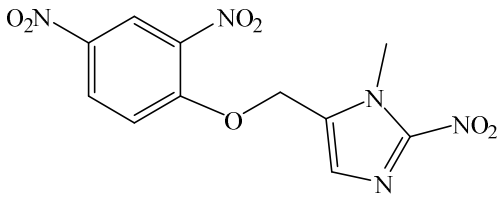
CLAIMS

We claim:

1. A crystalline form of 5-[(2,4-dinitrophenoxy)methyl]-1-methyl-2-nitro-1H-imidazole having the structure:



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2. The crystalline form of claim 1, wherein the crystalline form is characterized by an X-ray powder diffraction pattern having characteristic peaks expressed, in degree 2θ:

(A) at approximately 13.3 ± 0.2, 23.8 ± 0.2, and 26.3 ± 0.2;

(B) at 9.8 ± 0.2, 21.6 ± 0.2, 27.3 ± 0.2, and 28.1 ± 0.2;

(C) at approximately 14.0 ± 0.2, 25.8 ± 0.2, 26.6 ± 0.2, and 31.1 ± 0.2;

(D) at 9.0 ± 0.2, 21.2 ± 0.2, 23.2 ± 0.2, 31.8 ± 0.2 and 33.0 ± 0.2; or

(E) at 17.7 ± 0.2, 19.1 ± 0.2, 30.0 ± 0.2, and 34.7 ± 0.2.

3. The crystalline form of claim 1, wherein the crystalline form has an X-ray powder diffraction pattern comprising:

(A) four or more peaks, in 2-theta values, wherein the four or more peaks are selected from 9.8 ± 0.2, 13.3 ± 0.2, 21.6 ± 0.2, 23.8 ± 0.2, 26.3 ± 0.2, 27.3 ± 0.2, and 28.1 ± 0.2;

(B) six or more peaks, in 2-theta values, wherein the six or more peaks are selected from 9.8 ± 0.2, 13.3 ± 0.2, 14.0 ± 0.2, 21.6 ± 0.2, 23.8 ±1 0.2, 25.8 ± 0.2, 26.3 ± 0.2, 26.6 ± 0.2, 27.3 ± 0.2, 28.1 ± 0.2, and 31.1 ± 0.2;

(C) eight or more peaks, in 2-theta values, wherein the eight or more peaks are selected from 9.8 ± 0.2, 13.3 ± 0.2, 14.0 ± 0.2, 21.6 ± 0.2, 23.8 ± 0.2, 25.8 ± 0.2, 26.3 ± 0.2, 26.6 ± 0.2, 27.3 ± 0.2, 28.1 ± 0.2, and 31.1 ± 0.2; or

(D) ten or more peaks, in 2-theta values, wherein the ten or more peaks are selected from 9.8 ± 0.2, 9.0 ± 0.2, 13.3 ± 0.2, 14.0 ± 0.2, 21.6 ± 0.2, 21.2 ± 0.2, 23.2 ± 0.2, 23.8 ± 0.2, 25.8 ± 0.2, 26.3 ± 0.2, 26.6 ± 0.2, 27.3 ± 0.2, 28.1 ± 0.2, 31.1 ± 0.2, 31.8 ± 0.2, and 33.0 ± 0.2;

optionally, wherein the crystalline form is characterized by an X-ray powder diffraction pattern substantially as shown in Figure 2.

4. The crystalline form of claim 2 or claim 3, wherein the crystalline form has a differential scanning calorimetry thermogram (DSC) characterized by an initial endothermic transition at about 182.3 ºC ± 3 and a peak temperature at about 184 ºC ± 3; and/or a thermogravimetric analysis (TGA) characterized by about 0.584% of weight loss at 175 ºC ± 3.

5. The crystalline form of claim 1, wherein the crystalline form is characterized by an X-ray powder diffraction pattern having characteristic peaks expressed, in degree 2θ:

(A) at approximately 17.6 ± 0.2, 24.9 ± 0.2, 26.0 ± 0.2, and 30.0 ± 0.2;

(B) at 16.4 ± 0.2, 17.9 ± 0.2, and 20.7 ± 0.2;

(C) at approximately 13.0 ± 0.2, 16.1 ± 0.2, 20.4 ± 0.2, and 24.3 ± 0.2;

(D) at approximately 22.8 ± 0.2, 26.2 ± 0.2, 31.1 ± 0.2, and 33.6 ± 0.2;

(E) at approximately 21.7 ± 0.2, 29.1 ± 0.2, 29.6 ± 0.2, 30.7 ± 0.2, and 37.2 ± 0.2;

(F) at approximately 16.6 ± 0.2, 24.1 ± 0.2, 25.5 ± 0.2, and 28.8 ± 0.2; or

(G) at approximately 14.4 ± 0.2, 19.0 ± 0.2, 28.5 ± 0.2, 35.7 ± 0.2, 36.2 ± 0.2, and 38.9 ± 0.2.

