

DAFTAR PUSTAKA

- Adikusumo, I., Ameliana, L. Nurahmanto, D. (2015). Optimasi Polimer Hidroksipropil Metilselulosa K-4M dan Carbopol 940 pada Sediaan Patch Dispersi Padat Meloksikam. *e-Jurnal Pustaka Kesehatan*, 3(3), 436–442.
- Agrawal S, Gandhi SN, Gurgar P, Saraswathy N. (2020). Microneedles: An advancement to transdermal drug delivery system approach. *J Appl Pharm Sci*. 10(3):149–59
- Aijaz, A. Sajid, R, (2016). Review article: Advanced injectable drug delivery system: A brief review. *Innovations in Pharmaceuticals and Pharmacotherapy*, 3(4), 730-734.
- Al Sulaiman D, Chang JYH, Bennett NR, Topouzi H, Higgins CA, Irvine DJ, Ladame S (2019) Hydrogel-coated microneedle arrays for minimally invasive sampling and sensing of specific circulating nucleic acids from skin interstitial fluid. *ACS Nano*. 13, 9620–9628
- Alkilani AZ, Mccrudden MTC, Donnelly RF. (2015). Transdermal drug delivery: innovative pharmaceutical developments based on disruption of the barrier properties of the stratum corneum. *Pharmaceutics*. 7(4):438–70.
- Amit P., Tanwar YS., Rakesh S., Poojan P. (2013). Phytosome : Phytolipid Drug Delivery System for Improving Bioavailability of Herbal Drug. *J Pharm. Sci. Biosci Res*, 3(2), 51–57.
- Amnuaikit, T., Limsuwan, T., Khongkow, P. Boonme, P. (2018). Vesicular carriers containing phenylethyl resorcinol for topical delivery system; liposomes, transfersomes and invasomes. *Asian Journal of Pharmaceutical Sciences*, 13(5), 472–484.
- Aprilah, I. (2016). *Ekstraksi Antioksidan Lycopene dari Buah Tomat (Hylocereus Undatus) Menggunakan Pelarut Etanol-Heksan*. Doctoral dissertation, Politeknik Negeri Sriwijaya.
- Artini, P., Astuti, K., Warditiani N. (2013). Uji fitokimia ekstrak etil asetat rimpang bangle (*Zingiber purpureum* Roxb.). *Jurnal Farmasi Udayana*. 2(4), 1–7.
- Aulton, M, (2002). *Pharmaceutical Practice of Dosage Form Design*, Curcill Livingstone. Edirberd. London.
- Babaie S, Del Bakhshayesh AR, Ha JW, Hamishehkar H. (2020), Invasome: A novel nanocarrier for transdermal drug delivery. *Nanomaterials*. 10(2):341
- Byrne, J. D., Yeh, J. J., & DeSimone, J. M. (2018). Use of iontophoresis for the treatment of cancer. *Journal of controlled release*, 284, 144-151.

- Chivte P., Pardhi V., Joshi V., Ajhita RR. (2017). A Review on Therapeutic Applications of Phytosomes. *Journal of Drug Delivery and Therapeutics*, 7(5), 17-21.
- Fransisca D., Kahanjak D.N., Frethernety A. (2020). Uji aktivitas antibakteri ekstrak etanol daun sungkai (*Peronema canescens* Jack) terhadap pertumbuhan *Escherichia coli* dengan metode difusi cakram Kirby-Bauer. *Jurnal Pengelolaan Lingkungan Berkelanjutan*, 4(1), 460–470.
- Das MK., Kalita B. (2013). Phytosome : An Overview. *Journal of Pharmaceutical and Scientific Innovation*, 2(3), 7-11.
- Dhal S, Gavara RR, Pal K, Banerjee I, Mishra M, Giri S. (2020). Facile transdermal delivery of upconversion nanoparticle by iontophoresis-responsive magneto-upconversion oleogel. *Nano Express*. 1(1):010012.
- Departemen Kesehatan RI, (1979). *Farmakope Indonesia* Edisi III. Jakarta: Departemen Kesehatan Republik Indonesia.
