

## DAFTAR PUSTAKA

- Akhoond Zardini, A., Mohebbi, M. and Farhoosh, R. (2018) ‘Production and characterization of nanostructured lipid carriers and solid lipid nanoparticles containing lycopene for food fortification’, *Journal of Food Science and Technology*, 55(1), pp. 287–298. doi: 10.1007/s13197-017-2937-5.
- Akhtar, M. T., Sarib, M. S. B. M. and Ismail, I. S. (2016) ‘Anti-diabetic activity and metabolic changes induced by Andrographis paniculata plant extract in obese diabetic rats’, *Molecules*, 21(8). doi: 10.3390/molecules21081026.
- de Alvarenga, E. S. (2011) ‘Characterization and Properties of Chitosan’, *Biotechnology of Biopolymers*, pp. 91–108. Available at: <http://www.intechopen.com/books/biotechnology-of-biopolymers/characterization-and-properties-of-chitosan>.
- Bouriche, S., Alonso-García, A. and Cáceres-Rodríguez, C. M. (2021) ‘An in vivo pharmacokinetic study of metformin microparticles as an oral sustained release formulation in rabbits’, *BMC Veterinary Research*, 17(1), pp. 1–11. doi: 10.1186/s12917-021-03016-3.
- Buyuk, N. I., Arayici, P. P. and Derman, S. (2020) ‘Synthesis of chitosan nanoparticles for controlled release of amiodarone’, *Indian Journal of Pharmaceutical Sciences*, 82(1), pp. 131–138. doi: 10.36468/pharmaceutical-sciences.630.
- Grenha, A. (2012) ‘Chitosan nanoparticles: A survey of preparation methods’, *Journal of Drug Targeting*, 20(4), pp. 291–300. doi: 10.3109/1061186X.2011.654121.
- Hassani, S., Laouini, A. and Fessi, H. (2015) ‘Preparation of chitosan-TPP nanoparticles using microengineered membranes - Effect of parameters and encapsulation of tacrine’, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 482, pp. 1–29. doi: 10.1016/j.colsurfa.2015.04.006.
- Jeevanandam, J., Barhoum, A. and Chan, Y. S. (2018) ‘Review on nanoparticles and nanostructured materials: History, sources, toxicity and regulations’,

*Beilstein Journal of Nanotechnology*, 9(1), pp. 1050–1074. doi: 10.3762/bjnano.9.98.

Kandav, G., Bhatt, D. C. and Jindal, D. K. (2019) ‘FORMULATION AND EVALUATION OF ALLOPURINOL LOADED CHITOSAN NANOPARTICLES’, *International Journal of Applied Pharmaceutics*, 11(3), pp. 49–52.

Kim, H., Han, J. and Han, T. Y. J. (2020) ‘Machine vision-driven automatic recognition of particle size and morphology in SEM images’, *Nanoscale*, 12(37), pp. 19461–19469. doi: 10.1039/d0nr04140h.

Komalasari, T. and Harimurti, S. (2015) ‘A Review of The Anti-diabetic Activity of Andrographis paniculata (Burm. f.) Nees based in-vivo Study’, *International Journal of Public Health Science (IJPHS)*, 4(4), p. 256. doi: 10.11591/ijphs.v4i4.4743.

Kotta, S., Khan, A. W. and Ansari, S. H. (2015) ‘Formulation of nanoemulsion: A comparison between phase inversion composition method and high-pressure homogenization method’, *Drug Delivery*, 22(4), pp. 455–466. doi: 10.3109/10717544.2013.866992.

Kurniawan, D. W., Booijink, R. and Pater, L. (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, pp. 640–652. doi: 10.1016/j.jconrel.2020.09.041.

Kurniawan, D. W., Jajoriya, A. K. and Dhawan, G. (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, pp. 227–238. doi: 10.1016/j.jconrel.2018.09.004.

Lee, J. H., Kim, T. M. and Choi, I. G. (2021) ‘Phenolic hydroxyl groups in the lignin polymer affect the formation of lignin nanoparticles’, *Nanomaterials*, 11(7), pp. 1–13. doi: 10.3390/nano11071790.

