

**METHOD FOR OPTIMIZING VIRUS MEMBRANE FUSION
INHIBITOR, BROAD-SPECTRUM ANTI-CORONAVIRUS
LIPOPEPTIDE AND USE THEREOF**

5 Abstract

The present disclosure relates to a method for optimizing a virus membrane fusion inhibitor, a broad-spectrum anti-coronavirus lipopeptide and use thereof. The present disclosure provides compounds or pharmaceutically acceptable salts thereof or derivatives thereof, wherein the compounds are shown in formula (I) or formula (II), X₁ is an amino-terminal protecting group; X₂ is a polypeptide with an amino acid sequence of (EAAAK)_n or A[(EAAAK)_n]A; X₃ is lysine or cysteine or 2,3-diaminopropionic acid or ornithine or 2,4-diaminobutyric acid or 2,7-diaminoheptonic acid; X₄ is a lipophilic compound group modified on X₃ or X₄ is a lipophilic compound group modified on K in X₂; X₅ is a carboxyl-terminal protecting group. The compounds of the present disclosure have a stable property, are highly efficient and broad-spectrum novel coronavirus membrane fusion inhibitors, and used in preparation of pharmaceutical compositions for preventing and treating a disease caused by a coronavirus. The pharmaceutical compositions are used for preventing and treating the diseases caused by the coronavirus.



The most illustrative drawings: Figure 1