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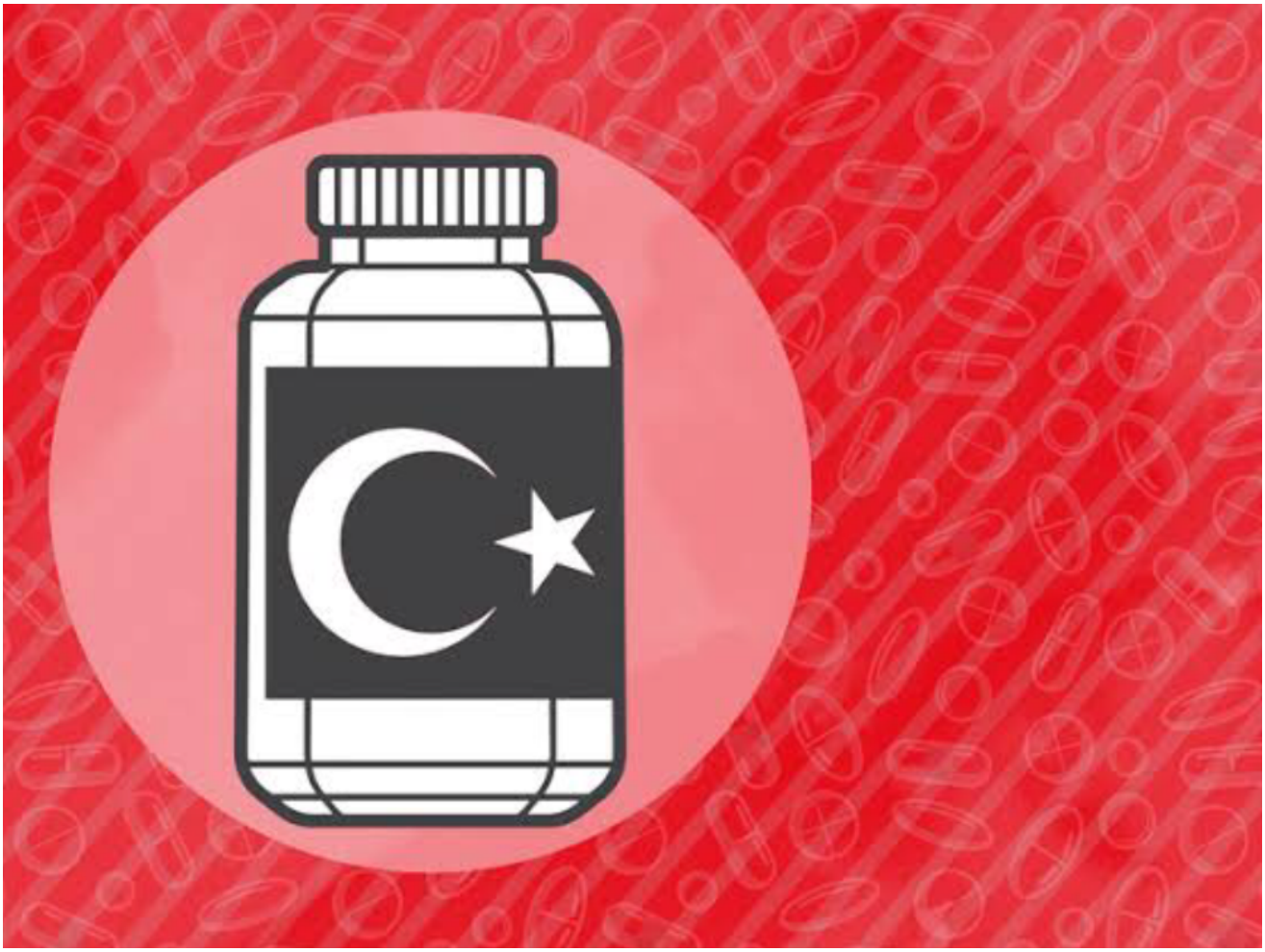
Skirmishing with Aggressive Cancers via promoting Pro-Apoptopic Enzyme Activity and Dual Suppression of Pro-Malignant Protein & Endopeptidases Part 2

In this Latter Part of the Previously Disclosed Anti-Carcinogenic Nutraceutical Biotech The Mechanism of Action and Ingredient Profile is Extensively Explained.

