

Review of: "[Review Article] Green Strategies for the Synthesis of Quinolone Derivatives"

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Potential competing interests: No potential competing interests to declare.

The review article entitled "Green Strategies for the Synthesis of Quinolone Derivatives" exhibited a comprehensive summary of quinolone bioactive cytotoxicity, including the introduction of the application of green chemistry in the sustainable synthesis of those adducts. Herein, I quite agree that this review article is suitable for publication in "Qeios" after major revisions. So, the items below are the important things that the authors should improve in their manuscript to have a higher impact in these research areas;

1. In the introduction part, only one quinolone derivative, nalidixic acid, was mentioned as an antibacterial agent. In my opinion, more quinolone derivatives should be mentioned and cited to show the higher impact on the quinolone family and to attract the attention of the readers. (You can access an example of a quinolone in this paper: <https://link.springer.com/article/10.1007/s11030-022-10581-8>)
2. In the case of pharmacological activities of quinolone derivatives, the activities that you mentioned were quite enough. On the other hand, the activities of those adducts you mentioned should be reported in terms of IC₅₀, GI₅₀, or even ED₅₀. These figures will provide simplicity in describing the SAR studies.
3. In the synthetic methodology of quinolone derivatives, the percentage yields of each reaction should be reported.
4. On page 7, in the text "X. Sun et al. synthesized and observed in 7-benzyloxy-4, 5-dihydro- [1][2][4] triazolo[4,3-a] that the anticonvulsant potency of...", it is hard to understand this citation among the chemical names.
5. Every chemical structure should be modified and applied in tabular format to be more consistent.
6. Every chemical structure should be numbered.
7. Figure 5, "1.prevention" should be edited to "1.Prevention" for consistency.
8. Figure 6, caption could be changed to "Fig. 6. Structure of ..."
9. Figure 7, caption could be changed to "Fig. 7. Structure of ..."
10. Figure 8, caption could be changed to "Fig. 8. Structure of ..."
11. Figure 10, caption could be changed to "Fig. 10. Structure of ..."
12. Figure 11, caption could be changed to "Fig. 11. Structure of ..."
13. Figure 12 (a)-(c) captions should be changed because there is no chemical interaction with cytochrome, the spike protein of SARS-COV-2, or even a cancer cell line. The authors could use the figures from the cited papers through the copyright permission process prior to publishing in this journal.

