

Correction

Correction: Wu et al. Synthesis of Spirooxindole-O-Naphthoquinone-Tetrazolo[1,5-*a*]Pyrimidine Hybrids as Potential Anticancer Agents. *Molecules* 2018, 23, 2330

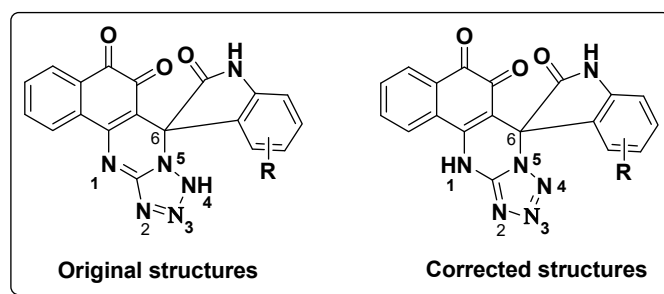
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In the original publication [1], we found that there was a mistake in the structures of compound 4. As the figure below shows, the structure of compound 4 should be “1,6-dihydro” instead of “4,6-dihydro” [2,3]. The authors did not notice the mistake before the article was published, and they would like to thank Dr. Essam M. Eliwa who pointed it out. A correction is needed for all data describing the structure of compound 4. The corrections of the figures, schemes, and data affected appear below.



Citation: Wu, L.; Liu, Y.; Li, Y.

Correction: Wu et al. Synthesis of Spirooxindole-O-Naphthoquinone-Tetrazolo[1,5-*a*]Pyrimidine Hybrids as Potential Anticancer Agents.

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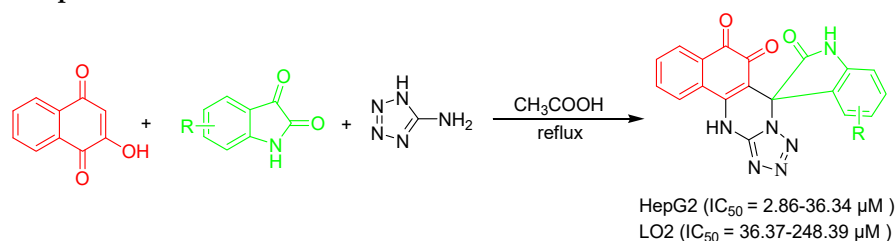
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Graphical Abstract



Error in Results and Discussion

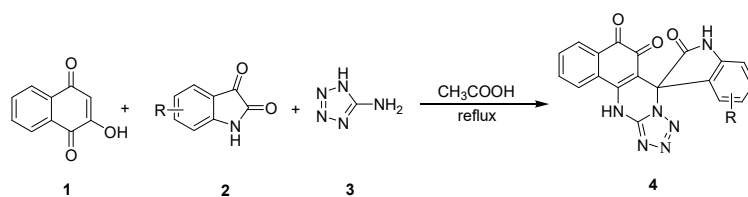
In the original publication [1], there was a mistake in both the first and third paragraphs of the Results and Discussion section. The correct text appears below.

To achieve the optimum conditions, the synthesis of 1,6-dihydro-spiro[benzo[*h*]tetrazolo[5,1-*b*]-quinazoline-6,3'-indoline]-2',7,8-trione (4a) was used as a model reaction under a variety of different conditions.

A suggested pathway for the formation of the hybrid is shown in Scheme 2. Keto form of 2-hydroxy-1,4-naphthoquinone undergoes Knoevenagel condensation with isatin to form olefin. The olefin can react with 5-aminotetrazole by carbonyl-amine condensation to produce the secondary ketamine, which further undergoes intramolecular cyclization via aza-Michael addition to generate C3-spirooxindole product.

Error in Schemes and Figure

The corrected Scheme 1 appears below:



Scheme 1. Synthesis of spirooxindole-O-naphthoquinone hybrids.

The corrected Figure 2 appears below:

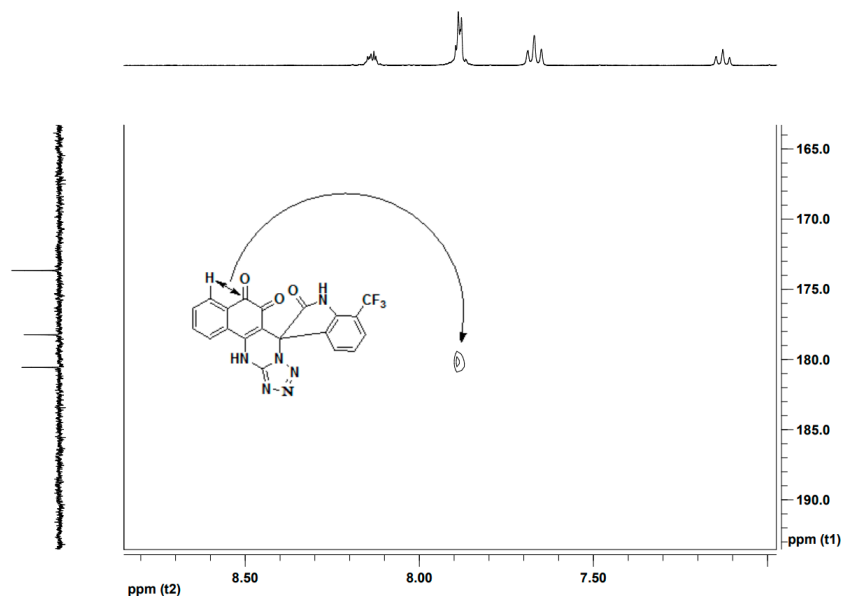
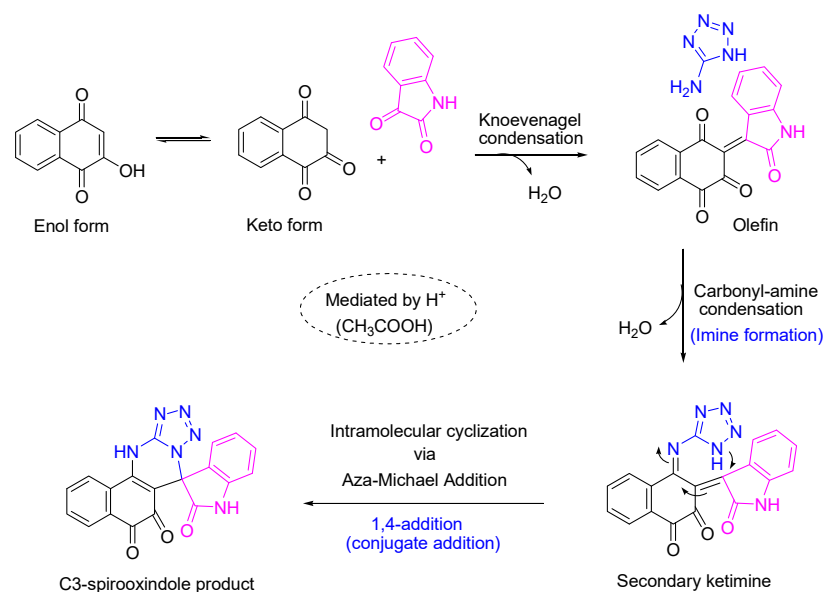


