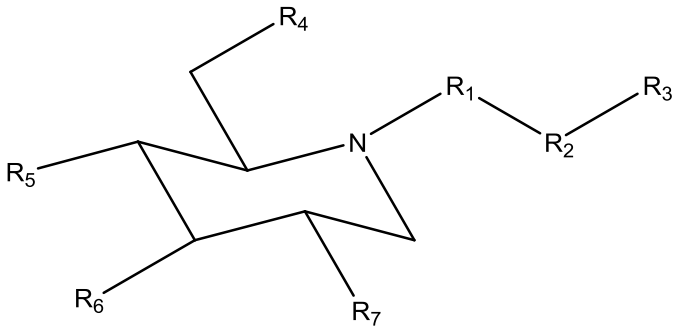
CLAIMS

1. A compound of ~~f~~Formula I:

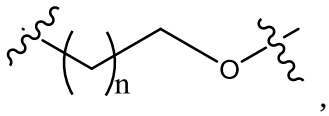


Formula I

or a pharmaceutically acceptable salt, hydrate, polymorph, solvate, ~~prodrug~~, enantiomer, or stereoisomer thereof, wherein

~~Wherein~~

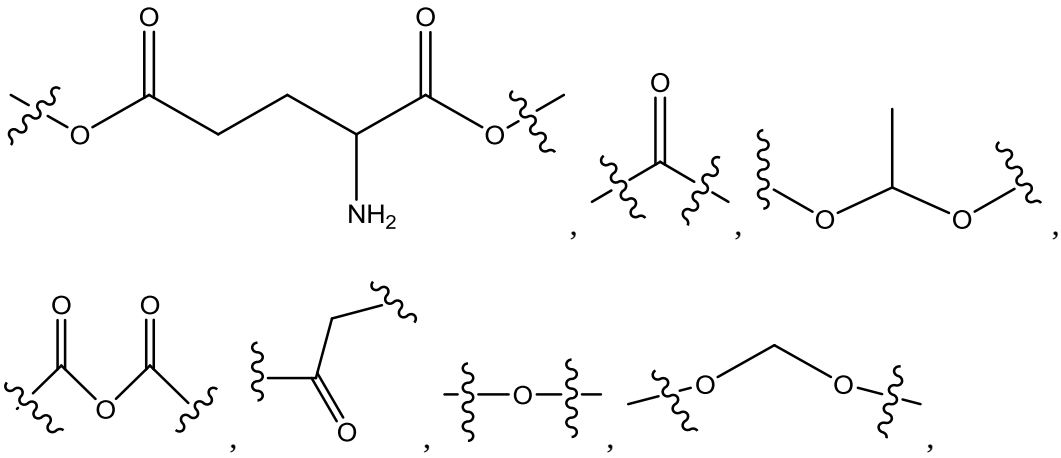
R^1 ~~independently~~ represents ~~D, H, methyl, ethyl, CH_3CO-~~ or

