

DAFTAR PUSTAKA

- Adha, S. A., Febriyanti, R. M. and Milanda, T. (2019) 'a Review : Potential of Sambiloto As Herbal Based Antidiabetic Medicine', *Medical Sains*, 4(1), pp. 7–12.
- Akhtar, M. T., Syakir, M., Ismail, I. S., Abas, F., Ismail, A., Lajis, N. H. and Shaari, K. (2016) 'Anti-diabetic activity and metabolic changes induced by *Andrographis paniculata* plant extract in obese diabetic rats', *Molecules*, 21(8). doi: 10.3390/molecules21081026.
- Alaydrus, S., Alifia and Anam, S. (2018) 'Efek Ekstrak Etanol Kombinasi Daun Sambiloto Dan Daun Mimba Terhadap Kadar Glukosa Darah Tikus', *Farmakologika Jurnal Farmasi*, XV(1), p. p.
- Albanese, A., Tang, P. S. and Chan, W. C. W. (2012) 'The effect of nanoparticle size, shape, and surface chemistry on biological systems', *Annual Review of Biomedical Engineering*, 14, pp. 1–16. doi: 10.1146/annurev-bioeng-071811-150124.
- Ansari, S. H., Islam, F. and Sameem, M. (2012) 'Influence of nanotechnology on herbal drugs: A Review', *Journal of Advanced Pharmaceutical Technology and Research*, 3(3), pp. 142–146. doi: 10.4103/2231-4040.101006.
- Ansari, M. J. and Alshahrani, S. M. (2019) 'Nano-encapsulation and characterization of baricitinib using poly-lactic-glycolic acid co-polymer', *Saudi Pharmaceutical Journal*, 27(4), pp. 491–501. doi: 10.1016/j.jsps.2019.01.012.
- Anwer, M.K., Al-Mansoor, M.A., Jamil, S., Al-Shdefat, R., Ansari, M.N. and Shakeel, F., 2016. 'Development and evaluation of PLGA polymer based nanoparticles of quercetin', *International journal of biological macromolecules*, 92, pp. 213–219
- Baker, M. I., Walsh, S. P., Schwartz, Z. and Boyan, B. D. (2012) 'A review of polyvinyl alcohol and its uses in cartilage and orthopedic applications', *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, 100 B(5), pp. 1451–1457. doi: 10.1002/jbm.b.32694.
- Bali, V., Ali, M. and Ali, J. (2010) 'Study of surfactant combinations and development of a novel nanoemulsion for minimising variations in bioavailability of ezetimibe', *Colloids and Surfaces B: Biointerfaces*, 76(2), pp. 410–420. doi: 10.1016/j.colsurfb.2009.11.021.
- Cao, J., Seok, C. J., Murtada A. O., Juho, L., Hasan, N., Jihyun, K. and Wook, Y. J. (2019) 'Development of PLGA micro- and nanorods with high capacity of surface ligand conjugation for enhanced targeted delivery', *Asian Journal of Pharmaceutical Sciences*, 14(1), pp. 86–94. doi: 10.1016/j.ajps.2018.08.008.
- Danaei, M., Dehghankhold, M., Ataei, S., Davarani, F. H., Javanmard, R., Dokhani, A., Khorasani, R. and Mozafari, M. R. (2018) 'Impact of particle

