Inhibitors Of Viral Proteases

Tech ID: 34502 / UC Case 2024-169-0

VALUE PROPOSITION

There is a need for cost-effective COVID therapies that are more accessible in delivery, i.e. one-time dosing and avoiding intravenous (IV) delivery. Additional factors that remain to be improved from the initial COVID medications include suboptimal potency, toxicity, imperfect pharmacokinetics (PK) properties (low oral drug exposure, poor oral bioavailability, stability in human liver microsomes), and drug resistant variants to Nirmatrelvir.

TECHNOLOGY DESCRIPTION

The UCSF investigators have developed an oral non-peptidic antiviral therapy with a novel mechanism of action that does not interact with CYP3A4 (thus obviating the need for concurrent ritonavir and obviating the drug interactions of Paxlovid). Studies with this invention have reduced viral titers after three oral doses and outperformed nirmatrelvir at six-fold higher dose. The medication has higher potency and thus likely only requires one-time dosing and is orally administered. The medication has also shown activity against Nirmatrelvir resistant variants.

PATENT STATUS

Patent Pending

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OTHER INFORMATION

KEYWORDS

COVID, Infectious disease, antiviral, non-peptidic, oral, small molecule, therapeutic

CATEGORIZED AS

- **Biotechnology**
  - Health
  - **Medical**
    - Disease: Infectious Diseases
    - Therapeutics

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