CLAIMS

1. Use of dextromethorphan in the manufacture of a medicament for increasing dextromethorphan plasma levels in a human being in need of treatment with dextromethorphan, wherein the medicament is intended to be co-administered with bupropion, hydroxybupropion, erythrohydroxybupropion, or threohydroxybupropion, and wherein the human being is an extensive metabolizer of dextromethorphan, wherein the medicament is effective for providing an AUC_{0-12} of dextromethorphan, on the eighth day that it is co-administered with bupropion, hydroxybupropion, erythrohydroxybupropion, or threohydroxybupropion, that is at least about 20 times the AUC_{0-12} that would be achieved by administering the same amount of dextromethorphan without bupropion, hydroxybupropion, erythrohydroxybupropion, or threohydroxybupropion for eight consecutive days.

2. Use of claim 1, wherein, on the eighth day, dextromethorphan has a plasma level 12 hours after co-administration of bupropion, hydroxybupropion, erythrohydroxybupropion, or threohydroxybupropion with dextromethorphan that is at least 80 times the plasma level that would be achieved by administration of the same amount of dextromethorphan without co-administration of bupropion, hydroxybupropion, erythrohydroxybupropion, or threohydroxybupropion.

3. Use of claim 1 or 2, wherein about 40 mg to about 140 mg of dextromethorphan is to be administered per day.

4. Use of claim 3, wherein about 60 mg to about 100 mg of dextromethorphan is to be administered per day.

5. Use of any one of claims 1 to 4, wherein bupropion is to be co-administered with dextromethorphan.

6. Use of claim 5, wherein about 100 mg to about 250 mg of bupropion is to be administered per day.

7. Use of claim 5, wherein about 200 mg to about 250 mg of bupropion is to be administered per day.

8. Use of any one of claims 1 to 7, wherein bupropion, hydroxybupropion,

erythrohydroxybupropion, or threohydroxybupropion is to be co-administered with dextromethorphan for the treatment of pain or a neurological disorder.

9. Use of claim 8, wherein the pain is postoperative pain, cancer pain, arthritic pain, lumbosacral pain, musculoskeletal pain, central multiple sclerosis pain, nociceptive pain, or neuropathic pain.

10. Use of claim 8, wherein the neurological disorder is an affective disorder, a psychiatric disorder, a cerebral function disorder, a movement disorder, a dementia, a motor neuron disease, a neurodegenerative disease, a seizure disorder, or a headache.

11. Use of claim 8, wherein the neurological disorder is depression.

12. Use of claim 8, wherein the neurological disorder is agitation in Alzheimer's disease.

13. Use of any one of claims 1 to 12, wherein the bupropion, hydroxybupropion, erythrohydroxybupropion, or threohydroxybupropion is to be co-administered with dextromethorphan in a single dosage form.