Review of: "Design, Synthesis, and In-Silico Analysis of Thiazole-Embedded Schiff Base Derivatives for Breast Cancer Therapeutic Potential"

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Potential competing interests: No potential competing interests to declare.

Related to the article entitled " Design, Synthesis, and In-Silico Analysis of Thiazole-Embedded Schiff Base Derivatives for Breast Cancer Therapeutic Potential"

Main objections:

The research paper is missing the evaluation of the targeted compounds against breast cancer cell lines, which is fundamental for the work and makes the computational studies meaningless.

The numbers of the compounds in the supplementary data are not the same as in the original paper, which is confusing for readers.

Did the authors carry out the synthesis of compounds TZ4-TZ10? Or are they reported before? Please clarify.

Introduction part:

The statistical information about breast cancer in old (2018) needs to be updated.

Approved drugs based on Schiff bases or thiazole are encouraged to be added.

Scheme 1

The intermediates are 4-6, not 4-5. Correct.

Please identify the R values for compounds 4-6 and TZ1-TZ3.

Experimental part:

Reference number 12, which is assigned for the synthesis of substituted thiosemicarbazone, is not correct.

The spectroscopic data for TZ4-TZ10 are missing.

The assigned data for compounds TZ1-TZ3 are not correct; the IR and 13C-NMR contain C=S data, which is not present in the structures.

TZ1, the assigned data are incorrect; the number of protons does not agree with the suggested structure. The NH proton is missing, and two methyl groups (NMe_2), which are absent in the HNMR.

TZ3, how does the integration of one proton represent two hydrogen atoms (8.16 (s,1H, HO-4′ and CH=N)?

In compound **4**, why (KBr, cm^{-1}, **5**), ^{1}HNMR (400 MHz, DMSO-d_6, δ ppm, **5**), and (400 MHz, DMSO-d_6, δ ppm, **5**)? It is **4**, not **5**???? Same for compounds **5** and **6**.

Tables 1-3 do not contain any spectral data; please correct the last line in the Chemistry Section.