PURDUE INNOVATES | Office of Technology Commercialization

Discovery of Potent Anti-Mpro Inhibitors for Covid-19 Treatment

A novel anti-Mpro inhibitor derived from Chloropyridyl ester derivatives offers effective, Remdesivir-comparable antiviral potency against SARS-COV-2, with applications in COVID-19 treatment and vaccine development.

Researchers at Purdue University have discovered that a potent anti-Mpro inhibitor to be used to treat COVID-19. The anti-Mpro inhibitor is derived from Chloropyridyl ester derivatives. These inhibitors have shown that they have a strong antiviral potency against SARS-COV-2 in VERO cells. VERO cells are a lineage of cell cultures that have been derived from the kidneys of an African green monkey. This inhibitor can block COVID-19 in cell culture assay. This technology can be used to create COVID-19 vaccines. It can also be used in the treatment of COVID-19 patients so that it does not further affect them. This approach is just as effective as Remdesivir, a drug that has shown to help treat patients with COVID-19.

Potential Application:

-Treating Covid-19

-Preventing Covid-19

-Covid-19 Vaccines

Technology Validation: Tested in vero cells.

TRL: 3

Intellectual Property:

Provisional-Gov. Funding, 2020-04-10, United States | Provisional-Gov. Funding, 2020-12-01, United States | NATL-Patent, 2021-02-09, Russia | Foreign, Non-PCT, 2021-02-09, Hong Kong | PCT-Gov. Funding, 2021-02-09, WO | NATL-Patent, 2021-02-09, Australia | NATL-Patent, 2021-02-09, Brazil | NATL-Patent, 2021-02-09, Canada | NATL-Patent, 2021-02-09, China | NATL-Patent, 2021-02-09, Europe | NATL-Patent, 2021-02-09, India | NATL-Patent,

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Biotechnology & Life Sciences/Biomarker Discovery & Diagnostics
Pharmaceuticals/Drug Discovery & Development
Biotechnology & Life Sciences/Analytical & Diagnostic Instrumentation
Pharmaceuticals/Small Molecule Therapeutics
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Authors
Arun K Ghosh
Hiroaki Mitsuya

Further information
Joe Kasper
JRKasper@prf.org

Nathan Smith
nesmith@prf.org

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