

DAFTAR PUSTAKA

- Adejuyigbe, B., Kallini, J., Chiou, D., & Kallini, J.R. 2023. Osteoporosis: Molecular Pathology, Diagnostics, and Therapeutics. *International Journal of Molecular Sciences*. 24(19):14583.
- Aziz, A.Y.R., Sahra, M., Ramadhani, N.N., Hamdan, M.F., Agrabudi, A.I., & Permana, A.D. 2024. Rapidly Weparable-Effervescent Microneedles Containing Crosslinked PVA/PVP Polymers for Sustained Transdermal Delivery of Rivastigmine Tartrate: a Promising Approach for Improved Treatment of Alzheimer's Disease. *Journal of Drug Delivery Science and Technology*. 1(1):1-15.
- Bhatnagar, S., Dave, K., & Venuganti, V.V.K., 2017. Microneedles in the clinic. *Journal of Controlled Release*. 260: 164–182.
- Charder, S.H., Joshi, A., & Raut, J. 2023. A Comprehensive Review on Postmenopausal Osteoporosis in Women. *Cureus*. 15(11).
- Chen, Y., Jia, X., Chen, J., Wang, J., & Hu, M. The Pharmacokinetics of Raloxifen and Its Interaction with Apigenin in Rat. *International Journal of Molecular Sciences*. 15(11):8478-8487.
- Dethe, M.J., Prabakaran, A., Ahmed, H., Agrawal, M., Roy, U., & Alexander, A. 2022. PCL-PEG Copolymer Based Injectable Thermosensitive Hydrogels. *Journal of Controlled Release*. 343:217-136.
- Febrianti, N.Q., Aziz, A.Y.R., Tunggeng, M.G.R., Ramadhany, I.D., Syafika, N., Azis, S.B.A., Djabir, Y.Y., Asri, R.M., & Permana, A.D. 2024. Development of pH-Sensitive Nanoparticle Incorporated Into Dissolvable Microneedle for Selective Delivery of Methotrexate. *AAPS PharmSciTech*. 25(4):70.
- International Coucil for Harmonisation of Technical Requirements for Pharmaceuical for Human Use (ICH). 2022. ICH Guideline M10 on Bioanalytical Method Validation and Study Sample Analysis.
- Jin, S.Y., Park,E.J.J., Kwon, S.M., Jung, H.S., & Kim, D.W. 2025. Rapidly Dissolving Microneedles Incorporating Lidocaine Hydrochloride: A PVP/PVA-Based Approach for Local Anesthesia. *Pharmaceutics*. 17(9):1100.
- Kemenkes RI. 2022. Osteoporosis pada Lansia. URL: https://keslan.kemkes.go.id/view_artikel/1689/osteoporosis-pada-lansia
- Maharani, S.N.K., Hidayat, M.T., Ramadhany, I.D., Khairani, N.I., Rahman, N.A., Permana, A.A. 2024. Application Of Validated UV–Vis

Spectrophotometry-Colorimetric Methods for Specific Quantification Of Deferiprone In The Development Of Iron-Responsive Nanoparticle Loaded Into Dissolving Microneedle. *Microchimica Acta*. 19, 587.

- Nagi, N., Ogata, F., Otake, H., Nakazawa, Y., & Kawasaki, N. 2018. Design Of A Transdermal Formulation Containing Raloxifene Nanoparticles For Osteoporosis Treatment. *International Journal Nanomedicine*. 6(13):5215-5229.
- Nowak, M., Brown, T.D., Graham, A., Helgeson, M.E., & Mitragotri, S. 2019. Size, Shape, and flexibility Influence Nanoparticle Transport Across Brain Endothelium Under Flow. *Bioengineering & Translational Medicine*. 5(2).
- Permana, A.D., Paredes, S.J., Zanutto, F.V., Amir, M.N., Ismail, I., Bahar, M.A., Sumarheni, P., Palma, S.D., & Donnelly, R.F. 2023. Albendazole Nanocrystal-Based Dissolving Microneedles with Improved Pharmacokinetic Performance for Enhanced Treatment of Cystic Echinococcosis. *International Journal of Pharmaceutics*. 635,122739.
- Permana, A.D., Paredes, A.J., Zanutto, F.V., Anjani, Q.K., Utomo, E., & Donnelly, R.F. 2020. Dissolving Microneedle-Mediated Dermal Delivery of Itraconazole Nanocrystal for Improved Treatment of Cutaneous Candidiasis. *European Journal of Pharmaceutics and Biopharmaceutics*. 154:50-61.
- Putri, H.E., Utami, R.N., Aliyah., Wahyudin, E., Oktaviani, W.W., Mudjahid, M., & Permana, A.D. 2022. Dissolving Microneedle Formulation of Ceftriaxone: Effect of Polymer Concentrations on Characterisation and Ex Vivo Permeation Study. *Journal of Pharmaceutical Innovation*. 17:1176-1188.
- Rawat, P., Maglani, K., Gupta, S., Kalam, A., Vohora, D., Ahmad, F.J., & Talegaponkar, S. 2015. Design and Development of Bioceramic Based Functionalized PLGA Nanoparticles of Risedronate for Bone Targeting: In-vitro Characterization and Pharmacodynamic Evaluation. *Pharm Res*. 32:3149-3158.
- Samma, A.A., Hidayat, M.T., Fitrayani, N., Anggriani, A. & Permana, A.D. 2024. Incorporation of Efavirenz Inclusion Complex in Dissolvable Microneedle for Enhanced Effectiveness of Intravaginal Drug Delivery: A Proof of Concept Study. *J. Drug Del. Sci. Technol*. 97:1-13.
- Sean, O., Poddar, P., Sarkar, P., Das, S. dan Manna, S. 2024. Current Advancements in Microneedle Technology for Therapeutic and Biomedical Applications. *Sensors International*. 6(100325):1-25.

- Supriya, O.S., Kamere, K., & Vijaykumar, G. 2024. Formulation and Evaluation of Microneedle Patch Raloxifen for Transdermal Drug Delivery. *Research Square*. 1-13.
- Syafika, N., Aziz, S.B.A., Enggi, C.K., Qonita, H.A., Mahmud, T.R.A., Abizart, A., Asri, R.M., & Permana, A.D. 2023. Glucose-Responsive Microparticle-Loaded Dissolving Microneedles for Selective Delivery of Metformin: A Proof-of-Concept Study. *Molecular Pharmaceutics*. 20(3), 1269-1284.
- Szurkowska, K., Kazimierczak, P. & Kolmas, J. 2021. Mg, Si-Co-Substituted Hydroxyapatite/Alginate Composite Beads Loaded With Raloxifene For Potential Use in Bone Tissue Regeneration. *International Journal of Molecular Sciences*. 22(2933):1-13.
- Waghule, T., Singhvi, G., Dubey, S. K., Pandey, M. M., Gupta, G., Singh, M., & Dua, K. 2019. Microneedles: A Smart Approach and Increasing Potential For Transdermal Drug Delivery System. *Biomedicine & Pharmacotherapy*. 109:1249-1258.
- Zhang, X., Chan, H.W., Shao, Z., Wang, Q., Chow, S., & Chow, S.F. 2025. Navigating Translation Research in Nanomedicine:A Strategis Guide to Formulation and Manufacturing. *International Journal of Pharmaceutics*. 671,125202.