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Anticancer peptides derived from supermeal worm (*Zophobas morio*) larvae (Article)

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Abstract

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Cancer still presents enormous challenges in the medical world. Currently, the search for anticancer compounds has garnered a lot of interest, especially in finding them from the natural sources. In this study, by using Sulforhodamine B (SRB) colorimetric assay, compounds, extracted from supermeal worm (*Zophobas morio*) larvae using two types of acidified organic solvent (ethanol and isopropanol), were shown to inhibit the growth of a breast cancer line, MCF-7. A comparative study of the effect was carried out on a normal cell line, Vero. Results showed that, the two types of extracts inhibits growth of MCF-7 cell at varying degrees, on the other hand, have much less effect on Vero cell. Extracts analysed by UV-vis spectroscopy, showed peaks in the range of 260 to 280 nm, inferring the presence of aromatic amino acids, whereas the highest peak of 3.608 AU at 230 nm indicates the presence of peptide bonds. By Raman spectroscopy, peaks are observed at 1349 cm⁻¹, 944 cm⁻¹ and 841 cm⁻¹ indicating the presence of Tyr, Try and Gly, confirming the UV-vis analyses. All results of analyses implied that the anticancer compounds contain peptides.

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Author keywords

Anticancer peptides MCF-7 breast cancer cell lin Vero cell line Zophobas morio fabricus

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
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