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CARBOSILANE DENDRIMERS WITH A POLYPHENOLIC NUCLEUS AND THEIR USE AS ANTIVIRALS

Patent
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Code

BIO_UAH_25

Application areas

- Biological Sciences, Biotechnology, Medicine, Health Science

Type of Collaboration

- Technical cooperation
- License agreement
- Manufacturing agreement
- Commercial agreement with technical assistance

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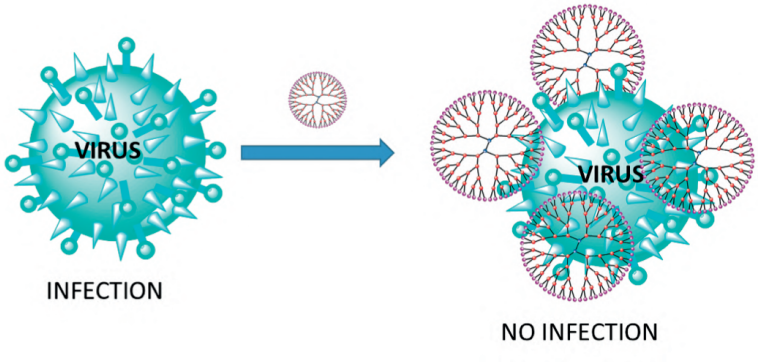

ABSTRACT

Dendrimers are hyperbranched molecules of well-defined threedimensional size and structure and possessing uniform chemical properties due in part to their low polydispersity. The nature and properties of the dendrimers can be controlled by acting on the core of the dendrimer, on the growth units or branches or on the periphery of dendrimers.

The dendrimers of this invention are of carbosilane and the surface is covered with different anionic groups, which give dendrimers antiviral properties.
The ability of dendrimers to interfere with the virus-cell interaction suggests that they could act as topical microbicides, that is, compounds applied to the vaginal or rectal mucous to prevent sexually transmitted diseases. Therefore, another aspect of the present invention relates to dendrimers as a medicine per se. This medicine being preferably for the prevention and/or treatment of diseases caused by viruses, bacteria or fungi. And more preferably when the disease is caused by strains of HIV.

As antivirals, these dendrimers prevent the correct process of virus adhesion to the target cell, as well as the infection and its corresponding production of new viral particles.

ADVANTAGES AND INNOVATIONS

The anti-inflammatory properties of these dendrimers are additional advantages with respect to other dendrimers with antiviral, antibacterial or antipyretic activity.

In addition to the prophylactic application, they have therapeutic effect especially in sexually transmitted diseases, by preventing the infection of cells not yet infected.
Their preparation as pharmaceutical formula can be very varied, being possible any solid composition (tablets, pills, capsules, granules, etc.) or liquid (gels, solutions, suspensions or emulsions). For oral, nasal, topical or parenteral administration, preferably the administration will be topical.

These dendrimers by themselves have biological activity as antiviral agents. They have in vitro activity against a variety of viruses.