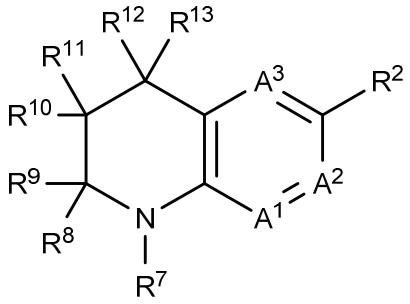
Claims

1. A compound of formula I:



in which

A^1 is N or CR^3;

A^2 is N or CR^4;

A^3 is N or CR^5;

R^3, R^4 and R^5, which may be the same or different, are each hydrogen, $alkyl_{C1-10}$, $alkene_{C2-12}$, aryl, aralkyl, halogen, trifluoroalkyl, cyano, nitro, $-NR^aR^b$, $-OR^a$, glycol, $-C(O)R^a$, $-C(O)OR^a$, $-OC(O)R^a$, $-S(O)R^aR^b$, $-C(O)NR^aR^b$ or a solubilising group;

R^7 is hydrogen, propynyl, $-(CH_2)_nC{\equiv}CH$, $-(CH_2)_nSH$, $-(CH_2)_nSO_2F$ or $-(CH_2)_nC{=}CH_2$, $alkyl_{C1-10}$, said alkyl being optionally substituted by aryl or heteroaryl;

R^8, R^9, R^{10} and R^{11}, which may be the same or different, are each hydrogen or $alkyl_{C1-4}$, aryl, halogen, trifluoroalkyl, $-OR^c$ or glycol, or together one pair of R^8 and R^{10} or R^9 and R^{11} represent a bond;

R^{12} and R^{13}, which may be the same or different, are each hydrogen, $alkyl_{C1-4}$ or together one pair of R^{10} and R^{12} or R^{11} and R^{13} represent a bond, or R^{12} and R^{13} together form a group:

$$=CR^{14}R^{15}$$

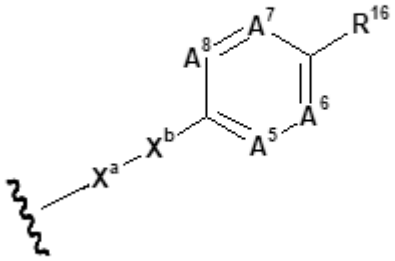
provided that the pair of R^{10} and R^{12} or R^{11} and R^{13} does **not** represent a bond if a pair from R^8, R^9, R^{10} and R^{11} represents a bond;

R^{14} and R^{15}, which may be the same or different, are each hydrogen or $alkyl_{C1-10}$; and

R^a, R^b and R^c, which may be the same or different, are each hydrogen or $alkyl_{C1-10}$;

n is an integer from 1 to 6;

R^2 is a group III:



III

in which

X^a is -C≡C-, -CH=CH- or –N=CH-;

X^b is -C≡C- or is absent;

A^5 is N or CR^{17};

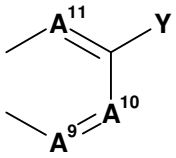
A^6 is N or CR^{18};

A^7 is N or CR^{19};

A^8 is N or CR^{20};

R^{17}, R^{18}, R^{19} and R^{20} , which may be the same or different, are each hydrogen, $alkyl_{C1-10}$, $alkene_{C2-12}$, aryl, aralkyl, halogen, trifluoroalkyl, cyano, nitro, $-NR^dR^e$, $-OR^d$, glycol, $-C(O)R^d$, $-C(O)OR^d$, $-OC(O)R^d$, $-S(O)R^dR^e$, $-C(O)NR^dR^e$ or a solubilising group;

R^{16} is $–CR^{21}=CR^{22}Y$, $-C≡C-R^{23}$ or together with R^{18} forms a ring IV:



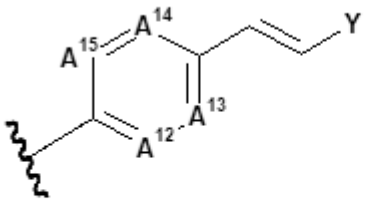
IV

A^9 is N or CR^{24};

A^{10} is N or CR^{25};

A^{11} is N or CR^{26};

R^{23} is a group V:



V

in which

A^{12} is N or CR^{27};

A^{13} is N or CR^{28};

A^{14} is N or CR^{29};

A^{15} is N or CR^{30};