- Depkes RI. (2017). *Farmakope Herbal* edisi II. Departemen Kesehatan Republik Indonesia.
- Dermol-Černe J, Pirc E, Miklavčič D. (2020). Mechanistic view of skin electroporation – models and dosimetry for successful applications: an expert review. *Expert Opin Drug Deliv*. 17(5):689–704
- Dillasamola D, Aldi Y, Wahyuni FS, Rita RS,, Umar S, dkk. (2021). Study of Sungkai (*Peronema canescens*, Jack) Leaf Extract Activity as an Immunostimulators With In vivo and In vitro Methods. *Pharmacognosy Journal*, 13(6), 1397-1407.
- Edens C, Collins ML, Goodson JL, Rota PA, Prausnitz MR (2015) microneedle patch containing measles vaccine is immunogenic in non-human primates. *Vaccine* 33, 4712–4718
- Emilia, I., Setiawan, A. A., Novianti, D., Mutiara, D., & Rangga. (2023). Skrining Fitokimia Ekstrak Daun Sungkai (*Peronema canescens* Jack.) secara Infundasi dan Maserasi. *Jurnal Indobiosains*, 5(2), 95-102.
- Escobar-Chávez JJ, Díaz-Torres R, Domínguez-Delgado CL, Rodríguez-Cruz IM, López-Arellano R, Hipólito EAM. (2017). Therapeutic applications of sonophoresis and sonophoretic devices. In: Percutaneous Penetration Enhancers Physical Methods in Penetration Enhancement. *Springer-Verlag Berlin Heidelberg*; p. 31–58.
- Ezike, T. C., Okpala, U. S., Onoja, U. L., Nwike, C. P. dkk. (2023). Advances in drug delivery systems, challenges and future directions. *Helyion*, 9(6), 1-17.

- Faskalia, Wibowo MA. (2014). Skrining Fitokimia, Uji Aktivitas, Antioksidan Dan Uji Sitotoksik Ekstrak Metanol Pada Akar Dan Kulit Batang Soma (*Ploiarium alternifolium*). *Jurnal Kimia Khatulistiwa*, 3(3), 1–6.
- Febrina, D. A. (2021). *Pengaruh Pemberian Ekstrak Etanol Daun Sungkai (Peronema canescens Jack.) terhadap Tekanan Darah dan Laju Jantung pada Tikus Putih Jantan Hipertensi*. Skripsi Sarjana. Fakultas Farmasi, Universitas Andalas, Padang.
- Ferdinal. N., Arifin, B., & Ayni, R. (2020). Identifikasi Metabolit Sekunder dan Uji Anti bakteri dari Daun Sungkai (*Peronema canescens* Jack). *Jurnal Kimia Unand*, 9(4), 16-20.
- Ferdinal, N., Ningsih, Y. F., & Afrizal. (2024). Penentuan kandungan metabolit sekunder, fenolik total serta uji aktivitas antibakteri dan antijamur ekstrak daun sungkai (*Peronema canescens* Jack) di Kabupaten Agam dan Kota Padang. *Jurnal Kimia Unand*, 13(1), 31-39.
- Fernández, GR., Lalatsa, A., Statss, L., Bolás-Fernández, F., Ballesteros, M. P., & Serrano, D. R. (2020). Transferosomes as nanocarriers for drugs across the skin: Quality by design from lab to industrial scale, *International journal of pharmaceutics*. 573, 1-44
- Fitriyah, H., (2013). *Formulasi Patch Natrium Diklofenak Berbasis Polimer Hidroksi Propil Metil Selulosa (HPMC) Sebagai Sediaan Lokal Penanganan Inflamasi pada Penyakit Periodontal*. Universitas Islam Negeri Syarif Hidayatullah. Jakarta
- Fuziyanti, N., Najihudin, A., & Hindun, S. (2022). Pengaruh Kombinasi Polimer PVP:EC dan HPMC:EC Terhadap Sediaan Transdermal Pada Karakteristik Patch yang Baik. *Pharmaceutical Journal of Indonesia*, 7(2), 147–152.
