

**CENTER FOR DRUG EVALUATION AND RESEARCH**

**Application Number 21-007**

**21-039**

**FINAL PRINTED LABELING**

## AGENERASE™

(amprenavir)

Capsules

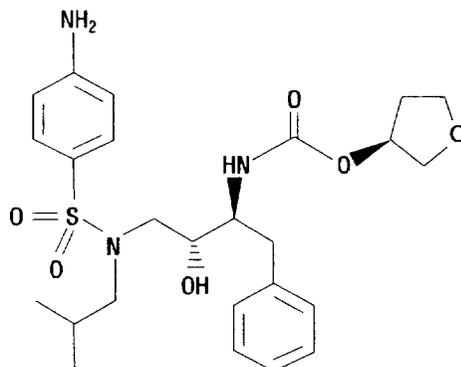
## AGENERASE™

(amprenavir)

Oral Solution

AGENERASE (amprenavir) in combination with other antiretroviral agents is indicated for the treatment of HIV-1 infection. This indication is based on analyses of plasma HIV RNA levels and CD4 cell counts in controlled studies of up to 24 weeks in duration. At present, there are no results from controlled trials evaluating long-term suppression of HIV RNA or disease progression with AGENERASE.

**DESCRIPTION:** AGENERASE (amprenavir) is an inhibitor of the human immunodeficiency virus (HIV) protease. The chemical name of amprenavir is (3*S*)-tetrahydro-3-furyl *N*-[(1*S*,2*R*)-3-(4-amino-*N*-isobutylbenzenesulfonamido)-1-benzyl-2-hydroxypropyl]carbamate. Amprenavir is a single stereoisomer with the (3*S*)(1*S*,2*R*) configuration. It has a molecular formula of C<sub>25</sub>H<sub>35</sub>N<sub>3</sub>O<sub>6</sub>S and a molecular weight of 505.64. It has the following structural formula:



Amprenavir is a white to cream-colored solid with a solubility of approximately 0.04 mg/mL in water at 25°C.

**AGENERASE Capsules** are available for oral administration in strengths of 50 and 150 mg. Each capsule contains the inactive ingredients d-alpha tocopheryl polyethylene glycol 1000 succinate (TPGS), polyethylene glycol 400 (PEG 400), and propylene glycol. The capsule shell contains the inactive ingredients d-sorbitol and sorbitans solution, gelatin, glycerin, and titanium dioxide. The soft gelatin capsules are printed with edible red ink. Each 150-mg AGENERASE Capsule contains 109 IU vitamin E

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in the form of d-alpha tocopheryl polyethylene glycol 1000 succinate (TPGS). The total amount of vitamin E in the recommended daily adult dose of AGENERASE is 1744 IU.

**AGENERASE Oral Solution** is for oral administration. One milliliter (1 mL) of AGENERASE Oral Solution contains 15 mg of amprenavir in solution and the inactive ingredients acesulfame potassium, artificial grape bubblegum flavor, citric acid (anhydrous), TPGS, menthol, natural peppermint flavor, polyethylene glycol 400 (PEG 400), propylene glycol, saccharin sodium, sodium chloride, and sodium citrate (dihydrate). Solutions of sodium hydroxide and/or diluted hydrochloric acid may have been added to adjust pH. Each mL of AGENERASE Oral Solution contains 46 IU vitamin E in the form of d-alpha tocopheryl polyethylene glycol 1000 succinate.

**MICROBIOLOGY:**

**Mechanism of Action:** Amprenavir is an inhibitor of HIV-1 protease. Amprenavir binds to the active site of HIV-1 protease and thereby prevents the processing of viral gag and gag-pol polyprotein precursors, resulting in the formation of immature non-infectious viral particles.

**Antiviral Activity *in Vitro*:** The *in vitro* antiviral activity of amprenavir was evaluated against HIV-1 IIIB in both acutely and chronically infected lymphoblastic cell lines (MT-4, CEM-CCRF, H9) and in peripheral blood lymphocytes. The 50% inhibitory concentration (IC<sub>50</sub>) of amprenavir ranged from 0.012 to 0.08 μM in acutely infected cells and was 0.41 μM in chronically infected cells (1 μM = 0.50 mcg/mL). Amprenavir exhibited synergistic anti-HIV-1 activity in combination with abacavir, zidovudine, didanosine, or saquinavir, and additive anti-HIV-1 activity in combination with indinavir, nelfinavir, and ritonavir *in vitro*. These drug combinations have not been adequately studied in humans. The relationship between *in vitro* anti-HIV-1 activity of amprenavir and the inhibition of HIV-1 replication in humans has not been defined.

**Resistance:** HIV-1 isolates with a decreased susceptibility to amprenavir have been selected *in vitro* and were also obtained from patients treated with amprenavir. Genotypic analysis of isolates from amprenavir-treated patients showed mutations in the HIV-1 protease gene resulting in amino acid substitutions primarily at positions M46I/L, I47V, I50V, I54L/V, and I84V as well as mutations in the viral protease p1/p6 cleavage site. Phenotypic analysis of HIV-1 isolates from some patients on amprenavir monotherapy for 8 to 12 weeks showed a 5- to 10-fold decrease in susceptibility to amprenavir *in vitro* compared to baseline. Phenotypic analysis of HIV-1 isolates from 28 patients treated with amprenavir in combination with zidovudine and lamivudine for 16 to 36 weeks identified isolates from six patients that exhibited a 5- to 11-fold decrease in susceptibility to amprenavir *in vitro* compared to wild-type virus. Clinical isolates that exhibited a decrease in amprenavir susceptibility harbored amprenavir-associated mutations. The clinical relevance of the genotypic and phenotypic changes associated with amprenavir therapy has not been established.

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**Cross-Resistance:** Varying degrees of HIV-1 cross-resistance among protease inhibitors have been observed. The potential for protease inhibitor cross-resistance in HIV-1 isolates from amprenavir-treated patients has not been fully evaluated.

**CLINICAL PHARMACOLOGY:**

**Pharmacokinetics in Adults:** The pharmacokinetic properties of amprenavir have been studied in asymptomatic, HIV-infected adult patients after administration of single oral doses of 150 to 1200 mg and multiple oral doses of 300 to 1200 mg twice daily.

**Absorption and Bioavailability:** Amprenavir was rapidly absorbed after oral administration in HIV-1-infected patients with a time to peak concentration ( $t_{max}$ ) typically between 1 and 2 hours after a single oral dose. The absolute oral bioavailability of amprenavir in humans has not been established.

Increases in the area under the plasma concentration versus time curve (AUC) after single oral doses between 150 and 1200 mg were slightly greater than dose-proportional. Increases in AUC were dose-proportional after 3 weeks of dosing with doses from 300 to 1200 mg twice daily. The pharmacokinetic parameters after administration of amprenavir 1200 mg b.i.d. for 3 weeks to HIV-infected subjects are shown in Table 1.

**Table 1: Average (%CV) Pharmacokinetic Parameters After 1200 mg b.i.d. of Amprenavir (n = 5)**

$C_{max}$ (mcg/mL)	$t_{max}$ (hours)	AUC <sub>0-12</sub> (mcg•h/mL)	$C_{avg}$ (mcg/mL)	$C_{min}$ (mcg/mL)	CL/F (mL/min/kg)
5.36 (62%)	1.9 (51%)	18.5 (63%)	1.54 (63%)	0.28 (52%)	31 (132%)

The relative bioavailability of AGENERASE Capsules and Oral Solution was assessed in healthy adults. AGENERASE Oral Solution was 14% less bioavailable compared to the capsules.

**Effects of Food on Oral Absorption:** The relative bioavailability of AGENERASE Capsules was assessed in the fasting and fed states in healthy volunteers (standardized high-fat meal: 967 kcal, 67 grams fat, 33 grams protein, 58 grams carbohydrate). Administration of a single 1200-mg dose of amprenavir in the fed state compared to the fasted state was associated with changes in  $C_{max}$  (fed:  $6.18 \pm 2.92$  mcg/mL, fasted:  $9.72 \pm 2.75$  mcg/mL),  $t_{max}$  (fed:  $1.51 \pm 0.68$ , fasted:  $1.05 \pm 0.63$ ), and AUC<sub>0-∞</sub> (fed:  $22.06 \pm 11.6$  mcg•h/mL, fasted:  $28.05 \pm 10.1$  mcg•h/mL). AGENERASE may be taken with or without food, but should not be taken with a high fat meal (see DOSAGE AND ADMINISTRATION).

