DAFTAR PUSTAKA

[1] Andika Widya Pramono, “Hilirisasi Hasil Penelitian dan Pengembangan Material Implan Ortopedi Melalui Model Pengelolaan Sistem Informasi dan Basis Data Real-Time Kebutuhan Implan di Indonesia,” Jakarta, 2022.

[2] Badan Pusat Statistik, “Impor Alat Kesehatan (Alkes) Menurut Jenis Impor dan Negara Asal,” Jakarta, Jul. 2023.

[3] S. E. Alavi *et al.*, “Hydrogel-based therapeutic coatings for dental implants,” *Eur Polym J*, vol. 181, p. 111652, Dec. 2022, doi: 10.1016/j.eurpolymj.2022.111652.

[4] B. V. Mohite, S. H. Koli, and S. V. Patil, “Bacterial Cellulose-Based Hydrogels: Synthesis, Properties, and Applications,” 2019, pp. 1255–1276. doi: 10.1007/978-3-319-77830-3_2.

[5] A. W. Indrianingsih *et al.*, “Preliminary study on biosynthesis and characterization of bacteria cellulose films from coconut water,” *IOP Conf Ser Earth Environ Sci*, vol. 101, p. 012010, Dec. 2017, doi: 10.1088/1755-1315/101/1/012010.

[6] “Producation of Bacterial Cellulose from Coconut Watwer as a Medium by using Acetobacter Xylinum strain,” *Humanitarian and Natural Sciences Journal*, vol. 2, no. 11, Nov. 2021, doi: 10.53796/hnsj21110.

[7] N. Nurfajriani, A. N. Pulungan, M. Yusuf, and N. Bukit, “Preparation and Characterization of Bacterial Cellulose From Culturation of Acetobacter Xylinum In Coconut Water Media,” *J Phys Conf Ser*, vol. 1811, no. 1, p. 012070, Mar. 2021, doi: 10.1088/1742-6596/1811/1/012070.

[8] A. P. C. Almeida *et al.*, “Crosslinked bacterial cellulose hydrogels for biomedical applications,” *Eur Polym J*, vol. 177, p. 111438, Aug. 2022, doi: 10.1016/j.eurpolymj.2022.111438.

[9] C. Huang *et al.*, “Biofabrication of natural Au/bacterial cellulose hydrogel for bone tissue regeneration via in-situ fermentation,” *Smart Mater Med*, vol. 4, pp. 1–14, 2023, doi: 10.1016/j.smaim.2022.06.001.

[10] I. G. R. da Silva, B. T. dos S. Pantoja, G. H. D. R. Almeida, A. C. O. Carreira, and M. A. Miglino, “Bacterial Cellulose and ECM Hydrogels: An Innovative Approach for Cardiovascular Regenerative Medicine,” *Int J Mol Sci*, vol. 23, no. 7, p. 3955, Apr. 2022, doi: 10.3390/ijms23073955.

[11] S. M. Choi, K. M. Rao, S. M. Zo, E. J. Shin, and S. S. Han, “Bacterial Cellulose and Its Applications,” *Polymers (Basel)*, vol. 14, no. 6, p. 1080, Mar. 2022, doi: 10.3390/polym14061080.

[12] F. Wahid, X. H. Hu, L. Q. Chu, S. R. Jia, Y. Y. Xie, and C. Zhong, "Development of bacterial cellulose/chitosan based semi-interpenetrating hydrogels with improved mechanical and antibacterial properties," *Int J Biol Macromol*, vol. 122, pp. 380–387, Feb. 2019, doi: 10.1016/j.ijbiomac.2018.10.105.

[13] D. Zhao, S. Yu, B. Sun, S. Gao, S. Guo, and K. Zhao, "Biomedical Applications of Chitosan and Its Derivative Nanoparticles.," *Polymers (Basel)*, vol. 10, no. 4, Apr. 2018, doi: 10.3390/polym10040462.

