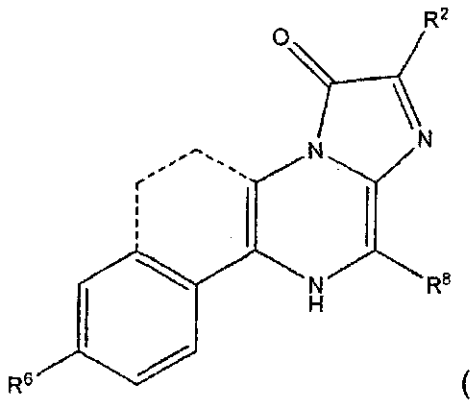
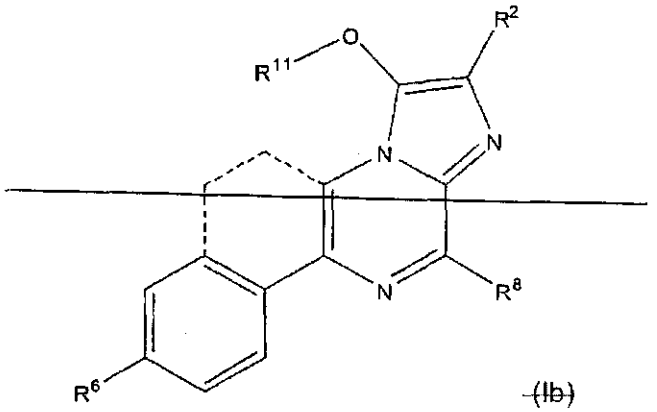
CLAIMS

1. A compound of formula (Ia) or (Ib):



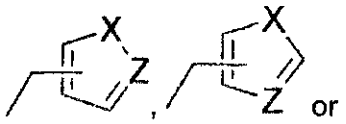
(Ia)

~~or~~



~~(Ib)~~

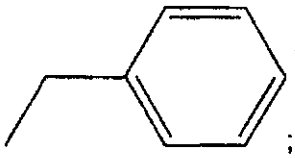
wherein R^2 is selected from the group consisting of



C_{2-5} straight chain alkyl;

R^6 is selected from the group consisting of -H, -OH, $-NH_2$, -OC(O)R or – $OCH_2OC(O)R$;

R^8 is


;

X is –S-, –O- or –NR^{22}-;

Z is –CH- or –N-;

each R^{11} is independently –C(O)R" or -$CH_2OC(O)R$";

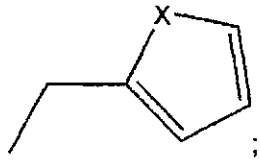
R^{22} is H, CH_3 or CH_2CH_3;

each R is independently C_{1-7} straight-chain alkyl or C_{1-7} branched alkyl;

R" is C_{1-7} straight-chain alkyl or C_{1-7} branched alkyl;

the dashed bonds indicate the presence of an optional ring, which may be saturated or unsaturated.

2. A compound according to claim 1,

wherein R^2 is 

; and

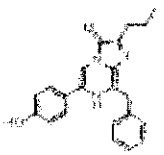
X is O or S.

3. A compound according to claim 1, wherein R^2 is C_{2-5} straight-chain alkyl.

4. A compound according to any one of the preceding claims, wherein R_{11} is –$CH_2OC(O)C(CH_3)_3$.

5. A compound according to any one of claims 1-~~5~~4, wherein R" is -$C(CH_3)_3$, -$CH(CH_3)_2$, -$CH_2C(CH_3)_3$, or –$CH_2CH(CH_3)_2$.

6. A compound selected from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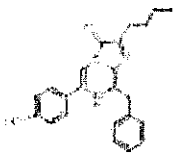
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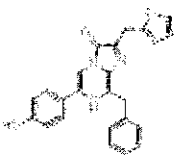
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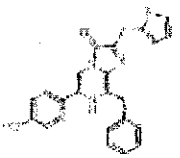
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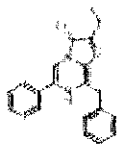
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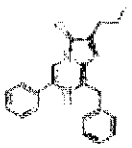
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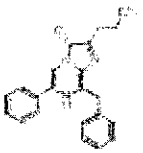
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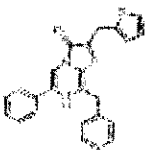
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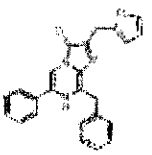
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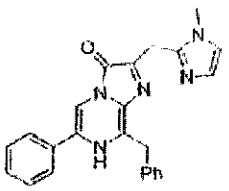
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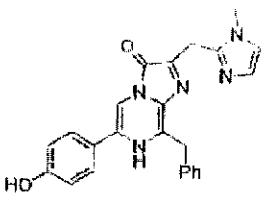
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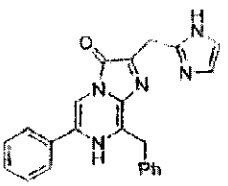
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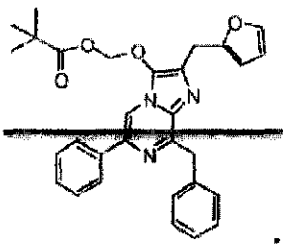
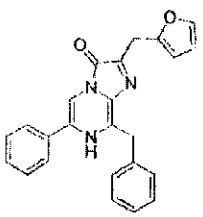
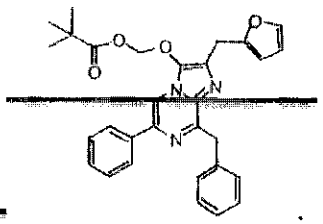


7. A compound of formula



~~OR~~



~~8. A kit comprising a compound according to any one of claims 1-7.~~

8~~9~~. A kit comprising a compound according to any one of claims 1-7, ~~The kit claim 8~~ further comprising a luciferase.

9~~10~~. The kit of claim 8~~9~~, wherein luciferase is an *Oplophorus* or *Renilla* luciferase.

10~~11~~. A kit of any one of claims 8-~~9~~10, further comprising a buffer reagent.

11~~12~~. A method for detecting luminescence in a sample comprising
contacting a sample with a compound according to any one of claims 1-7;
contacting the sample with a coelenterazine-utilizing luciferase, if it is not present in the sample; and
detecting luminescence.

12~~13~~. The method of claim 11~~12~~, wherein the sample contains live cells.

13~~14~~. The method of claim 11 ~~12~~ wherein the sample contains a coelenterazine-utilizing luciferase.

14~~15~~. A method for detecting luminescence in a non-human transgenic animal comprising administering a compound according to any one of claims 1-7 to a non-human transgenic animal; and
detecting luminescence;
wherein the non-human transgenic animal expresses a coelenterazine-utilizing luciferase.