**Description**

**A COMPOSITION COMPRISING ANTI-BACTERIAL COMPONENTS THAT EXHIBIT THE CHARACTERISTIC OF SUPPRESSING dnaB HELICASE**

**Technical Field**

The invention relates to a composition formed for suppressing dnaB helicase.

**State of the Art**

Helicases comprise an enzyme class that is of vital importance for all the living beings. They act on the phosphodiester backbone of the nucleic acids to separate the nucleic acid strands (of DNA, RNA or RNA-DNA hybrids) that are connected to each other via hydrogen bonds. For this purpose, they use the energy released from the hydrolysis of ATP. Helicases exhibit certain degree of similarity of amino acid sequence; they have common sequence motifs. These sequences are related to ATP hydrolysis and the progress on the nucleic acid strand. The variable portion of the amino acid sequence relates to the unique properties of each helicase.

It is possible to attribute possible helicase activity to any protein based on the defined helicase motifs; however, the presence of a motif is not sufficient to confirm that a protein is a helicase. Preserved sequence motifs support the evolutionary homology among the enzymes.

According to the state of the art, the invention no. EP1600510B1 with classification "C12N 15/67" entitled "DNA sequences having anti-repressor activity" is concerned with the systematic elucidation and identification of regulatory sequences. The invention provides among others screenings and detection methods with which regulatory sequences can be identified. The invention further provides regulatory sequences and use thereof in various fields such as, but not limited to protein production, diagnostics, transgenic plants and animals, and the therapeutic field.

Further, the invention no. EP1470226B1 entitled "Control of gene expression using a complex of an oligonucleotide and a regulatory peptide” is a method for suppressing the expression of a selected gene in a cell the method comprising introducing into the cell a molecule comprising a nucleic acid binding portion which binds to a site or associated with the selected gene which site is present in a genome and an expression repressor portion, wherein the nucleic acid binding portion comprises an oligonucleotide or oligonucleotide mimic or analogue, and wherein the repressor portion comprises a polypeptide or peptidomimetic. Molecules for use in the methods of the invention are provided. The repressor may be a portion of a histone deacetylase or DNA methylase or polypeptide capable of recruiting a histone deacetylase or DNA methylase.

Further, the invention no. EP1453962B1 entitled "Inhibitor oligonucleotides and their use for specific repression of a gene encoding an androgen receptor" relates to a double-strand oligonucleotide characterized by including two complementary oligonucleotide sequences forming a hybrid, each including at one of their 3′ or 5′ ends, one to five unpaired nucleotides forming single-strand ends extending beyond the hybrid, one of the oligonucleotide sequences being substantially complementary to a target sequence belonging to a DNA or RNA molecule to be specifically repressed. The invention also relates to the use of said oligonucleotides in the pharmaceutical compositions for treating especially the cancer.

As a result, the presence of the need for a composition for suppressing dnaB helicase 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 dnaB helicase.

Another object of the invention is to enable the suppression of bacterial DNA methyltransferase.

Another object of the invention is to enable the suppression of cellulose synthase.

In order to achieve the aforesaid advantages, the invention is a composition for suppressing dnaB helicase, said composition being obtained by the components selected from the group comprising 2 5-dimethoxy-4-(2-fluoroethyl)-tinocrisposide, 2 5-dimethoxy-4-(2-fluoromethyl)-tinocrisposide 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 comprising anti-bacterial components formed for suppressing dnaB helicase. Said invention enables the suppression of dnaB helicase, the suppression of bacterial DNA methyltransferase and the suppression of cellulose synthase.

The composition according to the invention contains 2 5-dimethoxy-4-(2-fluoroethyl)-tinocrisposide, 2 5-dimethoxy-4-(2-fluoromethyl)-tinocrisposide.

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

1-99% 2 5-dimethoxy-4-(2-fluoroethyl)-tinocrisposide,

99-1% 2 5-dimethoxy-4-(2-fluoromethyl)-tinocrisposide.

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 dnaB helicase and the manufacture thereof for this purpose.

**CLAIMS**

1. A composition for suppressing dnaB helicase, said composition being obtained by the components selected from the group comprising 2 5-dimethoxy-4-(2-fluoroethyl)-tinocrisposide, 2 5-dimethoxy-4-(2-fluoromethyl)-tinocrisposide that are used individually or in combinations.
2. A composition according to Claim 1 characterized in that it comprises 1-99% by weight 2 5-dimethoxy-4-(2-fluoroethyl)-tinocrisposide.
3. A composition according to Claim 1 characterized in that it comprises 99-1% by weight 2 5-dimethoxy-4-(2-fluoromethyl)-tinocrisposide.
4. Use of the components according to Claims 1 to 3 obtained individually or in combinations selected from the group consisting of 2 5-dimethoxy-4-(2-fluoroethyl)-tinocrisposide, 2 5-dimethoxy-4-(2-fluoromethyl)-tinocrisposide for the manufacture of a composition for suppressing dnaB helicase.

**ABSTRACT**

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The invention relates to a composition comprising anti-bacterial components formed for suppressing dnaB helicase.

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