

Publication

## Unravelling the Antiproliferative Activity of 1,2,5-oxadiazole Derivatives

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To develop several new derivatives aimed to complete the studies concerning the antiproliferative profile of the oxadiazole derivative MD77.; The substitution pattern around the phenyl rings of this compound was analyzed through the synthesis of positional isomers and of analogues bearing different substituents at the para positions ( ; 2-12; ).; The results of the antiproliferative activity of these derivatives versus HCT-116 and HeLa cancer cell lines shed light on the effects of the presence, nature and position of such substituents. Notably, derivative; 4; , a regioisomer of; 1; in which the substituents at the para positions of the phenyl rings were inverted, showed the best antiproliferative profile, exhibiting a significant activity also against MCF7 and MDA-MB 468 cancer cell lines.; Preliminary results showed the ability of compound; 4; to reduce the viability of cancer cells by counteracting human recombinant topoisomerase II  $\alpha$  relaxation activity.

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