**Distribution:** The apparent volume of distribution ( $V_z/F$ ) is approximately 430 L in healthy adult subjects. *In vitro* binding is approximately 90% to plasma proteins. The high affinity binding protein for amprenavir is alpha<sub>1</sub>-acid glycoprotein (AAG). The partitioning of amprenavir into erythrocytes is low, but

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increases as amprenavir concentrations increase, reflecting the higher amount of unbound drug at higher concentrations.

**Metabolism:** Amprenavir is metabolized in the liver by the cytochrome P450 CYP3A4 enzyme system. The two major metabolites result from oxidation of the tetrahydrofuran and aniline moieties. Glucuronide conjugates of oxidized metabolites have been identified as minor metabolites in urine and feces.

**Elimination:** Excretion of unchanged amprenavir in urine and feces is minimal. Approximately 14% and 75% of an administered single dose of <sup>14</sup>C-amprenavir can be accounted for as radiocarbon in urine and feces, respectively. Two metabolites accounted for >90% of the radiocarbon in fecal samples. The plasma elimination half-life of amprenavir ranged from 7.1 to 10.6 hours.

**Special Populations: Hepatic Insufficiency:** AGENERASE has been studied in adult patients with impaired hepatic function using a single 600-mg oral dose. The AUC<sub>0-∞</sub> was significantly greater in patients with moderate cirrhosis (25.76 ± 14.68 mcg•h/mL) compared with healthy volunteers (12.00 ± 4.38 mcg•h/mL). The AUC<sub>0-∞</sub> and C<sub>max</sub> were significantly greater in patients with severe cirrhosis (AUC<sub>0-∞</sub>: 38.66 ± 16.08 mcg•h/mL; C<sub>max</sub>: 9.43 ± 2.61 mcg/mL) compared with healthy volunteers (AUC<sub>0-∞</sub>: 12.00 ± 4.38 mcg•h/mL; C<sub>max</sub>: 4.90 ± 1.39 mcg/mL). Patients with impaired hepatic function require dosage adjustment (see DOSAGE AND ADMINISTRATION).

**Renal Insufficiency:** The impact of renal impairment on amprenavir elimination in adult patients has not been studied. The renal elimination of unchanged amprenavir represents <3% of the administered dose.

**Pediatric Patients:** The pharmacokinetics of amprenavir have been studied after either single or repeat doses of AGENERASE in 84 pediatric patients. Twenty HIV-1-infected children ranging in age from 4 to 12 years received single doses from 5 mg/kg to 20 mg/kg using 25-mg or 150-mg capsules. The C<sub>max</sub> of amprenavir increased less than proportionally with dose. The AUC<sub>0-∞</sub> increased proportionally at doses between 5 and 20 mg/kg. Amprenavir is 14% less bioavailable from the liquid formulation than from the capsules; therefore **AGENERASE Capsules and AGENERASE Oral Solution are not interchangeable on a milligram per milligram basis.**

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**Table 2: Average (%CV) Pharmacokinetic Parameters in Children Ages 4 to 12 Years Receiving  
 20 mg/kg b.i.d. or 15 mg/kg t.i.d. of AGENERASE Oral Solution**

Dose	n	C <sub>max</sub> (mcg/mL)	t <sub>max</sub> (hours)	AUC <sub>ss</sub> * (mcg•h/mL)	C <sub>avg</sub> (mcg/mL)	C <sub>min</sub> (mcg/mL)	CL/F (mL/min/kg)
20 mg/kg b.i.d.	20	6.77 (51%)	1.1 (21%)	15.46 (59%)	1.29 (59%)	0.24 (98%)	29 (58%)
15 mg/kg t.i.d.	17	3.99 (37%)	1.4 (90%)	8.73 (36%)	1.09 (36%)	0.27 (95%)	32 (34%)

\*AUC is 0 to 12 hours for b.i.d. and 0 to 8 hours for t.i.d., therefore the C<sub>avg</sub> is a better comparison of the exposures.

**Geriatric Patients:** The pharmacokinetics of amprenavir have not been studied in patients over 65 years of age.

**Gender:** The pharmacokinetics of amprenavir do not differ between males and females.

**Race:** The pharmacokinetics of amprenavir do not differ between Blacks and non-Blacks.

**Drug Interactions:** See also CONTRAINDICATIONS, WARNINGS, and PRECAUTIONS: Drug Interactions.

Amprenavir is metabolized in the liver by the cytochrome P450 enzyme system. Amprenavir inhibits CYP3A4. Caution should be used when coadministering medications that are substrates, inhibitors, or inducers of CYP3A4, or potentially toxic medications that are metabolized by CYP3A4. Amprenavir does not inhibit CYP2D6, CYP1A2, CYP2C9, CYP2C19, CYP2E1, or uridine glucuronosyltransferase (UDPGT).

Drug interaction studies were performed with amprenavir and other drugs likely to be coadministered or drugs commonly used as probes for pharmacokinetic interactions. The effects of coadministration of amprenavir on the AUC, C<sub>max</sub>, and C<sub>min</sub> are summarized in Table 3 (effect of other drugs on amprenavir) and Table 4 (effect of amprenavir on other drugs). For information regarding clinical recommendations, see PRECAUTIONS.

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**Table 3: Drug Interactions: Pharmacokinetic Parameters for Amprenavir  
in the Presence of the Coadministered Drug**

Co-administered Drug	Dose of Coadministered Drug	Dose of AGENERASE	n	% Change in Amprenavir Pharmacokinetic Parameters* (90% CI)		
				C <sub>max</sub>	AUC	C <sub>min</sub>
Abacavir	300 mg b.i.d. for 3 weeks	900 mg b.i.d. for 3 weeks	4	↑47 (↓15 to ↑154)	↑29 (↓18 to ↑103)	↑27 (↓46 to ↑197)
Clarithromycin	500 mg b.i.d. for 4 days	1200 mg b.i.d. for 4 days	12	↑15 (↑1 to ↑31)	↑18 (↑8 to ↑29)	↑39 (↑31 to ↑47)
Indinavir	800 mg t.i.d. for 2 weeks (fasted)	750 or 800 mg t.i.d. for 2 weeks (fasted)	9	↑18 (↓13 to ↑58)	↑33 (↑2 to ↑73)	↑25 (↓27 to ↑116)
Ketoconazole	400 mg single dose	1200 mg single dose	12	↓16 (↓25 to ↓6)	↑31 (↑20 to ↑42)	NA
Lamivudine	150 mg single dose	600 mg single dose	11	↔ (↓17 to ↑9)	↔ (↓15 to ↑14)	NA
Nelfinavir	750 mg t.i.d. for 2 weeks (fed)	750 or 800 mg t.i.d. for 2 weeks (fed)	6	↓14 (↓38 to ↑20)	↔ (↓19 to ↑47)	↑189 (↑52 to ↑448)
Rifabutin	300 mg q.d. for 10 days	1200 mg b.i.d. for 10 days	5	↔ (↓21 to ↑10)	↓15 (↓28 to 0)	↓15 (↓38 to ↑17)
Rifampin	300 mg q.d. for 4 days	1200 mg b.i.d. for 4 days	11	↓70 (↓76 to ↓62)	↓82 (↓84 to ↓78)	↓92 (↓95 to ↓89)
Saquinavir	800 mg t.i.d. for 2 weeks (fed)	750 or 800 mg t.i.d. for 2 weeks (fed)	7	↓37 (↓54 to ↓14)	↓32 (↓49 to ↓9)	↓14 (↓52 to ↑54)
Zidovudine	300 mg single dose	600 mg single dose	12	↔ (↓5 to ↑24)	↑13 (↓2 to ↑31)	NA

\*Based on total-drug concentrations.