Figure 2. Locally amplified HMBC of **4n**.

The corrected Scheme 2 appears below:



Scheme 2. A suggested pathway for the formation of the hybrid.

Error in Materials and Methods

In the original publication [1], there was a mistake in the compound names described in Section 3.2. of the Materials and Methods. The correct compound names appear below.

- 1,6-Dihydro-spiro[benzo[h]tetrazolo[5,1-b]-quinazoline-6,3'-indoline]-2',7,8-trione (**4a**)
5'-Bromo-1,6-dihydro-spiro[benzo[h]tetrazolo[5,1-b]-quinazoline-6,3'-indoline]-2',7,8-trione (**4b**)
5'-Chloro-1,6-dihydro-spiro[benzo[h]tetrazolo[5,1-b]-quinazoline-6,3'-indoline]-2',7,8-trione (**4c**)
6'-Bromo-1,6-dihydro-spiro[benzo[h]tetrazolo[5,1-b]-quinazoline-6,3'-indoline]-2',7,8-trione (**4d**)
1'-Methyl-7'-fluoro-1,6-dihydro-spiro[benzo[h]tetrazolo[5,1-b]-quinazoline-6,3'-indoline]-2',7,8-trione (**4e**)
7'-Chloro-1,6-dihydro-spiro[benzo[h]tetrazolo[5,1-b]-quinazoline-6,3'-indoline]-2',7,8-trione (**4f**)
5'-Fluoro-1,6-dihydro-spiro[benzo[h]tetrazolo[5,1-b]-quinazoline-6,3'-indoline]-2',7,8-trione (**4g**)
7'-Bromo-1,6-dihydro-spiro[benzo[h]tetrazolo[5,1-b]-quinazoline-6,3'-indoline]-2',7,8-trione (**4h**)
1'-Phenyl-1,6-dihydro-spiro[benzo[h]tetrazolo[5,1-b]-quinazoline-6,3'-indoline]-2',7,8-trione (**4i**)
5'-Methyl-1,6-dihydro-spiro[benzo[h]tetrazolo[5,1-b]-quinazoline-6,3'-indoline]-2',7,8-trione (**4j**)
6'-Chloro-1,6-dihydro-spiro[benzo[h]tetrazolo[5,1-b]-quinazoline-6,3'-indoline]-2',7,8-trione (**4k**)
6'-Methoxyl-1,6-dihydro-spiro[benzo[h]tetrazolo[5,1-b]-quinazoline-6,3'-indoline]-2',7,8-trione (**4l**)
5'-Trifluoromethoxyl-1,6-dihydro-spiro[benzo[h]tetrazolo[5,1-b]-quinazoline-6,3'-indoline]-2',7,8-trione (**4m**)
7'-Trifluoromethyl-1,6-dihydro-spiro[benzo[h]tetrazolo[5,1-b]-quinazoline-6,3'-indoline]-2',7,8-trione (**4n**)

In addition, the original text was also corrected to address minor text formatting issues.

Error in Supplementary Materials

The structures of the above-mentioned compounds **4a–4n** were corrected in the ¹H-NMR, ¹³C-NMR and HRMS data in the Supplementary Materials.

The authors state that the scientific conclusions are unaffected. The original publication has also been updated.

References

1. Wu, L.; Liu, Y.; Li, Y. Synthesis of Spirooxindole-O-Naphthoquinone-Tetrazolo[1,5-a]Pyrimidine Hybrids as Potential Anticancer Agents. *Molecules* **2018**, *23*, 2330. [[CrossRef](#)] [[PubMed](#)]
2. Wang, X.C.; Wei, Y.; Da, Y.X.; Zhang, Z.; Quan, Z.J. One-Step Synthesis of Tetrazolo[1,5-a]Pyrimidines by Cyclization Reaction of Dihydropyrimidine-2-Thiones with Sodium Azide. *Heterocycles* **2011**, *83*, 2811–2822. [[CrossRef](#)]
3. Dai, Y.; Qi, G.; Qian, X. Superacid Catalysed the One-Pot Synthesis of Spiro[Indole-3,9'-Tetrazolo[5,1-b]Quinazoline]-2,8'(1H, 5'H)-Dione in Aqueous Medium. *J. Chem. Res.* **2013**, *37*, 705–708. [[CrossRef](#)]

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