

Probable Use of Arecanut as a Therapeutic Agent against SARS Coronavirus

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ABSTRACT

The study is aimed at the possible certification of arecanut extract's efficacy as therapeutic agent against SARS corona virus. Then we could convert its use to a therapeutic use against several respiratory viral germs. It may become prophylactic and/or therapeutic regime for virus infection. Since Corona virus cannot be cultured, we have to resort to straight studies on influenza virus. These both viruses share similar structural properties and symptoms in infection. First, based on antimicrobial potential and antioxidant activity of the efficacy of arecanut extract it proved that studies could be done to compare the effect of extract against influenza virus and corona virus. This extract has a potential antifungal activity against unicellular yeast *Candida albicans* and mycelia fungi *Mucor sp* and *Aspergillus flavus*. In the tube method against bacteria and *Candida sp*, the test samples' absorbance was read at 530 nm at different time intervals. Disc Diffusion Method was used to evaluate the Zone of clearance suggestive of the zone of inhibition of the arecanut extract against fungi by taking Nystatin as standard. Inhibition of Aflatoxin production was checked by Pons Method. 85 % inhibition of the production of aflatoxin by *Aspergillus flavus* was between 100-250 µg/ml of the arecanut aqueous extract (AE). The AE was shown to inhibit the viral growth and propagation of AVIAN viruses NDV (New castle Disease Virus) and Egg Drop Syndrome Virus (EDS) in embryonated culture. *In vitro* antioxidant studies showed that AE could inhibit superoxide radical production, could inhibit hydroxyl radicals and could prevent lipid peroxidation. AE could scavenge DPPH (DI PHENYL-2-PICRYL Hydrazyl) radicals and also ABTS (Di ammonium salt) (2,2'-azinobis-(3-ethylbenzthiazoline-6-sulphonic acid). In FRAP (Ferric Reducing Antioxidant Power) assay, the reduction of ferric to ferrous was also seen in a concentration dependent manner. Concentration ranging from 5µg/ml-100 µg/ml showed the potential of AE to scavenge 50% free radicals. Repeated Cytotoxicity studies of Arecanut extract against Influenza virus previously reported and documented with scientific evidence proved all the more its efficacy in the development of new antiviral agent.

Result: The present line of thinking was supported by experimental results to show the effectiveness of AQUEOUS AE as potential therapeutic agent against Influenza virus. Thus, probably its use against Corona virus may be established with further scientific evidence is the perception. This is based on AE antimicrobial, antioxidant activity. Further, the identification and purification of their effective components may lead to the use of AE extract as traditional cure, or dietary supplement and functional food.

Keywords: Arecanut, Antimicrobial, Antioxidant, Antiviral

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