



## References

- Abou Neel, E. A., Aljabo, A., Strange, A., Ibrahim, S., Coathup, M., Young, A. M., Bozec, L., Mudera, V. (2016): Demineralization– remineralization dynamics in teeth and bone. *International journal of nanomedicine*, 4743-4763. <https://doi.org/10.2147/IJN.S107624>
- Ali, S. G., Mulay, S. (2015): Pulpitis: A review, *Journal of Dental and Medical Sciences*, 14(8), 92-97.  
DOI: 10.9790/0853-14869297
- Alipal, J., Pu'Ad, N. M., Lee, T. C., Nayan, N. H. M., Sahari, N., Basri,H., ... & Abdullah, H. Z. (2021): A review of gelatin: Properties, sources, process, applications, and commercialisation. *Materials Today: Proceedings*, 42, 240- 250.
- Alipour, M., Pouya, B., Aghazadeh, Z., SamadiKafil, H., Ghorbani, M., Alizadeh, S., ... & Dalir Abdolahinia, E. (2021): The antimicrobial, antioxidative, and anti-inflammatory effects of polycaprolactone/gelatin scaffolds containing chrysin for regenerative endodontic purposes. *Stem Cells International*, 2021.
- American Association of Endodontists (2013): Endodontic Diagnosis. [https://www.aae.org/specialty/wpcontent/uploads/sites/2/2017/07/endo\\_donticdiagnosisfall2013.pdf](https://www.aae.org/specialty/wpcontent/uploads/sites/2/2017/07/endo_donticdiagnosisfall2013.pdf)
- Applebaum, E., Nackley, A. G., Bair, E., Maixner, W., & Khan, A. A. (2015):Genetic variants in cyclooxygenase-2 contribute to post-treatment pain amongendodontic patients. *Journal of endodontics*, 41(8), 1214-1218. <https://doi.org/10.1016/j.joen.2015.04.021>
- Ariesdyanata, C., Lunardhi, C. G. J., dan Subiwahjudi, A. (2019): Perbedaan Angiogenesis Pada Pulpa Setelah Aplikasi Ekstrak Propolis Dan Kalsium Hidroksida, *Conservative Dentistry Journal*, 9(1), 48.
- Aubeux, D., Renard, E., Pérez, F., Tessier, S., Geoffroy, V., Gaudin, A. (2021): Review of animal models to study pulp inflammation. *Frontiers in Dental Medicine*, 2, 673552.
- Bagchi1, P., Kashyap1, N., Biswas1, S. (2021): Pulpotomy: Modern concepts andmaterials, Innovative Publication, *International journal of oral health Dentistry*, 7(4):245–252.  
<https://doi.org/10.18231/j.ijohd.2021.049>
- Baghaki, S., Yalcin, C.E., Baghaki, H.S., Aydin, S.Y., Daghan, B., Yavuz, E. (2020): COX2 inhibition in the treatment of COVID-19, Review of literature to propose repositioning of celecoxib for randomized controlled studies, *International Journal of Infectious Diseases*, 29-23.  
<https://pubmed.ncbi.nlm.nih.gov/33007455/>



