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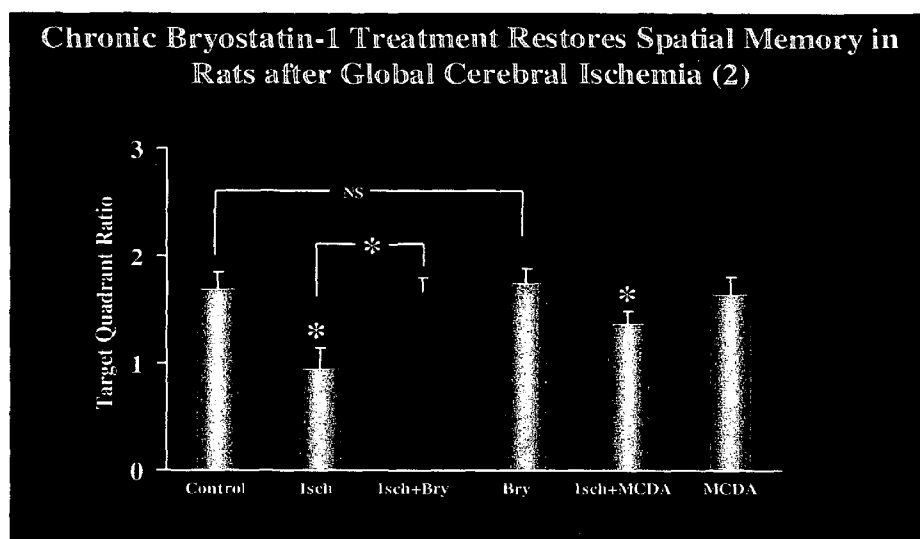
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(54) Title: THERAPEUTIC EFFECTS OF BRYOSTATINS, BRYOLOGS, AND OTHER RELATED SUBSTANCES ON ISCHEMIA/STROKE-INDUCED MEMORY IMPAIRMENT AND BRAIN INJURY



(57) Abstract: The invention provides for the use of protein kinase activators or boosters of nerve growth factor (NGF), brain-derived neurotrophic factor (BDNF) or other neurotrophic factors to treat stroke. Specifically, the present invention provides methods of treating stroke comprising the steps of identifying a subject having suffered a stroke and administering to said subject an amount of a pharmaceutical composition comprising a protein kinase C (PKC) activator or 4-methylcatechol acetic acid (MCBA) and a pharmaceutically acceptable carrier effective to treat at least one symptom of stroke.

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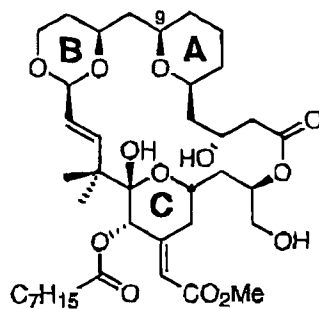
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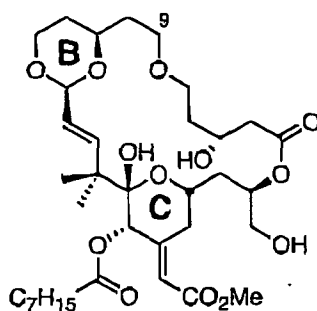
AMENDED CLAIMS**[received by the International Bureau on 08 May 2009 (08.05.09)]****We claim:**

1. A method of treating stroke comprising the steps of identifying a subject having suffered an ischemic event and administering to said subject an amount of a pharmaceutical composition comprising a protein kinase C (PKC) activator or 4-methylcatechol acetic acid (MCBA), or other derivatives of methylcatechol, and a pharmaceutically acceptable carrier effective to treat at least one symptom of stroke, wherein the PKC activator is selected from a group consisting of: bryologs, diacylglycerol derivatives other than phorbol esters, isoprenoids, daphnane-type diterpenes, bicyclic triterpenoids, naphthalenesulfonamides, lineolic acid derivatives, diacylglycerol kinase inhibitors, growth factor activators, or a combination thereof.
2. (Cancelled).
3. (Cancelled).
4. (Cancelled).
5. (Cancelled).
6. (Cancelled).
7. (Previously Presented) The method of claim 1, wherein the pharmaceutical composition comprises 4-methylcatechol acetic acid.
8. (Previously Presented) The method of claim 1, wherein said administration is initiated within 1 day of said stroke.
9. (Previously Presented) The method of claim 1, wherein said administration is initiated within 2 days of said stroke.
10. (Previously Presented) The method of claim 1, wherein said administration is initiated within 3 days of said stroke.
11. (Previously Presented) The method of claim 1, wherein said administration is initiated between 1 and 2 days of said stroke.

