COMPOUNDS FOR THE TREATMENT OF SARS

Novel class of high-potency antiviral compounds that inhibit viral replication to treat COVID-19 and other coronaviruses with better efficacy than current treatments.

Purdue University researchers have developed a series of compounds that potently inhibit an enzyme, 3-chymotrypsin like protease (3CLpro), essential for various coronaviruses, including those causing severe acute respiratory syndrome (SARS) and COVID-19. While the COVID-19 respiratory illness is specifically caused by the SARS-CoV-2 strain, various other coronaviruses also pose significant health threats. Despite the existence of therapeutics authorized for emergency use against coronaviruses, challenges remain with efficacy, ease of administration, and recurrence of illnesses.

Purdue researchers have created a novel class of compounds capable of inhibiting 3CLpro, a key protease found in many coronaviruses essential for efficient viral replication, including SARS and SARS-CoV-2. The compounds presented are chemically distinct from the current FDA-approved 3CLpro inhibitors for SARS-CoV-2. Moreover, they demonstrate enhanced potency in inhibiting 3CLpro and exhibit superior antiviral activity when compared to approved compounds.

TRL: 3

Intellectual Property:

Provisional-Gov. Funding, 2021-05-28, United States | NATL-Patent, 2022-05-22, Europe | PCT-Gov. Funding, 2022-05-27, WO | NATL-Patent, 2023-11-28, United States

Keywords: novel compounds, 3-chymotrypsin like protease, 3CLpro inhibitor, coronavirus, SARS, COVID-19, antiviral activity, viral replication, protease inhibitor, therapeutic compounds

Technology ID
2021-GHOS-69511

Category
Biotechnology & Life Sciences/Biomarker Discovery & Diagnostics
Pharmaceuticals/Other

Authors
Arun K Ghosh
Monika Yadav

Further information
Joe Kasper
JRKasper@prf.org

Nathan Smith
nesmith@prf.org

View online