[14] L. Hallmann and M.-D. Gerngroß, "Chitosan and its application in dental implantology," *J Stomatol Oral Maxillofac Surg*, vol. 123, no. 6, pp. e701–e707, Nov. 2022, doi: 10.1016/j.jormas.2022.02.006.

[15] E. Khor and L. Y. Lim, "Implantable applications of chitin and chitosan," *Biomaterials*, vol. 24, no. 13, pp. 2339–2349, Jun. 2003, doi: 10.1016/S0142-9612(03)00026-7.

[16] Z. Zhang, Y. Liu, S. Lin, and Q. Wang, "Preparation and properties of glutaraldehyde crosslinked poly(vinyl alcohol) membrane with gradient structure," *Journal of Polymer Research*, vol. 27, no. 8, p. 228, Aug. 2020, doi: 10.1007/s10965-020-02223-0.

[17] J. M. Dodda *et al.*, "Biocompatible hydrogels based on chitosan, cellulose/starch, PVA and PEDOT:PSS with high flexibility and high mechanical strength," *Cellulose*, vol. 29, no. 12, pp. 6697–6717, Aug. 2022, doi: 10.1007/s10570-022-04686-4.

[18] X. Shen, J. L. Shamshina, P. Berton, G. Gurau, and R. D. Rogers, "Hydrogels based on cellulose and chitin: fabrication, properties, and applications," *Green Chemistry*, vol. 18, no. 1, pp. 53–75, 2016, doi: 10.1039/C5GC02396C.

[19] A. Kaviani, S. M. Zebarjad, S. Javadpour, M. Ayatollahi, and R. Bazargan-Lari, "Fabrication and characterization of low-cost freeze-gelated chitosan/collagen/hydroxyapatite hydrogel nanocomposite scaffold," *International Journal of Polymer Analysis and Characterization*, vol. 24, no. 3, pp. 191–203, Apr. 2019, doi: 10.1080/1023666X.2018.1562477.

[20] S. Taokaew, W. Kaewkong, and W. Kriangkrai, "Recent Development of Functional Chitosan-Based Hydrogels for Pharmaceutical and Biomedical Applications," *Gels*, vol. 9, no. 4, p. 277, Mar. 2023, doi: 10.3390/gels9040277.

[21] P. P. Phatchayawat, A. Khamkeaw, S. Yodmuang, and M. Phisalaphong, "3D bacterial cellulose-chitosan-alginate-gelatin hydrogel scaffold for cartilage tissue engineering," *Biochem Eng J*, vol. 184, p. 108476, Jun. 2022, doi: 10.1016/j.bej.2022.108476.

[22] Q. Xu, Y. Ji, Q. Sun, Y. Fu, Y. Xu, and L. Jin, “Fabrication of Cellulose Nanocrystal/Chitosan Hydrogel for Controlled Drug Release,” *Nanomaterials*, vol. 9, no. 2, p. 253, Feb. 2019, doi: 10.3390/nano9020253.

[23] R. M. Pereira, G. S. S. Andrade, H. F. De Castro, and M. G. N. Campos, “Performance of Chitosan/Glycerol Phosphate Hydrogel as a Support for Lipase Immobilization,” *Materials Research*, vol. 20, no. suppl 2, pp. 190–201, Jun. 2017, doi: 10.1590/1980-5373-mr-2017-0091.

[24] “REGULATION OF MEDICAL IMPLANTS.”

[25] H. Dong *et al.*, “Surface Modified Techniques and Emerging Functional Coating of Dental Implants,” *Coatings*, vol. 10, no. 11, p. 1012, Oct. 2020, doi: 10.3390/coatings10111012.

[26] R. Davis *et al.*, “A comprehensive review on metallic implant biomaterials and their subtractive manufacturing.,” *Int J Adv Manuf Technol*, vol. 120, no. 3–4, pp. 1473–1530, 2022, doi: 10.1007/s00170-022-08770-8.

[27] R. Kohar, M. Ghosh, J. A. Sawale, A. Singh, N. K. Rangra, and R. Bhatia, “Insights into Translational and Biomedical Applications of Hydrogels as Versatile Drug Delivery Systems,” *AAPS PharmSciTech*, vol. 25, no. 1, p. 17, Jan. 2024, doi: 10.1208/s12249-024-02731-y.

