

Compounds with Potential Use in Development of Medications for the Treatment of Multidrug Resistant HIV-1

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Categories:

- Chemistry and Chemical Analysis
- Pharmaceuticals

Keywords:

- Antivirals
- Drug Development
- Drug Resistance
- Enzymes
- HIV/AIDS
- Inhibitors
- Pharmaceuticals
- Pharmacology
- Protease Inhibitors

HIV/AIDS is one of the top deadly diseases worldwide that is still common despite progress in healthcare. Human immunodeficiency virus (HIV) causes acquired immune deficiency syndrome (AIDS), which is a complex disease that includes gradual destruction of the immune system. Many current therapies that are available for the management of the disease are limited by their duration of action, side effect profile and toxicity, and their extensive pill burden. Hence, there is a need to find newer therapies for HIV/AIDS.

Researchers at Purdue University have developed a series of non-peptide HIV-1 protease inhibitors that incorporate a basic amine function in the inhibitor structure. These compounds are novel and show enzyme inhibition and antiviral activity at subnanomolar levels. In addition, they have been shown to have potent activity against multidrug resistant HIV-1 strains and are expected to have improved metabolic stability and pharmacokinetic properties. These compounds have potential use in the pharmaceutical industry for the development of superior HIV medications and in healthcare for the treatment of HIV/AIDS.

Advantages:

- HIV-1 protease inhibitor
- Potent activity against resistant strains
- Improved stability and pharmacokinetics

Potential Applications:
-Pharmaceutical industry
-Drug development
-Medical/Healthcare
-Treatment of HIV/AIDS

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Intellectual Property:

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