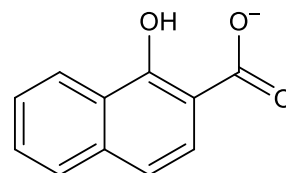
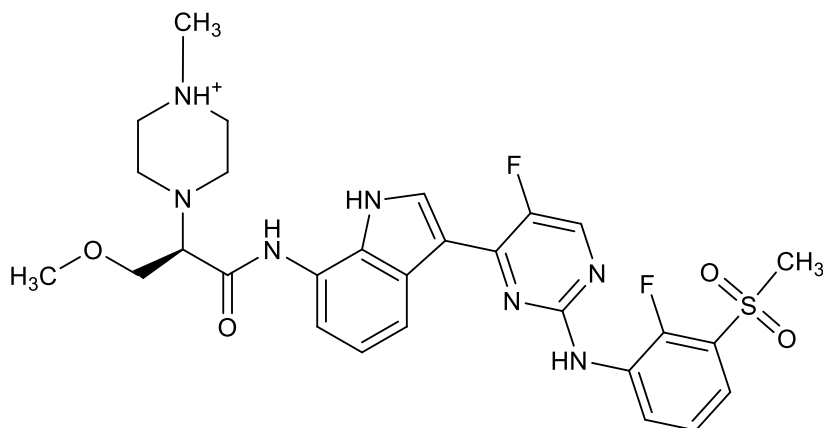


Claims

1. A xinafoate salt of Formula (Ia):



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Formula (Ia).

2. A pharmaceutically acceptable composition comprising a xinafoate salt of claim 1, in association with a pharmaceutically-acceptable excipient, diluent or carrier.

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3. Form A of a xinafoate salt of Formula (Ia) of claim 1, characterized by an X-ray powder diffraction pattern with specific 2θ peaks measured using $\text{CuK}\alpha$ radiation at 15.0° and 21.0° and $22.6^\circ (\pm 0.1^\circ)$.

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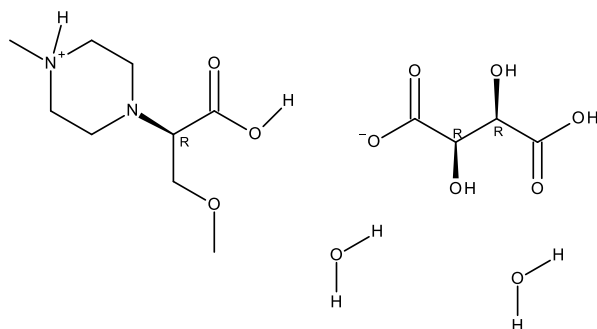
4. Form A of a xinafoate salt of Formula (Ia) of claim 1, characterized by an X-ray powder diffraction pattern with specific 2θ peaks measured using $\text{CuK}\alpha$ radiation at about 8.2° , 8.9° , 11.2° , 14.2° , 15.0° , 15.3° , 16.2° , 17.5° , 21.0° , 22.6° , 23.0° , 23.7° , 24.6° and $26.2^\circ (\pm 0.1^\circ)$.

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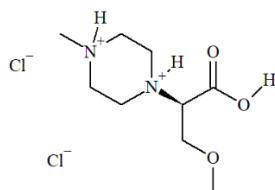
5. A process for the preparation of a xinafoate salt of Formula (Ia) of claim 1 comprising:

- (i) Dissolving (R)-*N*-(3-(5-fluoro-2-((2-fluoro-3-(methylsulfonyl)phenyl)amino)pyrimidin-4-yl)-1H-indol-7-yl)-3-methoxy-2-(4-methylpiperazin-1-yl)propanamide free base in a suitable solvent;
 - (ii) Dissolving xinafoate acid in a suitable solvent;
 - 5 (iii) Mixing the two solutions;
 - (iv) Optionally adding seed crystals of the xinafoate salt of (R)-*N*-(3-(5-fluoro-2-((2-fluoro-3-(methylsulfonyl)phenyl)amino)pyrimidin-4-yl)-1H-indol-7-yl)-3-methoxy-2-(4-methylpiperazin-1-yl)propanamide;
 - 10 (v) Crystallising the xinafoate salt of (R)-*N*-(3-(5-fluoro-2-((2-fluoro-3-(methylsulfonyl)phenyl)amino)pyrimidin-4-yl)-1H-indol-7-yl)-3-methoxy-2-(4-methylpiperazin-1-yl)propanamide; and
 - (vi) Isolating the xinafoate salt of (R)-*N*-(3-(5-fluoro-2-((2-fluoro-3-(methylsulfonyl)phenyl)amino)pyrimidin-4-yl)-1H-indol-7-yl)-3-methoxy-2-(4-methylpiperazin-1-yl)propanamide.
- 15 6. A process according to claim 5, wherein the solvent is selected from the group consisting of DMSO, ethyl acetate, methanol, and mixtures thereof.
- 20 7. A process according to claim 5, wherein the solvent is ethyl acetate and methanol.
8. A xinafoate salt of claim 1, for use as a medicament.
- 25 9. Use of a xinafoate salt of Formula (Ia), in the manufacture of a medicament for treating JAK kinase mediated diseases in a subject in need thereof, wherein the JAK kinase mediated diseases is asthma or COPD.
- 30 10. Use of Form A of a compound of Formula (Ia), in the manufacture of a medicament for treating JAK kinase mediated diseases in a subject in need thereof, wherein the JAK kinase mediated diseases is asthma or COPD.

11. The compound 4-[(1*R*)-1-carboxy-2-methoxyethyl]-1-methylpiperazin-1-ium (2*R*,3*R*)-3-carboxy-2,3-dihydroxypropanoate hydrate (1:1:2):



5 12. The compound 1-[(1*R*)-1-carboxy-2-methoxyethyl]-4-methylpiperazine-1,4-diiium dichloride:



10 13. A process for the preparation of 4-[(1*R*)-1-carboxy-2-methoxyethyl]-1-methylpiperazin-1-ium (2*R*,3*R*)-3-carboxy-2,3-dihydroxypropanoate hydrate (1:1:2) and 1-[(1*R*)-1-carboxy-2-methoxyethyl]-4-methylpiperazine-1,4-diiium dichloride, comprising:

- (i) Dissolving lithium 3-methoxy-2-(4-methylpiperazin-1-yl) propanoate in distilled water at pH 4;
- 15 (ii) Dissolving L-(+)-Tartaric acid in distilled water;
- (iii) Mixing the two solutions from step (i) and step (ii) in a suitable solvent, such as ethanol, to induce crystallization;
- (iv) Stirring the mixture of step (iii) for 20 hours at room temperature;
- (v) Adding suitable solvent to the mixture of step (iv), such as ethanol, and
- 20 cooling prior to filtration to yield the product 4-[(1*R*)-1-carboxy-2-

methoxyethyl]-1-methylpiperazin-1-ium (2R,3R)-3-carboxy-2,3-dihydroxypropanoate hydrate (1:1:2);

(vi) Collecting the product of step (v) and drying for 72 hours at reduced pressure;

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(vii) Dissolving the product of step (vi) in distilled water;

(viii) Performing cationic ion exchange to the product of step (vii); and

(ix) Eluting the product of step (viii) with 2M HCl and evaporating that solution to dryness which induces crystallization of 1-[(1*R*)-1-carboxy-2-methoxyethyl]-4-methylpiperazine-1,4-dium dichloride.

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