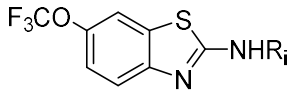
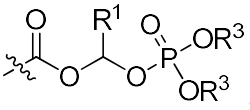
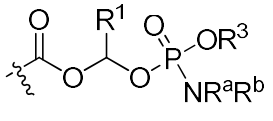
**WE CLAIM:**

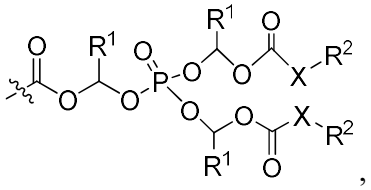
1. A prodrug of riluzole having the following formula:

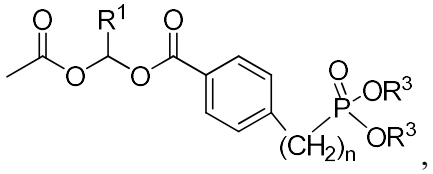


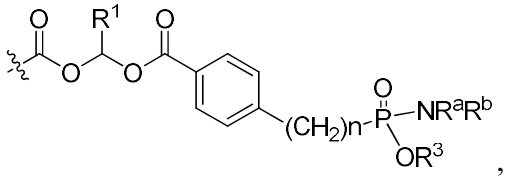
wherein $R_i$ is selected from:

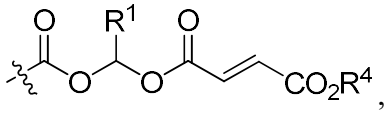
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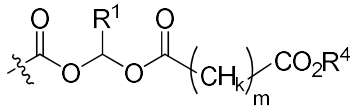
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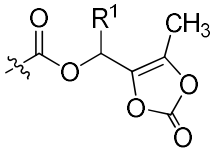
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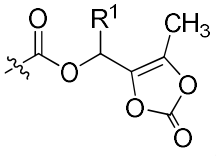
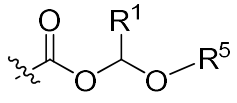
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, and ,

where $R^1$ is H, alkyl or particularly $C_1$-$C_8$ alkyl;

$R^2$ is alkyl, cycloalkyl, aryl, or heteroaryl, or halo alkyl, which is substituted or unsubstituted,

$R^3$ is H, metal, $R^2$ or a substituted or unsubstituted primary, secondary or tertiary amine;

$R^4$ is H, metal, ammonium salt or alkyl;

$R^5$ is a substituted or unsubstituted natural amino acid;

$R^a$ or $R^b$ is H, alkyl or aryl; or $NR^a$ or $NR^b$ is an amino acid;

X is O;

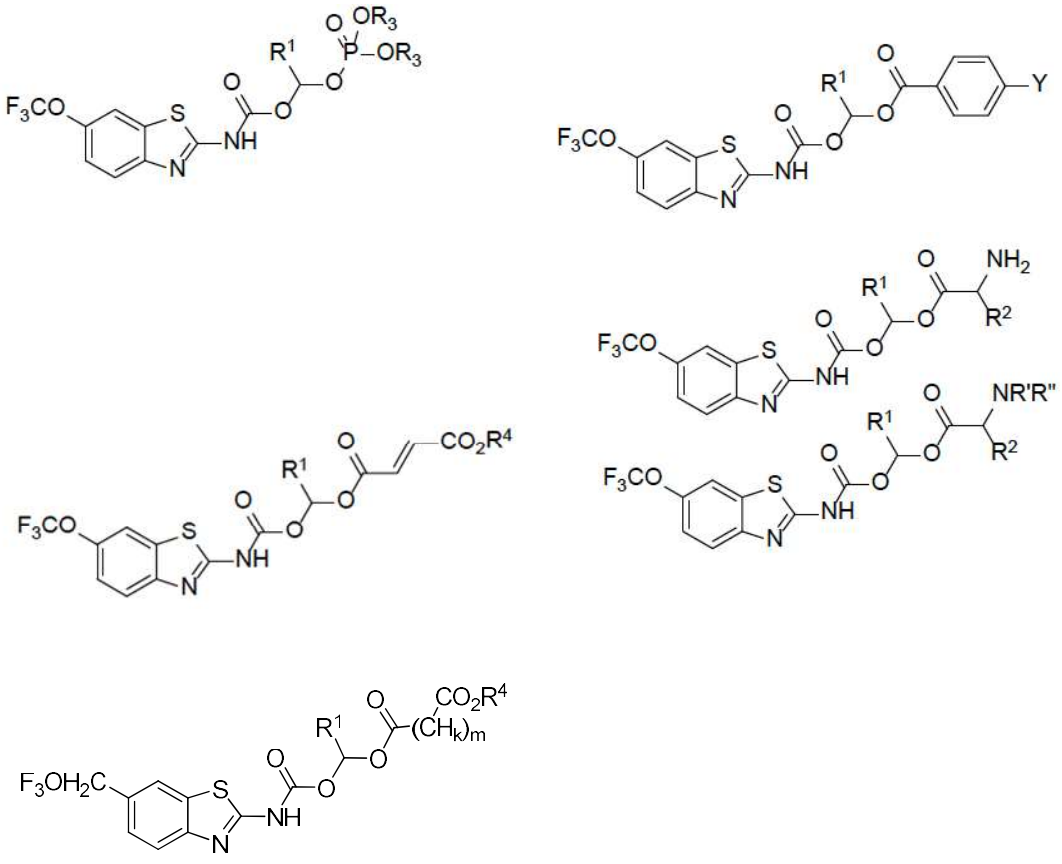
k is 1 or 2, m is 2-22, or $(CH_k)_m$ is saturated, unsaturated or conjugated hydrocarbon;

