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2-(Benzhydryl sulfinyl)-N-sec-butylacetamide) isolated from fig augmented trastuzumab-triggered phagocytic killing of cancer cells through interface with Fcγ receptor

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ABSTRACT

The objective of the current study was to extract 2-(benzhydryl sulfinyl)-N-sec-butylacetamide), a novel compound from fig, and then determine its role in enhancing trastuzumab-triggered phagocytic killing of SKOV-3 cancer cells. In this study, Soxhlet was used to extract the compound from the mature and air-dried fig fruits. The production of the isolated extracts was enhanced by using polar and non-polar solvents. Several solvents, such as methanol, ethyl acetate, chloroform, and n-hexane, were used to isolate the effective compound 2-(benzhydryl sulfinyl)-N-sec-butylacetamide) from the organic layer. UV-spectroscopy, FT-IR, ^{1}H-NMR, and ^{13}C-NMR were applied to identify the purified compound. The *in vitro* and *in vivo* assays demonstrated that the 2-(benzhydryl sulfinyl)-N-sec-butylacetamide) can increase the activity of the phagocytic cells, *via* the interaction with FcY receptors, along with trastuzumab, and the pathway can use a model for the therapeutic strategy for effective treatment of ovarian cancer cells.

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