WHAT IS CLAIMED IS:

1. A method of evaluating the effectiveness of antiretroviral therapy of a patient comprising:

(i) collecting a plasma sample from an HIV-infected patient who is being treated with an antiretroviral agent;

(ii) amplifying the HIV-encoding nucleic acid in the plasma sample using HIV primers in about 30 cycles of PCR; and

(iii) testing for the presence of HIV sequence in the product of the PCR;

in which the absence of detectable HIV sequence correlates positively with the conclusion that the antiretroviral agent is therapeutically effective.

2. The method of claim 1 in which the HIV primers are SK38 and SK39.

3. The method of claim 1 in which one HIV primer is primer NE1 (5'-TCATTGACAGTCCAGCT-3').

4. The method of claim 1 in which one HIV primer is primer A (5'-TTCCCATTAGTCCTATT-3').

5. The method of claim 1, 2, 3 or 4 in which the antiretroviral agent is zidvudine.

6. A method of evaluating the effectiveness of antiretroviral therapy of a patient comprising:

(i) collecting a plasma sample from an HIV-infected patient who is being treated with an antiretroviral agent;

(ii) amplifying the HIV-encoding nucleic acid in the plasma sample using HIV primers in about 30 cycles of PCR; and

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(iii) testing for the presence of HIV sequence in the product of the PCR;

in which the presence of detectable HIV sequence correlates positively with the conclusion that the antiretroviral agent is therapeutically ineffective.

7. A method of evaluating the effectiveness of antiretroviral therapy of a patient comprising:

(i) collecting a plasma sample from an HIV-infected patient who is being treated with an antiretroviral agent;

(ii) amplifying the HIV-encoding nucleic acid in the plasma sample using HIV primers in about 30 cycles of PCR; and

(iii) testing for the presence of HIV sequence in the product of the PCR;

in which the presence of detectable HIV sequence correlates positively with an absolute CD4 count of less than 200 cells per cubic millimeter.

8. A method of evaluating the effectiveness of antiretroviral therapy of a patient comprising:

(i) collecting a plasma sample from an HIV-infected patient who is being treated with an antiretroviral agent;

(ii) amplifying the HIV-encoding nucleic acid in the plasma sample using HIV primers in about 30 cycles of PCR; and

(iii) testing for the presence of HIV sequence in the product of the PCR;

in which the absence of detectable HIV sequence correlates positively with an absolute CD4 count of greater than 200 cells per cubic millimeter.

9. A method of evaluating the effectiveness of antiretroviral therapy of a patient comprising

(i) collecting a plasma sample from an HIV-infected patient who is being treated with an antiretroviral agent;

(ii) amplifying the HIV-encoding nucleic acid in the plasma sample using HIV primers in about 30 cycles of PCR; and

(iii) measuring the HIV RNA copy number using the product of the PCR, in which an HIV RNA copy number greater than about 500 correlates positively with the conclusion that the antiretroviral agent is therapeutically ineffective.

10. The method of claim 9 in which the HIV primers are SK38 and SK39.

11. The method of claim 9 in which one HIV primer is primer NE1 (5'-TCATTGACAGTCCAGCT-3').

12. The method of claim 9 in which one HIV primer is primer A (5'-TTCCCATTAGTCCTATT-3').

13. The method of claim 9, 10, 11 or 12 in which the antiretroviral agent is zidvudine.

14. A method of evaluating the effectiveness of antiretroviral therapy of a patient comprising:

(i) collecting a plasma sample from an HIV-infected patient who is being treated with an antiretroviral agent;

(ii) amplifying the HIV-encoding nucleic acid in the plasma sample using HIV primers in about 30 cycles of PCR; and

(iii) measuring the HIV RNA copy number using the product of the PCR, in which an HIV RNA copy number less than about 200 correlates positively with the conclusion that the antiretroviral agent is therapeutically effective.

15. The method of claim 14 in which the HIV primers are SK38 and SK39.

16. The method of claim 14 in which one HIV primer is primer NE1 (5'-TCATTGACAGTCCAGCT-3').

17. The method of claim 14 in which one HIV primer is primer A (5'-TTCCCATTAGTCCTATT-3').

18. The method of claim 14, 15, 16 or 17 in which the antiretroviral agent is zidvudine.

19. A method of evaluating the effectiveness of antiretroviral therapy of a patient comprising

(i) collecting one pre-treatment plasma sample from an HIV-infected patient who is about to be treated with an antiretroviral agent;

(ii) collecting a post-treatment plasma sample from the HIV-infected patient after the patient has been treated with the antiretroviral agent;

(iii) amplifying the HIV-encoding nucleic acid in the pre-treatment and post-treatment plasma samples using HIV primers in about 30 cycles of PCR;

(iv) measuring the HIV RNA copy number using the products of the PCRs of step (iii); and

(v) comparing the HIV RNA copy number in pre-treatment and post-treatment plasma samples,

in which a ratio of HIV RNA copy number in pre-treatment and post-treatment plasma samples of greater than about 4 to 1 correlates positively with the conclusion that the antiretroviral agent is therapeutically effective.

20. The method of claim 19 in which the HIV primers are SK38 and SK39.

21. The method of claim 19 in which one HIV primer is primer NE1 (5'-TCATTGAGAGTCCAGCT-3').

22. The method of claim 19 in which one HIV primer is primer A (5'-TTCCCATTAGTCCTATT-3').

23. The method of claim 19, 20, 21 or 22 in which the antiretroviral agent is zidvudine.

24. A method of evaluating the effectiveness of antiretroviral therapy of a patient comprising:

(i) collecting a plasma sample from an HIV-infected patient who is being treated with an antiretroviral agent; and

(ii) determining whether the plasma sample comprises nucleic acid encoding HIV RT having a mutation at codon 215,

in which the presence of the mutation correlates positively with immunologic decline of the patient within a six to twelve month period.

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25. The method of claim 24 in which the mutation at codon 215 is determined by a method comprising polymerase chain reaction.

26. The method of claim 25 which comprises a "nested" polymerase chain reaction.

27. The method of claim 25 or 26 which utilizes primer B (5'-GGATGGAAAGGAATCACC-3').

28. The method of claim 25 or 26 which utilizes primer 3M (3'-AAGTGTGGTCTGTTTTTTGTA-5').

29. A method of evaluating the effectiveness of antiretroviral therapy of a patient comprising:

(i) collecting PBMC from an HIV-infected patient who is being treated with an antiretroviral agent; and

(ii) determining whether the PBMC comprise proviral HIV DNA which comprises a mutation at codon 215,

in which the presence of the mutation correlates positively with immunologic decline of the patient within a 4-11 month period.

30. The method of claim 29 in which the mutation at codon 215 is determined by a method comprising polymerase chain reaction.

31. The method of claim 30 which comprises a "nested" polymerase chain reaction.

32. The method of claim 30 or 31 which utilizes primer B (5'-GGATGGAAAGGAATCACC-3').

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33. The method of claim 30 or 31 which utilizes primer 3M (3'-AAGTGTGGTCPGTTTTTTGTA-5').