

Modified Alpha-ketoamide Derivates as anti-Mpro inhibitors for Covid-19 treatment

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Categories:

- Chemistry and Chemical Analysis
- Pharmaceuticals

Keywords:

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- Coronavirus
- COVID-19
- Inhibitors
- Medicinal Chemistry
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- Protease Inhibitor

Researchers at Purdue University have developed a new class of compounds that target the main protease (Mpro) in SARS-COV-2/Covid-19 infection.

With the world facing the coronavirus (Covid-19) pandemic, there is an immediate need for intensive protection from the severe acute respiratory illness associated with the disease. Currently, there is no effective pharmaceutical treatment available for SARS-COV-2 infection. These compounds developed by Purdue University researchers are newer modified versions of previous alpha-ketoamide derivatives that have shown potency as anti-viral agents against Covid-19. One of the compounds identified showed potent activity (IC₅₀= 4.2micromolar) in SARS-COV-2 infected Vero-E6 cells.

Advantages:

- Excellent Antiviral Activity Against SARS-CoV-2 in Mammalian Cells
- Improved Drug-Like Properties

Potential Applications:

- Treatment of Covid-19
- Treatment of Coronavirus
- Pharmaceutical Research & Development

Technology Validation: The compounds have been validated in Vero-E6 cells.

Recent Publication:

"A small molecule compound with an indole moiety inhibits the main protease of SARS-CoV-2 and blocks virus replication"

Nature Communication

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People:

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