- Lim, L. M. and Hadinoto, K. (2021) ‘High-payload buccal delivery system of amorphous curcumin–chitosan nanoparticle complex in hydroxypropyl methylcellulose and starch films’, *International Journal of Molecular Sciences*, 22(17). doi: 10.3390/ijms22179399.
- Loutfy, S. A., El-Din, H. M. A. and Elberry, M. H. (2016) ‘Synthesis, characterization and cytotoxic evaluation of chitosan nanoparticles: In vitro liver cancer model’, *Advances in Natural Sciences: Nanoscience and Nanotechnology*, 7(3). doi: 10.1088/2043-6262/7/3/035008.
- Maiti, K., Mukherjee, K. and Murugan, V. (2010) ‘Enhancing bioavailability and hepatoprotective activity of andrographolide from Andrographis paniculata , a well-known medicinal food , through its herbosome’ , (May 2009), pp. 43–51. doi: 10.1002/jsfa.3777.
- Malik, Z., Parveen, R. and Parveen, B. (2021) ‘Anticancer potential of andrographolide from Andrographis paniculata (Burm.f.) Nees and its mechanisms of action’, *Journal of Ethnopharmacology*, 272, p. 113936. doi: 10.1016/J.JEP.2021.113936.
- Mohammadpour Dounighi, N., Damavandi, M. and Zolfagharian, H. (2012) ‘Preparing and characterizing chitosan nanoparticles containing hemiscorpius lepturus scorpion venom as an antigen delivery system’, *Archives of Razi Institute*, 67(2), pp. 145–153.
- Motiei, M., Kashanian, S. and Lucia, L. A. (2017) ‘Intrinsic parameters for the synthesis and tuned properties of amphiphilic chitosan drug delivery nanocarriers’, *Journal of Controlled Release*, 260(May), pp. 213–225. doi: 10.1016/j.jconrel.2017.06.010.
- Mourdikoudis, S., Pallares, R. M. and Thanh, N. T. K. (2018) ‘Characterization techniques for nanoparticles: Comparison and complementarity upon studying nanoparticle properties’, *Nanoscale*, 10(27), pp. 12871–12934. doi: 10.1039/c8nr02278j.
- Mutiah, R., Luthfiana, F. and Suryadinata, A. (2020) ‘The Profile of Anticancer Activities of Sambiloto Extract (Andrographis paniculata Nees) from Several

- Locations in East Java', *Journal of Food and Pharmaceutical Sciences*, 8(1), p. 3. doi: 10.22146/jfps.647.
- Nagavarma, B. V. N., Yadav, H. K. S. and Ayaz, A. (2012) 'Different techniques for preparation of polymeric nanoparticles- A review', *Asian Journal of Pharmaceutical and Clinical Research*, 5(SUPPL. 3), pp. 16–23.
- Naskar, S., Koutsu, K. and Sharma, S. (2019) 'Chitosan-based nanoparticles as drug delivery systems: a review on two decades of research', *Journal of Drug Targeting*, 27(4), pp. 379–393. doi: 10.1080/1061186X.2018.1512112.
- Nuari, Y. R., Wahyuningsih, I. and Prabawati, S. (2021) 'Self-Nanoemulsifying Drug Delivery System (SNEDDS) of piroxicam', *Pharmaciana*, 11(2), p. 185. doi: 10.12928/pharmaciana.v11i2.20973.
- Nugroho, A. E., Andrie, M. and Warditiani, N. K. (2012) 'Antidiabetic and antihiperlipidemic effect of Andrographis paniculata (Burm. f.) Nees and andrographolide in high-fructose-fat-fed rats', *Indian Journal of Pharmacology*, 44(3), pp. 377–381. doi: 10.4103/0253-7613.96343.
- Patel, M., Patel, N. V and Patel, T. B. (2020) 'Original Article DESIGN AND DEVELOPMENT OF RILPIVIRINE NANOPARTICLE CONTAINING CHITOSAN USING IONIC GELATION METHOD FOR HIV INFECTIONS', *International Journal of Pharmacy and Pharmaceutical Sciences*, 12(2), pp. 113–118.
- Pedroso-Santana, S. and Fleitas-Salazar, N. (2020) 'Ionotropic gelation method in the synthesis of nanoparticles/microparticles for biomedical purposes', *Polymer International*, 69(5), pp. 443–447. doi: 10.1002/pi.5970.
- Prihatini, R., Bachtiar, A. and Syarif, A. (2020) 'Morphology Character and Andrographolide Quantifications on Sambiloto ( Andrographis paniculata (Burm.F.) Nees)', *Bioscience*, 4(1), pp. 109–115. doi: 10.24036/0202041107669-0-00.
- Rahmi, E. P., Kumolosasi, E. and Jalil, J. (2022) 'Extracts of Andrographis paniculata (Burm.f.) Nees Leaves Exert Anti-Gout Effects by Lowering Uric

