

Scientific productions

Publications

1. Hamed, R., **Alkilani, A. Z.**, Al-Adhami, Y., Musleh, B., & Aburayya, R. (2025). Advances in Transdermal Delivery Systems for Antifungals: Current Approaches and Future Perspectives. *Microbial Pathogenesis*, 107776.
2. Hamed, R., Aburayya, R., **Alkilani, A. Z.**, Hammad, A. M., Abusara, O. H., & Abo-Zour, H. (2025). Thermo-Responsive Niosomal In Situ Gels for Topical Delivery of Prednisolone. *AAPS PharmSciTech*, 26(5), 1-28.
3. Basheer, H. A., **Alkilani, A. Z.**, Alhusban, M. A., Abo-Zour, H., & Alshaer, W. (2025). Evaluating Niosomes Cytotoxicity on Fibroblast Cells: A Preliminary Step Towards Cancer Cell Assessment Using Telaglenastat as a Model Drug. *BioNanoScience*, 15(1), 1-16.
4. Jaber, D., Salman, N., Al Tabbah, S., El-Sharif, A. R., **Alkilani, A. Z.**, & Qourshah, A. (2025). Evaluating the Knowledge, Attitude, and Practices of Jordanian Society Towards Halal Pharmaceuticals. *The Open Public Health Journal*, 18(1).
5. **Zaid Alkilani**, A., Alkhaldi, R. A., Basheer, H. A., Amro, B. I., & Alhusban, M. A. (2025). Fabrication of thymoquinone and ascorbic acid-loaded spanlastics gel for hyperpigmentation: in vitro release, cytotoxicity, and skin permeation studies. *Pharmaceutics*, 17(1), 48.
6. Hamed, R., AbuKwiak, A. D., Aburayya, R., **Alkilani, A. Z.**, Hamadneh, L., Naser, M., ... & Alhusban, A. A. (2024). Microneedles Mediated-Dermal Delivery of Vitamin C: Formulation, Characterization, Cytotoxicity, and Enhancement of Stability. *Heliyon*.
7. Al-Nimry, S. S., **Alkilani, A. Z.**, & Alda'ajeh, N. A. (2024). Transdermal drug delivery of rizatriptan using microneedles array patch: preparation, characterization and ex-vivo/in-vivo study. *Pharmaceutical Development and Technology*, 29(7), 776-789.
8. **Alkilani, A. Z.**, Omar, S., Nasereddin, J., Hamed, R., & Obeidat, R. (2024). Design of colon-targeted drug delivery of dexamethasone: Formulation and in vitro characterization of solid dispersions. *Heliyon*, 10(14).
9. Alkilani, **A. Z.**, Sharaire, Z., Hamed, R., & Basheer, H. A. (2024). Transdermal Delivery System of Doxycycline-Loaded Niosomal Gels: Toward Enhancing Doxycycline Stability. *ACS Omega*.
10. Jaber, D., Hasan, H. E., Alkaderi, A., **Alkilani, A. Z.**, & El-Sharif, A. R. (2024). Assessment of the Knowledge, Attitude, and Perception of Healthcare Providers Regarding Halal Pharmaceuticals. *The Open Public Health Journal*, 17(1).

