[0012] In another ~~aspect~~ embodiment of the present ~~invention~~disclosure, it provides a method for inhibiting positive-sense single-stranded RNA picornavirus, including: administering to a subject in need thereof an effective amount of P2X receptor antagonists.

[0013] In a preferred embodiment, the objects are mammals infected by viruses, including human, monkeys, or mice, etc. infected by enterovirus 71 or Coxsackie virus, preferably, the subject having HFMD.

[0014] In another preferred embodiment, the P2X receptor antagonist is selected from the group consisting of: PPADS, iso-PPADS, PPNDS, Suramin, NF023, TNP-ATP, NF279, NF157, Evans Blue, and/or analogs thereof or derivatives thereof, and/or pharmaceutically acceptable salts thereof.

[0015] In another preferred embodiment, the virus is enterovirus.

[0016] In another preferred embodiment, the virus is enterovirus A.

[0017] In another preferred embodiment, the virus is human enterovirus 71 and Coxsackie virus.

[0018] More preferably, the virus is human enterovirus 71, C4 subtype and Coxsackie virus A16 subtype.

[0019] Due to the disclosure herein, other aspects of the present ~~invention~~ disclosure will be apparent to those skilled in the art.

BRIEF DESCRIPTION OF DRAWINGS

[0020] FIG. 1 shows, at different E02 concentrations, EV71 clinical isolates were used to infect RD cells, at an MOI of 0.1. After incubation for 46 h, viral RNA in culture supernatant was extracted. Relative EV71 viral load was determined by quantitative RT-PCR. Numbers in columns 2, 3, 4 of the table represent results obtained from three repeated tests. Right panel shows the mean values of three results.

[0021] FIG. 2 shows, at different E02 concentrations, EV71 in 10-fold serial dilutions were used to infect RD cells. After incubation for 3-4 days, CPE (cytopathic effect) was observed under optical microscope and stained with crystal violet to calculate 50% tissue culture infective dose ($TCID_{50}$).

CLAIMS

1. Use of a P2X receptor antagonist for the preparation of a composition for inhibiting a positive-sense single-stranded RNA picornavirus.

2. The use of claim 1, characterized in that, for the preparation of a composition for preventing, alleviating, or treating hand foot and mouth disease.

3. The use of claim 1 or 2, characterized in that, the composition is used for: systemic administration or parenteral administration; preferably, the composition is used for oral administration, intravenous injection, intramuscular injection, or inhalation.

~~4. A method for the inhibition of a positive-sense single-stranded RNA picornavirus, comprising: administering to a subject in need thereof an effective amount of a P2X receptor antagonist.~~

~~5. The method of claim 4, characterized in that, the subject is a mammal infected by a virus, comprising a human, a monkey, or a mouse, etc. infected by enterovirus 71 or Coxsackie virus, preferably, the subject having hand foot and mouth disease.~~

6~~4~~. The use of claim 1 ~~or the method of claim 4~~, characterized in that, the P2X receptor antagonist is selected from the group consisting of: PPADS, iso-PPADS, PPNDS, Suramin, NF023, TNP- ATP, NF279, NF157, Evans Blue, and/or an analog thereof or a derivative thereof, and/or a pharmaceutically acceptable salt thereof.

7~~5~~. The use of claim 1 ~~or the method of claim 4~~, characterized in that, the virus is an enterovirus.

8~~6~~. The use of claim 1 ~~or the method of claim 4~~, characterized in that, the virus is an enterovirus A.

9~~7~~. The use of claim 1 ~~or the method of claim 4~~, characterized in that, the virus is a human enterovirus 71 and a Coxsackie virus.