[28] S. K. H. Gulrez, S. Al-Assaf, and G. O, “Hydrogels: Methods of Preparation, Characterisation and Applications,” in *Progress in Molecular and Environmental Bioengineering - From Analysis and Modeling to Technology Applications*, InTech, 2011. doi: 10.5772/24553.

[29] S. Dwivedi, “Hydrogel-A Conceptual Overview,” *Int J Pharm Biol Arch*, vol. 2, 2011, [Online]. Available: https://api.semanticscholar.org/CorpusID:56047890

[30] N. Kashyap, N. Kumar, and M. N. V. R. Kumar, “Hydrogels for Pharmaceutical and Biomedical Applications,” *Crit Rev Ther Drug Carrier Syst*, vol. 22, no. 2, pp. 107–150, 2005, doi: 10.1615/CritRevTherDrugCarrierSyst.v22.i2.10.

[31] Y. J. Chuah, Y. Peck, J. E. J. Lau, H. T. Hee, and D.-A. Wang, “Hydrogel based cartilaginous tissue regeneration: recent insights and technologies,” *Biomater Sci*, vol. 5, no. 4, pp. 613–631, 2017, doi: 10.1039/C6BM00863A.

[32] G. Gaetano, P. Giuseppe, P. F. Salvatore, M. Susanna, S. Sara, and R. C. Luca, “Hyaluronic-Based Antibacterial Hydrogel Coating for Implantable Biomaterials in Orthopedics and Trauma: From Basic Research to Clinical Applications,” in *Hydrogels*, InTech, 2018. doi: 10.5772/intechopen.73203.

[33] A. W. Indrianingsih *et al.*, “Preliminary study on biosynthesis and characterization of bacteria cellulose films from coconut water,” *IOP Conf*

Ser Earth Environ Sci, vol. 101, p. 012010, Dec. 2017, doi: 10.1088/1755-1315/101/1/012010.

[34] N. Nurfajriani, A. N. Pulungan, M. Yusuf, and N. Bukit, "Preparation and Characterization of Bacterial Cellulose From Culturation of Acetobacter Xylinum In Coconut Water Media," *J Phys Conf Ser*, vol. 1811, no. 1, p. 012070, Mar. 2021, doi: 10.1088/1742-6596/1811/1/012070.

[35] E. Rohaeti, E. W Laksono Fx, and A. Rakhmawati, "Mechanical Properties and Antibacterial Activity of Cellulose Composite based Coconut Water with Addition of Glycerol, Chitosan, and Silver Nanoparticle," *Oriental Journal of Chemistry*, vol. 34, no. 3, pp. 1341–1349, Jun. 2018, doi: 10.13005/ojc/340320.

[36] M. Velásquez-Riaño and V. Bojacá, "Production of bacterial cellulose from alternative low-cost substrates," *Cellulose*, vol. 24, no. 7, pp. 2677–2698, Jul. 2017, doi: 10.1007/s10570-017-1309-7.

[37] W. H. Irham, Tamrin, L. Marpaung, and Marpongahtun, "Characterization of bacterial cellulose from coconut water supplemented Curcuma Longa Linn and Ziziphus Mauritiana extract," 2020, p. 020056. doi: 10.1063/5.0023953.

[38] A. Windarsih *et al.*, "Gold modified bacterial cellulose from coconut water waste and its antibacterial activity," *Waste Biomass Valorization*, vol. 13, no. 10, pp. 4157–4164, Oct. 2022, doi: 10.1007/s12649-022-01769-y.

[39] P. D. Kasi, E. P. Tenriwaru, and R. Ridwan, "Bacterial Cellulose Production from Combination of Coconut Water and Sago Wastewater," in *ICONSS Proceeding Series The 2nd International Conference on Natural & Social Sciences (ICONSS 2019)*, Palopo: ICONSS, Sep. 2019.