- Georgios Kougkolos, Lionel Laudebat, Sorin Dinculescu, Juliette Simon, Muriel Golzio, et al.. (2024). Skin electroporation for transdermal drug delivery: Electrical measurements, numerical model and molecule delivery. *Journal of Controlled Release*, 367, pp.235-247
- Gendro S., & Aulya, D. (2022). Morfologi Batang dan Daun Sungkai (*Peronema canescens*) pada Lingkungan Tumbuh yang Berbeda. Dalam Seminar Nasional Hasil Penelitian dan Pengabdian Kepada Masyarakat. *LP2M Universitas Sarjanawiyata Tamansiswa* . 1(1), 390-400.
- Hanan, E. (2015). *Analisis Fitokimia*. Jakarta: Penerbit Buku Kedokteran EGC.
- Haerani A, Chaerunnisa A.Y, Subarna A. (2018). Artikel Tinjauan: Antioksidan Untuk Kulit. *Farmaka*, 16(2), 135-151.

- Haj-Ahmad R, Khan H, Arshad MS, Rasekh M, Hussain A, Walsh S, Li X, Chang MW, Ahmad Z (2015) Microneedle coating techniques for transdermal drug delivery. *Pharmaceutics* 7, 486–502
- Hasanah, N., & Novian, D. R. (2020). Analisis ekstrak etanol buah labu kuning (*Cucurbita moschata* D.). *Jurnal Ilmiah Farmasi*, 9(1), 54-59.
- Henry S, McAllister DV, Allen MG, Prausnitz MR (1998) Microfabricated microneedles: a novel approach to transdermal drug delivery. *J Pharm Sci* 87, 922–925
- He R, Niu Y, Li Z, Li A, Yang H, Xu F, Li F (2020). A Hydrogel Microneedle Patch for Point-of-Care Testing Based on Skin Interstitial Fluid. *Adv Healthcare Mater.* 9, 19 – 120
- Hirobe S, Azukizawa H, Hanafusa T, Matsuo K, Quan YS, Kamiyama F, Katayama I, Okada N, Nakagawa S (2015) Clinical study and stability assessment of a novel transcutaneous influenza vaccination using a dissolving microneedle patch. *Biomaterials* 57, 50–58
- Hujjatusnaini, N., Indah, B., Afitri, E., Widyastuti, R., & Ardiansyah. (2021). *Senyawa Metabolik Sekunder dan Formulasi Kombinasi Ekstrak Metanol Daun Tambora, Sembalit Angin, dan Rimpang Kunyit Terhadap Bakteri Post Partum Sebagai Bahan Pengembangan Buku Referensi Tentang Ekstraksi*. Institut Agama Islam Negeri Palangkaraya, Fakultas Matematika dan Ilmu Pengetahuan Alam, Jurusan MIPA, Program Studi Tadris Biologi.
- Ismiyati, N., Widiastuti, R., Medika, N. (2019). Formulasi dan Uji Sifat Fisik Patch Transdermal Ekstrak Etanol Daun Binahong (*Anredera cardifolia* (Tenore) Steenis) Dengan Matriks HPMC - PVP Formulation and Physical Test of Transdermal Patch of Binahong (*Anredera cardifolia*). *Jurnal Ilmu Kesehatan Bhakti Setya Medika*, 4, 29–35.
- Ita, K. (2016). Perspectives on transdermal electroporation. *Pharmaceutics*, 8(1), 9.
- Jadhav SM., Morey P., Karpe MM., Kadam V. (2012). Novel Vesicular System: An Overview. *J. Appl. Pharm. Sci*, 2(1), 193–202.
- Jacob, S. W. De la Torre, J. C. (2015). *Dimethyl Sulfoxide (DMSO) in Trauma and Disease*. CRC Press, Boca Raton.
