



PROTEASE INHIBITORS IN DEVELOPMENT

NOTE: several fact sheets describe drugs that are being tested against HIV:

- Fact sheet 410: nucleoside analog reverse transcriptase inhibitors (nukes)
- Fact sheet 430: non-nucleoside analog reverse transcriptase inhibitors (NNRTIs or non-nukes)
- Fact sheet 460: attachment and fusion inhibitors
- Fact sheet 470: new classes of antiretroviral (ARV) drugs
- Fact sheet 480: immune therapies

These drugs have not been approved by the Food and Drug Administration (FDA) for use against HIV.

PROTEASE INHIBITORS

These drugs block the protease enzyme. When new viral particles break off from an infected cell, protease cuts long protein strands into the parts needed to assemble a mature virus. When protease is blocked, the new viral particles cannot mature.

PROTEASE INHIBITORS IN DEVELOPMENT

Protease inhibitors being tested in humans include Brecanavir (GW640385) and PPL-100. Several firms are trying to develop a new type of protease inhibitor that will not be cross-resistant with existing drugs.

Brecanavir (GW640385) by GlaxoSmithKline and Vertex (also known as VX-385) shows power against the wild type virus and virus that is already resistant to current protease inhibitors. It may be used in a relatively low dose that could mean lower side effects, but will be boosted with ritonavir. It is in Phase II trials. Side effects are mild or moderate; the most common is rash. Phase III trials are scheduled for 2006.

Prezista™ (Darunavir TMC114) by Tibotec was approved in June 2006. See fact sheet 450.

PPL-100, developed by Ambrilla/Procyon Biopharma, has been bought by Merck. PPL-100 is being studied in Phase II trials.

Tipranavir (Aptivus, PNU-140690) by Boehringer Ingelheim was approved by the FDA in 2005. See fact sheet 449 for more information.

PIs NO LONGER IN DEVELOPMENT

The following drugs are no longer being developed for use against HIV:

L-756,423 by Merck

Mozenavir (DMP450) by Triangle Pharmaceuticals

RO033-4649 by Roche

Revised November 14, 2006