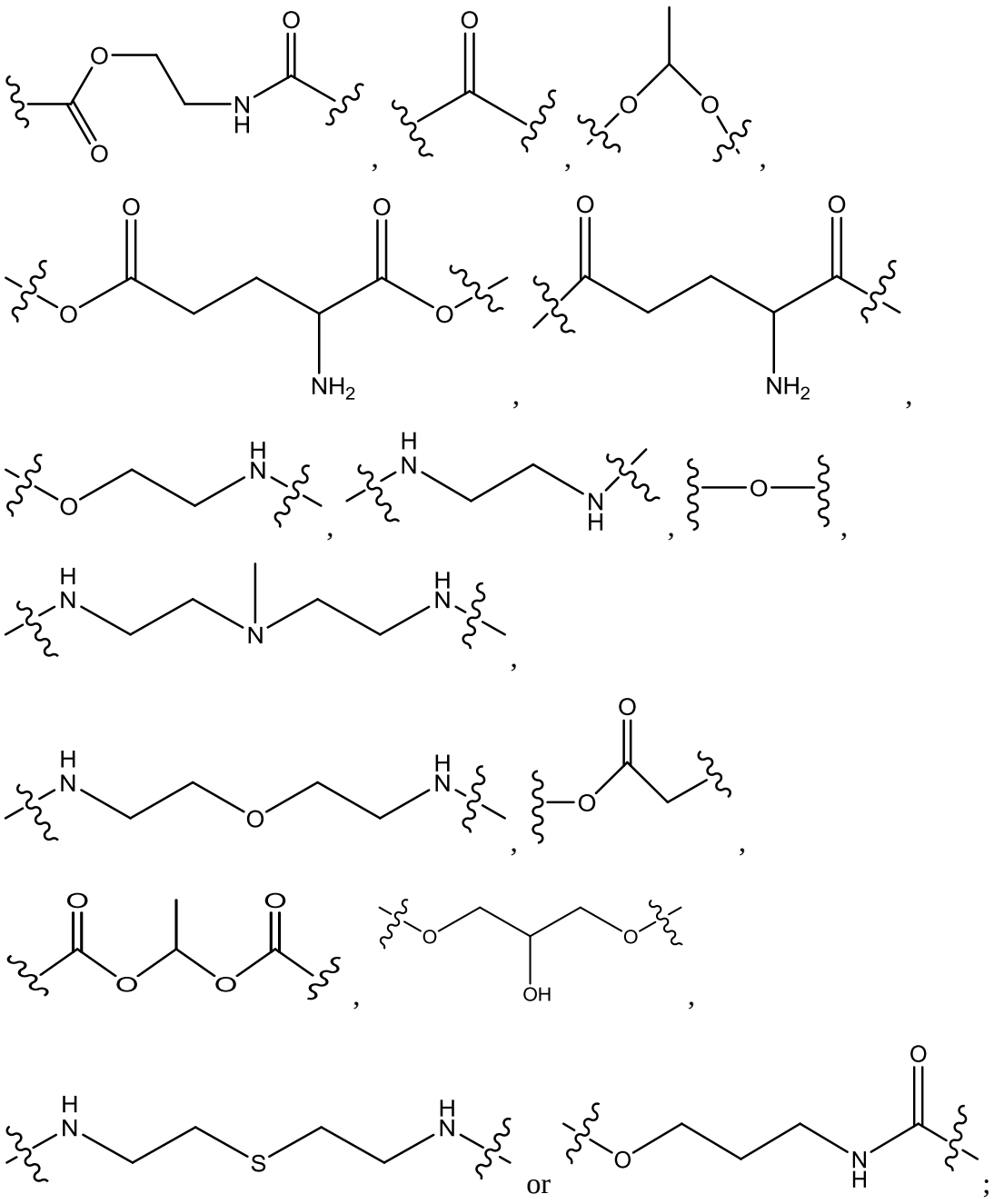


,

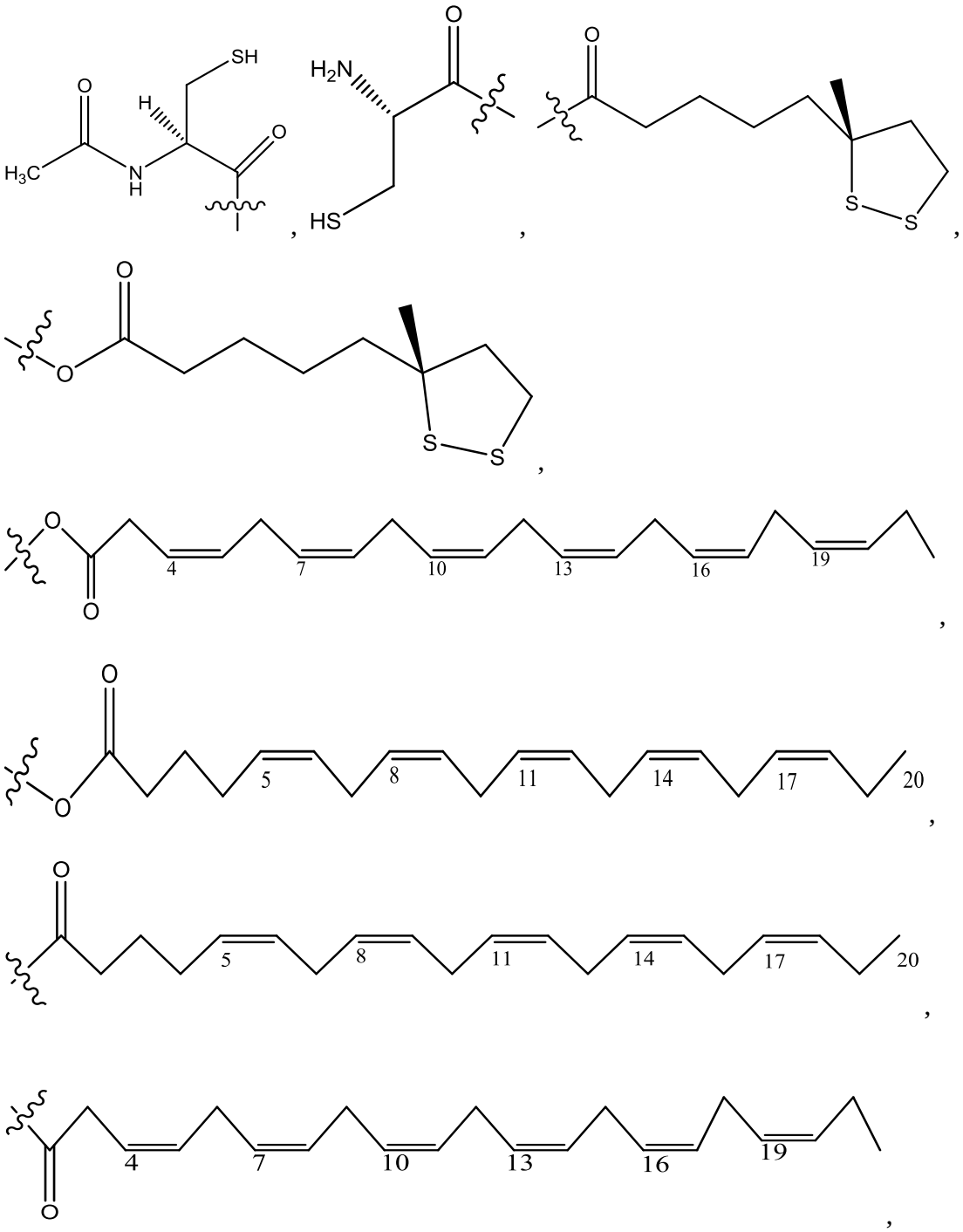
each n is independently 0,1, 2, or 3;

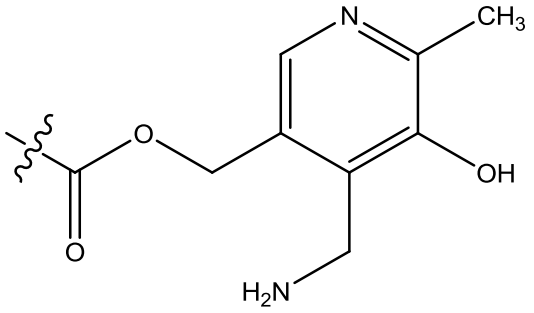
R^2 ~~independently~~ represents ~~H, D,~~