- Jeong WY, Kim SD, Lee SY, Lee HS, Han DW, Yang SY, et al. (2019). Transdermal delivery of Minoxidil using HA-PLGA nanoparticles for the treatment in alopecia. *Biomater Res*.23(1):16
- Jeong, W. Y., Kwon, M., Choi, H. E., & Kim, K. S. (2021). Recent advances in transdermal drug delivery systems: A review. *Biomaterials Research*, 25(24), 1-15.

- Jiang J, Gill HS, Ghate D, McCarey BE, Patel SR, Edelhauser HF, Prausnitz MR (2007) Coated microneedles for drug delivery to the eye. *Invest Ophthalmol Vis Sci* 48:4038–4043
- Jijie R, Barras A, Boukherroub R, Szunerits S. (2017). Nanomaterials for transdermal drug delivery: beyond the state of the art of liposomal structures. *J Mater Chem B*. 5(44):8653–75
- Jung, J. H., & Jin, S. G. (2021). Microneedle for transdermal drug delivery: current trends and fabrication. *Journal of pharmaceutical investigation*, 1-15.
- Kalangi, S. J. (2013). Histofisiologi Kulit. *Jurnal Biomedik*, 5(3),12-20.
- Khan, A., Yasir, M., Asif, M., Chauhan, I., Singh, A. P., Sharma, R., ... & Rai, S. (2011). Iontophoretic drug delivery: history and applications. *Journal of applied pharmaceutical science*, 11-24.
- Kumar, R., Saha, P., Sarkar, S., Rawat, N., & Prakash, A. (2021). A review on novel drug delivery system. *International Journal of Research and Analytical Reviews*, 8(1), 183-199.
- Kusumawati, Wiwik. (2002). Penghambat Siklooksigenase-2: Obat Analgesik Anti-Inflamasi Nonsteroid (AINS) Masa Depan. *Jurnal Mutiara Medika*, 2(1), 30-33.
- Latief, M., Tarigan, I. L., Sari, P. M., & Aurora, F. E. (2021). Aktivitas antihiperurisemia ekstrak etanol daun sungkai (*Peronema canescens* Jack) pada mencit putih jantan. *Pharmacon: Jurnal Farmasi Indonesia*, 18(1), 23-37.
- Latief, M., Fisesa, A. T., Sari, P. M., & Tarigan, I. L. (2021). Anti Inflammatory Activity Of Sungkai Leaves (*Peronema canescens* Jack) Ethanol Extract In Carrageenan Induced Mice. *Jurnal Farmasi Sains dan Praktis*, 7(2), 144-153.
- Leba, M. A. U. (2017). *Buku Ajar Ekstraksi dan Real Kromatografi*. Yogyakarta: CV Budi Utama.
- Lee SY, Kang MS, Jeong WY, Han DW, Kim KS. (2020). Hyaluronic acid-based theranostic nanomedicines for targeted cancer therapy. *Cancers*, 12(4): 940.
- Lou, J., Duan, H., Qin, Q., Teng, Z., Gan, F., Zhou, X., & Zhou, X. (2023). Advances in oral drug delivery systems: Challenges and opportunities. *Pharmaceutics*, 15(2), 484.
- Makeshwar, K. B., & Wasankar, S. R. (2013). Niosome: A novel drug delivery system. *Asian Journal of Pharmaceutical Research*, 3(1), 16–20.

- Marathe, D., Bhuvanashree, V. S., Mehta, C. H., & Nayak, U. Y. (2024). Low-Frequency Sonophoresis: A Promising Strategy for Enhanced Transdermal Delivery. *Advances in Pharmacological and Pharmaceutical Sciences*, 2024(1), 1247450.
- Marliana, Soerya Dewi; Venty Suryanti; Suyono. (2005). Skrining Fitokimia Dan Analisis Kromatografi Lapis Tipis Komponen Kimia Buah Labu Siam (*Sechoum edule* Jacq. Swartz.) Dalam Ekstrak Etanol. *Biofarmasi*, 3(1), 26-31.
- Marlinda, Mira; Meiske S. Sangi; Audy D. Wuntu. (2012). Analisis Senyawa Metabolit Sekunder Dan Uji Toksisitas Ekstrak Etanol Biji Buah Alpukat (*Persea americana* Mill.) *Jurnal MIPA UNSRAT Online*. 1(1). 24 – 28.