R^{21} and R^{22}, which may be the same or different, are each hydrogen, $alkyl_{C1-10}$, $alkene_{C2-12}$, aryl, halogen or trifluoroalkyl;

R^{24}, R^{25}, R^{26}, R^{27}, R^{28}, R^{29} and R^{30}, which may be the same or different, are each hydrogen, $alkyl_{C1-10}$, $alkene_{C2-12}$, aryl, halogen, trifluoroalkyl, $-OR^f$, glycol or a solubilising group;

R^d, R^e and R^f, which may be the same or different, are each hydrogen or $alkyl_{C1-10}$;

Y is $–CO_2R^{31}$, -COH, $-CO_2CH_2C{\equiv}CH$, -CN, $-SF_5$, $-SO_3H$, $-SO_2NH_2$, $-SO_2CF_3$, $-CF_3$, $-CO_2(CH_2)_mSH$, $-CO_2(CH_2)_mSO_2F$, $-CO_2(CH_2)_mCH{=}CH_2$, $-C{=}NR^{32}$ or $-C{=}N^+R^{33}R^{34}$;

R^{31} is hydrogen, $alkyl_{C1-10}$, $alkene_{C2-12}$, aryl or a photocleavable group;

R^{32}, R^{33} and R^{34}, which may be the same or different, are each hydrogen, $alkyl_{C1-10}$, $alkene_{C2-12}$ or aryl;

m is an integer from 1 to 9;

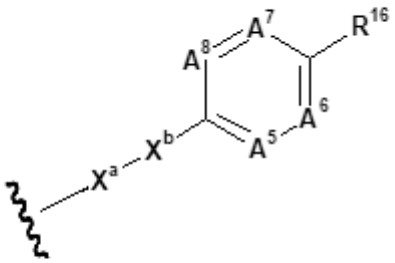
with the proviso that when R^1 together with R^6 forms a ring II in which R^7 is hydrogen or alkyl C_{1-10}, X_a is -C≡C- and X_b is absent, then Y is not $-CO_2R^{13}$;

and isomers thereof;

in free or in salt form.

2. The compound according to claim 1 wherein A^1 is CR^3, A^2 is CR^4, A^3 is CR^5; and R^2, R^3, R^4, and R^5 are each as defined in claim 1.

3. The compound according to claim 1 wherein R^2 is a group III:



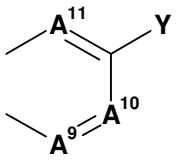
III

wherein X^a is -C≡C- and X^b is -C≡C-; and
A^5, A^6, A^7, A^8 and R^{16} are each as defined in claim 1.

4. The compound according to claim 3 wherein X^b is absent and X^a is selected from a group consisting of: -C≡C-, -CH=CH- and –N=CH-.

5. The compound according to claim 3 wherein A^5 is CR^{17}, A^6 is CR^{18}, A^7 is CR^{19} and A^8 is CR^{20}; and
X^a, X^b, R^{16}, R^{17}, R^{18}, R^{19} and R^{20} are each as defined in claim 1.

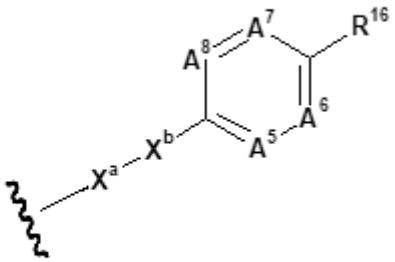
6. The compound according to claim 3 wherein A^5 is CR^{17}, A^6 is CR^{18}, A^7 is CR^{19} and A^8 is CR^{20}; and
R^{17}, R^{19} and R^{20} are each as defined in claim 1;
R^{16} together with R^{18} forms a ring IV:



IV

wherein A^9, A^{10}, A^{11} and Y are each as defined in claim 1.

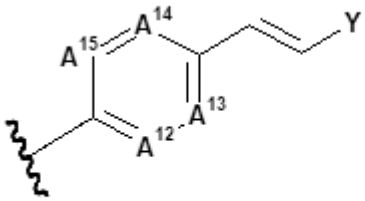
7. The compound according to claim 3 wherein R^2 is a group III;



III

and R^{16} is -C≡C-R^{23}

wherein R^{23} is a group V:



V

in which

A^{12} is CR^{27}, A^{13} is CR^{28}, A^{14} is CR^{29} and A^{15} is CR^{30}; and

R^{27}, R^{28}, R^{29}, R^{30} and Y are each as defined in claim 1.

