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Int. Cl.:—A 61 k 3/00

COMPLETE SPECIFICATION

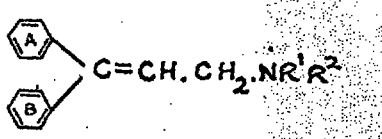
Pharmaceutical Compositions containing Bisphenylalkenylamine Derivatives

We, ED. GEISTLICH SÖHNE AG FÜR CHEMISCHE INDUSTRIE, a body corporate organised and existing under the laws of Switzerland, of 6110, Wolhusen, Switzerland, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to new pharmaceutical compositions having antidepressant activity.

Certain diphenylalkenylamine derivatives are known compounds, but it was not known heretofore that compounds of this type were useful as antidepressants. We have now made the unexpected discovery, and herein lies the basis of this invention, that compounds of this type have antidepressant activity.

According to the invention we provide pharmaceutical compositions comprising at least one alkene derivative of the formula:—



wherein R^1 and R^2, which may be the same or different, stand for hydrogen atoms or alkyl or benzyl radicals, and one or both of the phenyl radicals A and B may optionally be substituted with one or two substituents selected from halogen atoms and trifluoromethyl, alkyl and alkoxy radicals, or a pharmaceutically-acceptable acid-addition salt thereof, provided that when the phenyl radical A is unsubstituted, the phenyl radical B does not stand for a trifluoromethylphenyl radical, and a pharmaceutically-acceptable diluent or carrier.

It is to be understood that the above definition of alkene derivatives includes all stereoisomeric forms thereof, for example the cis- and trans-isomers, and mixtures thereof.

As a suitable value for R^1 or R^2 when it stands for an alkyl radical there may be mentioned, for example, an alkyl radical of not more than 6 carbon atoms, and more particularly an alkyl radical of not more than 2 carbon atoms, for example the methyl or ethyl radical.

The substituent(s) which may optionally be present in one or both of the phenyl radicals A and B may be selected from fluorine, chlorine and bromine atoms, and the trifluoromethyl radical, and alkyl and alkoxy radicals preferably of not more than 6 carbon atoms, and more particularly alkyl and alkoxy radicals of not more than 2 carbon atoms, for example the methyl and methoxy radical.

A preferred group of active ingredients for use in the compositions of the invention consists of alkene derivatives of the above formula wherein R^1 stands for a hydrogen atom or the methyl radical, R^2 stands for the methyl or ethyl radical, and one or both of the phenyl radicals A and B is or are optionally substituted with a halogen atom, and pharmaceutically-acceptable acid-addition salts thereof.

As alkene derivatives which may be used as active ingredients in the pharmaceutical compositions of the invention there may be mentioned, for example, N,N-dimethyl-3,3-

[*Price 4s. 6d.*]