n is 0 – 2; and

the metal is Na, K, Li, Ca, Mg, Ag or Zn,

wherein "substituted" refers to one or more substituents, which are the same or different, each replacing a hydrogen atom, wherein the one or more substituents are selected from F, Cl, Br, I, hydroxyl, amino, alkylamino, arylamino, dialkylamino, diarylamino, cyano, nitro, mercapto, oxo, thio, imino, formyl, carbamido, carbamyl, carboxyl, thioureido, thiocyanato, sulfoamido, sulfonylalkyl, sulfonylaryl, alkyl, alkenyl, alkoxy, mercaptoalkoxy, aryl, heteroaryl, and cyclyl, wherein alkyl, alkenyl, alkyloxy, aryl, heteroaryl, and cyclyl are optionally substituted with alkyl, aryl, heteroaryl, halogen, hydroxyl, amino, mercapto, cyano, nitro, oxo, thioxo, or imino.

2. The prodrug of claim 1 selected from:



where $R^1$ is H, alkyl or particularly $C_1$-$C_8$ alkyl;

$R^3$ is H, metal, $R^2$ or a substituted or unsubstituted primary, secondary or tertiary amine;

$R^4$ is H, metal, ammonium salt or alkyl;

$R^5$ is a substituted or unsubstituted natural amino acid;

$R^6$ is alkyl, cycloalkyl, aryl, or heteroaryl, or halo alkyl;

k is 1 or 2, m is 2-22, or $(CH_k)_m$ is saturated, unsaturated or conjugated hydrocarbon;

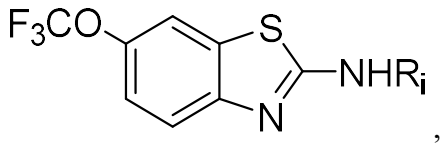
N' is a primary, secondary and tertiary amine which is substituted or unsubstituted, or metal salts;

Y is $PO_3H$, $CH_2PO_3H$ or salt thereof; and

the metal is Na, K, Li, Ca, Mg, Ag or Zn,

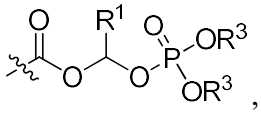
wherein "substituted" refers to one or more substituents, which are the same or different, each replacing a hydrogen atom, wherein the one or more substituents are selected from F, Cl, Br, I, hydroxyl, amino, alkylamino, arylamino, dialkylamino, diarylamino, cyano, nitro, mercapto, oxo, thio, imino, formyl, carbamido, carbamyl, carboxyl, thioureido, thiocyanato, sulfoamido, sulfonylalkyl, sulfonylaryl, alkyl, alkenyl, alkoxy, mercaptoalkoxy, aryl, heteroaryl, and cyclyl, wherein alkyl, alkenyl, alkyloxy, aryl, heteroaryl, and cyclyl are optionally substituted with alkyl, aryl, heteroaryl, halogen, hydroxyl, amino, mercapto, cyano, nitro, oxo, thioxo, or imino.

3. A method of preparing a riluzole prodrug, comprising a step of coupling one or more prodrug appendage moieties to a riluzole molecule

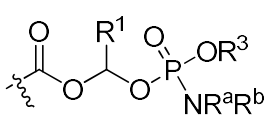


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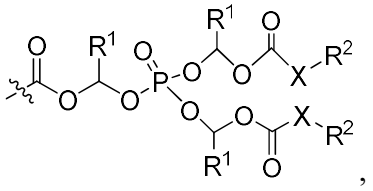
wherein $R_i$ is selected from:



