



DRUG NAMES AND MANUFACTURERS

None of these drugs can kill the HIV virus, but each class slows down the multiplication of the virus (replication) in a particular way.

1. Reverse transcriptase inhibitors (“Nukes”): The first anti-HIV drugs. They block reverse transcription (the creation of viral DNA from RNA) by providing “decoy” building blocks that interrupt the process. Most are nucleoside analogs; tenofovir is a nucleotide analog.

Year approved*	Generic Name	Trade Name	Also known as:	Manufacturer
1987	Zidovudine	Retrovir	AZT, ZDV	GlaxoSmithKline
1991	Didanosine	Videx	ddl	Bristol-Myers Squibb, Barr Laboratories (generic)
1992	Zalcitabine, Hivid (ddC, dideoxycytidine) by Roche: Manufacture discontinued in 2006			
1994	Stavudine	Zerit	d4T	Bristol-Myers Squibb
1995	Lamivudine	Epivir	3TC	GlaxoSmithKline
1997	Zidovudine/Lamivudine	Combivir	Combines AZT & 3TC	GlaxoSmithKline
1998	Abacavir	Ziagen	ABC	GlaxoSmithKline
2000	Zidovudine/Lamivudine/Abacavir	Trizivir	Combines AZT, 3TC, Abacavir	GlaxoSmithKline
2001	Tenofovir	Viread	TDF	Gilead Sciences
2003	Emtricitabine	Emtriva	FTC	Gilead Sciences
2004	Abacavir/Lamivudine	Epzicom	Combines Ziagen and 3TC	GlaxoSmithKline
2004	Emtricitabine/Tenofovir	Truvada	Combines Emtriva and Viread	Gilead Sciences

Other nukes in human trials: Elvucitabine (ACH-126,443, beta-L-Fd4C) by Achillion Pharmaceuticals, MIV-210 (FLG) by GlaxoSmithKline and Medivir, Racivir by Pharmasset Inc. and SPD754 by Shire Pharmaceuticals.

2. Non-nucleoside reverse transcriptase inhibitors: these also interrupt reverse transcription, by binding to the reverse transcriptase enzyme and restricting its activity.

1996	Nevirapine	Viramune	NVP	Boehringer Ingelheim
1997	Delavirdine	Rescriptor	DLV	Pfizer/Agouron
1998	Efavirenz	Sustiva	EFV	Bristol-Myers Squibb
2008	Etravirine	Intence	ETR	Tibotec

Other NNRTI's in human trials: +/-Calanolide A by Sarawak MediChem Pharmaceuticals, GW5634 by GlaxoSmithKline, MIV-150 by Medivir, and Etravirine (TMC125) and TMC128 by Tibotec.

2a. Combination medication: includes a non-nucleoside reverse transcriptase inhibitor and two nucleoside reverse transcriptase inhibitors.

2006	Efavirenz/emtricitabine/tenofovir	Atripla	Sustiva, Emtriva and Viread	Bristol-Myers Squibb and Gilead
------	-----------------------------------	---------	-----------------------------	---------------------------------

3. Protease inhibitors: Block the action of protease, an enzyme that cuts HIV protein chains into specific proteins needed to assemble a new copy of the virus. NOTE: when you see “/r” after the name of a protease inhibitor, that means it is boosted with a small dose of ritonavir. For example, SQV/r means saquinavir boosted with ritonavir.

1995	Saquinavir	Invirase	SQV	Roche
1996	Ritonavir	Norvir	RTV	Abbott
1996	Indinavir	Crixivan	IDV	Merck
1997	Nelfinavir	Viracept	NFV	Pfizer/Agouron
1997	Saquinavir	Fortovase Manufacture discontinued in 2006; Roche		
1999	Amprenavir	Agenerase Manufacture discontinued in 2007		
2000	Lopinavir	Kaletra, Aluvia	LPV	Abbott
2003	Atazanavir	Reyataz	ATV	Bristol-Myers Squibb
2003	Fosamprenavir	Lexiva	FPV	GlaxoSmithKline
2005	Tipranavir	Aptivus	TPV	Boehringer Ingelheim
2006	Darunavir	Prezista	DRV	Tibotec

Other PIs in human trials: GW640385 by GlaxoSmithKline, and RO033-4649 by Roche.

4. Integrase inhibitors: Block the action of integrase, an enzyme that inserts the viral DNA into the infected cell's DNA strands.

2007	Raltegravir	Isentress	RGV	Merck
------	-------------	-----------	-----	-------

Other integrase inhibitors in human trials: Elvitegravir (Gilead 9137) completed a Phase II study. GSK364735 by GlaxoSmithKline is in a Phase II study.

5. Attachment and Fusion inhibitors: Prevent HIV from attaching to a cell.

2003	Enfuvirtide	Fuzeon	T-20	Trimeris/Roche
2007	Maraviroc	Selzentry, Celsentri	MVC	Pfizer

Other fusion and attachment inhibitors in human trials include: AMD070 by AnorMED, BMS-378806 by Bristol-Myers Squibb, INCB9471 by Incyte, PRO 140 by Progenics Pharmaceuticals, Inc. Vicriviroc (SCH-D) by Schering, TAK-220 by Takeda, and TNX-355 by Tanox.

6. Antisense drugs: These are a “mirror image” of part of the HIV genetic code that locks onto the virus to prevent it from functioning.

One antisense drug, HGTV43 by Enzo Therapeutics, is in Phase I trials.

7. Immune Modulators: Use the body's chemical messengers to stimulate the immune response. Over a dozen immune modulators are being studied in humans. See Fact Sheet 480 for more information.