diphenylprop - 2 - enylamine, N,N - diethyl-3,3 - diphenylprop - 2 - enylamine, N,N-dimethyl - 3 - (4 - chlorophenyl) - 3 - phenylprop - 2 - enylamine, N,N - dimethyl - 3-(4 - fluorophenyl) - 3 - phenylprop - 2 - enylamine, 3,3 - diphenylprop - 2 enylamine, N-ethyl - 3,3 - diphenylprop - 2 - enylamine, N - n - butyl - 3,3 - diphenylprop - 2 - enylamine, N,N - diethyl - 3,3 - di - (4 - methylphenyl)prop - 2 - enylamine, 3 - (4 - methoxyphenyl) - 3 - phenylprop - 2 - enylamine, N - methyl - 3,3 - diphenylprop - 2 - enylamine, N,N - dimethyl - 3 - (3 - fluorophenyl) - 3 - phenylprop - 2 - enylamine, N,N - dimethyl - 3 - phenyl - 3 - (2 - tolyl)-prop - 2 - enylamine, N,N - dimethyl - 3 - (2-methoxyphenyl) - 3 - phenylprop - 2 - enylamine, N,N - dimethyl - 3,3 - bis - (4-chlorophenyl)prop - 2 - enylamine, N,N - dimethyl - 3,3 - bis - (3 - fluorophenyl)prop-2 - enylamine, N,N - dimethyl - 3,3 - bis - (4-fluorophenyl)prop - 2 - enylamine, N,N - dimethyl - 3 - (4 - chlorophenyl) - 3 - (4-fluorophenyl)prop - 2 - enylamine, N,N - dimethyl - 3 - (4 - chlorophenyl) - 3 - (2-methoxyphenyl)prop - 2 - enylamine, N,N-dimethyl - 3 - (4 - chlorophenyl) - 3 - (3-fluorphenyl)prop - 2 - enylamine, N,N - dimethyl - 3,3 - bis - (3 - trifluoromethylphenyl)prop - 2 - enylamine, N,N - dimethyl-3 - (4 - bromophenyl) - 3 - phenylprop - 2-enylamine, N - methyl - 3 - (4 - fluorophenyl)-3 - phenylprop - 2 - enylamine, N - methyl-3,3 - bis - (4 - fluorophenyl)prop - 2 - enylamine, N - methyl - 3 - (4 - chlorophenyl)-3 - phenylprop - 2 - enylamine, N - methyl-3,3 - bis - (3 - fluorophenyl)prop - 2 - enylamine, N - methyl - 3,3 - bis - (4 - chlorophenyl)prop - 2 - enylamine, N - methyl-3 - phenyl - 3 - (2 - tolyl)prop - 2 - enylamine, N - benzyl - N - methyl - 3,3 - bis-(4 - chlorophenyl)prop - 2 - enylamine and N - benzyl - N - methyl - 3,3 - bis - (4-fluorophenyl)prop-2-enylamine, and pharmaceutically-acceptable acid-addition salts thereof. Preferred compounds are N,N-dimethyl - 3,3 - diphenylprop - 2 - enylamine and pharmaceutically-acceptable acid-addition salts thereof, for example the hydrochloride.

As suitable acid-addition salts there may be mentioned salts derived from inorganic or organic acids affording pharmaceutically-acceptable anions, for example hydrochlorides, oxalates, citrates, maleates or tartrates.

Suitable pharmaceutically-acceptable diluents or carriers for use as excipients in the compositions of the invention are those known to the art and used in the preparation of pharmaceutical formulations for human and veterinary medication.

The pharmaceutical compositions of the invention include compositions which are suitable for oral administration. These include, for example, solid compositions, for example tablets, pills, capsules, dispersable powders and granules, which may optionally be coated, for example, with a sweetening agent and/or a protective material designed to modify the distribution and absorption of the active ingredient or ingredients in the digestive tract. They also include orally-administrable semi-solid or liquid formulations, for example pharmaceutically-acceptable emulsions, syrups, dispersions and solutions, either for administering *per se* with or without flavouring agents or after confinement in some suitable way, for example in capsules.

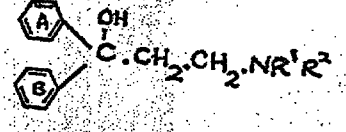
The pharmaceutical compositions of the invention also include liquid compositions which are sterile aqueous solutions, suspensions or emulsions, or sterile non-aqueous solutions or suspensions which can be administered by injection, for example intravenously, subcutaneously or intramuscularly. Those injejctable compositions of the invention which are suspensions contain their particulate matter in a finely divided form, for example in a micro-pulverised form, and those compositions which are aqueous suspensions may optionally contain small amounts of such agents as are commonly used to facilitate the manufacture and maintain the efficacy of aqueous suspensions, for example dispersing agents and suspending agents.

Suitable vehicles for the non-aqueous solutions and suspensions of the invention include, for example, water-miscible non-toxic vehicles, for example propylene glycol and polyethylene glycol, and water-immiscible non-toxic vehicles, for example injejctable vegetable oils, for example arachis oil, and oil-like injectable organic esters, for example dibutyl succinate. The said water-immiscible vehicles may also contain metallic soaps, for example aluminium stearate.