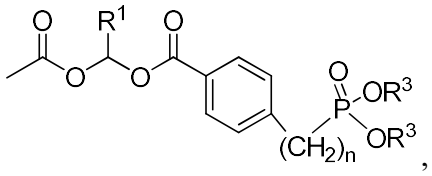
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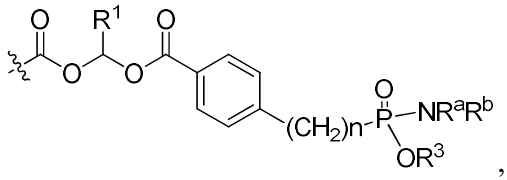
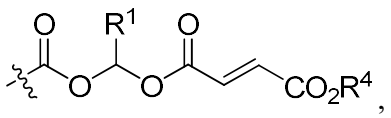
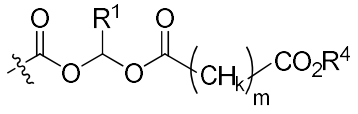
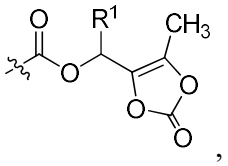
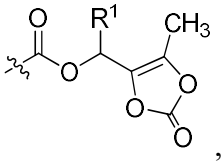
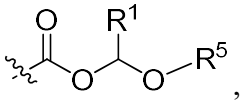
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where $R^1$ is H, alkyl or particularly $C_1$-$C_8$ alkyl;

$R^2$ is alkyl, cycloalkyl, aryl, or heteroaryl, or halo alkyl, which is substituted or unsubstituted,

$R^3$ is H, metal, $R^2$ or a substituted or unsubstituted primary, secondary or tertiary amine;

$R^4$ is H, metal, ammonium salt or alkyl;

$R^5$ is a substituted or unsubstituted natural amino acid;

$R^a$ or $R^b$ is H, alkyl or aryl; or $NR^a$ or $NR^b$ is an amino acid;

X is O;

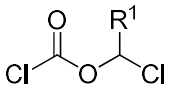
k is 1 or 2, m is 2-22, or $(CH_k)_m$ is saturated, unsaturated or conjugated hydrocarbon;

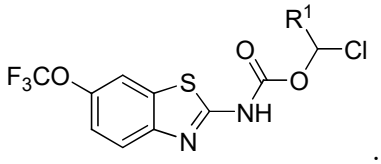
n is 0 – 2; and

the metal is Na, K, Li, Ca, Mg, Ag or Zn,

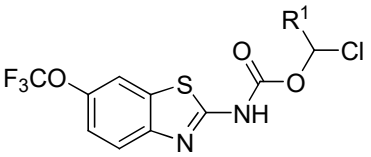
wherein "substituted" refers to one or more substituents, which are the same or different, each replacing a hydrogen atom, wherein the one or more substituents are selected from F, Cl, Br, I, hydroxyl, amino, alkylamino, arylamino, dialkylamino, diarylamino, cyano, nitro, mercapto, oxo, thio, imino, formyl, carbamido, carbamyl, carboxyl, thioureido, thiocyanato, sulfoamido, sulfonylalkyl, sulfonylaryl, alkyl, alkenyl, alkoxy, mercaptoalkoxy, aryl, heteroaryl, and cyclyl, wherein alkyl, alkenyl, alkyloxy, aryl, heteroaryl, and cyclyl are optionally substituted with alkyl, aryl, heteroaryl, halogen, hydroxyl, amino, mercapto, cyano, nitro, oxo, thioxo, or imino.

4. A method of synthesizing a riluzole prodrug, comprising a step of reacting riluzole with

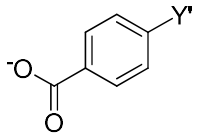
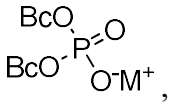
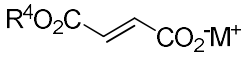
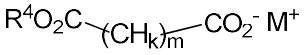
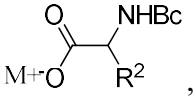
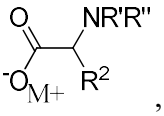


to produce .

5. The method of claim 4, further comprising a step of reacting



with a compound selected from:






and


wherein $R^1$ is H, alkyl or particularly $C_1$-$C_8$ alkyl;

X is Na, K, Li, Ca, Mg, Ag, or Zn,

$R^4$ is H, metal, ammonium salt, or alkyl,

k is 1 or 2, m is 2-22, or $(CH_k)_m$ is saturated, unsaturated or conjugated hydrocarbon;

Bc is a protecting group;

Y' is H, $PO_3Bc_2$, $CH_2PO_2Bc$, $MPO_3Bc$ or salt thereof, or $N(R_a)_4^+$, where Ra is H or alkyl;

M is Na, K, Li, Mg, Ca, Ag or Zn; and

R’ or R” are cyclic or acyclic alkyl,

wherein “substituted” refers to one or more substituents, which are the same or different, each replacing a hydrogen atom, wherein the one or more substituents are selected from F, Cl, Br, I, hydroxyl, amino, alkylamino, arylamino, dialkylamino, diarylamino, cyano, nitro, mercapto, oxo, thio, imino, formyl, carbamido, carbamyl, carboxyl, thioureido, thiocyanato, sulfoamido, sulfonylalkyl, sulfonylaryl, alkyl, alkenyl, alkoxy, mercaptoalkoxy, aryl, heteroaryl, and cyclyl, wherein alkyl, alkenyl, alkyloxy, aryl, heteroaryl, and cyclyl are optionally substituted with alkyl, aryl, heteroaryl, halogen, hydroxyl, amino, mercapto, cyano, nitro, oxo, thioxo, or imino.