

# Accepted Manuscript

Synthesis, carbonic anhydrase inhibition and cytotoxic activity of novel chromone-based sulfonamide derivatives

Fadi M. Awadallah, Tamer A. El-Waei, Mona M. Hanna, Safinaz E. Abbas, Mariangela Ceruso, Beyza Ecem Oz, Ozen Ozensoy Guler, Claudiu T. Supuran



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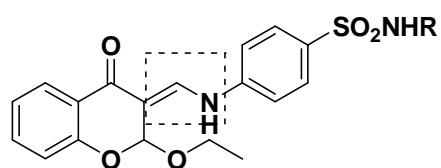
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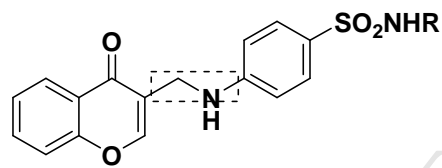
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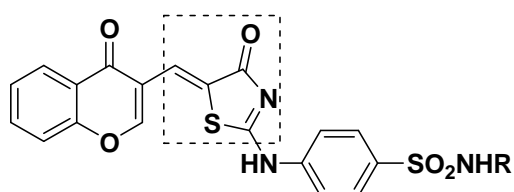
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**Graphical abstract:**

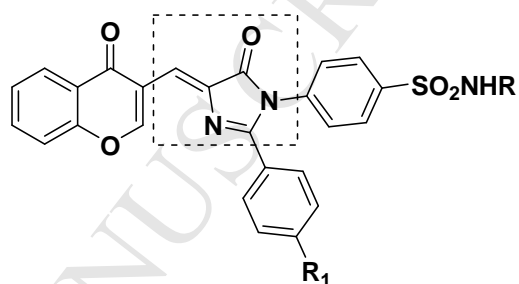
General formula A



General formula B



General formula C



General formula D

Compound **4a** (general formula B; R=H) has  $IC_{50}$  of 0.72 and 0.50  $\mu$ M against MCF-7 and A-549 cells, respectively. It has  $K_i$  of 29.75 and 4.54 nM on hCA IX and XII, respectively. It raises the % of early apoptotic cells to 94.12 and 74.77% in breast and lung cells, respectively.

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