

PATENT NO. 360050

A PROCESS FOR PREPARING A HAIRY ROOT CULTURE EXTRACT OF FICUS RELIGIOSA L. HAVING INDUCED ACETYLCHOLINESTERASE INHIBITORY ACTIVITY AND COMPOSITION THEREOF

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APPLICANT

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ABSTRACT

The present invention provides a process for preparing a hairy root culture extract of *Ficus religiosa* L. having enhanced acetylcholinesterase inhibitory activity which can be used in the treatment of Alzheimer's Disease. Hairy root cultures of *Ficus religiosa*, produced by genetic transformation by *Agrobacterium rhizogenes*, enable large scale production of the extract associated with high acetylcholinesterase inhibitory activity, which would not have been feasible with naturally occurring *Ficus religiosa* plants.

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CLAIM 1

A process for preparing hairy root culture extract of *Ficus religiosa* L. having acetylcholinesterase inhibitory activity, said process comprising (a) culturing nodal segments of *Ficus religiosa* L. on a culture medium to obtain regenerated shoots; (b) excising the regenerated shoots to obtain an explant; (c) obtaining a suspension of *Agrobacterium rhizogenes* at an optical density and centrifuging the suspension at 5000 rpm for 10 minutes to obtain a pellet; (d) resuspending the pellet in an infection medium; (e) incubating the explant of step (b) in the infection medium to obtain an infected explant; (f) culturing the infected explant in a co-cultivation medium to obtain a co-cultivated explant; (g) washing the co-cultivated explant with cefotaxime to remove *Agrobacterium* to obtain a washed explant; (h) culturing the washed explant of step (g) in a hairy root culture medium to obtain hairy roots; (i) harvesting the hairy roots after a time period of 15 to 30 days and cutting the hairy roots to obtain pieces; (j) drying the pieces and macerating them in methanol for a time period in the range of 30 minutes to 24 hours to obtain macerated pieces; (k) filtering the macerated pieces to obtain a filtrate and drying the filtrate to obtain a dried extract and; (l) dissolving the dried extract in methanol to obtain a hairy root culture extract.