↑ = Increase; ↓ = Decrease; ↔ = No change (↑ or ↓ < 10%); NA = C<sub>min</sub> not calculated for single-dose study.

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**Table 4: Drug Interactions: Pharmacokinetic Parameters for Coadministered Drug in the Presence of Amprenavir**

Co-administered Drug	Dose of Coadministered Drug	Dose of AGENERASE	n	% Change in Pharmacokinetic Parameters of Coadministered Drug (90% CI)		
				C <sub>max</sub>	AUC	C <sub>min</sub>
Clarithromycin	500 mg b.i.d. for 4 days	1200 mg b.i.d. for 4 days	12	↓10 (↓24 to ↑7)	↔ (↓17 to ↑11)	↔ (↓13 to ↑20)
Ketoconazole	400 mg single dose	1200 mg single dose	12	↑19 (↑8 to ↑33)	↑44 (↑31 to ↑59)	NA
Lamivudine	150 mg single dose	600 mg single dose	11	↔ (↓17 to ↑3)	↔ (↓11 to 0)	NA
Rifabutin	300 mg q.d. for 10 days	1200 mg b.i.d. for 10 days	5	↑119 (↑82 to ↑164)	↑193 (↑156 to ↑235)	↑271 (↑171 to ↑409)
Rifampin	300 mg q.d. for 4 days	1200 mg b.i.d. for 4 days	11	↔ (↓13 to ↑12)	↔ (↓10 to ↑13)	ND
Zidovudine	300 mg single dose	600 mg single dose	12	↑40 (↑14 to ↑71)	↑31 (↑19 to ↑45)	NA

↑ = Increase; ↓ = Decrease; ↔ = No change (↑ or ↓ < 10%); NA = C<sub>min</sub> not calculated for single-dose study, ND = Interaction cannot be determined as C<sub>min</sub> was below the lower limit of quantitation.

**Nucleoside Reverse Transcriptase Inhibitors (NRTIs):** There was no effect of amprenavir on abacavir in subjects receiving both agents based on historical data.

**HIV Protease Inhibitors:** The effect of amprenavir on total drug concentrations of other HIV protease inhibitors in subjects receiving both agents was evaluated using comparisons to historical data. Indinavir steady-state C<sub>max</sub>, AUC, and C<sub>min</sub> were decreased by 22%, 38%, and 27%, respectively, by concomitant amprenavir. Similar decreases in C<sub>max</sub> and AUC were seen after the first dose. Saquinavir steady-state C<sub>max</sub>, AUC, and C<sub>min</sub> were increased 21%, decreased 19%, and decreased 48%, respectively, by concomitant amprenavir. Nelfinavir steady-state C<sub>max</sub>, AUC, and C<sub>min</sub> were increased by 12%, 15%, and 14%, respectively, by concomitant amprenavir.

For information regarding clinical recommendations, see PRECAUTIONS: Drug Interactions.

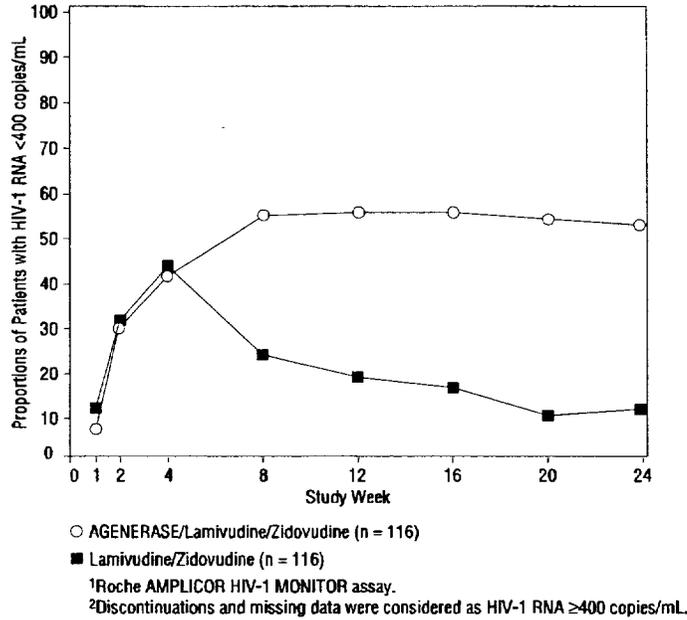
**INDICATIONS AND USAGE:** AGENERASE (amprenavir) in combination with other antiretroviral agents is indicated for the treatment of HIV-1 infection. This indication is based on analyses of plasma HIV RNA levels and CD4 cell counts in controlled studies of up to 24 weeks in duration. At present, there are no results from controlled trials evaluating long-term suppression of HIV RNA or disease progression with AGENERASE (see Description of Clinical Studies).

**Description of Clinical Studies: Therapy-Naive Adults:** PROAB3001, an ongoing, randomized, double-blind, placebo-controlled, multicenter study, compared treatment with AGENERASE (1200 mg twice daily) plus lamivudine (150 mg twice daily) plus zidovudine (300 mg twice daily) versus lamivudine (150 mg twice daily) plus zidovudine (300 mg twice daily) in 232 patients, median age 37 years (range 18 to 63 years), 75% Caucasian, 89% male, with a median CD4 cell count of 416 cells/mm<sup>3</sup> (range 139 to

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1800 cells/mm<sup>3</sup>) and a median plasma HIV-1 RNA of 4.67 log<sub>10</sub> copies/mL (range 3.06 to 6.31 log<sub>10</sub> copies/mL) at baseline. Through 24 weeks of therapy, there was no significant difference in the median CD4 cell count between the treatment arms. Figure 1 shows the proportions of patients with plasma HIV-1 RNA levels <400 copies/mL through 24 weeks.

**Figure 1: Virologic Response Through Week 24, PROAB3001<sup>1,2</sup>**



HIV-1 RNA status and reasons for discontinuation of randomized treatment at 24 weeks are summarized (Table 5).

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**Table 5: Outcomes of Randomized Treatment Through Week 24 (PROAB3001)**

Outcome	AGENERASE (n = 116)	Placebo (n = 116)
HIV RNA <400 copies/mL*	53%	11%
HIV RNA ≥400 copies/mL <sup>†,‡</sup>	13%	62%
CDC Class C event <sup>‡</sup>	0	0
Discontinued due to adverse events <sup>‡</sup>	15%	3%
Discontinued due to other reasons <sup>‡,§</sup>	19%	22%
On treatment with missing HIV RNA value <sup>‡</sup>	0%	1%
TOTAL	100%	100%

\*Corresponds to rates at Week 24 in Figure 1.

<sup>†</sup>Includes discontinuations due to virological failure at or before Week 24.

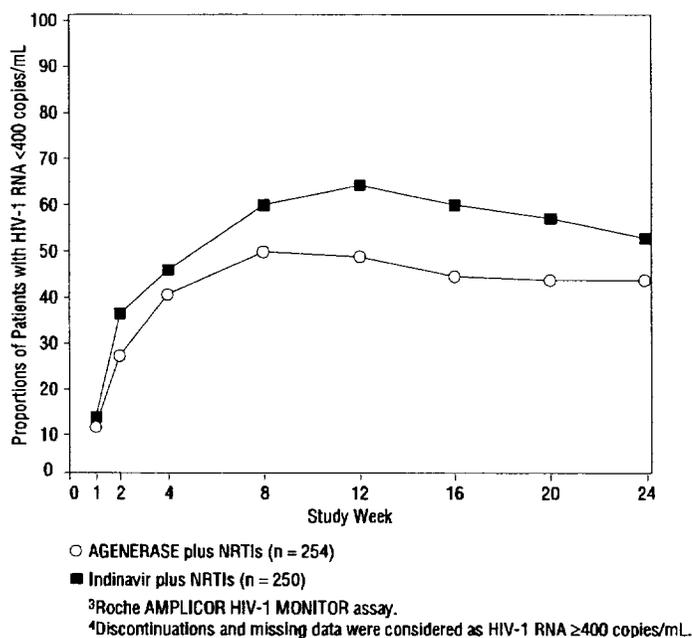
<sup>‡</sup>Treatment failure in the analysis.