- Mazumder A., Dwivedi A., Du Preez J.L., Du Plessis J. (2016). In Vitro Wound Healing and Cytotoxic Effects of Sinigrinphytosome Complex. *Int. J. Pharm.*, 498, 283–293.
- Mahdiyyah, A. A., Diyah, N. W., & Hendradi, E. (2022). Transdermal patches: A review of a new drug delivery system approach. *International Journal of Medical Reviews and Case Reports*, 6(9), 25-31.
- More MS., Shende MA., Kolhe DB. (2013). Herbosomes: herbo-phospholipid complex an approach for absorption enhancement. *Int. J. Biol. Pharm. Res.*, 4(9), 634–639.
- Moarefian, M., Davalos, R. V., Tafti, D. K., Achenie, L. E., & Jones, C. N. (2020). Modeling iontophoretic drug delivery in a microfluidic device. *Lab on a Chip*, 20(18), 3310-3321.
- Mukhriani. (2014). Ekstraksi, Pemisahan Senyawa, dan Identifikasi Senyawa Aktif. *Jurnal Kesehatan*, 7(2), 361–367.
- Muthmainnah, B. (2017). Skrining Fitokimia Senyawa Metabolit Sekunder Dari Ekstrak Etanol Buah Delima (*Punica granatum* L) Dengan Metode Uji Warna. *Media Farmasi*, 13(2), 36-41.
- Nitiariksa, N., & Iskandar, S. (2021). Pengembangan dan Evaluasi Formula Sediaan Patch Ekstrak Daun Binahong (*Anredera cordifolia* (Tenore) Steenis). *Journal of Pharmacopolium*, 4(2), 81–90.
- Novia. (2021). The Effect of Polyvinyl Pyrolidon and Ethyl Cellulose Polymer Combination on Characteristics and Penetration Test of Formulation Transdermal of Dayak Onion Extract Patch (*Eleutherine palmifolia* L.). *Jurnal Surya Medika (JSM)*, 7(1), 173–184.

- Notman, R., den Otter, W. K., Noro, M. G., Briels, W. J., & Anwar, J. (2007). The permeability enhancing mechanism of DMSO in ceramide bilayers simulated by molecular dynamics. *Biophysical journal*, 93(6), 2056-2068.
- Nurhamidah, Elvinawati, Handayani, D., Ginting, S. M., & Wahyuni, N. (2022). Antipyretic activity of ethanol fraction of pandan laut leaves (*Pandanus odorifer*) against male mice (*Mus musculus*) induced by DPT-HB vaccine.) *JKPK (Jurnal Kimia dan Pendidikan Kimia)*, 7(1), 76-85.
- Oktavia, Farida Dwi; Suyatno Sutoyo. (2021). Skrining Fitokimia, Kandungan Flavonoid Total, Dan Aktivitas Antioksidan Ekstrak Etanol Tumbuhan *Selaginella doederleinii*. *Jurnal Kimia Riset*, 6 (2), 141.
- Prausnitz, M. R., & Langer, R. (2008). Transdermal drug delivery. *Nature biotechnology*, 26(11), 1261–1268.
- Priani, S. E. (2023). Kajian pengaruh pengembangan sistem fitosom terhadap aktivitas agen sitotoksik herbal, *Jurnal Ilmiah Farmasi Farmasyifa*. 6(1), 50-59.
- Pujiastuti, E., & El'Zeba, D. (2021). Perbandingan Kadar Flavonoid Total Ekstrak Etanol 70% Dan 96% Kulit Buah Naga Merah (*Hylocereus polyrhizus*) Dengan Spektrofotometri. *Cendekia Journal of Pharmacy*, 5(1), 28-43.
