



PHARMACEUTICAL PREPARATIONS FOR USE IN TREATMENT OF VIRAL HEPATITIS C

Ideas on utilisation

The subject of this offer is an invention in the form of: (i) a group of compounds - peptide derivatives of diaryl esters of 1-aminoalkylphosphonic acids that can be used as inhibitors of NS3/4A protease expressed by a human HCV, (ii) pharmaceutical composition with the use of the above mentioned compounds, (iii) application of a group of compounds in preventive treatment and the therapy of viral hepatitis C.

The use of inhibitors of an irreversible inhibition mechanism in the treatment of viral hepatitis C allows for efficient and successful improvement of a therapy by, among others, shortening the time of medicine administration and therapy reduction to administering only one medicine.

The invention has been submitted to the Patent Office for legal protection by filing a patent application entitled Antiviral pharmaceutical preparation for use in treatment of hepatitis C, application number: PCT/IB2015/054670.

The compounds have been tested and received positive results with regard to their activity affecting HCVproteases.

Moreover, the compounds have been tested to determine their toxicity and were granted a certificate with a mark indicating low cytotoxicity potential, in accordance with the IC50 parameter. This test was conducted in an accredited laboratory, while keeping good laboratory practices (GLP) for chemical substances cytotoxicity tests.

Potential adopters of technology

The subject of this offer includes new peptide derivatives of diaryl esters of 1-aminoalkylphosphonic acids that can be used as NS3/4A protease inhibitor in preventive treatment and the therapy of viral hepatitis C (HCV).

Advantages of technology

Innovative character of this invention results from the following conditions:

1. The relation between an improved activity and irreversible mechanism of operations demonstrated by the compounds causing the inhibition of the activity of NS3/4A protease originating from various HCV mutations.
2. Stability of the most active complex from the said group of compounds exceeds 60 hours ($t_{1/2} > 60$), whereas this value for one of the most popular commercial inhibitors is less than 1 hour.
3. Expected significant increase of efficiency of viral hepatitis treatment - approximately up to 90% of cases (currently available commercial therapies demonstrate 50-60% efficiency).
4. Economical efficiency of mass production resulting from Production material availability.

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Market and context of technology

The invention will be used in the production of effective medicine for viral hepatitis preventive and regular treatment.

Primary recipients of this technology are pharmaceutical and biotechnological companies working on new methods of fighting infectious diseases (manufacturers of innovative medicines).

Preconditions in adopting enterprises

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