<sup>§</sup>Consent withdrawn, lost to follow-up, and protocol violation.

**Therapy-Experienced Adults:** PROAB3006, an ongoing, randomized, open-label multicenter study, compared treatment with AGENERASE (1200 mg twice daily) plus NRTIs versus indinavir (800 mg every 8 hours) plus NRTIs in 504 NRTI- and non-nucleoside reverse transcriptase inhibitor- (NNRTI) experienced, protease inhibitor-naive patients, median age 37 years (range 20 to 71 years), 72% Caucasian, 80% male, with a median CD4 cell count of 399 cells/mm<sup>3</sup> (range 9 to 1706 cells/mm<sup>3</sup>) and a median plasma HIV-1 RNA level of 3.93 log<sub>10</sub> copies/mL (range 2.60 to 7.01 log<sub>10</sub> copies/mL) at baseline. Through 24 weeks of therapy, there was a smaller increase in median CD4 cell count from baseline for the amprenavir group than for the indinavir group. Figure 2 shows the proportions of patients with plasma HIV-1 RNA levels <400 copies/mL through 24 weeks.

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**Figure 2: Virologic Response Through Week 24, PROAB3006<sup>3,4</sup>**



HIV-1 RNA status and reasons for discontinuation of randomized treatment at 24 weeks are summarized (Table 6).

**Table 6: Outcomes of Randomized Treatment Through Week 24 (PROAB3006)**

Outcome	AGENERASE (n = 254)	Indinavir (n = 250)
HIV RNA <400 copies/mL*	43%	53%
HIV RNA ≥400 copies/mL <sup>†,‡</sup>	22%	18%
CDC Class C event <sup>‡</sup>	<1%	2%
Discontinued due to adverse events <sup>‡</sup>	16%	8%
Discontinued due to other reasons <sup>‡,§</sup>	14%	12%
On treatment with missing HIV RNA value <sup>‡</sup>	4%	7%
TOTAL	100%	100%

\*Corresponds to rates at Week 24 in Figure 2.

<sup>†</sup>Includes discontinuations due to virological failure at or before Week 24.

<sup>‡</sup>Treatment failure in the analysis.

<sup>§</sup>Consent withdrawn, lost to follow-up, and protocol violation.

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**CONTRAINDICATIONS:** AGENERASE should not be administered concurrently with astemizole, bepridil, cisapride, dihydroergotamine, ergotamine, midazolam, and triazolam. Although these drugs have not been specifically studied, coadministration may result in competitive inhibition of metabolism of these products and may cause serious or life-threatening adverse events. (See **WARNINGS** for agents whose coadministration may result in competitive inhibition of metabolism but for which concentration monitoring is recommended.)

AGENERASE is contraindicated in patients with previously demonstrated clinically significant hypersensitivity to any of the components of this product.

**WARNINGS:** Serious and/or life-threatening drug interactions could occur between amprenavir and amiodarone, lidocaine (systemic), tricyclic antidepressants, and quinidine. Concentration monitoring of these agents is recommended if these agents are used concomitantly with AGENERASE (see **CONTRAINDICATIONS**).

Rifampin should not be used in combination with amprenavir because it reduces plasma concentrations and AUC of amprenavir by about 90%.

Particular caution should be used when prescribing sildenafil in patients receiving amprenavir. Coadministration of AGENERASE with sildenafil is expected to substantially increase sildenafil concentrations and may result in an increase in sildenafil-associated adverse events, including hypotension, visual changes, and priapism. (see **PRECAUTIONS: Drug Interactions and Information for Patients**, and the complete prescribing information for sildenafil).

**Severe and life-threatening skin reactions, including Stevens-Johnson syndrome, have occurred in patients treated with AGENERASE (see **ADVERSE REACTIONS**).**

Acute hemolytic anemia has been reported in a patient treated with AGENERASE.

New onset diabetes mellitus, exacerbation of pre-existing diabetes mellitus, and hyperglycemia have been reported during post-marketing surveillance in HIV-infected patients receiving protease inhibitor therapy. Some patients required either initiation or dose adjustments of insulin or oral hypoglycemic agents for treatment of these events. In some cases, diabetic ketoacidosis has occurred. In those patients who discontinued protease inhibitor therapy, hyperglycemia persisted in some cases. Because these events have been reported voluntarily during clinical practice, estimates of frequency cannot be made and causal relationships between protease inhibitor therapy and these events have not been established.

**PRECAUTIONS:**

**General:** AGENERASE Capsules and AGENERASE Oral Solution are not interchangeable on a milligram per milligram basis (see **CLINICAL PHARMACOLOGY: Pediatric Patients**).

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Amprenavir is a sulfonamide. The potential for cross-sensitivity between drugs in the sulfonamide class and amprenavir is unknown. Patients with a known sulfonamide allergy should be treated with caution.

AGENERASE is principally metabolized by the liver; therefore caution should be exercised when administering this drug to patients with hepatic impairment (see DOSAGE AND ADMINISTRATION).

Formulations of AGENERASE provide high daily doses of vitamin E (see Information for Patients, DESCRIPTION, and DOSAGE AND ADMINISTRATION). The effects of long-term, high-dose vitamin E administration in humans is not well characterized and has not been specifically studied in HIV-infected individuals. High vitamin E doses may exacerbate the blood coagulation defect of vitamin K deficiency caused by anticoagulant therapy or malabsorption.

**Patients with Hemophilia:** There have been reports of spontaneous bleeding in patients with hemophilia A and B treated with protease inhibitors. In some patients, additional factor VIII was required. In many of the reported cases, treatment with protease inhibitors was continued or restarted. A causal relationship between protease inhibitor therapy and these episodes has not been established.

**Fat Redistribution:** Redistribution/accumulation of body fat including central obesity, dorsocervical fat enlargement (buffalo hump), peripheral wasting, breast enlargement, and "cushingoid appearance" have been observed in patients receiving protease inhibitors. The mechanism and long-term consequences of these events are currently unknown. A causal relationship has not been established.

**Resistance/Cross-Resistance:** Because the potential for HIV cross-resistance among protease inhibitors has not been fully explored, it is unknown what effect amprenavir therapy will have on the activity of subsequently administered protease inhibitors (see MICROBIOLOGY).

**Information for Patients:** A Patient Package Insert (PPI) for AGENERASE is available for patient information.

Patients should be informed that AGENERASE is not a cure for HIV infection and that they may continue to develop opportunistic infections and other complications associated with HIV disease. The long-term effects of AGENERASE (amprenavir) are unknown at this time. Patients should be told that there are currently no data demonstrating that therapy with AGENERASE can reduce the risk of transmitting HIV to others through sexual contact.

Patients should remain under the care of a physician while using AGENERASE. Patients should be advised to take AGENERASE every day as prescribed. AGENERASE must always be used in combination with other antiretroviral drugs. Patients should not alter the dose or discontinue therapy without consulting their physician. If a dose is missed, patients should take the dose as soon as possible and then return to their normal schedule. However, if a dose is skipped, the patient should not double the next dose.

Patients should inform their doctor if they have a sulfa allergy. The potential for cross-sensitivity between drugs in the sulfonamide class and amprenavir is unknown.

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Some drugs should not be used with AGENERASE. Therefore, patients should be advised that they must report to their doctor the use of any other prescription or nonprescription medication.

Patients taking antacids (or didanosine) should take AGENERASE at least 1 hour before or after antacid (or didanosine) use.

Patients receiving sildenafil should be advised that they may be at an increased risk of sildenafil-associated adverse events including hypotension, visual changes, and priapism, and should promptly report any symptoms to their doctor.

Patients receiving hormonal contraceptives should be instructed that alternate contraceptive measures should be used during therapy with AGENERASE.

High fat meals may decrease the absorption of AGENERASE and should be avoided. AGENERASE may be taken with meals of normal fat content.

Patients should be informed that redistribution or accumulation of body fat may occur in patients receiving protease inhibitors and that the cause and long-term health effects of these conditions are not known at this time.

Adult and pediatric patients should be advised not to take supplemental vitamin E since the vitamin E content of AGENERASE Capsules and Oral Solution exceeds the Reference Daily Intake (adults 30 IU, pediatrics approximately 10 IU).

