CLAIMS

1. A crystalline form of the compound 6'-fluoro-N-(4-fluorobenzyl)-4'-oxo-3',4'-dihydro-1'H-spiro[piperidine-4,2'-quinoline]-1-carboxamide.

2. The crystalline form according to claim 1 of the compound 6'-fluoro-N-(4-fluorobenzyl)-4'-oxo-3',4'-dihydro-1'H-spiro[piperidine-4,2'-quinoline]-1-carboxamide, characterized by an x-ray powder diffraction pattern comprising a representative peak, in terms of °2θ, at 9.6 ± 0.2 °2θ when measured at a temperature of about 25°C.

3. A crystalline form of the compound 6'-fluoro-N-(4-fluorobenzyl)-4'-oxo-3',4'-dihydro-1'H-spiro[piperidine-4,2'-quinoline]-1-carboxamide, characterized by an x-ray powder diffraction pattern comprising one or more representative peaks in terms of 2θ selected from the group consisting of 9.6 ± 0.2 °2θ, 10.5 ± 0.2 °2θ, 13.4 ± 0.2 °2θ, 15.7 ± 0.2 °2θ, 17.1 ± 0.2 °2θ, 19.2 ± 0.2 °2θ, 21.0 ± 0.2 °2θ, 22.4 ± 0.2 °2θ, 27.3 ± 0.2 °2θ, 30.4 ± 0.2 °2θ and 31.7 ± 0.2 °2θ, measured at a temperature of about 25°C.

4. The crystalline form according to claim 1 having an x-ray diffraction spectrum substantially the same as the x-ray powder diffraction spectrum shown in FIG. 1.

5. The crystalline form of claim 1, characterized by a differential thermogravimetric profile measured by Differential Scanning Calorimetry (DSC) with a heating rate of 10°C/min, comprising a single endothermic peak starting at about 208°C.

6. The crystalline form according to claim 1 having a differential scanning calorimetry (DSC) thermogram substantially the same as that shown in FIG. 2.

7. The crystalline form of claim 1, having a decomposition point greater than 200°C and a weight loss on drying of about 0.3% in the range of 24 - 200°C, as determined by thermogravimetric analysis.

8. The crystalline form according to claim 1 having a thermogravimetric analysis (TGA) diagram substantially the same as that shown in FIG. 3.

9. A pharmaceutical composition comprising a crystalline from of claim 1, and a pharmaceutically acceptable carrier.

10. Use of a substantially phase pure crystalline form of 6'-fluoro-N-(4-fluorobenzyl)-4'-oxo-3',4'-dihydro-1'H-spiro[piperidine-4,2'-quinoline]-1-carboxamide according to any one of claims 1 to 8 for the preparation of a medicament.

11. Use of a substantially phase pure crystalline form of 6'-fluoro-N-(4-fluorobenzyl)-4'-oxo-3',4'-dihydro-1'H-spiro[piperidine-4,2'-quinoline]-1-carboxamide according to any one of claims 1 to 8 for the preparation of a medicament for the treatment of a disorder ameliorated by an AKR1C3 dependent KARS inhibitor.

12. A crystalline form of 6'-fluoro-N-(4-fluorobenzyl)-4'-oxo-3',4'-dihydro-1'H-spiro[piperidine-4,2'-quinoline]-1-carboxamide according to any one of claims 1 to 8 for use in therapy.

13. The use of claim 11, wherein the disorder ameliorated by an AKR1C3 dependent KARS inhibitor is selected from non-small cell lung cancer (NSCLC), liver cancer, head and neck cancer, esophageal cancer, uterine cancer, breast cancer, bladder cancer, cervical cancer, colorectal cancer, kidney cancer, melanoma, stomach, castration-resistant prostate cancer (CRPC), T-cell acute lymphoblastic leukemia (T-ALL), acute myeloid leukemia (AML), and myelodysplastic syndrome (MDS).

14. The use according to claim 13, wherein the disorder is non-small cell lung cancer (NSCLC).

15. A process for making crystalline Form A of 6'-fluoro-N-(4-fluorobenzyl)-4'-oxo-3',4'-dihydro-1'H-spiro[piperidine-4,2'-quinoline]-1-carboxamide, said process which comprises the steps of:

a) reacting 6'-fluoro-1'H-spiro[piperidine-4,2'-quinolin]-4'(3'H)-one with 4-fluorobenzyl isocyanate in a chlorinated solvent, optionally in the presence of a base; and

b) isolating the formed solid.

16. A process for making crystalline Form A of 6'-fluoro-N-(4-fluorobenzyl)-4'-oxo-3',4'-dihydro-1'H-spiro[piperidine-4,2'-quinoline]-1-carboxamide, said process comprising the steps of:

a) disolving an amount of 6'-fluoro-N-(4-fluorobenzyl)-4'-oxo-3',4'-dihydro-1'H-spiro[piperidine-4,2'-quinoline]-1-carboxamide in a solvent;

b) adding seed crystals of Form A of 6'-fluoro-N-(4-fluorobenzyl)-4'-oxo-3',4'-dihydro-1'H-spiro[piperidine-4,2'-quinoline]-1-carboxamide; and

c) isolating the formed solid.