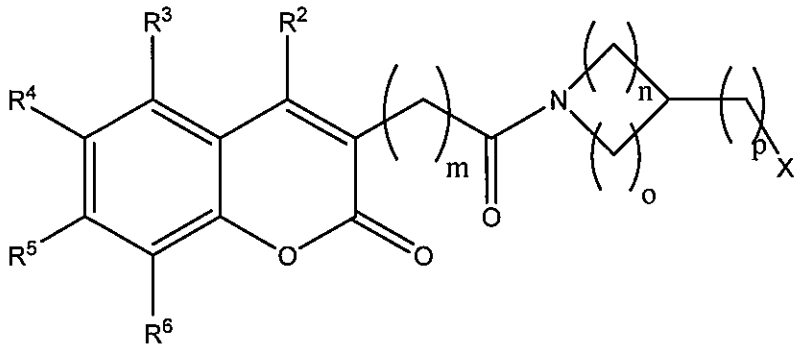
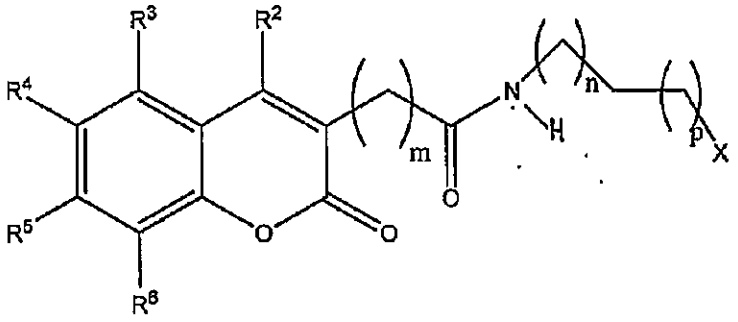
## CLAIMS

1. A compound of the structure below:



**Structure 14**

or



**Structure 14a**

where

m is 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10;

n is 1, 2 or 3;

o is 1, 2 or 3;

p is 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10;

$R^2$ is selected from a group consisting of -H or $-CH_3$;

$R^3$ is selected from a group consisting of -H, -halogen, $-CF_3$, -OH, $-NH_2$,-CCH, -CN, $-NO_2$, $(C_1-C_8)$alkyl, $(C_1-C_8)$substituted alkyl, $(C_1-C_8)$alkylthio, $(C_1-C_8)$ substituted alkylthio, $(C_1-C_8)$alkoxy, $(C_1-C_8)$substituted alkoxy, $-NR^7R^8$ where $R^7$ and $R^8$ are independently selected from H, $(C_1-C_8)$alkyl, or $R^7$ and $R^8$ together form a four-, five-, six-, or seven-membered heterocycle, $(C_1-C_8)$heteroalkyl, $(C_1-C_8)$substituted heteroalkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, or $R^3$ together with $R^4$ form a five- or six-membered carbocyclic or heterocyclic ring (*e.g.*, piperidinyl);

$R^4$ is selected from a group consisting of -H, -halogen, $-CF_3$, -OH, $-NH_2$,-CCH, -CN, $-NO_2$, $(C_1-C_8)$alkyl, $(C_1-C_8)$substituted alkyl, $(C_1-C_8)$alkylthio, $(C_1-C_8)$ substituted alkylthio, $(C_1-C_8)$alkoxy, $(C_1-C_8)$substituted alkoxy, $-NR^7R^8$ where $R^7$ and $R^8$ are independently selected from H, $(C_1-C_8)$alkyl, or $R^7$ and $R^8$ together form a four-, five-, six-, or seven-membered heterocycle, $(C_1-C_8)$heteroalkyl, $(C_1-C_8)$substituted heteroalkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, or $R^4$ together with $R^5$ form a five- or six-membered carbocyclic or heterocyclic ring (*e.g.*, piperidinyl);