11. Hamed, R., Abu Nahia, B. J., **Alkilani, A. Z.**, Al-Adhami, Y., & Obaidat, R. (2024). Recent Advances in Microneedling-Assisted Cosmetic Applications. *Cosmetics*, 11(2), 51.
12. **Zaid Alkilani**, A., Hamed, R., Musleh, B., & Sharaire, Z. (2024). Breaking boundaries: the advancements in transdermal delivery of antibiotics. *Drug Delivery*, 31(1), 2304251.
13. Nasereddin, J., Al Wadi, R., **Zaid Al-Kilani**, A., Abu Khalil, A., Al Natour, M., & Abu Dayyih, W. (2024). The Use of Data Mining for Obtaining Deeper Insights into the Fabrication of Prednisolone-Loaded Chitosan Nanoparticles. *AAPS PharmSciTech*, 25(2), 38.
14. Nasereddin, J., Al-Wadi, R., **Alkilani, A. Z.**, Nahia, B. A., Hailat, M. M., & Dayyih, W. A. (2024). Optimization and Validation of Spectrophotometric Methods for the Determination of Prednisolone in Chitosan Nanoparticles. *Journal of Hunan University Natural Sciences*, 51(4).
15. Basheer, H.A., Alhusban, M.A., **Zaid Alkilani**, A., Alshishani, A., Elsalem, L. and Afarinkia, K., 2023. Niosomal Delivery of Celecoxib and Metformin for Targeted Breast Cancer Treatment. *Cancers*, 15(20), p.5004.
16. **Zaid Alkilani**, A., Abo-Zour, H., Basheer, H. A., Abu-Zour, H., & Donnelly, R. F. (2023). Development and Evaluation of an Innovative Approach Using Niosomes Based Polymeric Microneedles to Deliver Dual Antioxidant Drugs. *Polymers*, 15(8), 1962.
17. **Zaid Alkilani**, A., Musleh, B., Hamed, R., Swellmeen, L., & Basheer, H. A. (2023). Preparation and Characterization of Patch Loaded with Clarithromycin Nanovesicles for Transdermal Drug Delivery. *Journal of Functional Biomaterials*, 14(2), 57.
18. **Zaid Alkilani**, A., Abu-Zour, H., Alshishani, A., Abu-Huwaij, R., Basheer, H. A., & Abo-Zour, H. (2022). Formulation and evaluation of niosomal alendronate sodium encapsulated in polymeric microneedles: In vitro studies, stability study and cytotoxicity study. *Nanomaterials*, 12(20), 3570.
19. **Alkilani**, A.Z, Hamed, R., Abdo, H., Swellmeen, L., Basheer, H. A., Wahdan, W., & Abu Kwiak, A. D. (2022). Formulation and Evaluation of Azithromycin-Loaded Niosomal Gel: Optimization, In Vitro Studies, Rheological Characterization, and Cytotoxicity Study. *ACS omega*.
20. **Alkilani**, A.Z, Nimrawi, S., Al-Nemrawi, N. K., & Nasereddin, J. (2022). Microneedle-assisted transdermal delivery of amlodipine besylate loaded nanoparticles. *Drug Development and Industrial Pharmacy*, 1-11.
21. **Alkilani**, A. Z., Nasereddin, J., Hamed, R., Nimrawi, S., Hussein, G., Abo-Zour, H., & Donnelly, R. F. (2022). Beneath the Skin: A Review of Current Trends and Future Prospects of Transdermal Drug Delivery Systems. *Pharmaceutics*, 14(6), 1152.

22. **Alkilani**, A., Hamed, R., Hussein, G., & Alnadi, S. (2021). Nanoemulsion-based patch for the dermal delivery of ascorbic acid. *Journal of Dispersion Science and Technology*, 1-11.
23. Hamed, R., Mahmoud, N. N., Alnadi, S. H., **Alkilani**, A. Z., & Hussein, G. (2020). Diclofenac diethylamine nanosystems-loaded bigels for topical delivery: development, rheological characterization, and release studies. *Drug Development and Industrial Pharmacy*, 46(10), 1705-1715.
24. Hamed, R., Kamal, A., & **Alkilani**, A. Z. (2020). Gelation and rheological characterization of Carbopol® in simulated gastrointestinal fluid of variable chemical properties. *Pakistan Journal of Pharmaceutical Sciences*, 33(3).
25. **Alkilani**, A. Z., Alkalbani, R., Jaber, D., Hamed, R., Hamad, I., Abumansour, H., & Assab, M. A. (2019). Knowledge, attitude, practice and satisfaction of patients using analgesic patches in Jordan. *Tropical Journal of Pharmaceutical Research*, 18(8).
26. Development and in-vitro characterization of nanoemulsion-based buccal patches of valsartan , Abu-Huwaij, R. Hamed, R., Daoud , E., **Alkilani**, A. Z., *Acta Poloniae Pharmaceutica*, Vol. 76 No. 2 , 2019
27. **Alkilani**, A. Z., Hamed, R., Al-Marabeh, S., Kamal, A., Abu-Huwaij, R., & Hamad, I. (2018). Nanoemulsion-based film formulation for transdermal delivery of carvedilol. *Journal of Drug Delivery Science and Technology*, 46, 122-128.
28. Hamed, R., Al Baraghthi, T., **Alkilani**, A. Z., & Abu-Huwaij, R. (2016). Correlation between rheological properties and in vitro drug release from penetration enhancer-loaded Carbopol® gels. *Journal of Pharmaceutical Innovation*, 11(4), 339-351.
29. Eltayib, E., Brady, A. J., Caffarel-Salvador, E., Gonzalez-Vazquez, P., **Alkilani**, A. Z., McCarthy, H. O., ... & Donnelly, R. F. (2016). Hydrogel-forming microneedle arrays: potential for use in minimally-invasive lithium monitoring. *European Journal of Pharmaceutics and Biopharmaceutics*, 102, 123-131.
30. **Alkilani**, A., McCrudden, M. T., & Donnelly, R. (2015). Transdermal drug delivery: innovative pharmaceutical developments based on disruption of the barrier properties of the stratum corneum. *Pharmaceutics*, 7(4), 438-470.
31. McCrudden, M. T., **Alkilani**, A. Z., Courtenay, A. J., McCrudden, C. M., McCloskey, B., Walker, C., ... & Donnelly, R. F. (2015). Considerations in the sterile manufacture of polymeric microneedle arrays. *Drug delivery and translational research*, 5(1), 3-14.