- Baik, S. A., Mkenah, A. A., Khan, A., Alkhailah, A., Makinah, A. A., & Alquraini, H. (2018): Pulpotomy vs. pulpectomy techniques, indications and complications. *International Journal of Community Medicine and public Health*, 5(11):xxx-xxx. [https://www.researchgate.net/publication/328345023\\_Pulpotomy\\_vs\\_pulpectomy\\_techniques\\_indications\\_and\\_complications](https://www.researchgate.net/publication/328345023_Pulpotomy_vs_pulpectomy_techniques_indications_and_complications).
- Banga, K., Arora, N., Kannan, S., Singh, A. K., & Malhotra, A. (2020): Evaluation of temperature rise in the pulp during various IPR techniques—an in vivo study. *Progress in Orthodontics*, 21, 1-9.
- Berkovitz, B., Moxham, B. J., Linden, R. W., & Sloan, A. J. (2010): Master dentistry volume 3 oral biology: oral anatomy, histology, physiology and biochemistry (Vol. 3). Elsevier Health Sciences.
- Borkar, S.A., Ataide, I. (2015): Biodentine pulpotomy several days after pulp exposure: Four case reports. *Journal of Conservative Dentistry*, 18(1):73-8.  
doi: 10.4103/0972-0707.148901. PMID: 25657533; PMCID: PMC4313486.
- Bimstein, E., Rotstein, I. (2016): Cvek pulpotomy, *Dental Traumatology*, 32: 438-442.  
<https://doi.org/10.1111/edt.12297>
- Botirovna, S. J., Shu hratovna, R. Z., & Rustambekovna, S. A. (2021): Toothpulpitis. *Texas Journal of Medical Science*, 3, 40-41.  
<https://zienjournals.com/index.php/tjms/article/view/472>
- Burn, G. L., Foti, A., Marsman, G., Patel, D. F., & Zychlinsky, A. (2021): Theneutrophil. *Immunity*, 54(7), 1377-1391.
- Chang, S. H., Lin, Y. Y., Wu, G. J., Huang, C. H., & Tsai, G. J. (2019): Effect of chitosan molecular weight on anti-inflammatory activity in the RAW 264.7 macrophage model. *International journal of biological macromolecules*, 131, 167- 175.
- Cervera, A. H., Soehnlein O, Kenne E. (2022): Neutrophils in chronic inflammatorydiseases, springer nature, *Cellular & Molecular Immunology Journal*, 19:177– 191.  
<https://doi.org/10.1038/s41423-021-00832-3>
- Chen, L., Deng, H., Cui1, H., Fang, J., Zhicai Zuo, Z., Deng, J., Li1, Y., Wang, X., Zhao., L. (2017): Inflammatory responses and inflammation-associated diseasesin organs, *Impact Journals*, 9(6):7204-7218.



Chen, X., Daliri, E.B., Kim, N., Kim, J.R., Yoo, D., Oh, D.H. (2020):

Microbial Etiology and Prevention of Dental Caries: Exploiting Natural Products to Inhibit Cariogenic Biofilms. *Pathogens*, 9(7), 569.10.3390/pathogens9070569.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7400585/>

Cheng, F. C., Chiang, C. P. (2022). Profile of dental use for diseases of pulp and periapical tissues under the National Health Insurance system in Taiwan in 2020.

*Journal of Dental Sciences*, 17(4), 1744-1750.

<https://doi.org/10.1016/j.jds.2022.08.023>

Cheng H, Huang H, Guo Z, Chang Y, Li Z. Role of prostaglandin E2 in tissue repair and regeneration. *Theranostics*. 2021 Aug 13;11(18):8836-8854. doi: 10.7150/thno.63396. PMID: 34522214; PMCID: PMC8419039.

Choi, S., Aid, S., Bosetti, F. (2009): The distinct roles of cyclooxygenase-1 and -2 in neuroinflammation: implications for translational research, *Trends in pharmacological sciences*, 30(4): 174–181.

Çolak, H., Dülgergil, Ç. T., Dalli, M., Hamidi, M. M. (2013): Early childhood caries update: A review of causes, diagnoses, and treatments. *Journal of natural science, biology, and medicine*, 4(1), 29.

Chua, H., Choi, J. J. E., Ramani, R. S., Ganjigatti, R., & Waddell, J. N. (2019): The cooling efficiency of different dental high-speed handpiece coolant port designs. *Heliyon*, 5(8).

Cushley, S., Duncan, H. F., Lappin, M. J., Tomson, P. L., Lundy, F. T., Cooper, P., Clarke, M., El Karim, I. A. (2019): Pulpotomy for mature carious teeth with symptoms of irreversible pulpitis: a systematic review. *Journal of Dentistry*, 88,103158.

