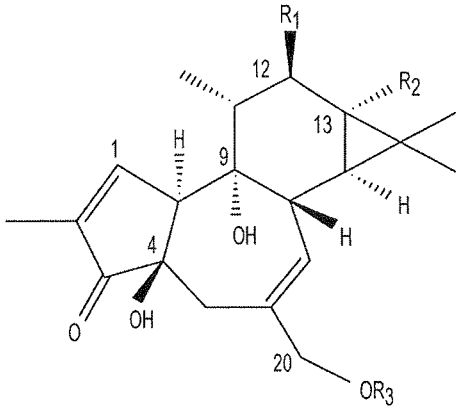
CLAIMS

1. Use~~A method for preventing or treating one or more of the effects of stroke in a mammalian subject comprising administering an effective amount~~ of a phorbol ester of Formula I, or a pharmaceutically-acceptable salt, isomer, or enantiomer, thereof ~~to said subject~~



FORMULA I

wherein R_1 and R_2 are selected from the group consisting of hydrogen, hydroxyl, —O—C(=O)-alkyl, —O—C(=O)-lower alkenyl, —O—C(=O)-phenyl, —O—C(=O)-benzyl, and substituted derivatives thereof; and R_3 is hydrogen, —C(=O)-lower alkyl —O—C(=O)-lower alkyl and substituted derivatives thereof, in the manufacture of a medicament for preventing or treating one or more of the effects of stroke in a mammalian subject.

2. The use~~method~~ of claim 1, wherein R_1 or R_2 is —O—C(=O)—C_1— C_{15} alkyl the remaining R_1 or R_2 is —O—C(=O)-lower alkyl and R_3 is hydrogen.

3. The use~~method~~ of claim 1, wherein the phorbol ester is phorbol 13-butyrate, phorbol 12-decanoate, phorbol 13-decanoate, phorbol 12,13-diacetate, phorbol 13,20-

diacetate, phorbol 12,13-dibenzoate, phorbol 12,13-dibutyrate, phorbol 12,13-didecanoate, phorbol 12,13-dihexanoate, phorbol 12,13-dipropionate, phorbol 12-myristate, phorbol 13-myristate, phorbol 12,13,20-triacetate, 12-deoxyphorbol 13-angelate, 12-deoxyphorbol 13-angelate 20-acetate, 12-deoxyphorbol 13-isobutyrate, 12-deoxyphorbol 13-isobutyrate-20-acetate, 12-deoxyphorbol 13-phenylacetate, 12-deoxyphorbol 13-phenylacetate 20-acetate, 12-deoxyphorbol 13-tetradecanoate, phorbol 12-tigliate 13-decanoate, 12-deoxyphorbol 13-acetate, phorbol 12-acetate, or phorbol 13-acetate.

4. The use~~method~~ of claim 1, further comprising use of~~administering~~ at least one secondary or adjunctive therapeutic agent that is effective in a combinatorial formulation or coordinate treatment regimen with said phorbol ester of Formula I in the manufacture of the medicament to treat or prevent effects of stroke in said subject.

~~5. The method of claim 4, wherein the at least one secondary or adjunctive therapeutic agent is administered to said subject in a coordinate administration protocol, simultaneously with, prior to, or after, administration of said phorbol ester to said subject.~~

56. The use~~method~~ of claim 4, wherein the at least one secondary or adjunctive therapeutic agent is tissue plasminogen activator, an anticoagulant, a statin, fibrate, angiotensin II receptor blockers, angiotensin-converting enzyme inhibitor, beta-blocker, anti-platelet agent, calcium channel blocker, or diuretic.