$R^5$ is selected from a group consisting of -H, -halogen, $-CF_3$, -OH, $-NH_2$,-CCH, -CN, $-NO_2$, $(C_1-C_8)$alkyl, $(C_1-C_8)$substituted alkyl, $(C_1-C_8)$alkylthio, $(C_1-C_8)$ substituted alkylthio, $(C_1-C_8)$alkoxy, $(C_1-C_8)$substituted alkoxy, $-NR^7R^8$ where $R^7$ and $R^8$ are independently selected from H, $(C_1-C_8)$alkyl, or $R^7$ and $R^8$ together form a four-, five-, six-, or seven-membered heterocycle, $(C_1-C_8)$heteroalkyl, $(C_1-C_8)$substituted heteroalkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, or $R^5$ together with $R^6$ form a five- or six-membered carbocyclic or heterocyclic ring (*e.g.*, piperidinyl); or $R^4$, $R^5$ and $R^6$ together form fused carbocyclic or heterocyclic ring systems having five- or six-membered rings;

$R^6$ is selected from a group consisting of -H, -halogen, $-CF_3$, -OH, $-NH_2$,-CCH, -CN, $-NO_2$, $(C_1-C_8)$alkyl, $(C_1-C_8)$substituted alkyl, $(C_1-C_8)$alkylthio, $(C_1-C_8)$ substituted alkylthio, $(C_1-C_8)$alkoxy, $(C_1-C_8)$substituted alkoxy, $-NR^7R^8$ where $R^7$ and $R^8$ are independently selected from H, $(C_1-C_8)$alkyl, $(C_1-C_8)$substituted alkyl, or $R^7$ and $R^8$ together form a four-, five-, six-, or seven-membered heterocycle, $(C_1-C_8)$heteroalkyl, $(C_1-C_8)$substituted heteroalkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl;

X is -OH, $-NH_2$, -SH, $-OR^{11}$, $-NHR^{12}$, $-NR^{13}R^{14}$, $-OC(O)R^{15}$, $-NHC(O)R^{16}$, $-SC(O)R^{17}$, -C(O)OH, $-C(O)OR^{18}$, $-C(O)NHR^{19}$, $-C(O)NR^{20}R^{21}$, $-N_3$;

$R^{11}$, $R^{12}$, $R^{13}$, $R^{14}$, $R^{15}$, $R^{16}$, $R^{17}$, $R^{18}$, $R^{19}$, $R^{20}$ and $R^{21}$ are independently selected from $(C_1-C_8)$alkyl, $(C_1-C_8)$substituted alkyl, $-CH_2CH(OH)CH_2(OH)$, $-CH(CH_2OH)_2$, $-CH_2CCH$, $-(CH_2CH_2O)_a-CH_2CH_2OH$ where a is 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10, $-P(NR^{22}R^{23})OCH_2CH_2$-EWG, $-P(O)(O^-)$-Oligonucleotide , $-(CH_2)_bCC$-Nucleoside, $-(CH_2)_bCC$-[Nucleoside Triphosphate], $-(CH_2)_b$-Nucleoside, $-(CH_2)_b$-[Nucleoside Triphosphate], $-(CH_2)_bNH$-Nucleoside, $-(CH_2)_bNH$-[Nucleoside Triphosphate], $-(CH_2)_bNHC(O)(CH_2)_b$-Nucleoside, $-(CH_2)_bNHC(O)(CH_2)_b$-[Nucleoside Triphosphate], where b is 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10;

EWG is an electron withdrawing group;

$R^{22}$ and $R^{23}$ are independently selected from $-CH_3$, $-CH_2CH_3$, $-CH(CH_3)_2$ or $R^{22}$ and $R^{23}$ together form a heterocycle.

2. The compound according to claim 1, wherein $R^3$ is -H or $(C_1-C_8)$alkyl.

3. The compound according to claim 2, wherein X is -OH, $-OR^{11}$, or $-OC(O)R^{15}$.

4. The compound according to claim 3, wherein $R^4$ is -H or $R^4$ together with $R^5$ form a five- or six-membered carbocyclic or heterocyclic ring.