Dammaschke, Till. (2009): Rat molar teeth as a study model for direct pulp capping research in dentistry, *Laboratory animals*. 44. 1-6. 10.1258/la.2009.008120.

Daniel, W.W., dan Cross, C.L., (2013), Biostatistics: A Foundation for Analysis in the Health Sciences, 10th edition, Hoboken: Wiley, hlm 204.

Devi, N., Sarmah, M., Khatun, B., & Maji, T. K. (2017): Encapsulation of active ingredients in polysaccharide–protein complex coacervates. *Advances in colloid and interfacescience*, 239, 136-145.



Donnelly, A., Foschi, F., McCabe, P. & Duncan, H.F. (2022): Pulpotomy fortreatment of complicated crown fractures in permanent teeth: A systematic review. *International Endodontic Journal*, 55, 290–311. <https://doi.org/10.1111/iej.13690>

Enggardipta, R. A. (2016): EKSPRESI SIKLOOKSIGENASE-2 DAN JUMLAH SEL INFLAMASI SETELAH PEMBERIAN EUGENOL PADA PULPITIS IREVERSIBEL, Thesis from FKG library UGM

Fakhri, E., Eslami, H., Maroufi, P., Pakdel, F., Taghizadeh, S., Ganbarov, K., ... & Kafil, H. S. (2020): Chitosan biomaterials application in dentistry. *Internationaljournal of biological macromolecules*, 162, 956-974.

Featherstone, J. D. B. (2004): The continuum of dental caries—evidence for a dynamic disease process. *Journal of dental research*, 83(1), 39- 42. <https://doi.org/10.1177/154405910408301s08>

Fitria, L., Lukitowati, F., dan Kristiawati, D. (2019): NILAI RUJUKAN UNTUK EVALUASI FUNGSI HATI DAN GINJAL PADA TIKUS (Rattus norvegicus Berkenhout, 1769) GALUR WISTAR, *Jurnal PendidikanMatematika dan IPA*,10(2),81. <https://doi.org/10.26418/jpmipa.v10i2.34144>

Furze, R. C., & Rankin, S. M. (2008): Neutrophil mobilization and clearance in thebone marrow. *Immunology*, 125(3), 281-288. <https://doi.org/10.1111/j.1365-2567.2008.02950.x>

Galler, K. M., Weber, M., Korkmaz, Y., Widbiller, M., & Feuerer, M. (2021): Inflammatory response mechanisms of the dentine–pulp complex and the periapical tissues. *International journal of molecular sciences*, 22(3), 1480. <https://doi.org/10.3390/ijms22031480>

Gehrig, S.J., Wilmann, D.E. (2008): Foundation of Periodontics for The DentalHygienist, Illinois, Wolter Kluwer.

Ghannam, M. G., Alameddine, H., & Bordoni, B. (2019): Anatomy, head and neck,pulp (Tooth). PMID: 30725797.

Hargreaves, K.M., Cohen, S., (2011): Cohen's Pathways of The Pulp, 10th Ed.,Elsevier, Missouri. <https://doi.org/10.1038/sj.bdj.2011.193>

Hensley-McBain, T., Wu, M. C., Manuzak, J. A., Cheu, R. K., Gustin, A.,Driscoll, C. B., Klatt, N. R. (2019): Increased mucosal neutrophil survival is associatedwith altered microbiota in HIV infection. *PLoS pathogens*, 15(4), e1007672.



Horst OV, Horst JA, Samudrala R, Dale BA (2012) Caries induced cytokinenetwork in the odontoblast layer of human teeth. *BMC Immunol* 12:9.

Hsueh, Y. C., Wu, J. M., Yu, C. K., Wu, K. K., & Hsieh, P. C. (2014). ProstaglandinE2 promotes post-infarction cardiomyocyte replenishment by endogenous stem cells. *EMBO molecular medicine*, 6(4), 496-503.