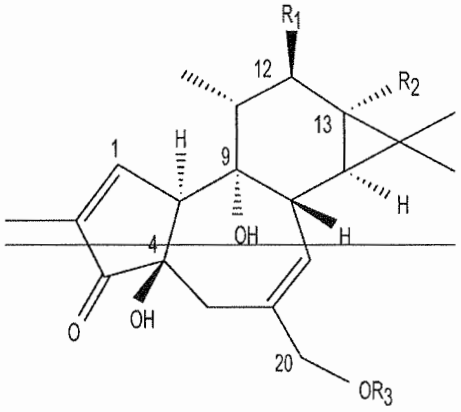
~~7. The method of claim 1, further comprising surgical intervention in combination with phorbol ester of Formula I to treat or prevent effects of stroke in said subject.~~

~~8. The method of claim 7, wherein the surgical intervention is a carotid endarterectomy, angioplasty, stent placement, craniotomy, insertion of a pacemaker,~~

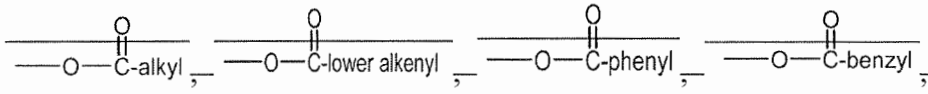
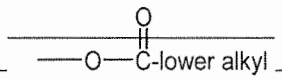
~~implantation of a defibrillator, replacement of valves, coronary artery bypass, heart transplantation, endovascular coil emobilization, or patent foramen ovale closure.~~

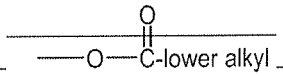
~~6~~9. The use~~method~~ of claim 1, wherein the one or more effects of stroke are paralysis, spatial impairment, impaired judgment, left-sided neglect, memory loss, aphasia, coordination and balance problems, nausea, vomiting, cognitive impairment, perception impairment, orientation impairment, homonymous hemianopsia, or impulsivity.

~~10. A composition for the prevention or treatment of one or more effects of stroke in a mammalian subject comprising an effective amount of a phorbol ester of Formula I, or a pharmaceutically acceptable salt, isomer, or enantiomer thereof~~



~~FORMULA I~~

~~wherein R_1 and R_2 are selected from the group consisting of hydrogen, hydroxyl,~~  ~~, and substituted derivatives thereof; and R_3 is hydrogen,~~  ~~and substituted derivatives thereof.~~

~~11. The composition of claim 10, wherein R_1 or R_2 is~~  ~~and the remaining R_1 or R_2 is~~  ~~and R_3 is hydrogen.~~

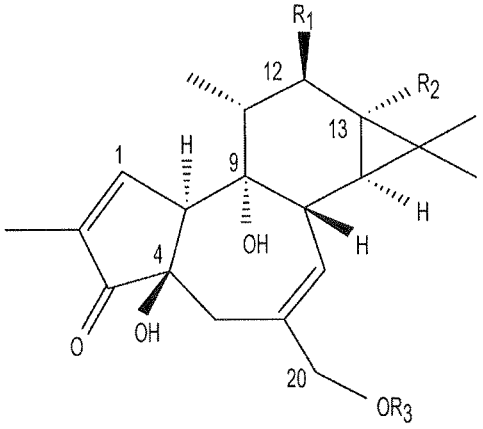
~~12. The composition of claim 10, wherein the phorbol ester is phorbol 13-butyrate, phorbol 12-decanoate, phorbol 13-decanoate, phorbol 12,13-diacetate, phorbol 13,20-diacetate, phorbol 12,13-dibenzoate, phorbol 12,13-dibutyrate, phorbol 12,13-didecanoate, phorbol 12,13-dihexanoate, phorbol 12,13-dipropionate, phorbol 12-myristate, phorbol 13-myristate, phorbol 12,13,20-triacetate, 12-deoxyphorbol 13-angelate, 12-deoxyphorbol 13-angelate 20-acetate, 12-deoxyphorbol 13-isobutyrate, 12-deoxyphorbol 13-isobutyrate 20-acetate, 12-deoxyphorbol 13-phenylacetate, 12-deoxyphorbol 13-phenylacetate 20-acetate, 12-deoxyphorbol 13-tetradecanoate, phorbol 12-tigliate 13-decanoate, 12-deoxyphorbol 13-acetate, phorbol 12-acetate, or phorbol 13-acetate.~~