**Drug Interactions: See also CONTRAINDICATIONS, WARNINGS, and CLINICAL PHARMACOLOGY: Drug Interactions.**

AGENERASE is an inhibitor of cytochrome P450 CYP3A4 metabolism and therefore should not be administered concurrently with medications with narrow therapeutic windows that are substrates of CYP3A4. There are other agents that may result in serious and/or life-threatening drug interactions (see CONTRAINDICATIONS and WARNINGS).

**AGENERASE™ (amprenavir) Capsules**  
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**Table 7: Drug Interactions with AGENERASE**

**Should Not Be Coadministered**

Drug Class	Drug Within Class Not To Be Coadministered
Antihistamines	Astemizole
Antimycobacterials	Rifampin*
Benzodiazepines	Midazolam, triazolam
Cardiovascular	Bepridil
Ergot derivatives	Dihydroergotamine, ergotamine
GI motility agents	Cisapride

\*Decreases plasma concentrations of amprenavir and should not be coadministered as it is likely to reduce antiviral activity.

**Coadministration Requires Concentration Monitoring**

Drug Class	Drug Within Class to Monitor
Antiarrhythmics	Amiodarone, lidocaine (systemic), quinidine
Anticoagulants	Warfarin*
Antidepressants	Tricyclic antidepressants

\*Monitor INR (International Normalized Ratio).

**Dosage Adjustment Required**

Drug Class	Drug Within Class Requiring a Dosage Adjustment
Antimycobacterials	Rifabutin (reduce dose to at least half that recommended)*

\*A complete blood count should be performed weekly and as clinically indicated in order to monitor for neutropenia in patients receiving amprenavir and rifabutin.

**Other Potentially Significant Drug Interactions**

Anticonvulsants: phenobarbital, phenytoin, carbamazepine	Induce CYP3A4 and may decrease amprenavir concentrations.
Cholesterol-lowering agents: atorvastatin, cerivastatin, lovastatin, pravastatin, and simvastatin	May have their serum concentrations increased by AGENERASE, which could increase their activity or toxicity.
Erectile dysfunction agents: sildenafil	Expected to substantially increase sildenafil concentrations (consult sildenafil prescribing information for dose reduction of sildenafil in patients receiving ritonavir)

**Antimycobacterials: Rifampin:** Rifampin should not be used in combination with amprenavir since it reduces plasma concentrations and AUC of amprenavir by about 90%.

**Rifabutin:** Coadministration of amprenavir with rifabutin results in a 15% decrease in amprenavir plasma AUC and a 193% increase in rifabutin plasma AUC. A dosage reduction of rifabutin to at least half the recommended dose is required when AGENERASE and rifabutin are coadministered (see CLINICAL PHARMACOLOGY: Drug Interactions). A complete blood count should be performed weekly and as clinically indicated in order to monitor for neutropenia in patients receiving amprenavir and rifabutin.

**Other Potentially Significant Drug Interactions:** Other medications that interact at CYP3A4, either as substrates, inhibitors, or inducers of the enzyme, could have potential interactions when used

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concomitantly. The clinical significance of these potential interactions is unknown and has not been studied.

**Antibiotics:** Dapsone and erythromycin may have their plasma concentrations increased by AGENERASE. Erythromycin may also increase amprenavir serum concentrations.

**Antifungals:** Itraconazole may have its plasma concentrations increased by AGENERASE. Itraconazole may increase serum concentrations of amprenavir.

**Benzodiazepines:** Alprazolam, clorazepate, diazepam, and flurazepam may have their serum concentrations increased by AGENERASE, which could increase their activity.

**Calcium Channel Blockers:** Diltiazem, nifedipine, nifedipine, and nimodipine may have their serum concentrations increased by AGENERASE, which could increase their activity.

**Cholesterol-Lowering Agents:** Atorvastatin, cerivastatin, lovastatin, pravastatin, and simvastatin may have their serum concentrations increased by AGENERASE, which could increase their activity or toxicity.

**Erectile Dysfunction Agents:** Particular caution should be used when prescribing sildenafil in patients receiving amprenavir. Because amprenavir is a cytochrome P4503A4 inhibitor, coadministration of AGENERASE with sildenafil is likely to result in an increase of sildenafil concentrations by competitive inhibition of metabolism. The magnitude of this interaction has not been determined. Results from drug interaction studies in healthy volunteers indicate that coadministration of saquinavir soft gelatin capsules (1200 mg t.i.d.) increases sildenafil (100 mg single dose) AUC by 210% (3.1-fold) and coadministration of ritonavir (500 mg b.i.d.) increases sildenafil (100 mg single dose) AUC by 1000% (11-fold). Providers should consult the sildenafil prescribing information for dose reductions of sildenafil in patients receiving ritonavir. Patients receiving amprenavir and sildenafil should be advised that they may be at an increased risk for sildenafil-associated adverse events, including hypotension, visual changes, and priapism, and should report these symptoms promptly to their doctor.

**NNRTIs:** NNRTIs have the potential to increase (delavirdine) or decrease (efavirenz, nevirapine) serum concentrations of amprenavir.

**Steroids:** Estrogens, progestogens, and some glucocorticoids may have an interaction with AGENERASE but there is insufficient information to predict the nature of the interaction. Because of this potential for metabolic interactions with amprenavir, the efficacy of hormonal contraceptives may be reduced. Alternate or additional reliable barrier methods of contraception are recommended for women of childbearing potential.

**Other Agents:** There are other agents that may have their plasma concentrations increased by AGENERASE, and include but are not limited to: clozapine, carbamazepine, loratadine, pimozone, and warfarin.

Cimetidine and ritonavir may increase amprenavir plasma concentrations.

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Antacids (and didanosine secondary to the antacid content) have not been specifically studied. Based upon data with other protease inhibitors, it is advisable that antacids not be taken at the same time as AGENERASE because of potential interference with absorption. It is recommended that their administration be separated by at least an hour.

**Carcinogenesis and Mutagenesis:** Long-term carcinogenicity studies of amprenavir in rodents are in progress. Amprenavir was not mutagenic or genotoxic in a battery of *in vitro* and *in vivo* assays including bacterial reverse mutation (Ames), mouse lymphoma, rat micronucleus, and chromosome aberrations in human lymphocytes.

**Fertility:** The effects of amprenavir on fertility and general reproductive performance were investigated in male rats (treated for 28 days before mating, at doses producing up to twice the expected clinical exposure based on AUC comparisons) and female rats (treated for 15 days before mating through day 17 of gestation at doses producing up to 2 times the expected clinical exposure). Amprenavir did not impair mating or fertility of male or female rats and did not affect the development and maturation of sperm from treated rats. The reproductive performance of the F1 generation born to female rats given amprenavir was not different from control animals.

**Pregnancy and Reproduction:** Pregnancy Category C. Embryo/fetal development studies were conducted in rats (dosed from 15 days before pairing to day 17 of gestation) and rabbits (dosed from day 8 to day 20 of gestation). In pregnant rabbits, amprenavir administration was associated with abortions and an increased incidence of three minor skeletal variations resulting from deficient ossification of the femur, humerus trochlea, and humerus. Systemic exposure at the highest tested dose was approximately one-twentieth of the exposure seen at the recommended human dose. In rat fetuses, thymic elongation and incomplete ossification of bones were attributed to amprenavir. Both findings were seen at systemic exposures that were one half of that associated with the recommended human dose.

Pre- and post-natal developmental studies were performed in rats dosed from day 7 of gestation to day 22 of lactation. Reduced body weights (10% to 20%) were observed in the offspring. The systemic exposure associated with this finding was approximately twice the exposure in humans following administration of the recommended human dose. The subsequent development of these offspring, including fertility and reproductive performance, was not affected by the maternal administration of amprenavir.

There are no adequate and well-controlled studies in pregnant women. AGENERASE should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

**Antiretroviral Pregnancy Registry:** To monitor maternal-fetal outcomes of pregnant women exposed to AGENERASE, an Antiretroviral Pregnancy Registry has been established. Physicians are encouraged to register patients by calling 1-800-258-4263.