The sterile injectable solutions, suspensions or emulsions of the invention may be obtained sterile by known procedures, for example by aseptic formulation, by Seitz filtration, by irradiation, by the incorporation of sterilising agents in the compositions, or by heat treatment.

The compositions of the invention include pharmaceutical compositions which are sterile powders comprising the active ingredient or ingredients together with such non-toxic pharmaceutical excipients as are required to provide, on mixing with water, sterile aqueous solutions or suspensions suitable for parenteral administration.

The alkene derivatives which are used as the active ingredients in the pharmaceutical compositions of this invention may be obtained by the dehydration of a propanolamine derivative of the formula:—



wherein A, B, R^1 and R^2 have the meanings stated above, or an acid-addition salt thereof, by conventional procedures.

The invention is illustrated but not limited by the following Examples in which the parts are by weight:—

EXAMPLE 1.

A mixture of 25 parts of N,N-dimethyl-3,3 - diphenylprop - 2 - enylamine hydrochloride, 125 parts of maize starch, 270 parts of calcium phosphate and 1 part of magnesium stearate is compressed, and the compressed material is then broken down into granules by passage through a 16-mesh screen. The granules so obtained are then compressed into tablets which are suitable for oral administration for therapeutic purposes.

The process described above is repeated except that the N,N - dimethyl - 3,3 - diphenylprop - 2 - enylamine hydrochloride is replaced by a pharmaceutically acceptable acid-addition salt of one of the following compounds:

N,N - diethyl - 3,3 - diphenylprop - 2-enylamine, N,N - dimethyl - 3 - (4 - chlorophenyl) - 3 - phenylprop - 2 - enylamine, N,N - dimethyl - 3 - (4 - fluorophenyl) - 3 - phenylprop - 2 - enylamine, 3,3 - diphenylprop - 2 - enylamine, N - ethyl - 3,3 - diphenylprop - 2 - enylamine, N,N - di - n-propyl - 3,3 - diphenylprop - 2 - enylamine, N,N - di - n - butyl - 3,3 - diphenylprop-2 - enylamine, N - n - butyl - 3,3 - diphenylprop - 2 - enylamine, N,N - diethyl-3,3 - di - (4 - methylphenyl)prop - 2 - enylamine and 3 - (4 - methoxyphenyl) - 3-phenylprop - 2 - enylamine. In a similar manner there are obtained tablets which are suitable for oral administration for therapeutic purposes.

EXAMPLE 2.

A mixture of 25 parts of N-methyl-3,3-diphenylprop - 2 - enylamine hydrochloride, 125 parts of maize starch, 270 parts of calcium phosphate and 1 part of magnesium stearate is compressed, and the compressed material is then broken down into granules by passage through a 16-mesh screen. The granules so obtained are then compressed into tablets which are suitable for oral administration for therapeutic purposes.

N - methyl - 3,3 - diphenylprop - 2 - enylamine hydrochloride may be obtained as follows:—

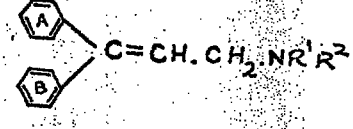
A mixture of 9 parts of N-methyl-3,3-diphenyl - 3 - hydroxypropylamine, 80 parts of acetic acid, and 30 parts of 10N-hydrochloric acid is heated at 95°C. for 2 hours. The solvent is then evaporated *in vacuo*, the residue is made strongly alkaline with 2N-sodium hydroxide solution, and is then extracted with 250 parts of ether. The ethereal extract is washed with water and then dried with anhydrous calcium sulphate. The ether is evaporated from the solution, and an ethereal solution of hydrogen chloride is added to the residual oil. The mixture is filtered and the solid residue is crystallised from n-butyl acetate. There is thus obtained N-methyl - 3,3 - diphenylprop - 2 - enylamine hydrochloride, m.p. 146—148°C.