~~13. The composition of claim 10, further comprising at least one secondary or adjunctive therapeutic agent that is effective in a combinatorial formulation with said phorbol ester of Formula I to treat or prevent an effect of stroke in said subject.~~

~~14. The composition of claim 13, wherein the at least one secondary or adjunctive therapeutic agent is tissue plasminogen activator, an anticoagulant, a statin, fibrate, anti-platelet agent, angiotensin II receptor blockers, angiotensin-converting enzyme inhibitor, beta-blocker, calcium channel blocker, or diuretic.~~

~~15. The composition of claim 10, wherein the one or more side effects of stroke is paralysis, spatial impairment, impaired judgment, left-sided neglect, memory loss, aphasia, coordination and balance problems, nausea, vomiting, cognitive impairment, perception impairment, orientation impairment, homonymous hemianopsia, or impulsivity.~~

7~~16~~. Use~~A method for preventing a stroke in a mammalian subject at risk for a stroke comprising administering an effective amount~~ of a phorbol ester of Formula I, or a pharmaceutically-acceptable salt, isomer, or enantiomer, thereof ~~to said subject~~



FORMULA I

wherein R_1 and R_2 are selected from the group consisting of hydrogen, hydroxyl, —O—C(=O)-alkyl, —O—C(=O)-lower alkenyl, —O—C(=O)-phenyl, —O—C(=O)-benzyl, and substituted derivatives thereof; and R_3 is hydrogen, —C(=O)-lower alkyl —O—C(=O)-lower alkyl and substituted derivatives thereof, in the manufacture of a medicament for preventing a stroke in a mammalian subject at risk for a stroke.

8~~17~~. The use~~method~~ of claim 7~~16~~, wherein R_1 or R_2 is —O—C(=O)—C_1— C_{15} alkyl the remaining R_1 or R_2 is —O—C(=O)-lower alkyl and R_3 is hydrogen.

9~~18~~. The use~~method~~ of claim 7~~16~~, wherein the phorbol ester is phorbol 13-butyrate, phorbol 12-decanoate, phorbol 13-decanoate, phorbol 12,13-diacetate, phorbol 13,20-diacetate, phorbol 12,13-dibenzoate, phorbol 12,13-dibutyrate, phorbol 12,13-didecanoate, phorbol 12,13-dihexanoate, phorbol 12,13-dipropionate, phorbol 12-myristate, phorbol 13-myristate, phorbol 12,13,20-triacetate, 12-deoxyphorbol 13-

angelate, 12-deoxyphorbol 13-angelate 20-acetate, 12-deoxyphorbol 13-isobutyrate, 12-deoxyphorbol 13-isobutyrate-20-acetate, 12-deoxyphorbol 13-phenylacetate, 12-deoxyphorbol 13-phenylacetate 20-acetate, 12-deoxyphorbol 13-tetradecanoate, phorbol 12-tigliate 13-decanoate, 12-deoxyphorbol 13-acetate, phorbol 12-acetate, or phorbol 13-acetate.

1019. The usemethod of claim 716, further comprising use ofadministering at least one secondary or adjunctive therapeutic agent that is effective in a combinatorial formulation or coordinate treatment regimen with said phorbol ester of Formula I in the manufacture of the medicament to treat or prevent effects of stroke in said subject~~, wherein the secondary or adjunctive therapeutic agent is administered simultaneously with, prior to, or after, administration of said phorbol ester of Formula I~~.

1120. The usemethod of claim 1019, wherein the at least one secondary or adjunctive therapeutic agent is an anticoagulant, a statin, fibrate, angiotensin II receptor blockers, anti-platelet agent, angiotensin-converting enzyme inhibitor, beta-blocker, calcium channel blocker, or diuretic.