6. The crystalline form of claim 1, wherein the crystalline form has an X-ray powder diffraction pattern comprising:

(A) four or more peaks, in 2-theta values, wherein the four or more peaks are selected from 16.4 ± 0.2, 17.6 ± 0.2, 17.9 ± 0.2, 20.7 ± 0.2, 24.9 ± 0.2, 26.0 ± 0.2, and 30.0 ± 0.2;

(B) six or more peaks, in 2-theta values, wherein the six or more peaks are selected from 13.0 ± 0.2, 16.1 ± 0.2, 16.4 ± 0.2, 17.6 ± 0.2, 17.9 ± 0.2, 20.4 ± 0.2, 20.7 ± 0.2, 24.3 ± 0.2, 24.9 ± 0.2, 26.0 ± 0.2, and 30.0 ± 0.2;

(C) eight or more peaks, in 2-theta values, wherein the eight or more peaks are selected from 13.0 ± 0.2, 16.1 ± 0.2, 16.4 ± 0.2, 17.6 ± 0.2, 17.9 ± 0.2, 20.4 ± 0.2, 20.7 ± 0.2, 24.3 ± 0.2, 24.9 ± 0.2, 26.0 ± 0.2, and 30.0 ± 0.2;

(D) ten or more peaks, in 2-theta values, wherein the ten or more peaks are selected from 13.0 ± 0.2, 16.1 ± 0.2, 16.4 ± 0.2, 17.6 ± 0.2, 17.9 ± 0.2, 20.4 ± 0.2, 20.7 ± 0.2, 22.8 ± 0.2, 24.3 ± 0.2, 24.9 ± 0.2, 26.0 ± 0.2, 26.2 ± 0.2, 30.0 ± 0.2, 31.1 ± 0.2, and 33.6 ± 0.2; or

(E) twelve or more peaks, in 2-theta values, wherein the twelve or more peaks are selected from 13.0 ± 0.2, 16.1 ± 0.2, 16.4 ± 0.2, 17.6 ± 0.2, 17.9 ± 0.2, 20.4 ± 0.2, 20.7 ± 0.2, 22.8 ± 0.2, 24.3 ± 0.2, 24.9 ± 0.2, 26.0 ± 0.2, 26.2 ± 0.2, 30.0 ± 0.2, 31.1 ± 0.2, and 33.6 ± 0.2;

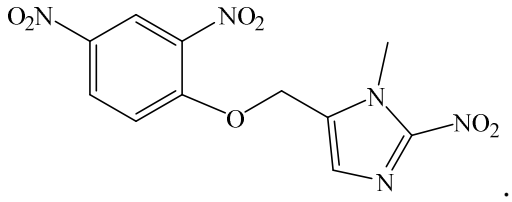
optionally, wherein the crystalline form is characterized by an X-ray powder diffraction pattern substantially as shown in Figure 1.

7. The crystalline form of claim 5 or claim 6, wherein the crystalline form has a differential scanning calorimetry thermogram (DSC) profile characterized by an endothermic transition at a temperature between 157 ^{o}C ±3 and 162 ^{o}C ±3 and a second endothermic transition at 183 ^{o}C ±3; and/or a thermal gravimetric analysis (TGA) characterized by about 0.704% of weight loss at 175 °C ± 3.

8. The crystalline form of any one of claims 2-4, which is crystalline Form **B**.

9. The crystalline form of any one of claims 5-7, which is crystalline Form **A**.

10. A micronized crystalline form of 5-[(2,4-dinitrophenoxy)methyl]-1-methyl-2-nitro-1H-imidazole having the structure:



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11. The micronized crystalline form of claim 10, which is micronized crystalline Form **B**; optionally, wherein micronized crystalline Form **B** is characterized by an X-ray powder diffraction pattern expressed, in degree 2θ, as described in any one of claims 2-4.

12. The micronized crystalline form of claim 10, which is micronized crystalline Form **A**; optionally, wherein micronized crystalline Form **A** is characterized by an X-ray powder diffraction pattern expressed, in degree 2θ, as described in any one of claims 5-7.

13. The micronized crystalline form of any one of claims 10-12, wherein the micronized crystalline form has a particle size distribution (D50) of:

(A) about 1 μm to about 10 μm;

(B) about 1 μm to about 5 μm;

(C) about 2 μm to about 4 μm; or

(D) about 3 μm; and/or

a particle size distribution (D90) of:

(A) about 5 μm to about 15 μm;

(B) about 8 μm to about 13 μm; or

(C) about 9 μm.

14. A pharmaceutical composition comprising (i) the crystalline form of any one of claims 1-9 or the micronized crystalline form of any one of claims 10-13; and (2) a pharmaceutically acceptable carrier.

15. Use of a crystalline form of any one of claims 1-9 or the micronized crystalline form of any one of claims 10-13, in the manufacture of a medicament:

(A) to treat a mitochondria-related disorder or condition in a subject in need thereof;

optionally wherein the disorder or condition is metabolic disorders, diabetes, type 2 diabetes (T2DM), diabetes-associated complications, obesity, excess body fat, non-alcoholic fatty liver disease (NAFLD), non-alcoholic steatohepatitis (NASH), hepatic steatosis, insulin resistance or intolerance, dyslipidemia, cardiovascular disease, or artherosclerosis;

(B) for reducing adiposity, controlling or preventing of weight gain in a subject in need thereof; or

(C) for stimulating oxygen consumption rate (OCR) in a subject.