[40] P. Kumar Dutta, J. Dutta, and V. S. Tripathi, "Chitin and chitosan: Chemistry, properties and applications," 2004.

[41] I. Aranaz *et al.*, "Chitosan: An Overview of Its Properties and Applications," *Polymers (Basel)*, vol. 13, no. 19, p. 3256, Sep. 2021, doi: 10.3390/polym13193256.

[42] N. Sugihartini, "Deasy Vanda Pertiwi, dkk Formulasi Dan Karakterisasi Sediaan Hidrogel Minyak Cengkeh (*Syzygium Aromaticum*) Berbasis Kitosan."

[43] F. Ramadhani *et al.*, "Prosiding Seminar Nasional Kimia 2023 eISSN 2987-9922 Jurusan Kimia FMIPA UNMUL."

[44] E. Rochima, "Buletin Teknologi Hasil Perikanan Karakterisasi Kitin Dan Kitosan Asal Limbah Rajungan Cirebon Jawa Barat," 2007.

[45] Lola Dhea Amanda, “Pembuatan Dan Karakteristik Membran Kitosan Dari Kulit Udang Vaname (Litopenaeus vannamei),” Universitas Islam Negeri Ar-Raniry, Banda Aceh, 2022.

[46] E. Cahyono Program Studi Teknologi Pengolahan Hasil Laut, J. Perikanan dan Kabaharian Politeknik Negeri Nusa Utara Jalan Kesehatan No, K. Sangihe, and S. Utara, “KARAKTERISTIK KITOSAN DARI LIMBAH CANGKANG UDANG WINDU (Panaeus monodon) PROPERTIES OF CHITOSAN FROM GIANT TIGER PRAWN EXOSCELETON,” 2018.

[47] M. Asgher, I. Nasir, N. Khalid, and S. A. Qamar, “Development of biocomposites based on bacterial cellulose reinforced delignified rice husk-PVA plasticized with glycerol,” *Journal of Polymer Research*, vol. 27, no. 11, p. 347, Nov. 2020, doi: 10.1007/s10965-020-02314-y.

[48] P. Chen, F. Xie, F. Tang, and T. McNally, “Glycerol plasticisation of chitosan/carboxymethyl cellulose composites: Role of interactions in determining structure and properties,” *Int J Biol Macromol*, vol. 163, pp. 683–693, Nov. 2020, doi: 10.1016/j.ijbiomac.2020.07.004.

[49] “Glycerol as a Green Solvent in Organic Reactions,” 2019, pp. 202–223. doi: 10.21741/9781644900314-9.

[50] K. Khabibi, D. Siswanta, and M. Mudasir, “Preparation, Characterization, and <i>In Vitro</i> Hemocompatibility of Glutaraldehyde-Crosslinked Chitosan/Carboxymethylcellulose as Hemodialysis Membrane,” *Indonesian Journal of Chemistry*, vol. 21, no. 5, p. 1120, Sep. 2021, doi: 10.22146/ijc.61704.

[51] M. Y. Chan, S. Husseinsyah, and S. T. Sam, “Chitosan/Corn Cob Biocomposite Films by Cross-linking with Glutaraldehyde,” *Bioresources*, vol. 8, no. 2, Apr. 2013, doi: 10.15376/biores.8.2.2910-2923.

[52] Admin, “FTIR (Fourier Transform Infra Red),” Laboraturium Terpadu UII. Accessed: Dec. 14, 2023. [Online]. Available: https://labterpadu.uii.ac.id/fasilitas/alat/ftir-fourier-transform-infra-red

[53] A. S. Gilbert, Ed., *Encyclopedia of Geoarchaeology*. in Encyclopedia of Earth Sciences Series. Dordrecht: Springer Netherlands, 2017. doi: 10.1007/978-1-4020-4409-0.

[54] K. Alkhuder, “Attenuated total reflection-Fourier transform infrared spectroscopy: a universal analytical technique with promising applications in forensic analyses,” *International Journal of Legal Medicine*, vol. 136, no. 6. Springer Science and Business Media Deutschland GmbH, pp. 1717–1736, Nov. 01, 2022. doi: 10.1007/s00414-022-02882-2.

