

# Review of: "Synthesis of 1, 2-Disubstituted Benzimidazoles at Ambient Temperature Catalyzed by 1-Methylimidazolium Tetrafluoroborate ([Hmim] BF<sub>4</sub>) 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 the present deliberation, authors have synthesized 1, 2-disubstituted benzimidazoles at ambient temperature, and their anti-ovarian cancer properties have been investigated through molecular docking studies and calculations. While carefully reading, it has been observed that to improve the manuscript quality, the following points need to be addressed.

1. In Table 1, recheck the structure of compound 3a; I think an additional R is there.
2. All of the abbreviations should be mentioned at their first occurrence.
3. The characterization of the compound only by <sup>1</sup>H, <sup>13</sup>C NMR and melting point is not sufficient; at least ESI-MS measurement is required.
4. The manuscript lacks experimental details related to molecular docking (e.g., software/server, processing of protein and ligands, and grid box used).
5. The exact name/class of the target protein should be given. The PDB code 6LAD seems to be wrong. The corrected PDB code should be used.
6. The authors are advised to be more careful with their discussion on the Lipinski rule of five, which is only applicable for the validation of orally active drug molecules. The entire section of the manuscript pertaining to the above rule should be thoroughly checked and revised.
7. The tool used for predicting the pharmacokinetic properties has to be mentioned.
8. The following sections need careful revision: (i) Figure 2 is a 2D representation, not 3D. (ii) In Table 5, the unit for docking energy is missing. (iii) The number of hydrogen bond donors/acceptors should be ideally present as whole numbers and not fractions.
9. There are plenty of typos and technical errors throughout the manuscript. Check the whole manuscript carefully.