8. The compound according to claim 7 wherein R^{16} is -C≡C-R^{23}, R^{23} is a group V and Y is $–CO_2R^{31}$, -COH, $-CO_2CH_2C{\equiv}CH$, -CN, $-SF_5$, $-SO_3H$, $-SO_2NH_2$, $-SO_2CF_3$, in which R^{31} is hydrogen, $alkyl_{C1-10}$, $alkene_{C2-12}$, aryl or a photocleavable group.

9. The compound according to claim 7 wherein Y is $–CO_2R^{31}$ in which R^{31} is hydrogen, $alkyl_{C1-10}$, $alkene_{C2-12}$, aryl or a photocleavable group.

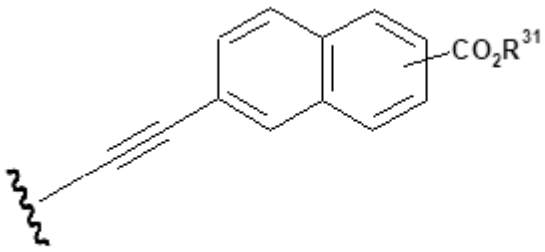
10. The compound according to claim 1 wherein R^7 is alkyl C1-10.

11. The compound according to claim 1 wherein R^8, R^9, R^{10} and R^{11} are each hydrogen.

12. The compound according to claim 1 wherein R^8 and R^{10} or R^9 and R^{11} represent a bond.

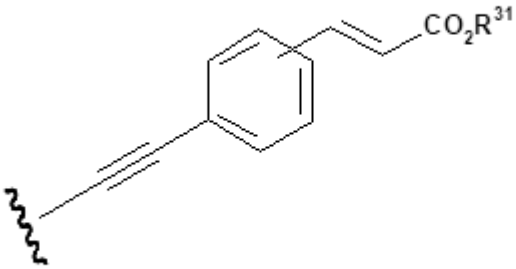
13. The compound according to claim 1 wherein R^{12} and R^{13} are the same or different; R^{12} and R^{13} may each represent alkyl C1-4.

14. The compound according to claim 1 wherein R^2 is selected from a group consisting of group VI:



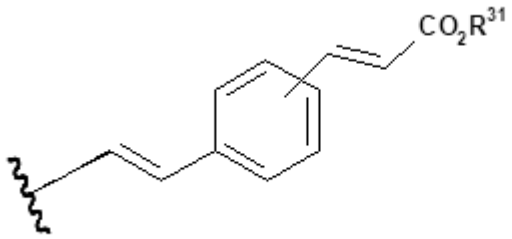
VI

group VII



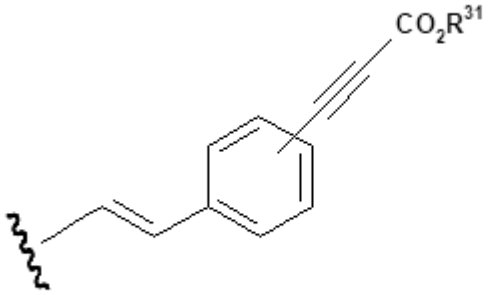
VII

group VIII



VIII

and group IX



IX

wherein R^{31} is as defined in claim 1.

15. The compound of formula I according to claim 1 that is selected from the group consisting of:
(2*E*)-3-(4-2-[4,4-dimethyl-1-(propyn-2-yl)-1,2,3,4-tetrahydroquinolin-6-yl] ethynylphenyl)prop-2-enoic acid; and
(2*E*)-3-(4-2-[4,4-dimethyl-1-(propyn-2-yl)-1,2,3,4-tetrahydroquinolin-6-yl] ethynylphenyl)prop-2-enoic acid methyl ester;
and isomers thereof;
in free or in salt form.

16. A composition comprising the compound according to claim 1 in combination with one or more pharmaceutically acceptable excipients; said composition being for use in the generation of reactive oxygen species when said compound is activated by light.

17. The composition according to claim 16 for use in the treatment of one or more of a cancer selected from head and neck tumours, breast cancer, gynaecological tumours, brain tumours, colorectal cancer, prostate cancer, mesothelioma, and pancreatic cancer, or a disease caused by a pathogenic organism selected from bacteria, viruses, fungi, parasites, protozoa and toxins, as well as cells and tissues infected or infiltrated therewith.