- Shetty, S. S., Sowmya, S., Pradeep, A., & Jayakumar, R. (2024). Gingival Mesenchymal Stem Cells: A Periodontal Regenerative Substitute. *Tissue Engineering and Regenerative Medicine*, 22(1), 1–21. <https://doi.org/10.1007/s13770-024-00676-8>
- Skiles, M. L., Marzan, A. J., Brown, K. S., & Shamonki, J. M. (2020). Comparison of umbilical cord tissue-derived mesenchymal stromal cells isolated from cryopreserved material and extracted by explantation and digestion methods utilizing a split manufacturing model. *Cytotherapy*, 22(10), 581–591. <https://doi.org/10.1016/j.jcyt.2020.06.002>
- Sonoyama, W., Liu, Y., Fang, D., Yamaza, T., Seo, B. M., Zhang, C., Liu, H., Gronthos, S., Wang, C. Y., Shi, S., & Wang, S. (2006). Mesenchymal stem cell-mediated functional tooth regeneration in Swine. *PLoS ONE*, 1(1), 1–8. <https://doi.org/10.1371/journal.pone.0000079>
- Sonoyama, W., Liu, Y., Yamaza, T., Tuan, R. S., Wang, S., Shi, S., & Huang, G. T. J. (2008). Characterization of the Apical Papilla and Its Residing Stem Cells from Human Immature Permanent Teeth: A Pilot Study. *Journal of Endodontics*, 34(2), 166–171. <https://doi.org/10.1016/j.joen.2007.11.021>
- Teo, A., Mantalaris, A., & Lim, M. (2014). Influence of culture pH on proliferation and cardiac differentiation of murine embryonic stem cells. *Biochemical Engineering Journal*, 90, 8–15. <https://doi.org/10.1016/j.bej.2014.05.005>
- Tolouei, A. E., Oruji, F., Tehrani, S., Rezaei, S., Mozaffari, A., Jahri, M., & Nasiri, K. (2023). Gingival mesenchymal stem cell therapy, immune cells, and immunoinflammatory application. *Molecular Biology Reports*, 50(12), 10461–10469. <https://doi.org/10.1007/s11033-023-08826-2>

- van der Valk, J., Bieback, K., Buta, C., Cochrane, B., Dirks, W. G., Fu, J., Hickman, J. J., Hohensee, C., Kolar, R., Liebsch, M., Pistollato, F., Schulz, M., Thieme, D., Weber, T., Wiest, J., Winkler, S., & Gstraunthaler, G. (2018). Fetal Bovine Serum (FBS): Past – Present – Future. *Altex*, 35(1), 99–118. <https://doi.org/10.14573/altex.1705101>
- van der Valk, J., Brunner, D., De Smet, K., Fex Svenningsen, Å., 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. *Toxicology in Vitro*, 24(4), 1053–1063. <https://doi.org/10.1016/j.tiv.2010.03.016>
- Weiskirchen, S., Schröder, S. K., Buhl, E. M., & Weiskirchen, R. (2023). A Beginner's Guide to Cell Culture: Practical Advice for Preventing Needless Problems. *Cells*, 12(5). <https://doi.org/10.3390/cells12050682>
- Weller, R. (2012). Anatomy of the horse. In *Veterinary Record* (Vol. 170, Issue 1). <https://doi.org/10.1136/vr.e16>
- Xu, L., & Li, G. (2014). Circulating mesenchymal stem cells and their clinical implications. *Journal of Orthopaedic Translation*, 2(1), 1–7. <https://doi.org/10.1016/j.jot.2013.11.002>
- Yao, T., & Asayama, Y. (2017). Animal-cell culture media: History, characteristics, and current issues. *Reproductive Medicine and Biology*, 16(2), 99–117. <https://doi.org/10.1002/rmb2.12024>
- Zhao, M. H., Kim, N. H., & Cui, X. S. (2016). GlutaMAX prolongs the shelf life of the culture medium for porcine parthenotes. *Theriogenology*, 85(3), 368–375. <https://doi.org/10.1016/j.theriogenology.2015.08.014>