**Description**

**A COMPOSITION COMPRISING COMPONENTS THAT EXHIBIT ANTI-CANCER CHARACTER BY SUPPRESSING THE BCL-2 EXPRESSION**

**Technical Field**

The invention relates to a composition formed for suppressing the bcl-2 expression and for exhibiting the anti-cancer character.

**State of the Art**

Cancer is the uncontrolled or abnormal growth and proliferation of the cells as a result of DNA damage in the cells. Although around 10.000 mutations occur in our body (in DNA) in a day, our immune system scans our body every millisecond and destroys the cancerous cells. Since it is impossible to determine to what extent and in what locations the cancerous cells produce metastasis, it is desirable to reinforce the immune system of the patients undergoing cancer therapy in order to enable said system to destroy these diffused cells.

According to the state of the art, the invention no. EP1255538B1 with classification “A61K 31/426” entitled “Use of 2-methyl-thiazolidin-2,4-dicarboxylic acid and/or physiologically compatible salts thereof as anti-cancer agents**”** relates to the use of 2-methyl-thiazolidin-2,4-dicarboxylic acid (2-MTDC) and/or physiologically compatible salts thereof for treating and/or preventing cancers.

Further, the invention no. EP1287854B1 entitled “Anti-cancer combinations of DMXAA and paclitaxel or docetaxel” relates to synergistic combinations of the compound 5,6-dimethylxanthenone-4-acetic acid (DMXAA) and paclitaxel or docetaxel, which have anti-tumor activity. More particularly, the invention is concerned with the use of such combinations in the treatment of cancer and pharmaceutical compositions containing such combinations.

Further, the invention no. TR2000/00837 with classification “C07D 239/94” entitled “Process and intermediates for preparing anti-cancer compositions” relates to the compounds of formula 1 and pharmaceutically acceptable salts and solvates thereof as well as the methods and intermediates for preparing said compositions, wherein R1, R2 and R15 are as defined herein. The above-mentioned compositions are useful for the treatment of the hyperproliferative disorders, such as cancer, in the mammals.

As a result, the presence of the need for a composition for suppressing the bcl-2 expression and for exhibiting anti-cancer character and the inadequacy of the existing solutions have made it necessary to perform an improvement in the relevant art.

**Object of the Invention**

In order to eliminate the disadvantages of the state of the art, an object of the invention is to enable the suppression of bcl-2.

Another object of the invention is to provide an increase in the expression of caspase-9.

Another object of the invention is to enable the suppression of cycline b1 level.

In order to achieve the aforesaid advantages, the invention is a composition for suppressing the bcl-2 expression and for exhibiting anti-cancer character, said composition being obtained by the components selected from the group comprising 3,7-bis(2-hydroxyethyl)**3,5,7-trihydroxy-2-(4-methoxyphenyl)-8-(3-methyl-2-buten-1-yl)-4H-1-benzopyran-4-one, 3,5-bis(2-methoxyethyl)3,5,7-trihydroxy-2-(4-methoxyphenyl)-8-(3-methyl-2-buten-1-yl)-4H-1-benzopyran-4-one** that are used individually or in combinations.

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 suppressing the bcl-2 expression and for exhibiting the anti-cancer character. Said composition enables the suppression of bcl-2, provides an increase in the expression of caspase-9, and enables the suppression of cycline b1 level.

The composition according to the invention contains 3,7-bis(2-hydroxyethyl)**3,5,7-trihydroxy-2-(4-methoxyphenyl)-8-(3-methyl-2-buten-1-yl)-4H-1-benzopyran-4-one, 3,5-bis(2-methoxyethyl)3,5,7-trihydroxy-2-(4-methoxyphenyl)-8-(3-methyl-2-buten-1-yl)-4H-1-benzopyran-4-one**.

Said composition is obtained by a mixture of the aforesaid components according to the following ratios by weight:

**1-99%** 3,7-bis(2-hydroxyethyl)**3,5,7-trihydroxy-2-(4-methoxyphenyl)-8-(3-methyl-2-buten-1-yl)-4H-1-benzopyran-4-one,**

**99-1% 3,5-bis(2-methoxyethyl)3,5,7-trihydroxy-2-(4-methoxyphenyl)-8-(3-methyl-2-buten-1-yl)-4H-1-benzopyran-4-one.**

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 suppressing the bcl-2 expression and for exhibiting anti-cancer character and the manufacture thereof for this purpose.

**CLAIMS**

1. A composition for suppressing the bcl-2 expression and for exhibiting anti-cancer character, said composition being obtained by the components selected from the group comprising 3,7-bis(2-hydroxyethyl)**3,5,7-trihydroxy-2-(4-methoxyphenyl)-8-(3-methyl-2-buten-1-yl)-4H-1-benzopyran-4-one, 3,5-bis(2-methoxyethyl)3,5,7-trihydroxy-2-(4-methoxyphenyl)-8-(3-methyl-2-buten-1-yl)-4H-1-benzopyran-4-one** that are used individually or in combinations.
2. A composition according to Claim 1 characterized in that it comprises 1-99% by weight 3,7-bis(2-hydroxyethyl)**3,5,7-trihydroxy-2-(4-methoxyphenyl)-8-(3-methyl-2-buten-1-yl)-4H-1-benzopyran-4-one**.
3. A composition according to Claim 1 characterized in that it comprises 99-1% by weight **3,5-bis(2-methoxyethyl)3,5,7-trihydroxy-2-(4-methoxyphenyl)-8-(3-methyl-2-buten-1-yl)-4H-1-benzopyran-4-one**.
4. Use of the components according to Claims 1 to 3 obtained individually or in combinations selected from the group consisting of 3,7-bis(2-hydroxyethyl)**3,5,7-trihydroxy-2-(4-methoxyphenyl)-8-(3-methyl-2-buten-1-yl)-4H-1-benzopyran-4-one, 3,5-bis(2-methoxyethyl)3,5,7-trihydroxy-2-(4-methoxyphenyl)-8-(3-methyl-2-buten-1-yl)-4H-1-benzopyran-4-one** for the manufacture of a composition for suppressing the bcl-2 expression and for exhibiting anti-cancer character.

**ABSTRACT**

**A COMPOSITION COMPRISING COMPONENTS THAT EXHIBIT ANTI-CANCER CHARACTER BY SUPPRESSING THE BCL-2 EXPRESSION**

The invention relates to a composition formed for suppressing the bcl-2 expression and for exhibiting the anti-cancer character.

No figure.