[55] A. W. Paramadini, “Efek Variasi Konsentrasi Kolagen Terhadap Karakteristik Biokomposit Selulosa Bakteri-Kolagen Sebagai Kandidat Duramater Artifisial,” Universitas Airlangga, Surabaya, 2015.

[56] admin, “Standard Guide for Characterization of Hydrogels used in Regenerative Medicine (Withdrawn 2020),” www.astm.org. Accessed: Dec. 14, 2023. [Online]. Available: https://www.astm.org/f2900-11.html

[57] D. Ji, P. Im, S. Shin, and J. Kim, “Specimen Geometry Effect on Experimental Tensile Mechanical Properties of Tough Hydrogels,” *Materials*, vol. 16, no. 2, p. 785, Jan. 2023, doi: 10.3390/ma16020785.

[58] M. J. Majcher and T. Hoare, “Hydrogel Properties and Characterization Techniques,” 2018, pp. 1–25. doi: 10.1007/978-3-319-92066-5_15-1.

[59] “Viscosity,” www.eag.com. Accessed: Dec. 18, 2023. [Online]. Available: https://www.eag.com/techniques/phys-chem/viscosity/

[60] A. Gatenby, “How can I measure viscosity?,” www.cscscientific.com. Accessed: Dec. 18, 2023. [Online]. Available: https://www.cscscientific.com/csc-scientific-blog/how-can-i-measure-viscosity

[61] Lubrizol, “LUBRIZOL TEST PROCEDURE Determination of Viscosity Using A Brookfield Viscometer for Conditioning Polymers Scope,” 2013. [Online]. Available: www.lubrizol.com/personalcare

[62] “EN 13726 Primary Wound Dressing Test Methods,” smtl.co.uk. Accessed: Dec. 14, 2023. [Online]. Available: http://smtl.co.uk/testing-services/54-wound-dressings-testing-services/127-primary-wound-dressings.html

[63] “(Characterization) 88550_BS EN13726-1 2002 (002)”.

[64] M. S. Dermawan, “Fabrikasi dan Karakterisasi Biokomposit Bakteri Selulosa-Kitosan-Gliserol sebagai Kandidat Wound Dressing untuk Luka Neuroiskemik pada Penderita Diabetes Melitus,” Institut Teknologi Telkom Purwokerto, Kabupaten Banyumas, 2024.

[65] J. Ilmiah Teknologi Pertanian, B. Dwiki Yusuf Fachriza, I. Wayan Arnata, and L. Putu Wrasiati, “Pengaruh Konsentrasi Natrium Hidroksida terhadap Karakteristik Selulosa Mikrobia dari SCOBY Effect of Sodium Hydroxide Concentration on the Characteristics of Microbial Cellulose from SCOBY”.

[66] F. Wahid, X. H. Hu, L. Q. Chu, S. R. Jia, Y. Y. Xie, and C. Zhong, “Development of bacterial cellulose/chitosan based semi-interpenetrating hydrogels with improved mechanical and antibacterial properties,” *Int J Biol Macromol*, vol. 122, pp. 380–387, Feb. 2019, doi: 10.1016/j.ijbiomac.2018.10.105.

[67] A. F. Rosdiani, “Sintesis Dan Karakterisasi Scaffold Variasi Komposisi Kolagen-Kitosan Dengan Penambahan Plasticizer Gliserol Untuk Rekayasa Jaringan Pada Kasus Gingivitis,” Universitas Airlangga, Surabaya, 2015.

[68] A. OU and I. BO, “Chitosan Hydrogels and their Glutaraldehyde-Crosslinked Counterparts as Potential Drug Release and Tissue Engineering Systems - Synthesis, Characterization, Swelling Kinetics and Mechanism,” *J Phys Chem Biophys*, vol. 07, no. 03, 2017, doi: 10.4172/2161-0398.1000256.