- size and polydispersity index on the clinical applications of lipidic nanocarrier systems', *Pharmaceutics*, 10(2), pp. 1–17. doi: 10.3390/pharmaceutics10020057.
- Devi, A. U. (2019) 'Preparation and Characterization of Herbal', 10(12), pp. 5380–5385. doi: 10.13040/IJPSR.0975-8232.10(12).5380-85.
- Dewi, I. K., Lestari, T. and Rofi'ah, S. N. (2016) 'Formulation and Physical Test of Ethanolic Extract Sambiloto Leaves (*Andrographis paniculata*) Ointment', *Sains Medika*, 6(2), p. 56. doi: 10.26532/sainsmed.v6i2.603.
- Dias, D. J. S., Joanitti, G. A., Azevedo, R. B., Silva, L. P., Lunardi, C. N. and Gomes, A. J. (2015) 'Chlorambucil Encapsulation into PLGA Nanoparticles and Cytotoxic Effects in Breast Cancer Cell', *Journal of Biophysical Chemistry*, 06(01), pp. 1–13. doi: 10.4236/jbpc.2015.61001.
- Fatmawati, A., Bachri, M. S. and Nurani, L. H. (2019) 'Combination Effects of Moringa oleifera Leaf Ethanol Extract and *Andrographis paniculata* Herb on Blood Glucose Levels and Pancreas Histopathology of Diabetic Rats Induced by Streptozotocin', *Majalah Obat Tradisional*, 24(2), p. 85. doi: 10.22146/mot.39401.
- Ghitman, J., Stan, R. and Iovu, H. (2017) 'Experimental contributions in the synthesis of plga nanoparticles with excellent properties for drug delivery: Investigation of key parameters', *UPB Scientific Bulletin, Series B: Chemistry and Materials Science*, 79(2), pp. 101–112.
- Gorjikhah, F., Jalalian, F. A., Salehi, R., Panahi, Y., Hasanzadeh, A., Alizadeh, E., Akbarzadeh, A. and Davaran, S. (2017) 'Preparation and characterization of PLGA- β -CD polymeric nanoparticles containing methotrexate and evaluation of their effects on T47D cell line', *Artificial Cells, Nanomedicine and Biotechnology*, 45(3), pp. 432–440. doi: 10.3109/21691401.2016.1160915.
- Hernández-Giottonini, K. Y., Rodriguez-Cordova, R. J., Gutierrez-Valenzuela, C. A., Penunuri-Miranda, O., Zavala-Rivera, P., Guerrero-German, P. and Lucero-Acuna, A. (2020) 'PLGA nanoparticle preparations by emulsification and nanoprecipitation techniques: Effects of formulation parameters', *RSC Advances*, 10(8), pp. 4218–4231. doi: 10.1039/c9ra10857b.
- Hirenkumar, M. and Steven, S. (2012) 'Poly Lactic-co-Glycolic Acid (PLGA) as Biodegradable Controlled Drug Delivery Carrier', *Polymers*, 3(3), pp. 1–19. doi: 10.3390/polym3031377.Poly.
- Hu F, Liu W, Yan L, Kong F, Wei K. (2019) Optimization and characterization of poly(lactic-co-glycolic acid) nanoparticles loaded with astaxanthin and evaluation of antiphotodamage effect in vitro. *R. Soc. open sci.* 6: 191184.
- Husni, P. (2018) 'Biodegradable Polymer Potential of Poly-Lactic-co-Glycolic Acid for Cancer Therapy and Its Clinical Trial', *Indonesian Journal of Clinical Pharmacy*, 7(1), pp. 59–68. doi: 10.15416/ijcp.2018.7.1.59.

