Review of: "Synthesis of 1, 2-Disubstituted Benzimidazoles at Ambient Temperature Catalyzed by 1-Methylimidazolium Tetraflouroborate ([Hmim] BF_4) and Investigating Their Anti-ovarian Cancer Properties Through Molecular Docking Studies and Calculations"

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Potential competing interests: No potential competing interests to declare.

In this manuscript

"Synthesis of 1, 2-Disubstituted Benzimidazoles at Ambient Temperature Catalyzed by 1-Methylimidazolium Tetrafluoroborate ([Hmim] BF4) and Investigating Their Anti-ovarian Cancer Properties Through Molecular Docking Studies and Calculations,"

the authors have developed an efficient method for the preparation of 1, 2-disubstituted benzimidazoles via a condensation reaction from aromatic aldehydes and o-phenylenediamines (OPD).

They have also displayed details of the synthesis with substrate variation at room temperature in the presence of 1-Methylimidazolium Tetrafluoroborate ([Hmim] BF4) (ionic liquid).

Dehghani *et al.* also extensively studied their molecular docking.

Whatever,

The preparation of the benzimidazole motif from aromatic aldehydes and o-phenylenediamines is a well-known strategy. The authors should also highlight that the only importance here is the use of 1-methylimidazolium tetrafluoroborate ([Hmim] BF4) as a catalyst in ethanol: water.

The manuscript is large. It would be better if it were presented in a concise way.

A broad range of structurally diverse benzaldehydes were applied successfully, but no other derivative of o-phenylenediamines has been used. Differently substituted o-phenylenediamines may increase the impact of the work.

The representation of o-phenylenediamines in Scheme 1 is 2, and in Table 1 and Table 2 it is 2a. Clearly mention the numbering of o-phenylenediamines, either 2 and 2a.

Clarify the proportion of benzaldehyde (2 mmol), o-phenylenediamine (1 mmol). Why is it (2:1)?

The authors should incorporate the following literature for the synthesis of the benzimidazole moiety; both review papers

are very relevant.

Review paper *RSC Adv.*, 2023, **13**, 32734-32771, and review paper *Journal of Saudi Chemical Society* **2017**, 21, 229-237

However, the manuscript can be accepted after these modifications.