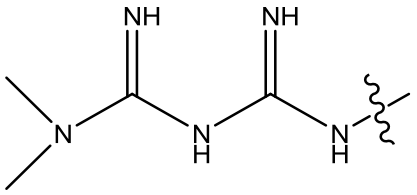


R^3 ~~independently~~ represents

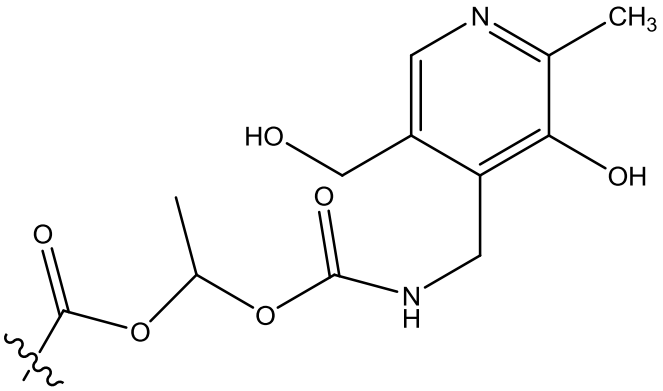



N
CH3
O
OH
O
H2N

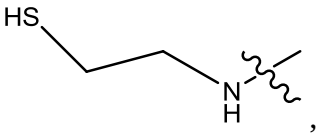
,


NH
NH
N
N
H
N
H

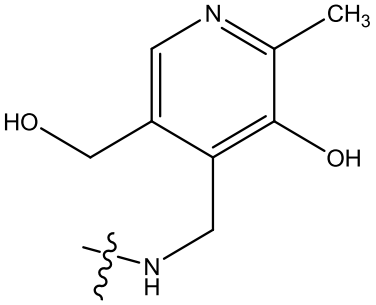
,


N
CH3
HO
OH
O
O
O
O
N
H

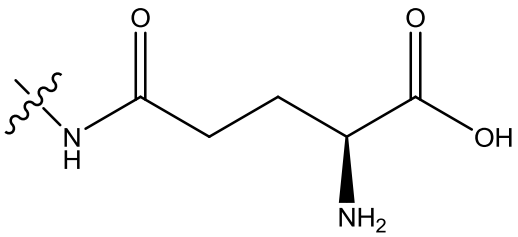
,


HS
N
H

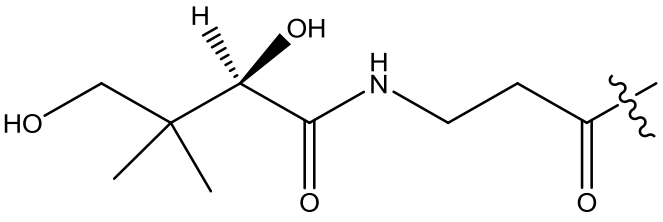
,


N
CH3
HO
OH
N
H

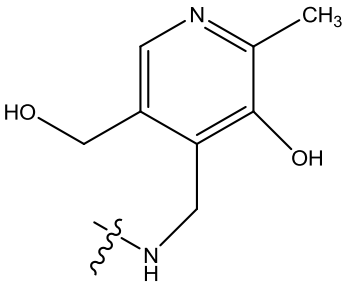
,


O
O
N
H
OH
NH2

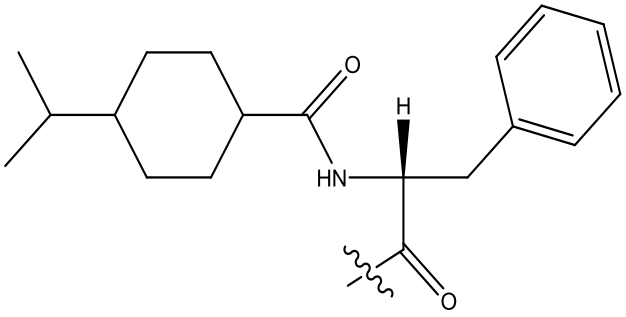
,


H
OH
HO
H
N
O
O

,


N
CH3
HO
OH
N
H

,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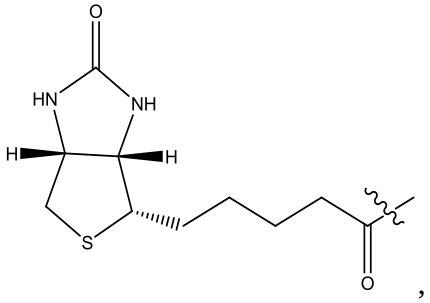
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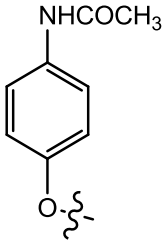
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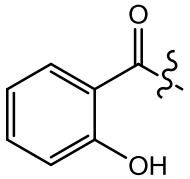
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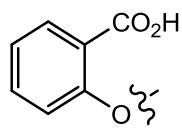
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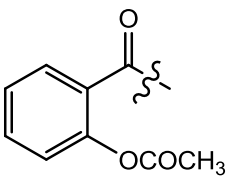
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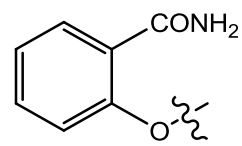
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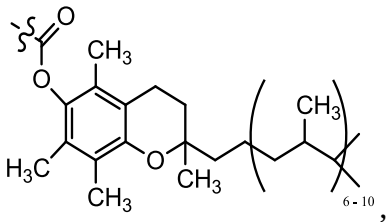
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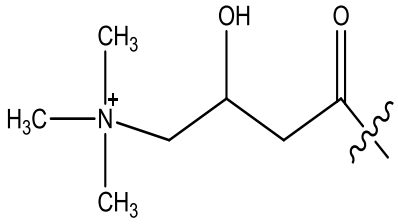
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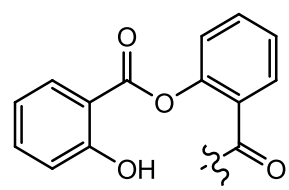
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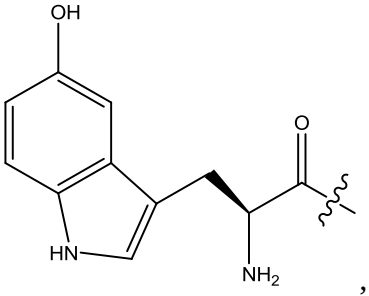
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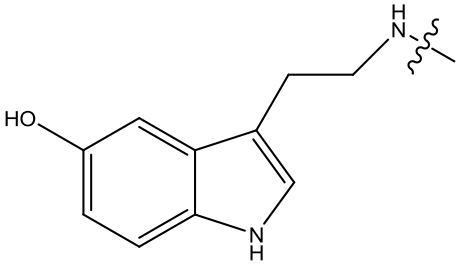
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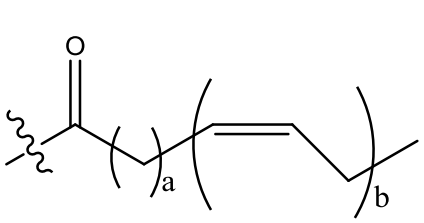
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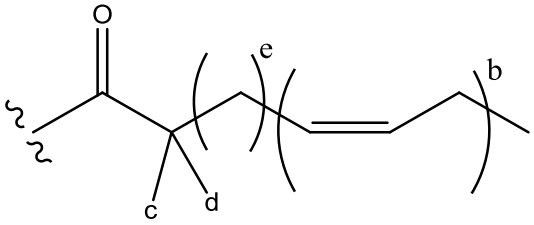
;

a is ~~independently~~ 2,3 or 7;

each b is independently 3, 5 or 6;

e is ~~independently~~ 1, 2 or 6;

c and d are each independently H, D, -OH, -OD, C_1-C_6-alkyl, -NH_2 or -$COCH_3$; and