Ingle, J. I., Bakland, L. K., & Baumgartner, J. C. (2008): Ingle's endodontics/John I.Ingle, Leif K. Bakland, J. Craig Baumgartner. *International Immunopharmacology*, 10-11, 1325-1334.  
<https://doi.org/10.1016/j.intimp.2010.08.012>

Irfan, N. I., Zubir, A. Z. M., Suwandi, A., Haris, M. S., Jaswir, I., & Lestari, W.(2022): Gelatin-based hemostatic agents for medical and dental application at aglance: A narrative literature review. *The Saudi Dental Journal*.  
<https://doi.org/10.1016/j.sdentj.2022.11.007>

Jiang, T., James, R., Kumbar, S. G., & Laurencin, C. T. (2014). Chitosan as a biomaterial: structure, properties, and applications in tissue engineering and drug delivery. In *Natural and synthetic biomedical polymers* (pp. 91-113). Elsevier.

Kaur, M., Kaur, B., Kaur, J. et al. (2020): Role of water in cyclooxygenase catalysisand design of anti-inflammatory agents targeting two sites of the enzyme. *Scientific Reports*, **10**, 10764.

<https://doi.org/10.1038/s41598-020-67655-6>

Kim, Y. S., Min, K. S., Lee, H. D., Oh, H. W., & Kim, E. C. (2010): Effect of cytosolic phospholipase A2 on proinflammatory cytokine-induced bone resorptive genes including receptor activator of nuclear factor kappa B ligand inhuman dental pulp cells. *Journal of Endodontics*, 36(4), 636-641.

Kolaczkowska E, Kubes P. Neutrophil recruitment and function in health and inflammation. *Nat Rev Immunol*. 2013 Mar;13(3):159-75. doi: 10.1038/nri3399.PMID: 23435331

Kumar, V., Sharma, A. (2010): Neutrophils: Cinderella of innate immunesystem, *International immunopharmacology*. 10(11):1325-34.  
<https://doi.org/10.1016/j.intimp.2010.08.012>

Kutil, Z., Temml, V., Maghradze, D., Pribylova, M., Dvorakova, M., Schuster, D., ... & Landa, P. (2014): Impact of wines and wine constituents on cyclooxygenase-1, cyclooxygenase-2, and 5- lipoxygenase catalytic activity. *Mediators of inflammation*, 2014.



Lee SK, Min KS, Kim YH, Jeong GS, Lee SH, Lee HJ, Lee SI, Kim YS, Park SJ, Seo SW, Lee SK, Kim EC (2008) Mechanical stress activates proinflammatory cytokines and antioxidant defense enzymes in human dental pulp cells. *J Endod* 34:1364–1369 22

leksandrowicz P, Brzezińska-Błaszczyk E, Kozłowska E, Żelechowska P, Borgonovo AE, Agier J. Analysis of IL-1 $\beta$ , CXCL8, and TNF- $\alpha$  levels in the crevicular fluid of patients with periodontitis or healthy implants. *BMC Oral Health*. 2021 Mar 16;21(1):120. doi: 10.1186/s12903-021-01478-3. PMID: 33726736; PMCID: PMC7968186.21

Li, J. Y., Wang, S. N., & Dong, Y. M. (2021): The effect of topical application of meloxicam on inflamed dental pulp. *Journal of Dental Sciences*, 16(3), 915-921.

Liu, H., Wei, L. K., Jian, X. F., Huang, J., Zou, H., Zhang, S. Z., & Yuan, G. H. (2018): Isolation, culture and induced differentiation of rabbit mesenchymal stemcells into osteoblasts. *Experimental and Therapeutic Medicine*, 15(4), 3715-3724.

Lin, P. S., Cheng, R. H., Chang, M. C., Lee, J. J., Chang, H. H., Huang, W. L., ... & Jeng, J. H. (2017): TGF- $\beta$ 1 stimulates cyclooxygenase-2 expression and PGE2 production of human dental pulp cells: role of ALK5/Smad2 and MEK/ERK signal transduction pathways. *Journal of the Formosan Medical Association*, 116(10), 748-754.

