Proposed **CLAIMS**

(Clean and Re-numbered)

1. A compound having the formula of:

X-Y-Z (I)

wherein

(a) X is berberine;

(b) Z is ursodeoxycholic acid; and

(c) Y is a covalent bond or a linker comprising an ester bond.

2. The compound of claim 1, wherein Y comprises an ester bond.

3. A compound having the formula of:

X-Y-Z (I)

wherein

(a) X is metformin;

(b) Z is ursodeoxycholic acid; and

(c) Y is a covalent bond or a linker comprising an ester bond.

4. The compound of claim 3, wherein Y comprises an ester bond.

5. A pharmaceutical composition comprising an amount of a compound according to any of claims 1-4 suitable for treating one or more diseases or disorders selected from liver diseases or disorders, diabetes, diabetic complications, pre-diabetes, dyslipidemia, obesity, metabolic syndromes, muscle atrophy, inflammation, and cancers or a related disease or disorder thereof in a mammal including a human, and a pharmaceutically acceptable excipient, carrier, or diluent.

6. The pharmaceutical composition of claim 5, wherein the disease or disorder is selected

from non-alcoholic fatty liver disease (NAFLD), non-alcoholic steatohepatitis (NASH), cholestatic liver diseases or graft-versus-host disease of the liver.

7. The pharmaceutical composition of claim 5, wherein the disease or disorder is selected from diabetes, diabetic complications and pre-diabetes.

8. The pharmaceutical composition of claim 5, wherein the disease or disorder is dyslipidemia.

9. The pharmaceutical composition of claim 5, wherein the disease or disorder is obesity.

10. The pharmaceutical composition of claim 5, wherein the disease or disorder is metabolic syndromes.

11. The pharmaceutical composition of claim 5, wherein the disease or disorder is muscle atrophy.

12. The pharmaceutical composition of claim 5, wherein the disease or disorder is inflammation.

13. The pharmaceutical composition of claim 6, wherein the disease or disorder is cancer.