[69] A. W. Paramadini, P. Chinavinijkul, A. Meemai, P. Thongkam, A. Apasuthirat, and N. Nasongkla, “Fabrication and in vitro characterization of zinc oxide nanoparticles and hyaluronic acid-containing carboxymethylcellulose gel for wound healing application,” *Pharm Dev Technol*, vol. 28, no. 1, pp. 95–108, Jan. 2023, doi: 10.1080/10837450.2022.2164304.

[70] Admin, “Fourier Transform – Infra Red (FT-IR),” simlab.undip.id. Accessed: Mar. 12, 2024. [Online]. Available: https://simlab.undip.id/allPelayanan/detail/14

[71] S. N. Y. Putri *et al.*, “Pengaruh Mikroorganisme, Bahan Baku, Dan Waktu Inkubasi Pada Karakter Nata: Review,” *Jurnal Teknologi Hasil Pertanian*, vol. 14, no. 1, p. 62, Feb. 2021, doi: 10.20961/jthp.v14i1.47654.

[72] N. A. Yanti, S. W. Ahmad, D. Tryaswaty, and A. Nurhana, “Pengaruh Penambahan Gula dan Nitrogen pada Produksi Nata De Coco,” 2017.

[73] T. Fahmy and A. Sarhan, “Characterization and molecular dynamic studies of chitosan–iron complexes,” *Bulletin of Materials Science*, vol. 44, no. 2, p. 142, Jun. 2021, doi: 10.1007/s12034-021-02434-1.

[74] M. Ibrahim, O. Osman, and A. A. Mahmoud, “Spectroscopic Analyses of Cellulose and Chitosan: FTIR and Modeling Approach,” *J Comput Theor Nanosci*, vol. 8, no. 1, pp. 117–123, Jan. 2011, doi: 10.1166/jctn.2011.1668.

[75] A. B. D. Nandiyanto, R. Oktiani, and R. Ragadhita, “How to read and interpret ftir spectroscope of organic material,” *Indonesian Journal of Science and Technology*, vol. 4, no. 1, pp. 97–118, 2019, doi: 10.17509/ijost.v4i1.15806.

[76] J. G. Caroni *et al.*, “Chitosan-based glycerol-plasticized membranes: bactericidal and fibroblast cellular growth properties,” *Polymer Bulletin*, vol. 78, no. 8, pp. 4297–4312, Aug. 2021, doi: 10.1007/s00289-020-03310-4.

[77] S. Rivero, L. Damonte, M. A. García, and A. Pinotti, “An Insight into the Role of Glycerol in Chitosan Films,” *Food Biophys*, vol. 11, no. 2, pp. 117–127, Jun. 2016, doi: 10.1007/s11483-015-9421-4.

[78] H. Ritonga, M. Nurdin, F. Rembon, L. O. A. N. Ramadhan, and F. Fitriana, “Preparation of Hydrogel Chitosan Co-Polyacrilamide Crosslinked Glutaraldehyde,” European Alliance for Innovation n.o., Jun. 2019. doi: 10.4108/eai.2-5-2019.2284680.

[79] P. Domalik-Pyzik, J. Chłopek, and K. Pielichowska, “Chitosan-Based Hydrogels: Preparation, Properties, and Applications,” 2018, pp. 1–29. doi: 10.1007/978-3-319-76573-0_55-1.

[80] D. P. Sari, P. M. Lestari, and N. Nining, “Review: Komposit Polimer Pektin dalam Sistem Penghantaran Obat,” *Majalah Farmasetika*, vol. 7, no. 1, p. 1, Feb. 2022, doi: 10.24198/mfarmasetika.v7i1.36568.

[81] C. Ming Yeng, S. Husseinsyah, and S. Sung Ting, “Chitosan/corn cob films,” 2013.

[82] B. C. Smith, “Organic Nitrogen Compounds, VII: Amides- The rest of the story,” *Spectrospocy*, pp. 10–15, Jan. 02, 2020.