Liu, Y., Ng, S. C., Yu, J., & Tsai, W. B. (2019): Modification andcrosslinking of gelatin-based biomaterials as tissue adhesives. *Colloids and Surfaces B: Biointerfaces*, 174, 316-323.

Lopes CS, Junqueira MA, Cosme-Silva L, Pegoraro COR, Garbelini CCD, OliveiraTM, Martins NS, Neves JDS, Sakai VT. (2019): Initial inflammatory response after the pulpotomy of rat molars with MTA or ferric sulfate. *J Appl Oral Sci* 29;27:e20180550. doi: 10.1590/1678-7757-2018-0550. PMID: 31365709; PMCID: PMC6690728.

Machiulskiene, V., Campus, G., Carvalho, J.C., Dige, I., Ekstrand, K.R., Jablonski-Momeni, A., Maltz, M., Manton, D.J., Martignon, S., Martinez-Mier, E.A., Pitts, N.B., Schulte, A.G., Splieth, C.H., Tenuta, L.M.A., Ferreira Zandoná, A., Nyvad, B. (2019): Terminology of Dental Caries and Dental Caries Management: Consensus Report of a Workshop Organized by ORCA andCariology Research Group of IADR, Karger, *Caries research*, 54(1),7-14.

<https://pubmed.ncbi.nlm.nih.gov/31590168/>

Mahmudi, M., Pidhatika, B., Suyanta, S., dan Nuryono, N. (2022): Modification of Gelatin/Carbonated Hydroxyapatite Membrane With Chitosan To Improve the Tensile Strength, *Rasayan Journal of Chemistry*, 15(2), 954–959. <https://doi.org/10.31788/RJC.2022.1526599>



Mani, A., Anarthe, R., Kale, P., Maniyar, S., Anuraga, S., & Student, P.

A. (2018): Hemostatic agents in dentistry. *Galore International Journal of HealthSciences and Research*, 3, 40-46.

Martínez-Ibáñez, M., Juan-Díaz, M. J., Lara-Saez, I., Coso, A., Franco, J., Gurruchaga, M. A. R. I. L. O., ... & Goñi, I. (2016): Biological characterization of a new silicon based coating developed for dental implants. *Journal of Materials Science: Materials in Medicine*, 27, 1-9.

Mathur, V.p., Dhillon, J.K. (2018): Dental Caries: A Disease Which Needs Attention: *The Indian Journal of Pediatrics*, 85(3), 202–206.

<https://link.springer.com/content/pdf/10.1007/s12098-017-2381-6.pdf?pdf=button>

Michael, M., & Vermeren, S. (2019): A neutrophil-centric view of chemotaxis. *Essays in biochemistry*, 63(5), 607-618.

Morotomi, T., Washio, A., & Kitamura, C. (2019). Current and future options for dental pulp therapy. *Japanese Dental Science Review*, 55(1), 5\_11. <https://doi.org/10.1016/j.jdsr.2018.09.001>

Negi, R. R., Rana, S. V., Gupta, V., Gupta, R., Chadha, V. D., Prasad, K. K., & Dhawan, D. K. (2019): Over-expression of cyclooxygenase-2 in colorectal cancer patients. *Asian Pacific journal of cancer prevention: APJCP*, 20(6), 1675.

Niu, L., Zhang, H., Liu, Y., Wang, Y., Li, A., Liu, R., ... & Yang, Q. (2019). Microfluidic chip for odontoblasts in vitro. *ACS Biomaterials Science & Engineering*, 5(9), 4844-4851.