- Quinn HL, Bonham L, Hughes CM, Donnelly RF (2015) Design of a dissolving microneedle platform for transdermal delivery of a fixed-dose combination of cardiovascular drugs. *J Pharm Sci*. 104, 3490–3500
- Rahma, C. S. A., Ardini, D., & Mulatasih, E. R. (2022). Profil Metabolit Sekunder Daun Sungkai (*Peronema canescens* J) Dan Aktivitas Antioksidan Ekstrak Etanol Daun Sungkai (*Peronema canescens* J) Dengan Metode DPPH. *Jurnal Analis Farmasi*, 7(2), 192-210
- Rastogi, V., & Yadav, P. (2012). Transdermal drug delivery system: An overview. *Asian Journal of Pharmaceutics*, 6(3), 161-170
- Richard, C. Stéphanie, C. Muriel, B. (2020). Vesicular Systems for Dermal and Transdermal Drug Delivery. *RSC Advances*, 11(1), 442–451.
- Roy, J. (2011). *Introduction to Pharmaceutical Sciences* 1st Edition. Woodhead Publishing Limited, Great Britain.
- Rudi, A. (2016). *Formulasi Floating Tablet Metformin Hcl Menggunakan Hpc, Hpmc K100m, Kitosan, Dan Kombinasinya*. Diploma thesis, Universitas Andalas.

- Syafitri NE, Bintang M, Falah S. (2014). Kandungan Fitokimia, Total Fenol, dan Total Flavonoid Ekstrak Buah Harendong (*Melastoma affine* D. Don). *Curr Biochem*, 1(3), 105–115.
- Sarvan, K, A., & Alam, M. S. (2024). Target drug delivery system: An advance approach of pharmaceuticals. *World Journal of Pharmaceutical and Life Sciences*, 10(4), 106-115.
- Sheikh, A. A. (2016). Injectable Controlled Release Drug Delivery Systems. *Asian Journal of Pharmaceutics (AJP)*, 10(4), 464-471.
- Shinde, P. V., (2014). A Review on Advance Technologies for Developing Transdermal Drug Delivery Systems. *Asian Journal of Pharmaceutical Technology & Innovation*, 2(4), 1–15.
- Simaremare, Eva Susanty. (2014). Skrining Fitokimia Ekstrak Etanol Daun Gatal (*Laportea decumana* (Roxb.) Wedd). *Pharmacy*, 11(1), 98-107.
- Sudarwati T, Fernanda M. (2019). *Aplikasi Pemanfaatan Daun Pepaya (Carica papaya) Sebagai Biolarvasida Terhadap Larva Aedes Aegypti*. Penerbit Graniti: Gresik.
- Sullivan S, Koutsonanos D, del Pilar MM, Lee JW, Zarnitsyn V, Choi SO, Murthy N, Compans RW, Skountzou I, Prausnitz MR (2010). Dissolving polymer microneedle patches for influenza vaccination. *Nat Med*. 16, 915–920
- Suryani, Ode, W., Musnina, S, & Anto, A. S.(2017). Optimasi Formula Matriks Patch Transdermal Nanopartikel Teofilin dengan Menggunakan Metode Simplex Lattice Design (SLD). *Majalah Farmasi, Sains dan Kesehatan*. 3 (1), 26-32.
- Sutiswa S.I, Saripah S.S, Martihandini N. (2024). Formulation And Characterization Of Anti Inflammatory Transdermal Patch Preparations From The Extract Of Patah Tulang (*Euphorbia tirucalli*). *Medical Sains: Jurnal Ilmiah Kefarmasian*, 9(1), 105–114.
- Szunerits S, Boukherroub R. Heat. (2018). a highly efficient skin enhancer for transdermal drug delivery. *Front Bioeng Biotechnol.*, 6:15
- Tiwari, G., Tiwari, R., Sriwastawa, B., Bhati, L., Pandey, S., Pandey, P., & Bannerjee, S. K., (2012). Drug delivery systems: An updated review. *International journal of pharmaceutical investigation*, 2(1), 2-11.
- Wahyuni, R. Guswandi. Rivai, H. (2014). Pengaruh Cara Pengeringan Dengan Oven, Kering Angin Dan Cahaya Matahari Langsung Terhadap Mutu *Simplisia* Herba Sambiloto. *Jurnal Farmasi Higea*. 6(2), 126-133.

