~~CLAIMS~~

~~What is claimed is:~~

~~1. 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 the patient population of Parkinson's disease patients is reduced,~~
~~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 use of claim 1, wherein said time period is about 30 minutes.~~

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

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

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

~~6. The 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. 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 the patient population of Parkinson's disease patients is reduced,~~
~~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 use of claim 7, wherein said time period post inhalation is about 30 minutes.~~

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

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

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

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

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

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

18. The 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.

CLAIMS

What is claimed is:

~~19.~~1. Use of levodopa in the manufacture of a medicament for providing rapid relief of motor fluctuations in a Parkinson's disease patient population,

wherein at least one dose of about 10 mg to about 50 mg fine particle dose (FDP) 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 of about 200 mg to about 2500 mg,

at least one dose of about 10 mg to about 50 mg FDP 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 of about 200 mg to about 2500 mg,

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.~~2. The use of claim ~~19~~ 1, wherein said first average daily dose of oral levodopa is higher than the second average daily dose of oral levodopa.

~~21.~~3. The use of claim ~~19~~ 1, 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.~~4. The use of claim ~~19~~ 1, wherein said first average daily dose of levodopa between 400-700mg.

~~23.~~5. The use of claim ~~19~~ 1, wherein said second average daily dose of levodopa is between 700-2000mg.

~~24.~~6. The use of claim ~~20~~ 2, wherein said first average daily dose of levodopa is between 400-700mg.

~~25.~~7. The use of claim ~~19~~ 1, wherein said second average daily dose of levodopa is between 1000-2000mg.

~~26.~~8. The use of claim ~~19~~ 1, wherein 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~~ 2500mg per day.