Claims:

1. Use of leucine, acetyl-leucine, or a pharmaceutically acceptable salt thereof, in the manufacture of a medicament for treating restless legs syndrome (RLS) in a subject who has a neurodegenerative disease.

2. The use according to claim 1, wherein the neurodegenerative disease is parkinsonism.

3. The use according to claim 1, wherein the neurodegenerative disease is a Motor Neuron Disease.

4. The use according to claim 1, wherein the neurodegenerative disease is Parkinson's Disease.

5. The use according to claim 1, wherein the neurodegenerative disease is associated with dopaminergic system dysfunction.

6. The use of according to any of claims 1-5, wherein the leucine is DL-leucine or the acetyl-leucine is acetyl-DL-leucine.

7. The use of according to any of claims 1-5, wherein the leucine or acetyl-leucine has an enantiomeric excess of the L-enantiomer or the D-enantiomer.

8. The use according to any of claims 1-5, wherein the leucine or acetyl-leucine is the L-enantiomer.

9. The use according to any of claims 1-8, wherein the use comprises the acetyl-leucine to be administered to the subject in need thereof at a therapeutically effect amount of from 1 g to 15 g per day, from 1 g to 10 g per day, from 1.5 g to 7 g per day, from 4 g to 6 g per day, or from 4 g to 5 g per day.