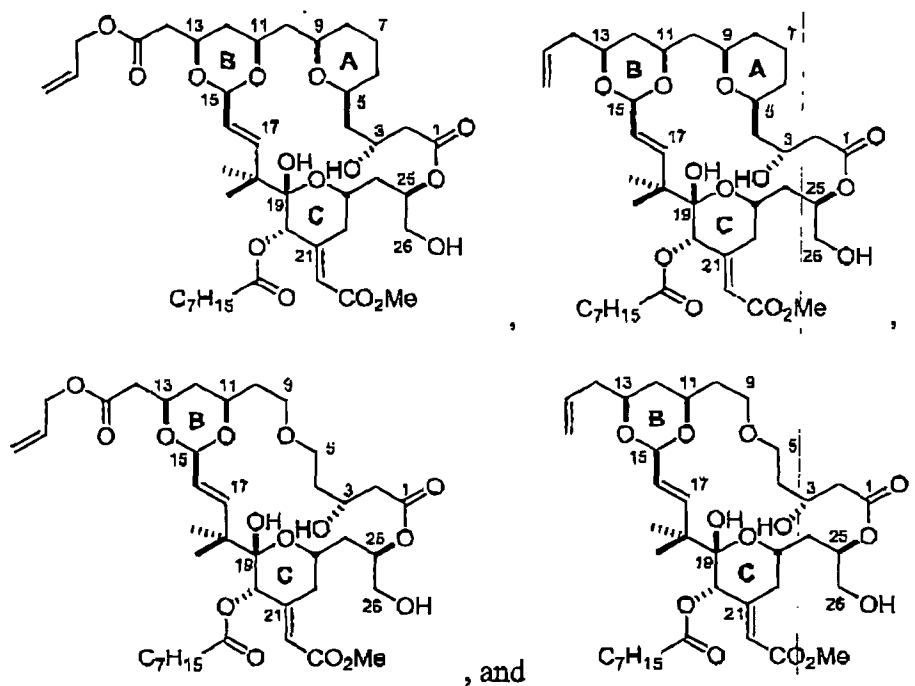
12. (Previously Presented) The method of claim 1, wherein said administration is initiated between 1 and 3 days of said stroke.
13. (Previously Presented) The method of claim 1, wherein the treatment is continued for a duration of 1 week.
14. (Previously Presented) The method of claim 1, wherein the treatment is continued for a duration of 2 weeks.
15. (Previously Presented) The method of claim 1, wherein the treatment is continued for a duration of 3 weeks.
16. (Previously Presented) The method of claim 1, wherein the treatment is continued for a duration of 4 weeks.
17. (Previously Presented) The method of claim 1, wherein the treatment is continued for a duration of 6 week.
18. (Previously Presented) The method of claim 1, wherein said treatment reverses stroke-induced brain injury.
19. (Previously Presented) The method of claim 1, wherein said treatment reverses stroke-induced memory impairment.
20. (New) The method of claim 1, wherein the bryolog is a B-ring bryolog or A-ring bryolog.
21. (New) The method of claim 20, wherein the B-ring or A-ring bryolog has a molecular weight from about 600 to 755 and an affinity for PKC from about 0.25 nM to 10 μ M.
22. (New) The method of claim 1, wherein the bryolog is



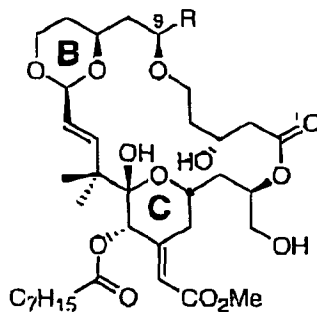
23. (New) The method of claim 1, wherein the bryolog is



24. (New) The method of claim 20, wherein the B-ring bryolog is selected from the group consisting of



25. (New) The method of claim 20, wherein the A-Ring analog is



and R is t-Bu, Ph, or (CH₂)₃p-Br-Ph.

26. (New) The method of claim 1, wherein the diacylglycerol derivative is comprised of unsaturated fatty acids.
27. (New) The method of claim 26, wherein the fatty acids are in a 1,2-sn configuration.
28. (New) The method of claim 26, wherein the fatty acids are cis-unsaturated fatty acids.

29. (New) The method of claim 1, wherein the PKC activator is octylindolactam V.
30. (New) The method of claim 29, wherein the octylindolactam is the (-)-enantiomer.
31. (New) The method of claim 1, wherein the daphnane-type diterpene is gnidimacrin.
32. (New) The method of claim 1, wherein the bicyclic triterpenoid is iripallidal.
33. (New) The method of claim 1, wherein the diterpenoid is ingenol.
34. (New) The method of claim 1, wherein the diterpenoid is ingenol 3,20-dibenzoate.
35. (New) The method of claim 1, wherein the diterpenoid is ingenol-3-angelate.
36. (New) The method of claim 1, wherein the naphthalenesulfonamide is N-(n-heptyl)-5-chloro-1-naphthalenesulfonamide or N-(6-Phenylhexyl)-5-chloro-1-naphthalenesulfonamide.
37. (New) The method of claim 1, wherein the lincolic acid derivative is 2-[(2-pentylcyclopropyl)methyl]-cyclopropaneoctanoic acid.
38. (New) The method of claim 1, wherein the diacylglycerol kinase inhibitor is 6-(2-(4-[(4-fluorophenyl)phenylmethylene]-1-piperidiny)ethyl)-7-methyl-5H-thiazolo[3,2-a]pyrimidin-5-one.
39. (New) The method of claim 1, wherein the diacylglycerol kinase inhibitor is [3-[2-[4-(bis-(4-fluorophenyl)methylene)piperidin-1-yl)ethyl]-2,3-dihydro-2-thioxo-4(1H)-quinazolinone.
40. (New) The method of claim 1, wherein the growth factor activator is a 4-methyl catechol derivative.
41. (New) The method of claim 1, wherein the growth factor activator is 4-methylcatechol acetic acid.