

# 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 manuscript of Ahmed and Akter is a review paper concerning the green strategies for the synthesis of quinolone derivatives. The plagiarism check shows that the results are not published before. However, the manuscript suffers from a number of shortcomings and therefore **does not deserve publication in its current form**

1. The most part of the protocols in the manuscript duplicate those recently published in a review paper "Current updates on green synthesis and biological properties of 4-quinolone derivatives," *J. Mol. Struct.* **2023**, 1294, 136565, which is not cited.

2. The title does not correspond to the presented protocols. The "green" element is missing in several presented protocols. For instance, Schemes 1 and 2 concern classical methods that required harsh conditions and cannot be called "green."

3. The article is written in a very unusual way. Although the title underlines the green synthetic methods, up to page 12, single examples of biologically active compounds are given. At the same time, some of the presented examples are confusing. A few examples:

Nalidixic acid (Fig. 1), the main object of the Introduction, is a naphthyridinone, not a quinolone. The same for tosufloxacin and trovafloxacin. The second nitrogen atom is also important for the biological properties.

There is no information about the structure of the compounds in the sub-chapter "Structure of Quinolone." Here again, the authors are talking about nalidixic acid and derivatives.

Contrarily, the sub-chapter "Antimicrobial Targets of Quinolone" contains a figure describing the tautomeric equilibria, which has no place here. Further, ref. 28 concerns completely different compounds, not quinolones, exhibiting anticancer activity. Fig. 3 is not referred to in the text. No substituents are given on Fig. 4. Tetrahydroquinolone, which possesses different properties, is drawn on Fig. 6.

The compounds presented on Fig. 12b are not quinolones.

The products presented on Schemes 4 and 5 are tetrahydroquinolones, which possess different properties. The same is valid for Figure 6.

The products presented on Scheme 22 are not quinolones.

Ref. 63 is wrong.

Etc.