**Nursing Mothers:** The Centers for Disease Control and Prevention recommend that HIV-infected mothers not breastfeed their infants to avoid risking postnatal transmission of HIV. Although it is

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not known if amprenavir is excreted in human milk, amprenavir is secreted into the milk of lactating rats. Because of both the potential for HIV transmission and any possible adverse effects of amprenavir, **mothers should be instructed not to breastfeed if they are receiving AGENERASE.**

**Pediatric Use:** One hundred eighteen patients 4 to 17 years of age have received amprenavir as single or multiple doses in studies. An adverse event profile similar to that seen in adults was seen in pediatric patients.

The safety, effectiveness, and pharmacokinetics of amprenavir have not been evaluated in pediatric patients below the age of 4 years (see CLINICAL PHARMACOLOGY and DOSAGE AND ADMINISTRATION).

**Geriatric Use:** Clinical studies of AGENERASE did not include sufficient numbers of patients aged 65 and over to determine whether they respond differently from younger adults. In general, dose selection for an elderly patient should be cautious, reflecting the greater frequency of decreased hepatic, renal, or cardiac function, and of concomitant disease or other drug therapy.

**ADVERSE REACTIONS:** Rates of discontinuation of randomized therapy due to adverse events were 15% in amprenavir vs 3% in placebo recipients from Study 3001, and 16% in amprenavir vs 8% in indinavir recipients from Study 3006. In these studies, adverse events leading to amprenavir discontinuation included gastrointestinal events (11%), rash (3%), and paresthesias (<1%).

Most gastrointestinal events (nausea, vomiting, diarrhea, and abdominal pain) that led to amprenavir discontinuation were graded as mild or moderate in severity.

In all multidose studies in HIV-infected patients, skin rash occurred in 28% of patients treated with amprenavir. Rashes were usually maculopapular and of mild or moderate intensity, some with pruritus. Rashes had onsets ranging from 7 to 73 days (median: 10 days) after amprenavir initiation. With mild or moderate rash, amprenavir dosing was often continued without interruption; if interrupted, reintroduction of amprenavir generally did not result in rash recurrence (Phase 3 studies).

**Severe or life-threatening rash, including Stevens-Johnson syndrome, occurred in 1% of recipients of AGENERASE (4% of recipients who developed rash) (see WARNINGS). Amprenavir therapy should be discontinued for severe or life-threatening rashes and for moderate rashes accompanied by systemic symptoms.**

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**Table 8: Selected Clinical Adverse Events Grades 1-4 (≥5% Frequency)**

Adverse Event	PROAB3001 Therapy-Naive Patients		PROAB3006 NRTI-Experienced Patients	
	AGENERASE/ Lamivudine/ Zidovudine (n = 113)	Lamivudine/ Zidovudine (n = 109)	AGENERASE/ NRTI (n = 245)	Indinavir/NRTI (n = 241)
<b>Digestive</b>				
Nausea	73%	50%	38%	26%
Vomiting	29%	17%	20%	11%
Diarrhea or loose stools	33%	34%	56%	32%
Taste disorders	10%	5%	1%	7%
<b>Skin</b>				
Rash	25%	6%	18%	10%
<b>Nervous</b>				
Paresthesia, oral/perioral	26%	5%	30%	2%
Paresthesia (including peripheral)	8%	3%	12%	9%
<b>Psychiatric</b>				
Depressive or mood disorders	15%	4%	4%	6%

In Phase 3 studies, one patient experienced diabetes mellitus *de novo*, and another developed a dorsocervical fat enlargement (buffalo hump).

**Table 9: Selected Laboratory Abnormalities Grades 1-4 Reported in ≥5% of Patients**

Laboratory Abnormality (non-fasting specimens)	PROAB3001 Therapy-Naive Patients		PROAB3006 NRTI-Experienced Patients	
	AGENERASE/ Lamivudine/ Zidovudine (n = 113)	Lamivudine/ Zidovudine (n = 109)	AGENERASE/ NRTI (n = 245)	Indinavir/NRTI (n = 241)
Hyperglycemia (>160 mg/L)	37%	29%	41%	44%
Hypertriglyceridemia (>399 mg/dL)	36%	22%	47%	40%
Hypercholesterolemia (>260 mg/dL)	4%	3%	9%	10%

In studies 3001 and 3006, no increased frequency of Grade 3 or 4 AST, ALT, amylase, or bilirubin elevations was seen compared to controls.

**Pediatric Patients:** An adverse event profile similar to that seen in adults was seen in pediatric patients.

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**OVERDOSAGE:** There is no known antidote for AGENERASE. It is not known whether amprenavir can be removed by peritoneal dialysis or hemodialysis. If overdosage occurs, the patient should be monitored for evidence of toxicity and standard supportive treatment applied as necessary.

**DOSAGE AND ADMINISTRATION:** AGENERASE may be taken with or without food, however, a high fat meal decreases the absorption of amprenavir and should be avoided (see CLINICAL PHARMACOLOGY: Effect of Food On Oral Absorption). **Adult and pediatric patients should be advised not to take supplemental vitamin E since the vitamin E content of AGENERASE Capsules and Oral Solution exceeds the Reference Daily Intake (adults 30 IU, pediatrics approximately 10 IU) (see DESCRIPTION).**

**Adults:** The recommended oral dose of AGENERASE Capsules for adults is 1200 mg (eight 150-mg capsules) twice daily in combination with other antiretroviral agents.

**Pediatric Patients: AGENERASE Capsules:** For adolescents (13 to 16 years), the recommended oral dose of AGENERASE Capsules is 1200 mg (eight 150-mg capsules) twice daily in combination with other antiretroviral agents. For patients between 4 and 12 years of age or for patients 13 to 16 years of age with weight of <50 kg, the recommended oral dose of AGENERASE Capsules is 20 mg/kg twice daily or 15 mg/kg three times daily (to a maximum daily dose of 2400 mg) in combination with other antiretroviral agents.

**AGENERASE Oral Solution:** The recommended oral dose of AGENERASE Oral Solution for patients between 4 and 12 years of age or for patients 13 to 16 years of age with weight <50 kg is 22.5 mg/kg (1.5 mL/kg) twice daily or 17 mg/kg (1.1 mL/kg) three times daily (to a maximum daily dose of 2800 mg) in combination with other antiretroviral agents.

**AGENERASE Capsules and AGENERASE Oral Solution are not interchangeable on a milligram per milligram basis (see CLINICAL PHARMACOLOGY).**

**Patients with Hepatic Impairment:** AGENERASE should be used with caution in patients with moderate or severe hepatic impairment. Patients with a Child-Pugh score ranging from 5 to 8 should receive a reduced dose of AGENERASE Capsules of 450 mg twice daily, and patients with a Child-Pugh score ranging from 9 to 12 should receive a reduced dose of AGENERASE Capsules of 300 mg twice daily (see CLINICAL PHARMACOLOGY: Hepatic Insufficiency).

**HOW SUPPLIED:** AGENERASE Capsules, 50 mg, are oblong, opaque off-white to cream-colored soft gelatin capsules printed with "GX CC1" on one side.

Bottles of 480 with child-resistant closures (NDC 0173-0679-00).

AGENERASE Capsules, 150 mg, are oblong, opaque off-white to cream-colored soft gelatin capsules printed with "GX CC2" on one side.

Bottles of 240 with child-resistant closures (NDC 0173-0672-00).

**AGENERASE™ (amprenavir) Capsules**  
**AGENERASE™ (amprenavir) Oral Solution**

**Store at controlled room temperature of 25°C (77°F) (see USP).**

AGENERASE Oral Solution, a clear, pale yellow to yellow, grape bubblegum peppermint-flavored liquid, contains 15 mg of amprenavir in each 1 mL.

Bottles of 240 mL with child-resistant closures (NDC 0173-0687-00). This product does not require reconstitution.

**Store at controlled room temperature of 25°C (77°F) (see USP).**

US Patent No. 5,585,397

AGENERASE Capsules are manufactured by

R.P. Scherer

Beinheim, France

for

**GlaxoWellcome**

Glaxo Wellcome Inc.

