CLAIMS

1. Use of an ATP13A2 inhibiting agent in the manufacture of a medicament for treating acute myeloid leukemia (AML) in a subject in need thereof, comprising modulating the activity of an NF-KB pathway.

2. The use according to claim 2, wherein the modulation of an NF-KB pathway modulates multiple pathways comprising a metabolic pathway, an inflammatory pathway, a cancer associated pathway, and combinations thereof.

3. The use according to claim 2, wherein the NF-KB pathway gene is p65.

4. The use of any one of claims 2 to 3, wherein the metabolic pathway comprises oxidative phosphorylation (OXPHOS), mitochondrial dysfunction, Sirtuin signaling and / or mTOR signaling.

5. The use of any one of claims 2 to 4, wherein the cancer associated pathway comprises pathways related to acute myeloid leukemia (AML), small lung cancer, and / or pancreatic adenocarcinoma, optionally, wherein the cancer associated pathway comprises AML and AML-associated signaling pathways comprising IL-6, IL-7, JAK, CXCR4, JAK-STAT and / or GM-CSF.

6. The use of any one of claims 2 to 5, wherein the inflammatory pathway comprises TLR, TNFR2, CCL22, IL-10, IL-17A, CD40 and / or IL-6 signalling.

7. The use of any one of claims 2 to 6, wherein the use regulates gene and / or protein expression of a lysosomal-associated protein.

8. The use of any one of claims 2 to 7, wherein the use regulates the function of a lysosomal-associated protein.

9. The use of any one of claims 2 to 8, wherein the lysosomal-associated protein is ATP13A2 / Park9.

10. The use of any one of claims 2 to 9, wherein the use comprises an agent to be administered to inhibit the activity of the ATP13A2 gene.

11. The use of any one of claims 2 to 10, wherein treatment reduces one or more indications comprising reduction of oxygen consumption rate (OCR), reduction in maximum respiration, reduction in spare respiratory capacity, reduction of nonmitochondrial respiration, and combinations thereof.

12. The use of any one of claims 2 to 11, wherein treatment reduces one or more indications comprising reduction in glycolysis, reduction in glycolytic capacity, reduction in maximum mitochondrial respiration, and combinations thereof.

13. The use according to any one of claims 2 to 13, wherein treatment reverses or improves dysfunctional mitochondrial function.

14. The use of any one of claims 2 to 14, wherein treatment reduces one or more indications comprising elimination of ability to proliferate and/or form colonies.

15. The use of any one of claims 2 to 14, wherein the subject is further treated with inhibiting agents comprising a chemotherapeutic agent, an immune therapy agent, a cellular therapy agent, an oligonucleotide, an antigen binding molecule, a small molecule inhibitor, and / or combinations thereof.

16. The use according to claim 15, wherein the subject is further treated with a chemotherapeutic agent.

17. An ATP13A2 inhibiting agent for use in therapy or medicine.

18. An ATP13A2 inhibiting agent for use in treating AML.