NOSRAT, A., SEIFI, A., ASGARY, S. (2012): Pulpotomy in caries-exposed immature permanent molars using calcium-enriched mixture cement or mineral trioxide aggregate: a randomized clinical trial, *International Journal of Paediatric Dentistry*, 23-1, 56-63. <https://doi.org/10.1111/j.1365-263X.2012.01224.x>

Oronsky, B., Caroen, S., Reid, T. (2022): What Exactly Is Inflammation (and What Is It Not?). *International Journal of Molecular Sciences*, 23(23), 14905.

Othman, A., Sekheri, M., & Filep, J. G. (2022): Roles of neutrophil granule proteins in orchestrating inflammation and immunity. *The FEBS journal*, 289(14), 3932-3953.

Ozório JE, Carvalho LF, de Oliveira DA, de Sousa-Neto MD, Perez DE. (2012): Standardized propolis extract and calcium hydroxide as pulpotomy agents in primary pig teeth. *Journal of Dentistry for Children (Chic)*: (2):53-8. PMID: 22828758.



Paradowska-Stolarz, A., Wieckiewicz, M., Owczarek, A., & Wezgowiec, J. (2021): Natural polymers for the maintenance of oral health: Review of recent advances and perspectives. *International journal of molecular sciences*, 22(19), 10337.

Parisay, I., Ghoddusi, J., & Forghani, M. (2015): A review on vital pulp therapy in primary teeth. *Iranian endodontic journal*, 10(1), 6.

Patrono, C. (2016): Cardiovascular effects of cyclooxygenase-2 inhibitors: a mechanistic and clinical perspective. *British journal of clinical pharmacology*, 82(4), 957-964.

Philip, N., Suneja, B. (2022): Minimally invasive endodontics: a new era for pulpotomy in mature permanent teeth, *British Dental Journal*, 233, 1035–1041.  
<https://doi.org/10.1038/s41415-022-5316-1>

Pittman K, Kubes P. Damage-associated molecular patterns control neutrophil recruitment. *J Innate Immun.* 2013;5(4):315-23. doi: 10.1159/000347132. Epub 2013 Mar 7. PMID: 23486162; PMCID: PMC6741494.

Pitts, N. B., Zero, D. T., Marsh, P. D., Ekstrand, K., Weintraub, J. A., Gomez, F.R., Tagami, J., Twetman, S., Tsakos, G., and Ismail, A. (2017): Dental caries, *PRIMER*, 3, 17030.  
<https://pubmed.ncbi.nlm.nih.gov/28540937/>

Priyadarshini, R., Murthykumar, K. (2016): Cox2-Inhibitors in the management of pulpal pain-a review, *Journal of pharmaceutical Sciences and Research*, 8(6),442.

Qudeimat MA et al. Prognostic biomarkers in vital pulp therapy: a systematic review. *Int Endod J.* 2020;53(3):347-365.

Quock, R. L. (2015). Dental caries: a current understanding and implications. *Journal of Nature and Science*, 1(1), 27.

Rada, B. (2019): Neutrophil Extracellular Traps. In: Knaus, U., Leto, T. (eds) NADPH Oxidases. *Methods in Molecular Biology*, 1982.[https://doi.org/10.1007/978-1-4939-9424-3\\_31](https://doi.org/10.1007/978-1-4939-9424-3_31)

Ramasamy, D. L., Wojtuś, A., Repo, E., Kalliola, S., Srivastava, V., & Sillanpää, M. (2017): Ligand immobilized novel hybrid adsorbents for rare earth elements(REE) removal from waste water: assessing the feasibility of using APTES functionalized silica in the hybridization process with chitosan. *Chemical Engineering Journal*, 330, 1370- 1379.

Reyes-Carmona, J. F., Santos, A. R., Figueiredo, C. P., Felippe, M. S., Felippe, W.T., & Cordeiro, M. M. (2011): In vivo host interactions with mineral trioxide aggregate and calcium hydroxide: inflammatory molecular signaling assessment. *Journal of Endodontics*, 37(9), 1225-1235.