N - methyl - 3,3 - diphenyl - 3 - hydroxypropylamine (m.p. 148—150°C., crystallised from n-butyl acetate) may be obtained in conventional manner by the interaction of phenyl magnesium bromide and ω-methylaminopropiophenone.

EXAMPLE 3.

A mixture of 25 parts of N,N-dimethyl-3 - (3 - fluorophenyl) - 3 - phenylprop - 2-enylamine hydrochloride, 125 parts of maize starch, 270 parts of calcium phosphate and 1 part of magnesium stearate is compressed, and the compressed material is then broken down into granules by passage through a 16-mesh screen. The granules so obtained are then compressed into tablets which are suitable for oral administration for therapeutic purposes.

The process described above is repeated except that the N,N - dimethyl - 3 - (3-fluorophenyl) - 3 - phenylprop - 2 - enylamine hydrochloride is replaced by any one of the following compounds:—



A	B	R^1	R^2	Salt*; m.p. (°C.) crystallisation solvent
Ph	2—Me—Ph	Me	Me	a; 194 butyl acetate
Ph	2—MeO—Ph	Me	Me	a; 166 butyl acetate
4—Cl—Ph	4—Cl—Ph	Me	Me	a; 232 acetone
3—F—Ph	3—F—Ph	Me	Me	a; 156 benzene
4—F—Ph	4—F—Ph	Me	Me	a; 212 ethyl acetate
4—Cl—Ph	4—F—Ph	Me	Me	a; 196 ethyl acetate
4—Cl—Ph	2—MeO—Ph	Me	Me	a; 159 butyl acetate
4—Cl—Ph	3—F—Ph	Me	Me	a; 144 butanol
3—CF_3—Ph	3—CF_3—Ph	Me	Me	a; 144 ethyl acetate
Ph	4—Br—Ph	Me	Me	a; 170
Ph	4—F—Ph	H	Me	a; 140 ethyl acetate
4—F—Ph	4—F—Ph	H	Me	b; 216 ethanol
Ph	4—Cl—Ph	H	Me	a; 142 butyl acetate
3—F—Ph	3—F—Ph	H	Me	a; 179 ethyl acetate
4—Cl—Ph	4—Cl—Ph	H	Me	a; 189 ethanol
Ph	2—Me—Ph	H	Me	a; 160 butyl acetate
4—Cl—Ph	4—Cl—Ph	Me	CH_2Ph	a; 187 ethyl acetate
4—F—Ph	4—F—Ph	Me	CH_2Ph	a; 132 ethyl acetate

* a; hydrochloride

b; oxalate

In a similar manner there are obtained tablets which are suitable for oral administration for therapeutic purposes.

N,N - Dimethyl - 3 - (3 - fluorophenyl) - 3 - phenylprop - 2 - enylamine hydrochloride may be obtained as follows:—

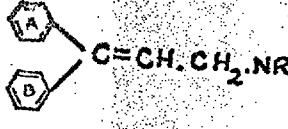
A mixture of 9 parts of N,N - dimethyl - 3 - (3 - fluorophenyl) - 3 - phenyl - 3 - hydroxypropylamine, 150 parts of acetic acid and 40 parts of 10N-hydrochloric acid is heated at 95°C. for 2 hours, and is then kept at 20°C. for 12 hours. The solvent is then evaporated and the residue is made strongly alkaline with aqueous sodium hydroxide and is then extracted with 200 parts of ether. The ethereal extract is washed with water and dried over anhydrous calcium sulphate, and the ether is then removed from the extract by evaporation. An ethereal solution of hydrogen chloride is added to the residue, and the precipitated solid is collected by filtration and is crystallised from butyl acetate. There is thus obtained N,N - dimethyl - 3 - (3 - fluorophenyl) - 3 - phenylprop - 2 - enylamine hydrochloride, m.p. 148°C.

The hydroxypropane derivative used as starting material may be obtained in conventional manner by the interaction of the appropriate Grignard reagent with the appropriate ketone.

