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CORRECTION



Correction to: Synthesis, characterization and biological evaluation of new azo-coumarinic derivatives

Abstract

Hydroxycoumarins and their based conjugates revealed a wide-ranged biological activity providing potential scaffolds to serve better in therapy. This work aims to synthesize six new azo-coumarinic conjugates termed SY1-SY6 and investigate their potentials as antitumor and antibacterial applicants. The synthesis of these conjugates started from cantabiline, which was employed as a synthetic precursor and comparable agent in the biological assessment. The antitumor activity of the conjugates was investigated versus four tumor-cell lines by applying an MTT-based assay; these cell-lines included KYSE-30, MCF-7, HeLa, and SK-OV-3. The antibacterial activity was evaluated versus four standard bacterial strains using a broth-dilution technique; these strains were *Klebsiella pneumonia*, *Salmonella typhi*, *Shigella dysenteriae*, and *Escherichia coli*. The spectral data acquired from various spectrophotometers were confirmed the chemical structures of the synthesized conjugates. The biological investigation exhibited that the conjugates have moderate-to-good antitumor and antibacterial activities. Also, the substituent on the inserted aromatic component of the azo bond exerts a notable influence on the investigated activities. When this substituent has an electron-withdrawing character, the activity shifted toward the antitumor than antibacterial effect. This shifting was reversed in the case of electron-donation substituents. The authors concluded that the utilization of these two findings may result in the construction of new conjugates with an activity directed toward fighting cancer or bacterial infections by modulating the nature of the substituted group.