

Potent Protease Inhibitors for Treatment of COVID-19

A new class of drug compounds potentially inhibits the SARS-CoV-2 3CL-pro enzyme, effectively blocking viral replication for use in COVID-19 treatment and drug discovery.

Researchers at Purdue University have developed compounds that inhibit SARS-CoV-2 replication and outperform an approved therapy. Pfizer's Paxlovid and Merck's Molnupiravir are the only antiviral drugs available for individuals with severe COVID-19 symptoms. Purdue researchers are designing more potent compounds to address the continued need for effective COVID-19 therapies. The antiviral drugs developed by the Purdue researchers are 3CLprotease inhibitors that potentially block SARS-CoV-2 replication. The best of these compounds are more potent than Pfizer's Paxlovid in enzyme inhibition and antiviral assays. The researchers expect the compounds to have drug-like properties.

Technology Validation: Enzyme inhibition and antiviral assays

Advantages:

- Effective inhibition of 3CLpro enzyme
- Potent antiviral activity

Applications:

- COVID-19 treatment

TRL: 3

Intellectual Property:

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Category

Pharmaceuticals/Other
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