32. Donnelly, R. F., McCrudden, M. T., **Alkilani**, A. Z., Larrañeta, E., McAlister, E., Courtenay, A. J., ... & Caffarel-Salvador, E. (2014). Hydrogel-forming microneedles prepared from “super swelling” polymers combined with lyophilised wafers for transdermal drug delivery. *PLoS One*, 9(10), e111547.
33. Donnelly, R. F., Moffatt, K., **Alkilani**, A. Z., Vicente-Pérez, E. M., Barry, J., McCrudden, M. T., & Woolfson, A. D. (2014). Hydrogel-forming microneedle arrays can be effectively inserted in skin by self-application: a pilot study centred on pharmacist intervention and a patient information leaflet. *Pharmaceutical research*, 31(8), 1989-1999.
34. Donnelly, R. F., Morrow, D. I., McCrudden, M. T., **Alkilani**, A. Z., Vicente-Pérez, E. M., O'Mahony, C., ... & Woolfson, A. D. (2014). Hydrogel-forming and dissolving microneedles for enhanced delivery of photosensitizers and precursors. *Photochemistry and photobiology*, 90(3), 641-647.
35. McCrudden, M. T., **Alkilani**, A. Z., McCrudden, C. M., McAlister, E., McCarthy, H. O., Woolfson, A. D., & Donnelly, R. F. (2014). Design and physicochemical characterisation of novel dissolving polymeric microneedle arrays for transdermal delivery of high dose, low molecular weight drugs. *Journal of controlled release*, 180, 71-80.
36. Donnelly, R. F., Singh, T. R. R., **Alkilani**, A. Z., McCrudden, M. T., O'Neill, S., O'mahony, C., ... & Woolfson, A. D. (2013). Hydrogel-forming microneedle arrays exhibit antimicrobial properties: potential for enhanced patient safety. *International journal of pharmaceutics*, 451(1-2), 76-91.

Books

1. **Alkilani**, A.Z. (2018). Genesis of Transdermal Drug Delivery. In *Microneedles for Drug and Vaccine Delivery and Patient Monitoring*, F. D. Ryan (Ed.). doi:[10.1002/9781119305101.ch1](https://doi.org/10.1002/9781119305101.ch1). John Wiley and Sons, Incorporated.
2. Singh, T. R. R., McMillan, H., Mooney, K., **Alkilani**, A. Z., & Donnelly, R. F. (2017). Fabrication of Microneedles. In *Percutaneous Penetration Enhancers Physical Methods in Penetration Enhancement* (pp. 305-323). Springer, Berlin, Heidelberg.
3. Donnelly, R. F., Garland, M. J., & **Alkilani**, A. Z. (2014). Microneedle-ionstophoresis combinations for enhanced transdermal drug delivery. In *Drug Delivery System* (pp. 121-132). Springer New York.
4. Singh, T. R. R., McMillan, H., Mooney, K., **Alkilani**, A., & Donelly, R. (2013). Microneedles for drug delivery and monitoring. *Microfluidic Devices for Biomedical Applications*, X. Li and Y. Zhou, Editors, 185-230, Elsevier.