Research Triangle Park, NC 27709

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April 1999

RL-708

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**PATIENT INFORMATION**

**AGENERASE™ (amprenavir) Capsules**

**AGENERASE™ (amprenavir) Oral Solution**

Please read this information before you start taking AGENERASE (pronounced ah-GEN-er-ase), and re-read it each time you receive your prescription, just in case something has changed. Remember that this information does not take the place of careful discussions with your doctor when you start this medication and at checkups. You should not change or stop your anti-HIV treatment without first talking with your doctor. **You should tell your doctor about any drug you are taking or planning to take because taking AGENERASE with some medications can result in serious or life-threatening problems.**

**AGENERASE™ (amprenavir) Capsules**  
**AGENERASE™ (amprenavir) Oral Solution**

**What is AGENERASE?**

AGENERASE is a medication used to treat HIV infection. HIV is the virus that causes AIDS (acquired immune deficiency syndrome). AGENERASE is taken by mouth as a soft gel capsule or oral solution. It belongs to a class of anti-HIV medicines called protease inhibitors.

**How does AGENERASE work?**

AGENERASE is used only in combination with other anti-HIV medicines. When used in combination therapy, AGENERASE may help lower the amount of HIV found in your blood, raise CD4 (T) cell count, and keep your immune system as healthy as possible so that it can help fight infection. However, AGENERASE does not have these effects in all patients.

**What are the side effects of AGENERASE?**

Common side effects of AGENERASE are nausea, vomiting, diarrhea, rash, and a tingling sensation around the mouth. Severe or life-threatening rash has been reported.

Contact your doctor if you have nausea, vomiting, diarrhea, or rash. Your doctor may be able to help you manage these symptoms. Your doctor will advise you whether your symptoms can be managed on therapy or whether AGENERASE should be stopped.

This list of side effects is not complete. Your doctor or pharmacist can discuss with you a more complete list of possible side effects with AGENERASE. Talk to your doctor promptly about any side effects you have.

**How should I take AGENERASE?**

Take AGENERASE exactly as your doctor prescribes it. The usual dosage for adults and adolescents (at least 13 years of age) is eight 150-mg soft gel capsules twice a day (morning and night), in combination with other anti-HIV medicines.

AGENERASE can be taken with or without food. However, you should not take AGENERASE with a high-fat meal because this could reduce the effectiveness of AGENERASE.

**What should I do if I miss a dose of AGENERASE?**

To help make sure that your anti-HIV therapy is as effective as possible, be very careful to take all of your medication exactly as your doctor prescribed it and do not skip any doses.

If you miss a dose of AGENERASE by more than 4 hours, wait and take the next dose at the regularly scheduled time. However, if you miss a dose by fewer than 4 hours, take your missed dose immediately. Then take your next dose at the regularly scheduled time. Do not take more or less than your prescribed dose of AGENERASE at any one time.

**AGENERASE™ (amprenavir) Capsules**  
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When your supply of AGENERASE or other anti-HIV drugs starts to run low, arrange to get more from your doctor or pharmacy. It is very important that you take anti-HIV drugs as prescribed by your doctor because the amount of virus in your blood may increase if one or more of the drugs is stopped, even for a short time.

**Can AGENERASE be taken with other medications?**

Protease inhibitors, including AGENERASE, may interact with other drugs, including those you take without a prescription. Before you take AGENERASE, tell your doctor about any drugs that you are taking or planning to take including non-prescription drugs.

- **You should not take any of the following medications with AGENERASE because serious or life-threatening problems could occur.\***

Halcion® (triazolam)

Propulsid® (cisapride)

Hismanal® (astemizole)

Versed® (midazolam)

Ergot medications (Cafergot® and others)

Vascor® (bepridil)

- **You should also not take rifampin** with AGENERASE because this drug reduces the effectiveness of AGENERASE. Rifampin is also known as: Rifadin®, Rifamate®, Rifater®, and Rimactane®.
- **Serious and/or life-threatening drug interactions can also occur if you take AGENERASE with any of the following drugs.\*** If you need to take any of these drugs, your doctor may closely monitor the amount of drug in your blood to minimize potential problems.
  - Cordarone® (amiodarone)
  - Phenobarbital
  - Dilantin® (phenytoin)
  - Lidocaine
  - Coumadin® (warfarin)
  - (quinidine) Quinaglute®, Cardioquin®, Quinidex®
  - Antidepressants such as Elavil® (amitriptyline), Norpramin® (desipramine), Pamelor® (nortriptyline), Tofranil® (imipramine)
- Before you take Viagra® (sildenafil) with AGENERASE, talk to your doctor about possible drug interactions and side effects. If you take Viagra and AGENERASE together, you may be at increased risk of side effects of Viagra such as low blood pressure, visual changes, and penile erection lasting more than 4 hours. If an erection lasts longer than 4 hours, you should seek immediate medical assistance to avoid permanent damage to your penis. Your doctor can explain these symptoms to you.

**AGENERASE™ (amprenavir) Capsules**  
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- If you use birth control pills, talk to your doctor about choosing a different type of contraceptive, since AGENERASE may reduce the effectiveness of some birth control pills.
- Because AGENERASE Capsules and Oral Solution contain large amounts of vitamin E, you should not take additional vitamin E while taking AGENERASE.
- **Special considerations:\***
  - If you take AGENERASE with Mycobutin® (rifabutin), your doctor will lower the dose of Mycobutin.
  - If you take AGENERASE with Videx® (didanosine, ddl), take them at least 1 hour apart.
  - If you take AGENERASE with antacids, take them at least 1 hour apart.

**Does AGENERASE cure HIV infection or AIDS?**

AGENERASE does not cure HIV infection or AIDS. At this time we do not know if AGENERASE will help you live longer or have fewer of the medical problems (opportunistic infections) that are associated with HIV infection or AIDS. Because of this, you must be sure to be seen regularly by your healthcare professional.

**Does AGENERASE reduce the risk of passing HIV to others?**

No. AGENERASE, as well as other anti-HIV medications, has not been shown to reduce the risk of passing HIV to others through sexual contact or blood contamination. Continue to practice safe sex and do not use or share dirty needles.

**Who should not take AGENERASE?**

Do not take AGENERASE if you have had a serious allergic reaction to AGENERASE or any of its ingredients. If you have liver disease, your dosage of AGENERASE may have to be adjusted.

If you are allergic to sulfa drugs, you should inform your doctor.

**Can children take AGENERASE?**

Children from 4 to 12 years of age can also take AGENERASE. Your doctor will tell you if the oral solution or capsule is best for your child. Your child's doctor will decide the right dose based on your child's weight and age. AGENERASE has not been studied in children under 4 years of age.

**Can pregnant women and nursing mothers take AGENERASE?**

AGENERASE has not been studied in pregnant women and the risk to the unborn child is not known. Talk to your doctor if you are pregnant or if you become pregnant while taking AGENERASE.

Mothers with HIV should not breastfeed their infants because HIV in the breast milk can infect the infant.

**AGENERASE™ (amprenavir) Capsules  
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**What other medical conditions should I discuss with my doctor?**

Talk to your doctor if you are pregnant or if you become pregnant while you are taking AGENERASE.

Also talk to your doctor if you have hemophilia or problems with your liver.

**How should I store AGENERASE Capsules and Oral Solution?**

AGENERASE Capsules and Oral Solution should be stored at room temperature and should not be refrigerated.

**Other information:**

This medication is prescribed for a particular condition. Do not use it for any other condition or give it to anybody else. Keep AGENERASE and all medicines out of the reach of children.

Ask a healthcare professional any questions you may have about AGENERASE.

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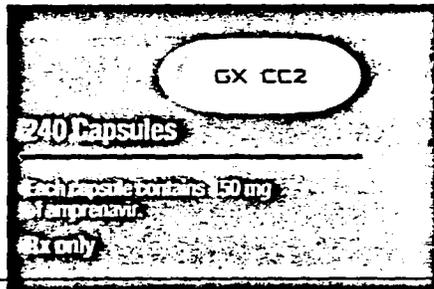
Vertex Pharmaceuticals Incorporated  
Cambridge, MA 02139

April 1999

RL-708

NDC 0173-0672-00

# **Agenerase™** (amprenavir) Capsules 150 mg



Store at controlled room temperature of 25°C (77°F) (see USP).

