PURDUE INNOVATES | Office of Technology Commercialization

Potent HIV Protease Inhibitor Against HIV/AIDS

Novel class of potent inhibitors developed to fight emerging multidrug-resistant HIV-1 variants, offering better drug-resistant properties than current ART options.

HIV-1 protease inhibitors are the key component of current antiretroviral treatment (ART) of HIV infection and AIDS. The majority of today's FDA approved protease inhibitors do not show efficacy because of the emergence of drug resistance. Darunavir, a leading protease inhibitor drug, is widely used for the treatment of patients harboring drug-resistant HIV variants. However, after long-term use, darunavir-resistant HIV-1 variants are emerging and there are very limited options to treat these patients.

Researchers at Purdue University have developed a new class of inhibitors that have shown exceptional potency against multidrug resistant (MDR) HIV-1 variants. The developed compounds are novel and show better drug-resistant properties.

Advantages:

-Fight drug-resistant HIV-1 variants

-New compounds show better drug-resistant properties

Potential Applications:

-Pharmaceutical industry

-HIV/AIDS treatment

TRL: 3

Intellectual Property:

Provisional-Patent, 2016-11-09, United States | EP-Patent, 2017-11-09, Belgium | EP-Patent, 2017-11-09, Ireland | NATL-Patent, 2017-11-09, Japan | NATL-Patent, 2017-11-09, European Patent | EP-Patent, 2017-11-09,

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Germany | EP-Patent, 2017-11-09, France | EP-Patent, 2017-11-09, Denmark | EP-Patent, 2017-11-09, United Kingdom | EP-Patent, 2017-11-09, Switzerland | PCT-Patent, 2017-11-09, WO | NATL-Patent, 2019-05-09, United States | DIV-Gov. Funding, 2021-05-04, United States | DIV-Patent, 2022-06-21, Europe