Rosales, C. (2018): Neutrophil: a cell with many roles in inflammation or several cell types? *Frontier in physiology*, 9,113.  
[https://www.frontiersin.org/articles/10.3389/fphys.2018.00113/full?trk=public\\_post\\_comment-text](https://www.frontiersin.org/articles/10.3389/fphys.2018.00113/full?trk=public_post_comment-text)

Ratnakumari, N., & Thomas, B. (2012): A histopathological comparison of pulpal response to chitra-cpc and formocresol used as pulpotomy agents in primary teeth: A clinical trial. *International Journal of Clinical Pediatric Dentistry*, 5(1),6.

Samiei, M., Abdollahinia, E. D., Amiryaghoubi, N., Fathi, M., Barar, J., & Omidi, Y. (2023): Injectable thermosensitive chitosan/gelatin hydrogel for dental pulp stem cells proliferation and differentiation. *BioImpacts: BI*, 13(1), 63.

Simon-Soro, A., Tomás, I., Cabrera-Rubio, R., Catalan, M. D., Nyvad, B., Mira, A. (2013): Microbial geography of the oral cavity. *Journal of dental research*, 92(7),616-621.  
<https://doi.org/10.1177/0022034513488119>

Solete, P., Ramesh, S. (2021): Comparative evaluation of various analgesics in reducing pain in irreversible pulpitis. *Bioinformation*, 17(2),313-319.  
<http://www.bioinformation.net/017/97320630017313.pdf>

Sonmez D, Sari S, Cetinbaş T. (2008): A Comparison of four pulpotomy techniques in primary molars: a long-term follow-up. *Journal of endodontics*, 34(8):950-5. doi: 10.1016/j.joen.2008.05.009. PMID: 18634926

Su, K., & Wang, C. (2015): Recent advances in the use of gelatin in biomedical research. *Biotechnology letters*, 37, 2139-2145.

Svitkina, T. (2018): The actin cytoskeleton and actin-based motility. *Cold Spring Harbor perspectives in biology*, 10(1), a018267.

Syed, G. A., Mulay, S. (2015): Pulpitis: A review. *Journal of Dental and Medical Sciences*, 14(8),10.9790/0853-14869297.  
[https://www.researchgate.net/publication/281228037\\_Pulpitis\\_A\\_review](https://www.researchgate.net/publication/281228037_Pulpitis_A_review)

Taneja, S., & Singh, A. (2019). Evaluation of effectiveness of calcium hydroxide and MTA as pulpotomy agents in permanent teeth: A meta- analysis. *Pediatric Dental Journal*, 29(2),90-96.

<https://doi.org/10.1016/j.pdj.2019.04.001>

Tanikonda, R., Ravi, R. K., Kantheti, S., & Divella, S. (2014): Chitosan: Applications in Dentistry. *Trends in Biomaterials & Artificial Organs*, 28(2).

Tigner, A., Ibrahim, S. A., & Murray, I. (2020): Histology, white blood cell, In: StatPearls. StatPearls Publishing, Treasure Island (FL); 2022. PMID: 33085295.



Torabinejad, M., & Walton, R. E. (2008): Pulp and periapical pathosis.  
*Endodontics: principles and practice*, 4, 49.

Tran, X. V., Ngo, L. T. Q., & Boukpessi, T. (2021): BiodentineTM full pulpotomyin mature permanent teeth with irreversible pulpitis and apical periodontitis.In *Healthcare* (Vol. 9, No. 6, p. 720). MDPI. <https://doi.org/10.3390/healthcare9060720>

Tripathi, K.D., (2003): Essentials of Medical Pharmacology, 5th ed., Jaypee Brothers, New Delhi, 156-184.

Uribe, S. E., Innes, N., & Maldupa, I. (2021): The global prevalence of early childhood caries: a systematic review with meta-analysis using the WHOdiagnosi ccrriteria. *International journal of paediatricdentistry*, 31(6),817830.  
<https://doi.org/10.1111/ipd.12783>

Vestweber, D., Wessel, F., & Nottebaum, A. F. (2014): Similarities and differencesin the regulation of leukocyte extravasation and vascular permeability. In *Seminars in immunopathology* (Vol. 36, pp. 177-192). Springer BerlinHeidelberg.