The other diphenylalkenylamine derivatives listed above may be obtained in similar manner to that described for N,N - dimethyl - 3 - (3 - fluorophenyl) - 3 - phenylprop - 2 - enylamine hydrochloride.

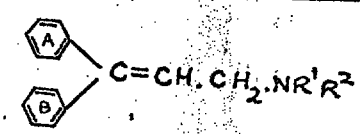
WHAT WE CLAIM IS:—

1. A pharmaceutical composition comprising at least one alkene derivative of the formula:—



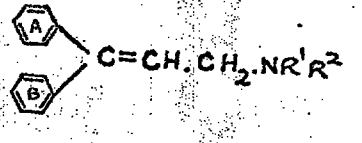
wherein R^1 and R^2, which may be the same or different, stand for hydrogen atoms or alkyl or benzyl radicals, and one or both of the phenyl radicals A and B is or are optionally substituted with one or two substituents selected from halogen atoms and trifluoromethyl, alkyl and alkoxy radicals, or a pharmaceutically - acceptable acid - addition salt thereof, provided that when the phenyl radical A is unsubstituted, the phenyl radical B does not stand for a trifluoromethylphenyl radical, and a pharmaceutically-acceptable diluent or carrier.

2. A pharmaceutical composition comprising at least one alkene derivative of the formula:—



wherein R^1 and R^2, which may be the same or different, stand for hydrogen atoms or alkyl or benzyl radicals, and one or both of the phenyl radicals A and B is or are optionally substituted with one or two substituents selected from halogen atoms and alkyl and alkoxy radicals, or a pharmaceutically-acceptable acid-addition salt thereof, and a pharmaceutically acceptable diluent or carrier.

3. A composition as claimed in claim 2 comprising an alkene derivative of the formula:—



wherein R^1 stands for a hydrogen atom or the methyl radical, R^2 stands for the methyl or ethyl radical, and one or both of the phenyl radicals A and B is or are optionally substituted with a halogen atom, or a pharmaceutically-acceptable acid-addition salt thereof, and a pharmaceutically-acceptable diluent or carrier.

4. A composition as claimed in claim 1 wherein R^1 or R^2 stands for an alkyl radical of not more than 2 carbon atoms or a benzyl radical, and one or both of the phenyl radicals A and B is optionally substituted with one or two substituents selected from fluorine, chlorine and bromine atoms, and the trifluoromethyl radical, and alkyl and alkoxy radicals of not more than 2 carbon atoms, provided that when the phenyl radical A is unsubstituted, the phenyl radical B does not stand for a trifluoromethylphenyl radical.

5. A pharmaceutical composition comprising N,N - dimethyl - 3,3 - diphenylprop - 2-enylamine, or a pharmaceutically-acceptable acid-addition salt thereof, and a pharmaceutically-acceptable diluent or carrier.

6. A composition as claimed in claim 5 wherein the salt is the hydrochloride.

7. A composition as claimed in claim 2 or 3 wherein the alkene derivative is N,N-diethyl - 3,3 - diphenylprop - 2 - enylamine, N,N - dimethyl - 3 - (4 - chlorophenyl) - 3-phenylprop - 2 - enylamine, N,N - dimethyl-3 - (4 - fluorophenyl) - 3 - phenylprop - 2-enylamine, 3,3 - diphenylprop - 2 - enylamine, N - ethyl - 3,3 - diphenylprop - 2 - enylamine, N - n - butyl - 3,3 - diphenylprop-2 - enylamine, N,N - diethyl - 3,3 - di - (4-methylphenyl)prop - 2 - enylamine or 3 - (4-methoxyphenyl) - 3 - phenylprop - 2 - enyl-

In a similar manner there are obtained tablets which are suitable for oral administration for therapeutic purposes.

