CLAIMS

What is claimed is:

1. ~~A method of reducing~~Use of levodopa in the manufacture of a medicament for treating Parkinson's disease in a patient population of Parkinson's disease patients such that the inter-patient variability of levodopa in ~~a~~ the patient population of Parkinson's disease patients ~~comprising:~~is reduced,

~~administering~~ wherein levodopa is to be administered by inhalation to a patient population of at least two patients suffering from Parkinson's disease~~;~~,

wherein the inter-patient variability of the levodopa plasma concentration at the time period of from about ten minutes post inhalation has less than a 50% coefficient of variation.

2. The ~~method~~ use of claim 1, wherein said time period is about 30 minutes.

3. The ~~method~~ use of claim 1, wherein said time period is about 60 minutes.

4. The ~~method~~ use of claim 1, wherein said patients are stage 2, stage 3 or stage 4 Parkinson's disease patients.

5. The ~~method~~ use of claim 1, wherein said coefficient of variation is less than 35%.

6. The ~~method~~ use of claim 1, wherein said dosage given by inhalation provides a higher plasma concentration at ten minutes as compared to an equivalent dose of levodopa given orally.

7. ~~A method of reducing~~Use of levodopa in the manufacture of a medicament for treating Parkinson's disease in a patient population of Parkinson's disease patients such that the inter-patient variability of levodopa in ~~a~~ the patient population of Parkinson's disease patients ~~comprising:~~is reduced,

~~administering~~ wherein levodopa is to be administered by inhalation to a patient population of at least two patients suffering from Parkinson's disease~~;~~,

wherein the inter-patient variability of the levodopa AUC at the time period of from about ten minutes post inhalation has less than a 50% coefficient of variation.

8. The ~~method~~ use of claim 7, wherein said time period post inhalation is about 30 minutes.

9. The ~~method~~ use of claim 7, wherein said time period post inhalation is about 60 minutes.

10. The ~~method~~ use of claim 7, wherein said patients are stage 2, stage 3 or stage 4 Parkinson's disease patients.

11. The ~~method~~ use of claim 7, wherein said coefficient of variation is less than 35%.

12. The ~~method~~ use of claim 7, wherein said patient does not require dose titration of levodopa.

13. The ~~method~~ use of claim 7, wherein said dosage given by inhalation provides a higher AUC at ten minutes as compared to an equivalent dose of levodopa given orally.

14. The ~~method~~ use of claim 1, wherein the patient does not require co-administration of a DOPA decarboxylase inhibitor.

15. The ~~method~~ use of claim 1, wherein the patient is to be co-administered with a lower dosage of DOPA decarboxylase inhibitor as compared to the dosage of DOPA decarboxylase inhibitor co-administered to a patient receiving orally administered L-Dopa.

16. The ~~method~~ use of claim 1, wherein the patient is to be co-administered with a dosage of a DOPA decarboxylase inhibitor less frequently as compared to frequency of co-administration of a DOPA decarboxylase inhibitor to a patient receiving orally administered L-Dopa.

17. The ~~method~~ use of claims 14, 15 or 16, wherein the DOPA decarboxylase inhibitor is carbidopa or benserazide.

18. The ~~method~~ use of claims 1 or 7, wherein the dose of levodopa comprises 90% by dry weight levodopa, 8% by dry weight dipalmitoylphosphatidylcholine (DPPC) and 2% sodium chloride.

19. ~~A method of~~ Use of levodopa in the manufacture of a medicament for providing rapid relief of motor fluctuations in a Parkinson's disease patient population~~, comprising:~~

~~administering~~ wherein at least one dose of levodopa is to be administered by inhalation to a first Parkinson's disease patient who takes a first average daily dose of oral levodopa~~;~~,

~~administering~~ at least one dose of levodopa is to be administered by inhalation to a second Parkinson's disease patient who takes a second average daily dose of oral levodopa~~;~~,

wherein both patients have a reduction in motor symptoms within about 20 minutes of administration of said levodopa by inhalation upon administration of the same dose of pulmonary levodopa~~;~~, and

wherein the inter-patient variability of the levodopa plasma concentration at the time period of about ten minutes post inhalation has less than a 50% coefficient of variation.

20. The ~~method~~ use of claim 19, wherein said first average daily dose of oral levodopa is higher than the second average daily dose of oral levodopa.

21. The ~~method~~ use of claim 19, wherein said first average daily dose of oral levodopa is higher than the second average daily dose of oral levodopa and both average daily doses range from 200mg to 2500mg of levodopa.

22. The ~~method~~ use of claim 19, wherein said first average daily dose of levodopa between 400-700mg.

23. The ~~method~~ use of claim 19, wherein said second average daily dose of levodopa is between 700-2000mg.

24. The ~~method~~ use of claim 20, wherein said first average daily dose of levodopa is between 400-700mg.

25. The ~~method~~ use of claim 19, wherein said second average daily dose of levodopa is between 1000-2000mg.

26. The ~~method~~ use of claim 19, wherein ~~said method further comprises administering~~ said pulmonary levodopa is to be administered to more than two patients wherein said patients take multiple different average daily oral doses of levodopa ranging from 200mg to 3000 per day.