[83] A. G. D. Prasad and M. Zarei, “Ftir Spectroscopic Studies On Cleome Gynandra-Comparative Analysis Of Functional Group Before And After Extraction.” [Online]. Available: https://www.researchgate.net/publication/255486350

[84] L. Djekic, M. Martinović, V. Dobričić, B. Čalija, Đ. Medarević, and M. Primorac, “Comparison of the Effect of Bioadhesive Polymers on Stability and Drug Release Kinetics of Biocompatible Hydrogels for Topical Application of Ibuprofen,” *J Pharm Sci*, vol. 108, no. 3, pp. 1326–1333, Mar. 2019, doi: 10.1016/j.xphs.2018.10.054.

[85] P. Yakaew, T. Phetchara, P. Kampeerapappun, and K. Srikulkit, “Chitosan-Coated Bacterial Cellulose (BC)/Hydrolyzed Collagen Films and Their Ascorbic Acid Loading/Releasing Performance: A Utilization of BC Waste from Kombucha Tea Fermentation,” *Polymers (Basel)*, vol. 14, no. 21, Nov. 2022, doi: 10.3390/polym14214544.

[86] J. Suksaeree and C. Chuchote, “Formulation and Characterization of Topical Anti-acne Spot Gel Containing Herbal Extracts,” *MATEC Web of Conferences*, vol. 237, p. 02005, Nov. 2018, doi: 10.1051/matecconf/201823702005.

[87] J. Y. Kim, J. Y. Song, E. J. Lee, and S. K. Park, “Rheological properties and microstructures of Carbopol gel network system,” *Colloid Polym Sci*, vol. 281, no. 7, pp. 614–623, Jul. 2003, doi: 10.1007/s00396-002-0808-7.

[88] M. R. Saputro, Y. Windhu Wardhana, and N. Wathoni, “Stabilitas Hidrogel dalam Penghantaran Obat,” *Majalah Farmasetika*, vol. 6, no. 5, p. 421, Dec. 2021, doi: 10.24198/mfarmasetika.v6i5.35705.

[89] M. R. Saputro, Y. Windhu Wardhana, and N. Wathoni, “Stabilitas Hidrogel dalam Penghantaran Obat,” *Majalah Farmasetika*, vol. 6, no. 5, p. 421, Dec. 2021, doi: 10.24198/mfarmasetika.v6i5.35705.

[90] O. P. Eka *et al.*, “PHARMACEUTICAL JOURNAL OF INDONESIA Pengembangan Formula Hidrogel Balutan Luka Menggunakan Kombinasi Polimer Galaktomanan dan PVP.” [Online]. Available: http://.pji.ub.ac.id

[91] H. Gao *et al.*, “Injectable hydrogel-based combination therapy for myocardial infarction: a systematic review and Meta-analysis of preclinical trials,” *BMC Cardiovasc Disord*, vol. 24, no. 1, Dec. 2024, doi: 10.1186/s12872-024-03742-0.

[92] H. Hameed, S. Faheem, A. C. Paiva-Santos, H. S. Sarwar, and M. Jamshaid, “A Comprehensive Review of Hydrogel-Based Drug Delivery Systems: Classification, Properties, Recent Trends, and Applications,” *AAPS PharmSciTech*, vol. 25, no. 4, p. 64, Mar. 2024, doi: 10.1208/s12249-024-02786-x.

[93] H. Omidian and S. D. Chowdhury, “Advancements and Applications of Injectable Hydrogel Composites in Biomedical Research and Therapy,” *Gels*, vol. 9, no. 7. Multidisciplinary Digital Publishing Institute (MDPI), Jul. 01, 2023. doi: 10.3390/gels9070533.

[94] B. Richlen, “Learn When You Should Apply a Hydrogel Dressing to a Wound,” Wound Care Education Institute. Accessed: Jun. 25, 2024. [Online]. Available: https://blog.wcei.net/wound-care-dressings-hydrogels

[95] D. Rudolph, “Hydrogel Dressings: What Should You Know?,” Wound Source. Accessed: Jun. 25, 2024. [Online]. Available: https://www.woundsource.com/blog/hydrogel-dressings-what-should-you-know