N,N - Dimethyl - 3 - (3 - fluorophenyl) - 3 - phenylprop - 2 - enylamine hydrochloride may be obtained as follows:—

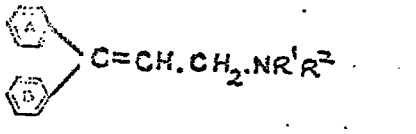
A mixture of 9 parts of N,N - dimethyl - 3 - (3 - fluorophenyl) - 3 - phenyl - 3 - hydroxypropylamine, 150 parts of acetic acid and 40 parts of 10N-hydrochloric acid is heated at 95°C. for 2 hours, and is then kept at 20°C. for 12 hours. The solvent is then evaporated and the residue is made strongly alkaline with aqueous sodium hydroxide and is then extracted with 200 parts of ether. The ethereal extract is washed with water and dried over anhydrous calcium sulphate, and the ether is then removed from the extract by evaporation. An ethereal solution of hydrogen chloride is added to the residue, and the precipitated solid is collected by filtration and is crystallised from butyl acetate. There is thus obtained N,N - dimethyl - 3 - (3 - fluorophenyl) - 3 - phenylprop - 2 - enylamine hydrochloride, m.p. 148°C.

The hydroxypropane derivative used as starting material may be obtained in conventional manner by the interaction of the appropriate Grignard reagent with the appropriate ketone.

The other diphenylalkenylamine derivatives listed above may be obtained in similar manner to that described for N,N - dimethyl - 3 - (3 - fluorophenyl) - 3 - phenylprop - 2 - enylamine hydrochloride.

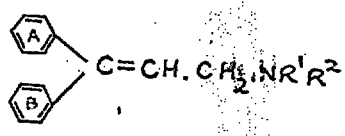
WHAT WE CLAIM IS:—

1. A pharmaceutical composition comprising at least one alkene derivative of the formula:—



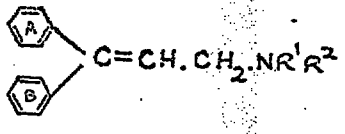
wherein R^1 and R^2, which may be the same or different, stand for hydrogen atoms or alkyl or benzyl radicals, and one or both of the phenyl radicals A and B is or are optionally substituted with one or two substituents selected from halogen atoms and trifluoromethyl, alkyl and alkoxy radicals, or a pharmaceutically - acceptable acid - addition salt thereof, provided that when the phenyl radical A is unsubstituted, the phenyl radical B does not stand for a trifluoromethylphenyl radical, and a pharmaceutically-acceptable diluent or carrier.

2. A pharmaceutical composition comprising at least one alkene derivative of the formula:—



wherein R^1 and R^2, which may be the same or different, stand for hydrogen atoms or alkyl or benzyl radicals, and one or both of the phenyl radicals A and B is or are optionally substituted with one or two substituents selected from halogen atoms and alkyl and alkoxy radicals, or a pharmaceutically-acceptable acid-addition salt thereof, and a pharmaceutically acceptable diluent or carrier.

3. A composition as claimed in claim 2 comprising an alkene derivative of the formula:—



wherein R^1 stands for a hydrogen atom or the methyl radical, R^2 stands for the methyl or ethyl radical, and one or both of the phenyl radicals A and B is or are optionally substituted with a halogen atom, or a pharmaceutically-acceptable acid-addition salt thereof, and a pharmaceutically-acceptable diluent or carrier.

4. A composition as claimed in claim 1 wherein R^1 or R^2 stands for an alkyl radical of not more than 2 carbon atoms or a benzyl radical, and one or both of the phenyl radicals A and B is optionally substituted with one or two substituents selected from fluorine, chlorine and bromine atoms, and the trifluoromethyl radical, and alkyl and alkoxy radicals of not more than 2 carbon atoms, provided that when the phenyl radical A is unsubstituted, the phenyl radical B does not stand for a trifluoromethylphenyl radical.

5. A pharmaceutical composition comprising N,N - dimethyl - 3,3 - diphenylprop - 2-enylamine, or a pharmaceutically-acceptable acid-addition salt thereof, and a pharmaceutically-acceptable diluent or carrier.

