CLAIMS

1. A mitoflavoscin having at least one fatty acid membrane-targeting signal.

2. The mitoflavoscin of claim 1, wherein the mitoflavoscin comprises at least one of diphenyleneiodonium having at least one fatty acid membrane-targeting signal, a pharmaceutically acceptable salt of diphenyleneiodonium having at least one fatty acid membrane-targeting signal, diphenyliodonium having at least one fatty acid membrane-targeting signal, and a pharmaceutically acceptable salt of diphenyliodonium having at least one fatty acid membrane-targeting signal.

3. The mitoflavoscin of claim 1, wherein the at least one fatty acid membrane-targeting signal is selected from palmitic acid, stearic acid, myristic acid, and oleic acid.

4. The mitoflavoscin of claim 2, wherein the at least one fatty acid membrane-targeting signal is selected from palmitic acid, stearic acid, myristic acid, and oleic acid.

5. The mitoflavoscin of claim 1, wherein the mitoflavoscin comprises diphenyleneiodonium with a myristic acid membrane-targeting signal, or a pharmaceutically acceptable salt thereof.

6. The mitoflavoscin of claim 1, wherein the mitoflavoscin comprises diphenyliodonium with a myristic acid membrane-targeting signal, or a pharmaceutically acceptable salt thereof.

7. A mitoflavoscin for use in medicine.

8. Use of a mitoflavoscin in the manufacture of a medicament for treating cancer, wherein the mitoflavoscin has at least one fatty acid membrane-targeting signal.

9. The use of claim 8, wherein the mitoflavoscin comprises at least one of diphenyleneiodonium having at least one fatty acid membrane-targeting signal, a pharmaceutically

acceptable salt of diphenyleneiodonium having at least one fatty acid membrane-targeting signal, diphenyliodonium having at least one fatty acid membrane-targeting signal, and a pharmaceutically acceptable salt of diphenyliodonium having at least one fatty acid membrane-targeting signal.

10. The use of claim 8 or 9, wherein the at least one fatty acid membrane-targeting signal is selected from myristic acid, palmitic acid, stearic acid, and oleic acid.

11. The use of claim 8, wherein the mitoflavoscin comprises diphenyleneiodonium with a myristic acid membrane-targeting signal, or a pharmaceutically acceptable salt thereof.

12. The use of claim 8, wherein the mitoflavoscin comprises diphenyliodonium with a myristic acid membrane-targeting signal, or a pharmaceutically acceptable salt thereof.