- Wang, Y., Zeng, L., Song, W., & Liu, J. (2022). Influencing factors and drug application of iontophoresis in transdermal drug delivery: an overview of recent progress. *Drug delivery and translational research*, 1-12.
- Wardani V.K, Saryanti D. (2021). Formulasi Transdermal Patch Ekstrak Etanol Biji Pepaya (*Carica Papaya* L.) Dengan Basis Hydroxypropil Metilcellulose (HPMC). *Smart Medical Journal*, 4(1), 38-44.
- Widaryanto E, Azizah N. (2018). *Perspektif Tanaman Obat Berkhasiat*. Malang: UB Press.
- Widya S, Max, RJR. Gayatri, C. (2013). Kandungan Flavonoid dan Kapasitas Antioksidan Total Ekstrak Etanol Daun Binahong (*Anredera cordifolia* (Ten.) Steenis.). *Pharmacon, Jurnal Ilmiah Farmasi*, 2(1), 2302-2493.
- Widowati, H., & Rinata, E. (2020). *Buku Ajar Anatomi*. Umsida Press.
- Windriyati, Y. N., Sholikhah, A., & Muliawati, F. (2016). Pengembangan film transdermal diltiazem HCl tipe matriks dengan kombinasi polimer polivinil alkohol dan etil selulosa serta peningkat penetrasi PEG 400. *Jurnal Ilmu Farmasi dan Farmasi Klinik*, 13(1), 21-26
- Wijayanti, W., & Herlina, T. (2020). Tinjauan Farmakologi dan Pemanfaatan Tradisional Daun Sungkai. *Jurnal Farmasi dan Ilmu Kedokteran*, 12(1), 15-22.
- Wong, W.F.; Ang, K.P.; Sethi, G.; Looi, C.Y. (2023). Recent Advancement of Medical Patch for Transdermal Drug Delivery. *Medicina*, 59(4), 778.
- Yani, A. P., Yenita, Y., Ansori, I., & Irwanto, R. (2013). Uji Potensi Daun Muda Sungkai (*Peronema Canescens*) Untuk Kesehatan (Imunitas) Pada Mencit (*Mus. mucus*). In *Proceeding Biology Education Conference: Biology, Science, Enviromental, and Learning*. 11(1), 245-250.
- Yani, A. P., & Pratama, A. Y. (2015). Efek Samping Penggunaan Daun Sungkai (*Peronema canescens* Jack) Sebagai Obat Tradisional Suku Lembak Pada Mencit (*Mus musculus*). *SEMIRATA 2015*, 4(1).
- Yu J, Zhang Y, Ye Y, DiSanto R, Sun W, Ranson D, Ligler FS, Buse JB, Gu Z (2015). Microneedle-array patches loaded with hypoxiasensitive vesicles provide fast glucose-responsive insulin delivery. *Proc Natl Acad Sci USA*. 112, 8260–8265
- Yuniarsih N, Putriana A, Nurunnisa I, Fadilla R.A, Pratiwi T.P. (2023). Sistem Penghantaran Obat Pada Sediaan Optalmik: Literature Review Article. *Jurnal Cahaya Mandalika*, 3(2), 1984-1994.

- Yurleni, Y. (2018). Penggunaan Beberapa Metode Ekstraksi Pada Rimpang Curcuma Untuk Memperoleh Komponen Aktif Secara Kualitatif. *Biospecies*, 11(1), 48-56.
- Zakaria, N., Bangun, H., Vonna, A., Oesman, F., Khaira, Z., & Fajriana, F. (2021). Pengaruh Penggunaan Polimer HPMC dan Polivinil Prolidon Terhadap Karakteristik Fisik Transdermal Patch Natrium Diklofenak. *Jurnal Sains Dan Kesehatan Darussalam*, 1(2), 58–66.
- Zhao, Z., Chen, Y., & Shi, Y. (2020). Microneedles: a potential strategy in transdermal delivery and application in the management of psoriasis. *Rsc Advances*, 10(24), 14040-14

