Formatting a Good Abstract

Abstract Heading Format and Content: The heading should be prepared as a **SINGLE MERGED PARAGRAPH** including the items found in the following 4 green boxes:

Assessing the Apoptosis Effect of Prenylated Stilbenoids Combined with Paclitaxel in Triple-negative Breast Cancer Cells.

The title should clearly indicate the subject and purpose of the material presented.

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List presenting author first and in all capital letters. If there is more than one affiliation, they should be noted by superscript numbers after their name.

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List complete affiliations with addresses. Superscript numbers are required for 2 or more affiliations. For 3 or more affiliations, place a semicolon (;) between affiliations. Include the word "and" before the last affiliation. USA should not be listed. Countries outside of the USA should be listed and in all capital letters.

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Presenting and/or Corresponding authors may be included here.

Abstract Body

An abstract is a condensed but complete summary of the work presented. Avoid phrases like 'will be discussed.' Identify animals, plants or other organisms involved and pertinent details needed to interpret the results. Do not use or cite figures, tables, or references. Limit the abstract itself to 1,800 characters (not including spaces).

Rationale

Breast cancer is one of the most prevalent types of cancer in women worldwide. Triple-negative breast cancer (TNBC) is unresponsive to typical hormonal treatments causing it to be one of the deadliest forms of breast cancer. Investigating alternative therapies to increase survival rates for this disease is essential. This study aimed to examine if prenylated stilbenoids from peanut can act as an adjuvant for paclitaxel, a chemotherapeutic drug with severe side effects.

Why was this work done?

Objectives
Methods

The prenylated stilbenoids arachidin-1 (A-1) and arachidin-3 (A-3) are analogs of resveratrol (RES) and were produced in hairy root cultures of peanut. The cytotoxicity activity of A-1, A-3, and RES was studied in TNBC cell lines MDA-MB-231 and MDA-MB-436. Furthermore, the cytotoxicity of A-1, the most potent prenylated stilbenoid, combined with paclitaxel was studied by checkerboard assays in the TNBC cell lines. The apoptotic effects of this combination treatment were studied by western blotting targeting protein expression levels of PARP, caspase-8, caspase-9, and survivin and through the Apo-ONE Homogeneous Caspase-3/7 assay. To further investigate the apoptosis and cell cycle stages, cells treated with prenylated stilbenoids or RES were studied using flow cytometry.

What are the goals of this research? How were they achieved?

Results

After 24 hours of treatment, A-1 exhibited higher cytotoxicity than A-3 and RES with approximately 11-fold and 6-fold lower IC50, respectively, in MDA-MB-231 cells, and 9-fold and 8-fold lower IC50, respectively, in MDA-MB-436 cells. A-1 did not show significant cytotoxicity in the non-cancerous cell line MCF-10A. Cytotoxicity, checkerboard, and flow cytometry assays showed a decrease in paclitaxel concentration when combined with prenylated stilbenoids.

What did the research find?

Conclusions

This highlights the significance of continuing research with prenylated stilbenoids as an adjuvant in TNBC treatment.

New knowledge or insight gained that makes your study useful.