Widbiller, M., Rothmaier, C., Saliter, D., Wölflick, M., Rosendahl, A., Buchalla, W., Schmalz, G., Spruss, T., Galler, K. M. (2021): Histology of human teeth: Standard and specific staining methodsrevisited. *Archives of Oral Biology*, 127,105136.

Widbiller, M., Schmalz, G. (2021): Endodontic regeneration: Hard shell, soft core.  
*Odontology*, 109(2), 303-312.

Wolf K, Friedl P. (2011): Extracellular matrix determinants of proteolytic and non-proteolytic cell migration. *Trends in cell biology*, 21(12).

Wuri, R., Rosdianto, A. M., dan Goenawan, H. (2021): Utilization of RatsAs BluntTrauma Animals Model: a Literature Review, *Indonesia MedicusVeterinus*, 10(2),338–354.  
<https://doi.org/10.19087/imv.2021.10.2.338>

Yong, D., Cathro, P. (2021): Conservative pulp therapy in the management ofreversible and irreversible pulpitis. *Australian Dental Journal*.  
<https://doi.org/10.1111/adj.12841>

Yumoto, H., Hirao, K., Hosokawa, Y., Kuramoto, H., Takegawa, D., Nakanishi, T., Matsuo, T. (2018): The roles of odontoblasts in dental pulp innate immunity. *Japanese Dental Science Review*, 54(3), 105- 117. <https://doi.org/10.1016/j.jdsr.2018.03.001>

Zanini, M., Martine, M., Cousson, P. Y. (2016): A Review of Criteria for the Evaluation of Pulpotomy Outcomes in Mature Permanent Teeth, *Journal of Endodontics*, 42(8), 1167-1174.

<https://doi.org/10.1016/j.joen.2016.05.008>



UNIVERSITAS  
GADJAH MADA

**COX-2 EXPRESSION AND NEUTROPHIL NUMBER AFTER PULPOTOMY WITH COMPOSITE GELATIN - CHITOSAN - TEOS-Ca(OH)2 OR Ca(OH)2**

Ghadah abdulrahman alqatta, Prof. Dr. drg. Juni Handajani, M.Kes; Dr. drg. Retno Ardhani, M.Sc

Universitas Gadjah Mada, 2024 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Zhang, S., Li, X., Qi, Y., Ma, X., Qiao, S., Cai, H., ... & Lee, E. S. (2021): Comparison of autogenous tooth materials and other bonegrafts. *Tissue Engineering and Regenerative Medicine*, 18(3), 327-341.

Zhao, L., Ito, S., Arai, A., Udagawa, N., Horibe, K., Hara, M., Daisuke Nishida, D., Hosoya, A., Masuko, R., Okabe, K., Shin, M., Xianqi Li, Matsuo, K., Abe, S., Matsunaga, S., Kobayashi, Y., Kagami, H., Mizoguchi, T. (2021): Odontoblast death drives cell-rich zone-derived dental tissue regeneration. *Bone*, 150, 116010.

Zielinski, M. R., Krueger, M. J. (2012): Therapy in Sleep Medicine, 607-616.  
<https://doi.org/10.1016/B978-1-4377-1703-7.10048-9>



**COX-2 EXPRESSION AND NEUTROPHIL NUMBER AFTER PULPOTOMY WITH COMPOSITE GELATIN  
- CHITOSAN -  
TEOS-Ca(OH)<sub>2</sub> OR Ca(OH)<sub>2</sub>**

Ghadah abdulrahman alqatta, Prof. Dr. drg. Juni Handajani, M.Kes; Dr. drg. Retno Ardhani, M.Sc  
Universitas Gadjah Mada, 2024 | Diunduh dari <http://etd.repository.ugm.ac.id/>