CLAIMS

1. A crystalline form of evenamide salt designated as form I, having an XRPD spectrum with the characteristic peaks, measured using Cu Kα radiation (λ = 1.54 Å), falling at about 12.1; 13.4; 16.2; 16.7; 18.2; 18.7; 19.4; 21.7; 22.4; 22.8; 23.3; 23.7; 24.2; 24.4; 25.4; 26.0; 26.6 ± 0.2° in 2θ.

2. A crystalline form of evenamide salt designated as form II, having an XRPD spectrum with the characteristic peaks, measured using Cu Kα radiation (λ = 1.54 Å), falling at about 12.7; 17.7; 20.0; 20.4; 20.7 ± 0.2° in 2θ.

3. A crystalline form of evenamide salt according to claim 1 or 2, wherein the salt is hydrochloride.

4. A crystalline form of evenamide salt which is selected from a salt exhibiting a predominant endothermic peak:

- at about 119°C, preferably sulfate;
- at about 132.6°C, preferably maleate;
- at about 105.6°C, preferably phosphate;
- at about 118.3°C, preferably pyruvate;
- at about 114.6°C, preferably fumarate;
- at about 154.8°C, preferably mucate;
- at about 140.7°C, preferably citrate;
- at about 101.2°C, preferably L-malate;
- at about 85.8°C, preferably succinate;
- at about 91.4°C, preferably glutarate;
- at about 147.9°C, preferably napadisylate;
- at about 197.8°C, preferably edisylate;
- at about 120.0°C, preferably esylate;
- at about 161.8°C, preferably tosylate;
- at about 139.5°C, preferably mesylate;
- at about 184.5°C, preferably napsylate;
- at about 107.0°C, preferably besilate;
- at about 198.3°C, preferably oxalate;
- at about 96.6°C, preferably malonate;
- at about 150.1°C, preferably saccharinate;
- at about 129.0°C, preferably camsylate; and

- at about 105.0°C, preferably mandelate.

5. A crystalline form of evenamide salt according to claim 4, wherein the salt is selected from maleate, mucate, citrate, edisylate, mesylate, napsylate, oxalate, saccharinate and camsylate.

6. A crystalline form of evenamide salt according to claim 5, wherein the salt is selected from mucate, citrate, edisylate, mesylate, napsylate and saccharinate.

7. A process for the preparation of evenamide in crystalline form I, as defined in claim 1, comprising:

- adding a solvent to evenamide free base and hydrochloric acid in gas form, or aqueous hydrochloric acid, preferably hydrochloric acid in gas form, as a salification reagent);
- crystallizing at a temperature equal to or lower than 94°C;
- recovering evenamide hydrochloride salt in crystalline form I;

wherein the solvent is selected from acetone, water, methyl alcohol, isopropyl alcohol, methyl ethyl ketone/water, ethyl acetate, methyl isobutyl ketone, methyl isobutyl carbinol, dimethyl formamide, heptane(s), or a mixture of said solvents, preferably the solvent is acetone.

8. A process for the preparation of evenamide hydrochloride salt in crystalline form II according to claim 2, comprising:

- adding a solvent to evenamide free base;
- heating the solution/dispersion to a temperature comprised between 99 and 147°C;
- crystallizing by adding a salification reagent;
- obtaining and optionally recovering evenamide hydrochloride salt in crystalline form II.

9. A process for the preparation of evenamide hydrochloride salt in crystalline form II according to claim 2 or 3, comprising:

- adding a solvent to evenamide free base and a salification reagent to form evenamide hydrochloride salt in crystalline form I;
- heating the solution/dispersion to a temperature comprised between 99 and 147°C;
- obtaining and optionally recovering evenamide hydrochloride salt in crystalline form II.

10. A process for the preparation of evenamide hydrochloride salt in crystalline form I according to claim 1, comprising:

- adding a solvent to evenamide free base;
- heating the solution/dispersion to a temperature comprised between 99 and 147°C;
- crystallizing by adding hydrochloric acid in gas form as salification reagent;
- obtaining evenamide hydrochloride salt in crystalline form II,
- cooling down to a temperature comprised between 0 and 94°C, preferably at a temperature comprised between 20 and 30°C, more preferably of 25°C (room temperature);
- obtaining and recovering evenamide hydrochloride salt in crystalline form I.

11. A process for the preparation of evenamide hydrochloride salt in crystalline form I according to claim 1, comprising:

- adding a solvent to evenamide free base and hydrochloric acid in gas form as salification reagent;
- heating the solution/dispersion to a temperature comprised between 99 and 147°C;
- obtaining evenamide hydrochloride salt in crystalline form II,
- cooling down to a temperature comprised between 0 and 94°C, preferably at a temperature comprised between 20 and 30°C, more preferably of 25°C (room temperature);
- obtaining and recovering evenamide hydrochloride salt in crystalline form I.

12. A process according to claims 7-11, wherein the solvent is selected from acetone, water, methyl alcohol, isopropyl alcohol, methyl ethyl ketone/water, ethyl acetate, methyl isobutyl ketone, dimethyl formamide, heptane(s), or a mixture of said solvents, preferably the solvent is acetone.

13. A process according to claims 7-9 and 12, wherein the salification reagent is selected from hydrochloric acid in gas form, and aqueous hydrochloric acid; preferably hydrochloric acid in gas form.

14. Use of crystalline form I of evenamide as defined in claim 1 or 3, in the preparation of evenamide in crystalline form II as defined in claim 2 or 3, by heating crystalline form I

of evenamide at a temperature comprised between 99°C and 147°C to obtain evenamide in crystalline form II.

15. Use of crystalline form II of evenamide as defined in claim 2 or 3, in the preparation of evenamide in crystalline form I as defined in claim 1 or 3, by cooling crystalline form II of evenamide at a temperature equal to or lower than 94°C to obtain evenamide in crystalline form I.

16. A pharmaceutical composition comprising a salt of evenamide in crystalline form according to claims 1-6, as active pharmaceutical ingredient, and a pharmaceutically acceptable excipient and/or carrier.

17. Evenamide salt in crystalline form according to claims 1-6, for use as a medicament.

18. Use of evenamide salt in crystalline form according to claims 1-6, in the manufacture of a medicament for the prevention and/ or treatment of neurological, cognitive, psychiatric, inflammatory, urogenital and gastrointestinal diseases, wherein an aberrant sodium channel activity plays a pathological role.

19. The use according to claim 18, wherein the disease is a psychiatric disorder such as schizophrenia.

20. The use according to claim 19, wherein the medicament is to be used in add on to one or more antipsychotic agents.

21. The use according to claim 20, wherein the antipsychotic agent is selected from the group comprising, or consisting of, risperidone, olanzapine, aripiprazole, clozapine, quetiapine, paliperidone, trifluoperazine, haloperidol, amisulpride and blonanserin.

22. The use according to claim 20, wherein the medicament is to be used in add on to one or more typical or atypical antipsychotic agents, wherein the typical antipsychotic agent is haloperidol and the atypical antipsychotic agent is selected from risperidone and clozapine.