- International Diabetes Federation. (2021). "IDF Diabetes Atlas.11 Edition." In . <https://diabetesatlas.org/>.
- Jannah, H. and Safnowandi, S. (2018) 'Identifikasi Jenis Tumbuhan Obat Di Kawasan Desa Batu Mekar Kecamatan Lingsar Kabupaten Lombok Barat', *Bioscientist : Jurnal Ilmiah Biologi*, 6(1), p. 1. doi: 10.33394/bjib.v6i1.938.
- Kadam, V. B. Dhanawade, K. B., Salunkhe, V. A. and Ubale A. T. (2014). Nanoparticle-novel drug delivery system. *Journal of Current Pharma Research*, 4(4), 1318.
- Kemala, T., Budianto, E., Suegiyono, B. (2012), Preparation and Characterization of Microspheres Based on Blend of Poly(Lactic Acid) and Poly(ϵ Caprolactone) with Poly(Vinyl Alcohol) as Emulsifier. *Arabian Journal of Chemistry*, 5 : 103-108.
- Kemenkes. (2013). *Riset Kesehatan Dasar: RISKESDAS*. Jakarta: Balitbang.
- Kemenkes. (2017). *Farmakope Herbal Indonesia Edisi II*. Jakarta: Kementerian Kesehatan RI.
- Kemenkes. (2018). *Infodatin: Hari Diabetes Sedunia Tahun 2018*.
- Khan, Ibrahim, Saeed, K. and Khan, Idrees (2019) 'Nanoparticles: Properties, applications and toxicities', *Arabian Journal of Chemistry*, 12(7), pp. 908–931. doi: 10.1016/j.arabjc.2017.05.011.
- Kharroubi, A. T. (2015) 'Diabetes mellitus: The epidemic of the century', *World Journal of Diabetes*, 6(6), p. 850. doi: 10.4239/wjd.v6.i6.850.
- Kizilbey, K. (2019) 'Optimization of Rutin-Loaded PLGA Nanoparticles Synthesized by Single-Emulsion Solvent Evaporation Method', *ACS Omega*, 4(1), pp. 555–562. doi: 10.1021/acsomega.8b02767.
- Kurniawan, D. W., Jajoriyac, A. K., Dhawanc, G., Mishrac, D., Argemid, J., Batallerd, R., Storma, G., Mishrac, D. P., Prakasha, J., Bansala, R. (2018) 'Therapeutic inhibition of spleen tyrosine kinase in inflammatory macrophages using PLGA nanoparticles for the treatment of non-alcoholic steatohepatitis', *Journal of Controlled Release*, 288(September), pp. 227–238. doi: 10.1016/j.jconrel.2018.09.004.
- Kurniawan, D. W., Booiijinka, R., Patera, L., Wolsa, I., Vrynasa, A., Storma, A., Prakasha, J. and Bansala, R. (2020) 'Fibroblast growth factor 2 conjugated superparamagnetic iron oxide nanoparticles (FGF2-SPIONs) ameliorate hepatic stellate cells activation in vitro and acute liver injury in vivo', *Journal of Controlled Release*, 328(September), pp. 640–652. doi: 10.1016/j.jconrel.2020.09.041.
- Loosli, F., Le Coustumer, P. and Stoll, S. (2013) 'TiO₂ nanoparticles aggregation and disaggregation in presence of alginate and Suwannee River humic acids. pH and concentration effects on nanoparticle stability', *Water Research*, 47(16), pp. 6052–6063. doi: 10.1016/j.watres.2013.07.021.
- Martien, R. Adhyatmika, Irianto, I. D. K., Farida, V., Sari, D. P. (2012)

- 'Technology Developments Nanoparticles as Drug', *Majalah Farmaseutik*, 8(1), pp. 133–144.
- Mustafa, R. H., Hadisoewignyo, L., Ervina, M., Soegianto, L. and Tamayanti, W. D. (2015) 'Optimizing Combination of Sambiloto Herbal Water Fraction and Salam Leaf Water Fraction As Anti-Inflammation', *Pharmaceutical Technology*, pp. 23–27.
- Nagavarma, B. V. N., Yadav, H., Ayas, A. and Vasudha, L. S. (2012) 'Different techniques for preparation of polymeric nanoparticles- A review', *Asian Journal of Pharmaceutical and Clinical Research*, 5(SUPPL. 3), pp. 16–23.
- Nugrahani, A. D., Meles, D. K., Hamid, I. S., Nangoi, L., Widiyatno, T. V. and Santoso, K. P. (2019) 'The Effect of Leaves Extract of Sambiloto (*Andrographis paniculata*) on Renal Histopathology Features Induced by Gentamicine in White Rats (*Rattus norvegicus*)', 8(1), pp. 29–34.
- Nugroho, A. E., Andrie, M., Warditiani, N. K., Siswanto, E., Pramono, S. and Lukitaningsih, E. (2012) 'Antidiabetic and antihyperlipidemic effect of *Andrographis paniculata* (Burm. f.) Nees and andrographolide in highfructose-fat-fed rats', *Indian Journal of Pharmacology*, 44(3), pp. 377–381. doi: 10.4103/0253-7613.96343.
- Patra, J. K. Das, G., Fraceto, L. F., Campos, E. V. R., Rodriguez, M. P., Acosta, L. S., Diaz, L. A., Grillo, R., Swamy, M. P., Sharma, S., Habtemariam, S. and Shin, H. (2018) 'Nano based drug delivery systems: Recent developments and future prospects', *Journal of Nanobiotechnology*, 16(1), pp. 1–33. doi: 10.1186/s12951-018-0392-8.
- Pietra, R. C. C. de S., Cruz, R. C., Melo, C. N., Rodrigues, L. B., Santos, P. C., Bretz, G. P. M., Soares, B. M., Sousa, G. R., Ferreira, M. V. L., Cisalpino, P. S., Magalhaes, P. P., Farias, L. de M. and Pinotti, M. (2017) 'Evaluation of polymeric PLGA nanoparticles conjugated to curcumin for use in aPDT', *Brazilian Journal of Pharmaceutical Sciences*, 53(2), pp. 1–9. doi: 10.1590/s2175-97902017000216043.
- Posadzki, P., Watson, L. K. and Ernst, E. (2013) 'Adverse effects of herbal medicines: An overview of systematic reviews', *Clinical Medicine, Journal of the Royal College of Physicians of London*, 13(1), pp. 7–12. doi: 10.7861/clinmedicine.13-1-7.
- Ratnani, R. D., Hartati, I., & Kurniasari, L. (2012). Potensi Produksi Andrographolide dari Sambiloto (*Andrographis paniculata* Nees) Melalui Proses Ekstraksi Hidrotropi. *Jurnal Ilmiah MOMENTUM*, 8(1).
- Sangeetha, S., Archit, R. and SathiaVelu, A. (2014) 'Phytochemical testing, antioxidant activity, HPTLC and FTIR analysis of antidiabetic plants *Nigella sativa*, *Eugenia jambolana*, *Andrographis paniculata* and *Gymnema sylvestre*', *Research Journal of Biotechnology*, 9(9), pp. 65–72.
- Sanower Hossain, M., Urbi, Z., Sule, A. and Rahman, K. M. H. (2014) 'A Review of Ethnobotany, Phytochemistry, and Pharmacology', *The Scientific World*