SCIENTIFIC ADVANCES



The structural and characteristic features and all the advantages of the invention will become more clearly understood from the detailed description provided below and therefore, the evaluation must be made taking this detailed description into consideration.

Detailed Description of the Invention

The invention is a composition formed for the use of 20-O-B-D-glucopyranosyl-20(S)-protopanaxatriol and the derivatives thereof in the treatment of the malignant tumors.

20-O-B-D-glucopyranosyl-20(S)-protopanaxatriol has proven to be an effective component for the treatment of the solid tumors, owing to its low molecular weight, relatively long half life and tolerance-resistant action mechanism. 20-O-B-D-glucopyranosyl-20(S)-protopanaxatriol prevents the cell division by increasing the expression of AMPK (AMP-activated protein kinase) and by disrupting the mineral balance owing to the ability to trigger the Ca(+2) calcium over-load for the tumors, and permanently destroys the ability of cell division and the ability of the tumor to effectively synthesize cancerous cells, owing to the cytoplasmic stress induced.

20-O-B-D-glucopyranosyl-20(S)-protopanaxatriol, with its ability to trigger the early death of annexin V-positive cells, triggers the death of the cancerous cells and reduces the cell viability; and triggers the sub-G1 accumulation in the cancerous cells and induces the nucleus condensation, thereby causing the cell to lose its entire function.

20-O-B-D-glucopyranosyl-20(S)-protopanaxatriol disrupts the element and mineral balance of the tumor by inducing the cytosolic and mitochondrial calcium over-load, and disrupts the endogenous homeostasis of the tumor cells by inducing the protein kinase like endoplasmic reticulum kinase phosphorylation and eukaryotic initiation factor 2-alpha phosphorylation.

The composition according to the invention contains 20-O-B-D-glucopyranosyl-20(S)-protopanaxatriol, 20-O-B-D-glucopyranosyl-20(S)-B-D-protopanaxatriol, 20-O-glucopyranosyl-20(S)-protopanaxatriol.

Said formulation is obtained by a mixture of the aforesaid components according to the following ratios by weight:
33-50% 20-O-B-D-glucopyranosyl-20(S)-protopanaxatriol,
27-40% 20-O-B-D-glucopyranosyl-20(S)-B-D-protopanaxatriol,
40-10% 20-O-glucopyranosyl-20(S)-protopanaxatriol.

The composition is obtained from the aforesaid components selected from the aforesaid group and used according to the mentioned weight ratio ranges individually or in combinations.

Said invention also encompasses the use of said composition for treating the malignant tumors and the manufacture thereof for this purpose.

CLAIMS

1. A composition for use in treating the malignant tumors, said composition being obtained by the components selected from the group comprising 20-O-B-D-glucopyranosyl-20(S)-protopanaxatriol, 20-O-B-D-glucopyranosyl-20(S)-B-D-protopanaxatriol, 20-O-glucopyranosyl-20(S)-protopanaxatriol that are used individually or in combinations.

2. A composition according to Claim 1 characterized in that it comprises 33-50% by weight 20-O-B-D-glucopyranosyl-20(S)-protopanaxatriol.

3. A composition according to Claim 1 characterized in that it comprises 27-40% by weight 20-O-B-D-glucopyranosyl-20(S)-B-D-protopanaxatriol.

4. A composition according to Claim 1 characterized in that it comprises 40-10% by

weight 20-O-glucopyranosyl-20(S)-protopanaxatriol.

5. Use of the components according to Claims 1 to 4 obtained individually or in combinations from the group consisting of 20-O-B-D-glucopyranosyl-20(S)-protopanaxatriol, 20-O-B-D-glucopyranosyl-20(S)-B-D-protopanaxatriol, 20-O-glucopyranosyl-20(S)-protopanaxatriol for the manufacture of a composition for treating the malignant tumors.

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