Efficacy of stem powder of *Amorphophallus paeoniifolius* on anti hyperlipideamic activity

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ABSTRACT

This study was an experimental study conducted in 9 Wistar albino rats in Trincomalee Campus, Eastern University of Sri Lanka.

Hyperlipideamia has been ranked as one of the greatest risk factors contributing to prevalence & severity of coronary heart disease. Globally, a third of ischemic heart disease is attributable to high cholesterol level.

Plant *Amorphophallus paeoniifolius* is a perennial herb belongs to the family of Araceae. In Tamil it's known as *Karunai kilangu*. The stem of this plant traditionally claims antihyperlipideamic activity. As per the Siddha theory *Kozhupu* and *Iyam mihu gunam* results *Adimedhai noi.* However the antihyperlipideamic property of stem of the plant *Amorphophallus paeoniifolius* has not been proven yet. Thereby the present study deals with the efficacy of stem powder of plant *Amorphophallus paeoniifolius* in lowering the elevated lipid levels.

Adult male Albino rats of weighing around 200-350gm obtained. The animals housed in polypropylene cages (three in each cage) under standard laboratory condition. Hyperlipideamia induced by intraperitoneal injection of Triton-X-100 (100mg/kg) after overnight fasting for 18 hours. The rats were divided into 3 groups 3 animals in each. Administered normal water and pellet for control group, standard group fed with Atorvastatin (10mg/kg) and test group fed with hot extract of stem of plant *Amorphophallus paeoniifolius*. After 72 hours of injection baseline cholesterol was evaluated, after treatment with drug for a week on 8th day blood withdrawal done for the analysis. Biochemical estimation carried out and result analyzed using simple statistical method.

Study showed, after the Trion-X-100 injection there is increase in Total Cholesterol level and reduction in HDL level and Artherogenic index. After the administration of test and standard drug

there is reduction in Total Cholesterol level, increase in HDL level, Reduction in both weight and AI index.

The quotation for general character of *Amorphophallus paeoniifolius* is proven scientifically from the above scientific study for hyperlipideamia.

Key words: Hyperlipideamia, Total Cholesterol, *Amorphophallus paeonifolius*, HDL, AI index.

REFERENCES:

Anuradha singh, Neeraj wadhwa. "A review on multiple potential of aroid: Amorphophallus paeomiifolius." *International journal of pharmaceutical science* (Dept of biotechnology, Jaypee institute i=of information technology), no. 24 (Feb 2014).

Bopanna KN, Bhagyalakshmi N, Rathod SP, Balaraman R, Kannan J. "Cell culture derived Hemidesmus indicus in the prevention of hypercholestroleamia in normal and hyperlipideamic rats." (Indian journal of pharmacology) 129 (1997): 105-9.

G, Davy Smith. "The cholestrol lowering mortality, the importance of considering initial level of risk." *International medical journal*, no. 306 (1993): 1367-1373.

Geetha kodali, Ganapaty seru. "Antihyperlipideamic activity of Boswellia ovalifoliata BAI Henry Atherogenic diet induced rats." (Dept of pharmacognosy and phytochemistry, College of pharmaceutical science,Andhra universitys) 3, no. 3 (2013).

M, Shanmugevelu. "Noi naadal noi mudhal nadal thiratu part 1." Department of homeopathy, 2009.

Murugesamudaliyar, KS. *Materia medica (Medicinal plants division).* Chennai: Dept of homeopathy, 2008.

Nimmy chacko, Shastry CS, Prerna shetty, Prassana shyama, Ullas D souza, Patel, Maulika. "Antihyperlipideamic activity of costus Igneus in Triton X 100 induced hyperlipideamic rats." (Dept of pharmacology, NGSM institute of pharmaceutical sciences) 1, no. 2 (April-June 2012).

Organization, World Health. 2008.

Saravanan, Rajendra prasad N, Pugalamdi KV. "Effect of iper betle extract in alcoholic toxicity in rat brain." *journal of med food*, no. 6 (2003): 261-265.

SM, Grundy. "Cholestrol and coronary heart disease." *A new era* (J Am Med Association) 256 (1986): 2849-2859.

TM, Speight. "Avery's drug treatment priciples and practice of clinical pharmacology and therapeutics ." (ADIS press Ltd) 1988: 599.

Uthamarayan, Dr KS. "Siddha maruthuvanga surukam." 14-215. chennai 600 014: Indian medicne, Dept of homeopathy, 2010.