Journal, 2014, pp. 1–28.

- Saputra, B. A. (2021) 'Potensi Ekstrak Daun Sambiloto sebagai Obat Antidiabetes', *Jurnal Penelitian Perawat Profesional*, 3(2), pp. 253–260. doi: 10.37287/jppp.v3i2.408.
- Shafira and Destiani, D. P. (2018) 'Review Artikel: Kokristalisasi Metode Solvent Evaporation dan Drygrinding', *Farmaka*, 16(3), pp. 262–273.
- Shnoudeh, A. J. *et al.* (2019) *Synthesis, Characterization, and Applications of Metal Nanoparticles, Biomaterials and Bionanotechnology*. Elsevier Inc. doi: 10.1016/B978-0-12-814427-5.00015-9.
- Sugita, P., Bintang, M., Achmadi, S. S., Pradono, D. I., Irawadi, T. T., & Darusman, L. K. (2018). *Segi Kimiawi dan Biokimiawi dari Sistem Pengantaran Obat*. PT Penerbit IPB Press.
- Sun, S., Liu, P., Shao, F. and Miao, Q. (2015) 'Formulation and evaluation of PLGA nanoparticles loaded capecitabine for prostate cancer', 8(10), pp. 19670–19681.
- Urbaniak, T. and Musiał, W. (2019) 'Influence of solvent evaporation technique parameters on diameter of submicron lamivudine-poly-ε-caprolactone conjugate particles', *Nanomaterials*, 9(9). doi: 10.3390/nano9091240.
- Watkins, R., Wu, L., Zhang, C., Davis, R. M. and Xu, B. (2015) 'Natural product-based nanomedicine: Recent advances and issues', *International Journal of Nanomedicine*, 10, pp. 6055–6074. doi: 10.2147/IJN.S92162.
- Widhiana Putra, I. K., Ganda Putra, G. . and Wrasiasi, L. P. (2020) 'Pengaruh Perbandingan Bahan dengan Pelarut dan Waktu Maserasi terhadap Ekstrak Kulit Biji Kakao (*Theobroma cacao* L.) sebagai Sumber Antioksidan', *Jurnal Rekayasa Dan Manajemen Agroindustri*, 8(2), p. 167. doi: 10.24843/jrma.2020.v08.i02.p02.
- WHO. (2020). *Factsheets Diabetes 2020*.
- Yunita, E. P., Pangestika, R. W., & Triastuti, E. (2017). Pengaruh Nanopartikel PLGA *Nigella sativa* dalam Menurunkan Radikal Bebas Malondialdehida Hepar Tikus Model DM Tipe 2. *Jurnal Kesehatan FKUB*, 4(1), 44-51.