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"

Heba Alshater[1]

1 Menoufia University

Potential competing interests: No potential competing interests to declare.

I would like to thank the authors for their valuable article; however, I have some comments:

1-**abstract** : it is small, the spaces between lines should be adjusted, and some parts should be added, such as details about the results of the molecular docking studies of the synthesized 1, 2-disubstituted benzimidazole derivatives with the 6LAD protein, and results about the anti-ovarian cancer properties of the synthesized compounds.

2-**introduction** : the spaces between lines should be adjusted, contains long paragraphs, correct the following references to [4,5], [6-9], [10-14], [15-17], [18-21], [22-25], [26-28], [29-31], [32-35], [36-39], [40-42], [43-46], [47-50], add Figure 1 in the text, authors should add a part about the discussion of the cause of using 1-methylimidazolium tetrafluoroborate ([Hmim] BF4) in the synthesis of benzimidazoles and its advantages over traditional methods, and current challenges in ovarian cancer treatment and the need for novel therapeutic agents with improved efficacy and safety profiles.

3-**experimental**: has missing parts such as detailed information on the specific reaction conditions used for the synthesis of 1, 2-disubstituted benzimidazole derivatives, including temperature, reaction time, and stoichiometry of reactants. Characterization techniques employed to confirm the identity and purity of the synthesized compounds, such as ^{1}H NMR spectroscopy, mass spectrometry, and elemental analysis. Any additional experimental procedures or modifications made to optimize the reaction conditions or improve the yield of the desired products. Authors should add a reference for the preparation of compounds and a section about detailed information about the docking technique used.

4-**results**: has missing parts such as discussion about the experimental data related to the synthesis of 1, 2-disubstituted benzimidazole derivatives, analysis of the physical and chemical properties of the synthesized compounds, such as melting points, solubility, and spectral data (^{1}H NMR, IR, etc.). Comparison of the results obtained in this study with previous literature reports on the synthesis of benzimidazoles using different catalyst systems or reaction conditions. Add ( ) to tables 1, 2, table 3-5, table 6.

5-**conulsion**: has missing parts such as: A summary of results obtained from the study on the synthesis and characterization of 1, 2-disubstituted benzimidazole derivatives, the potential applications of the synthesized compounds

in the field of medicinal chemistry, particularly in the development of anti-cancer agents, and future research directions or potential modifications to the synthetic approach to further enhance the biological activity or physicochemical properties of the benzimidazole derivatives.