R^4, R^5, R^6, R^7 each independently are selected from the groups consisting of H, D, -OH, -OD, methyl, ethyl, -OCH_3, -OCD_3 or acetyl.

2. A ~~Pharmaceutical~~ pharmaceutical composition comprising a compound of claim 1 and a pharmaceutically acceptable carrier.

~~3. The pharmaceutical composition of claim 2, which is formulated to treat the underlying etiology with an effective amount administering the patient in need by oral administration, delayed release or sustained release, transmucosal, syrup, topical, parenteral administration, injection, subdermal, oral solution, rectal administration, buccal administration or transdermal administration.~~

~~4.~~3. Compounds and compositions of claim 2~~3~~, ~~are formulated~~ for the treatment of hyperglycemia, insulin resistance, diabetes mellitus, diabetes insipidus, type 1 diabetes, type 2 diabetes, microvascular complications, macrovascular complications, lipid disorders, prediabetes, obesity, arrhythmia, myocardial infarction, stroke, neuropathy, renal complications, hyperinsulinemia, hypertriglyceridemia, cardiovascular complications, and post prandial hyperglycemia.

4. A molecular conjugate of miglitol and carboxylic acid compounds selected from a group consisting of R-Lipoic acid, eicosapentaenoic acid, docosahexaenoic acid, acetyl cysteine and salsalate.

5. ~~A~~ The molecular conjugate of claim 4, wherein the carboxylic acid compound is ~~miglitol and~~ R-Lipoic acid.

6. ~~A~~ The molecular conjugate of claim 4, wherein the carboxylic acid compound is ~~miglitol and~~ eicosapentaenoic acid .

7. ~~A~~ The molecular conjugate of claim 4, wherein the carboxylic acid compound is ~~miglitol and~~ docosahexaenoic acid.

8. ~~A~~ The molecular conjugate of claim 4, wherein the carboxylic acid compound is ~~miglitol and~~ acetyl cysteine

9. ~~A~~ The molecular conjugate of claim 4, wherein the carboxylic acid compound is ~~miglitol and~~ salsalate.