6. A composition as claimed in claim 5 wherein the salt is the hydrochloride.

7. A composition as claimed in claim 2 or 3 wherein the alkene derivative is N,N-diethyl - 3,3 - diphenylprop - 2 - enylamine, N,N - dimethyl - 3 - (4 - chlorophenyl) - 3-phenylprop - 2 - enylamine, N,N - dimethyl-3 - (4 - fluorophenyl) - 3 - phenylprop - 2-enylamine, 3,3 - diphenylprop - 2 - enylamine, N - ethyl - 3,3 - diphenylprop - 2 - enylamine, N - n - butyl - 3,3 - diphenylprop-2 - enylamine, N,N - diethyl - 3,3 - di - (4-methylphenyl)prop - 2 - enylamine or 3 - (4-methoxyphenyl) - 3 - phenylprop - 2 - enyl-

* C L M S *

amine, or a pharmaceutically-acceptable acid-addition salt thereof.

8. A composition as claimed in claim 3 wherein the alkene derivative is N-methyl-3,3 - diphenylprop - 2 - enylamine or a pharmaceutically-acceptable acid-addition salt thereof.

9. A composition as claimed in claim 1 wherein the alkene derivative is N,N - dimethyl - 3 - (3 - fluorophenyl) - 3 - phenylprop - 2 - enylamine, N,N - dimethyl - 3-phenyl - 3 - (2 - tolyl)prop - 2 - enylamine, N,N - dimethyl - 3 - (2 - methoxyphenyl)-3 - phenylprop - 2 - enylamine, N,N - dimethyl - 3,3 - bis - (4 - chlorophenyl)prop-2 - enylamine, N,N - dimethyl - 3,3 - bis-(3 - fluorophenyl)prop - 2 - enylamine, N,N-dimethyl - 3,3 - bis - (4 - fluorophenyl)prop-2 - enylamine, N,N - dimethyl - 3 - (4-chlorophenyl) - 3 - (4 - fluorophenyl)prop-2 - enylamine, N,N - dimethyl - 3 - (4-chlorophenyl) - 3 - (2 - methoxyphenyl)-prop - 2 - enylamine, N,N - dimethyl - 3-(4 - chlorophenyl) - 3 - (3 - fluorophenyl)-prop - 2 - enylamine, N,N - dimethyl - 3,3-bis - (3 - trifluoromethylphenyl)prop - 2-enylamine, N,N - dimethyl - 3 - (4 - bromophenyl) - 3 - phenylprop - 2 - enylamine, N - methyl - 3 - (4 - fluorophenyl) - 3-phenylprop - 2 - enylamine, N - methyl - 3,3-bis - (4 - fluorophenyl)prop - 2 - enylamine, N - methyl - 3 - (4 - chlorophenyl) - 3-phenylprop - 2 - enylamine, N - methyl - 3,3-bis - (3 - fluorophenyl)prop - 2 - enylamine, N - methyl - 3,3 - bis - (4 - chlorophenyl)-prop - 2 - enylamine, N - methyl - 3 - phenyl-3 - (2 - tolyl)prop - 2 - enylamine, N -benzyl-N - methyl - 3,3 - bis - (4 - chlorophenyl)-prop - 2 - enylamine or N - benzyl - N-methyl - 3,3 - bis - (4 - fluorophenyl)prop-2-enylamine, or a pharmaceutically-acceptable acid-addition salt thereof.

10. A composition as claimed in any of claims 1 to 5 and 7 to 9 wherein the salt is a hydrochloride oxalate, citrate, maleate or tartrate.

11. A composition as claimed in any of claims 1 to 10 which are in the form of tablets, pills, capsules, dispersible powders, dispersible granules, emulsions, syrups, dispersions, solutions, sterile aqueous or non-aqueous solutions, sterile aqueous or non-aqueous suspensions, sterile emulsions or sterile powders.

12. A tablet substantially as described in Example 1.

13. A tablet substantially as described in Example 2.

14. A tablet substantially as described in Example 3.

BERTRAM F. DREW,
Agent for the Applicants.

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