- Acid Levels and Reducing Monosodium Urate Crystal-Induced Inflammation’, *Frontiers in Pharmacology*, 12(January), pp. 1–12. doi: 10.3389/fphar.2021.787125.
- Rohman, A., Luthfianasari, H. and Irnawati (2021) ‘HPLC-FTIR spectroscopy combined with multivariate calibration for analysis of Andrographolide in Andrographis paniculata extract’, *Journal of Applied Pharmaceutical Science*, 11(5), pp. 32–38. doi: 10.7324/JAPS.2021.110505.
- Rosso, A., Lollo, G. and Chevalier, Y. (2020) ‘Development and structural characterization of a novel nanoemulsion for oral drug delivery’, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 593. doi: 10.1016/j.colsurfa.2020.124614.
- Roy, P., Das, S. and Audy, R. G. (2014) ‘Engineered andrographolide nanosystems for smart recovery in hepatotoxic conditions’, *International Journal of Nanomedicine*, 9, pp. 4723–4735.
- Sacco, P., Pedroso-Santana, S. and Kumar, Y. (2021) ‘Ionotropic gelation of chitosan flat structures and potential applications’, *Molecules*, 26(660), pp. 1–28. doi: 10.3390/molecules26030660.
- Sanower Hossain, M., Urbi, Z. and Sule, A. (2014) ‘A Review of Ethnobotany, Phytochemistry, and Pharmacology’, *The Scientific World Journal*, 2014, pp. 1–28.
- Servat-Medina, L., González-Gómez, A. and Reyes-Ortega, F. (2015) ‘Chitosan-tripolyphosphate nanoparticles as Arrabidaea chica standardized extract carrier: Synthesis, characterization, biocompatibility, and antiulcerogenic activity’, *International Journal of Nanomedicine*, 10, pp. 3897–3909. doi: 10.2147/IJN.S83705.
- Silvestro, I., Francolini, I. and Di Lisio, V. (2020) ‘Preparation and characterization of TPP-chitosan crosslinked scaffolds for tissue engineering’, *Materials*, 13(16). doi: 10.3390/MA13163577.
- Sudarmi, Tari, A. I. N. and Wartini (2014) ‘Antidiabetic Activity of Sambiloto

Extract ( Andrographis Paniculata Ness ) to Decrease Blood Glucose Level of Aloxan Induced Diabetic’, *Ejurnal Unisri*, pp. 77–80.

Sulistyo, H., Kurniawan, D. W. and Rujito, L. (2017) ‘Biochemical and histopathological effects of green tea nanoparticles in ironized mouse model’, *Research in Pharmaceutical Sciences*, 12(2), pp. 99–106. doi: 10.4103/1735-5362.202448.

Sun, S. Ben, Liu, P. and Shao, F. M. (2015) ‘Formulation and evaluation of PLGA nanoparticles loaded capecitabine for prostate cancer’, *International Journal of Clinical and Experimental Medicine*, 8(10), pp. 19670–19681.

Ye, L., Wang, T. and Tang, L. (2011) ‘Poor oral bioavailability of a promising anticancer agent andrographolide is due to extensive metabolism and efflux by P-glycoprotein.’, *Journal of pharmaceutical sciences*, 100(11), pp. 5007–5017. doi: 10.1002/jps.22693.

Yen, C. C., Liang, Y. K. and Cheng, C. P. (2020) ‘Oral bioavailability enhancement and anti-fatigue assessment of the andrographolide loaded solid dispersion’, *International Journal of Molecular Sciences*, 21(7). doi: 10.3390/ijms21072506.

Zhao, L., Duan, X. and Cao, W. (2021) ‘Effects of Different Drying Methods on the Characterization, Dissolution Rate and Antioxidant Activity of Ursolic Acid-Loaded Chitosan Nanoparticles’, *Foods*, 10(10), p. 2470. doi: 10.3390/foods10102470.

Zhao, Y., Wang, Y. and Ran, F. (2017) ‘A comparison between sphere and rod nanoparticles regarding their in vivo biological behavior and pharmacokinetics’, *Scientific Reports*, 7(1), pp. 1–11. doi: 10.1038/s41598-017-03834-2.

Zielinska, A., Carreiro, F. and Oliveira, A. M. (2020) ‘Polymeric Nanoparticles: Production, Characterization, Toxicology and Ecotoxicology’, *Molecules*, 25(3731), pp. 1–20. doi: 10.1201/9780429031236-8.