See package insert for Dosage and Administration.

Agenerase (amprenavir) Capsules are not interchangeable on a mg/mg basis with Agenerase (amprenavir) Oral Solution.

US Patent No. 5,585,397

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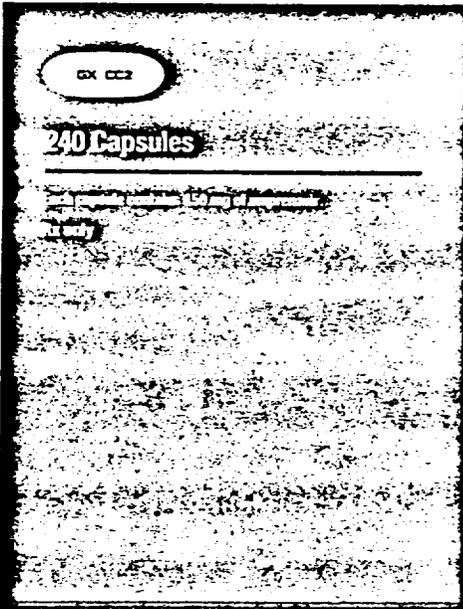
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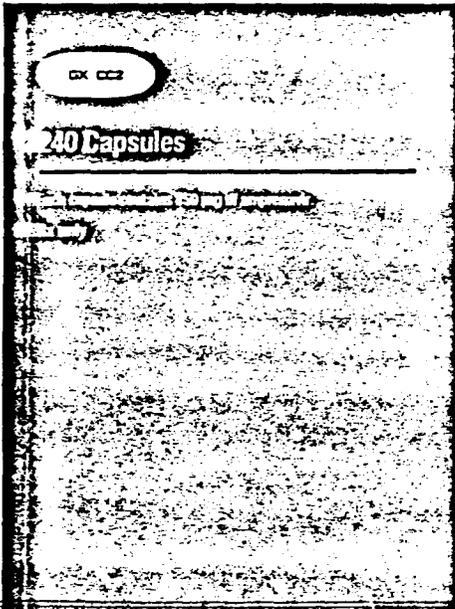
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(amprenavir)  
Capsules 150 mg



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**Agenerase™**  
**(amprenavir)**  
**Capsules 50 mg**

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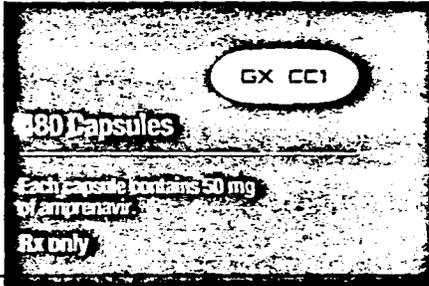
Manufactured by  
R.P. Scherer  
Beinheim, France  
for

Glaxo Wellcome Inc.  
Research Triangle Park, NC 27709  
Made in France

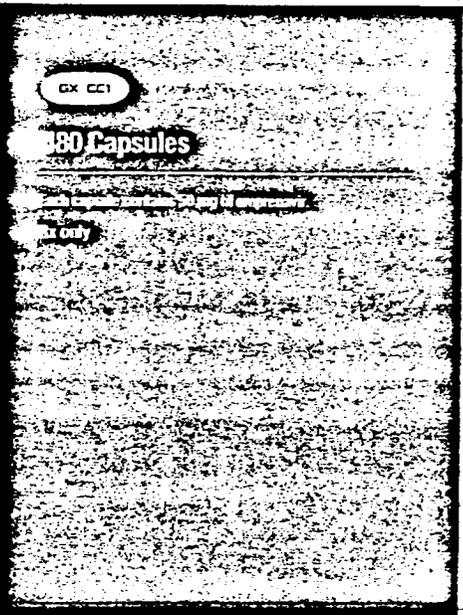
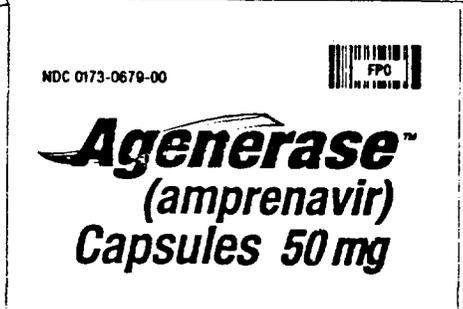
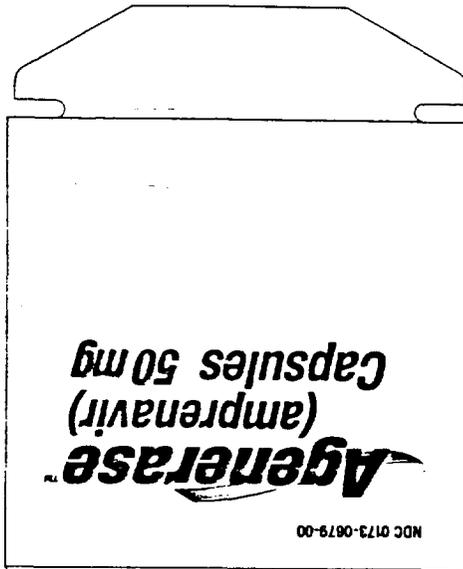
**GlaxoWellcome**



XXXXXXXX Rev. 4/99



APPEARS THIS WAY  
ON ORIGINAL



Store at controlled room temperature of 25°C (77°F) (see  
See package insert for Dosage and Administration.

Agenerase (amprenavir) Capsules are not interchangeable  
a mg/mg basis with Agenerase (amprenavir) Oral Solution  
US Patent No. 5,585,397

Licensed from  
Vertex Pharmaceuticals Incorporated  
Cambridge, MA 02139

AGENERASE is a trademark of the Glaxo Wellcome group  
companies.

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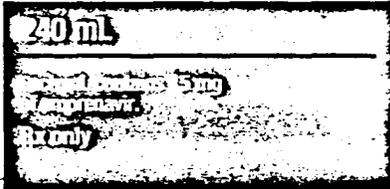
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ON ORIGINAL

NDC 0173-0687-00

**Agenerase™**  
**(amprenavir)**  
**Oral Solution**  
**15 mg/mL**



Store at controlled room temperature of 25°C (77°F) (see USP).  
See package insert for Dosage and Administration.

Agenerase (amprenavir) Oral Solution is not interchangeable on  
a mg/mg basis with Agenerase (amprenavir) Capsules.

US Patent No. 5,585,397

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**VERTEX**

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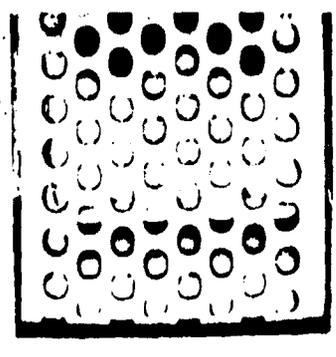
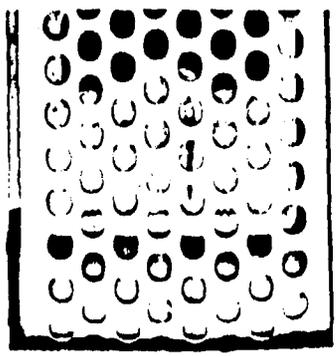
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Rev. 4/99

XXXXXXX

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AREA  
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APPEARS THIS WAY  
ON ORIGINAL



3 UT 5-0000-002

240 mL

Each mL contains 5 mg  
of amprenavir.

Rx only

Cambridge, MA 02139  
Glaxo Wellcome Inc.  
Research Triangle Park, NC 27709  
Made in England

GlaxoWellcome



XXXXXXX

240 mL

Each mL contains 5 mg  
of amprenavir.

Rx only

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Research Triangle Park, NC 27709  
Made in England

GlaxoWellcome



3 0173-0000-002

XXXXXX  
Rev. 4/99

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XXXXXX

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