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) or one or more symptoms associated with RLS in a subject in need thereof.

2. Use according to claim 1, wherein the RLS is primary RLS.

3. Use according to claim 1, wherein the RLS is secondary RLS.

4. Use according to claim 1, wherein the a therapeutically effective amount of the leucine, acetyl-leucine, or pharmaceutically acceptable salt thereof is to be administered to the subject.

5. Use according to claim 4, wherein the adminstration occurs over time and the subject's International Restless Leg Syndrome Rating Scale (IRLS) is reduced by at least 10% after the adminstration compared to a baseline.

6. Use according to claim 5, wherein the subject's International Restless Leg Syndrome Rating Scale (IRLS) is reduced by at least 50% after the adminstration compared to the baseline.

7. Use according to any of claims 1-6, wherein the leucine is DL-leucine or the acetyl-leucine is acetyl-DL-leucine.

8. Use according to any of claims 1-6, wherein the leucine or acetyl-leucine has an enantiomeric excess of the L-enantiomer or the D-enantiomer.

9. Use according to any of claims 1-8, wherein the acetyl-leucine is to be administered to the subject in need thereof at a therapeutically effective 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.

10. Use of a therapeutically effective amount of leucine, acetyl-leucine, or a pharmaceutically acceptable salt thereof in the manufacture of a medicament for diminishing, inhibiting, or eliminating one or more symptoms of restless legs syndrome (RLS) in a subject in need thereof.

11. The use of claim 10, wherein the one or more symptoms are chosen from lower leg sensations, periodic leg movements of sleep, unpleasant leg sensations, urge to move, restlessness, daytime sleepiness, and sleep disturbances.

12. The use according to claim 10 or 11, wherein the leucine is DL-leucine or the acetyl-leucine is acetyl-DL-leucine.

13. The use according to claim 10 or 11, wherein the leucine or acetyl-leucine has an enantiomeric excess of the L-enantiomer or the D-enantiomer.

14. The use according to any of claims 10-13, wherein the therapeutically effective 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.