

Review of: "A Novel One-Pot Three-Component Approach to Orthoaminocarbonitrile Tetrahydronaphthalenes Using Triethylamine (Et₃N) as a Highly Efficient and Homogeneous Catalyst Under Mild Conditions and Investigating Its Anti-cancer Properties Through Molecular Docking Studies and Calculations"

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Potential competing interests: No potential competing interests to declare.

Summary

Improvements recommended:

1. Incorrect description

Tetrahydronaphthalene as a heterocyclic compound

1. Full characterization and spectral details of all compounds must be provided, and SAR studies should be conducted.
2. Molecular docking studies only show possible interactions of a compound within the active site.
 - Molecular docking and energy calculations are insufficient data to draw conclusions about anti-cancer activity.
 - Please provide full details of the molecular modelling software program used, details of the binding within the active site, docking results, including crystal structure data.
 - In general, selected top dock-scored compounds are assayed.

1. Anti-cancer properties

The anti-cancer properties of these compounds were studied and investigated.

- How was this done? In vitro and in vivo studies must be conducted.
 - Erroneously concludes that the compounds have the potential to become an oral anti-cancer drug without doing cell viability assays
 - Compounds must be assayed for cell viability on different cancer cell lines to evaluate and confirm activity.
 - SAR studies must also be conducted to get a clear understanding of how the structure of the compounds relates to their activity.
1. Full characterization and spectral details of all compounds must be provided to confirm structures and presence of

impurities, as impurities can also contribute to the activity.

5. Results and discussion

- This section appears to be more of the experimental section for the synthesis of the compounds and results of molecular docking calculations.
- A separate or clearly defined experimental section, results and discussion section should be considered.
- Based on the complete set of facts produced under discussion of the results, the researchers' perspectives and viewpoints on the subject matter can be integrated in the discussion.

Concludes: A shorter reaction time and higher yield of products simplicity, short reaction time, and mild conditions, which makes this **method a green and environmentally friendly protocol**

- Authors are hasty to make claims/conclusions without providing sufficient data to substantiate.
- There are numerous unjustified assumptions.
- More literature must be provided to get a concise background to determine the novelty of this method, the existence of anticancer activity of similar compounds.

1. An extensive literature background is needed with references
2. Language editing on final draft
3. Lastly, the Title is too long; two publications might be needed here, with appropriate titles, where

(1) First paper: the chemistry and novelty of the method can be shown

(2) Second paper: Biological evaluation, including molecular docking studies, with full anticancer activity studies of compounds

Thanks