

Specific Immune Response Stimulation Effect of Ingredient of PHYTOCEE®: *Ocimum sanctum*

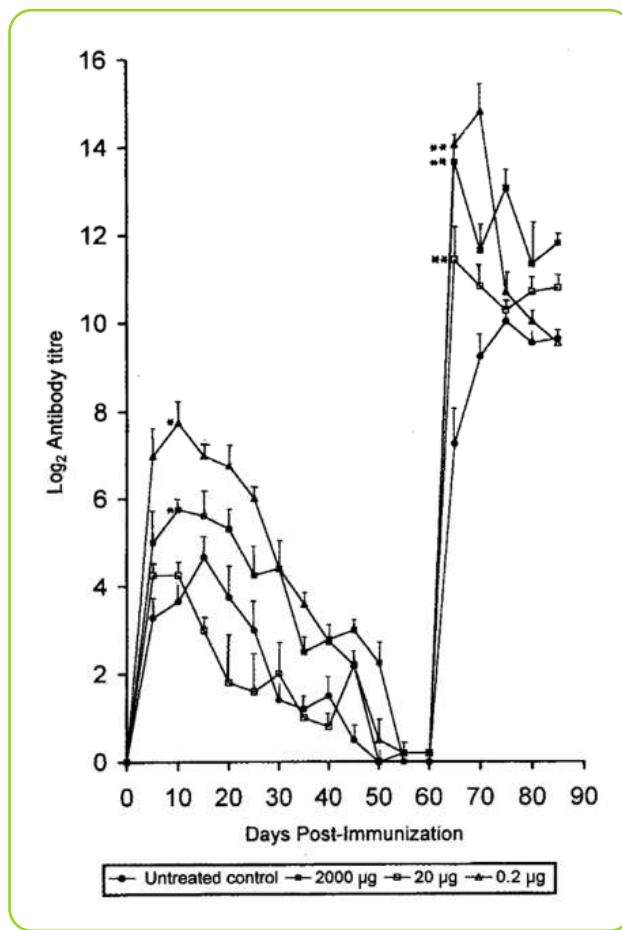
OBJECTIVE

To investigate effect of leaf extract of *Ocimum sanctum* on specific immune responses in *Oreochromis mossambicus*.

MATERIALS AND METHODS

10% crude extract of leaf of *Ocimum sanctum* was used in this study. Sheep red blood cells (SRBC) were used as antigens for specific immune response studies. Experimental fish (n=8/group) were administered intraperitoneally with different doses of extract. Two days prior to priming with 5% SRBC, each fish was given leaf extract, at 2000 µg, 20 µg or 0.2 µg. Three days after priming, an augmenting dose of 25% SRBC was administered through the same route. An untreated immunized control group (n=8) was maintained. To study the secondary antibody response, fish were administered with the same priming and augmenting doses of the antigen on day 60 post primary immunization. AntiSRBC antibodies were titrated using direct haemagglutination assay.

RESULTS



Effect of *Ocimum sanctum* leaf extract on the primary and secondary antibody responses to SRBC

Each data point represents the mean \pm SE; *Significance at $p<0.01$ **Significance at $p<0.001$

CONCLUSIONS

- Different concentrations of the leaf extract of *Ocimum sanctum* produced a significant stimulatory effect on both primary ($p<0.01$) and secondary ($p<0.001$) antibody responses.
- These results depicted that *Ocimum sanctum* was shown to possess specific immune response stimulation effects.

OUTCOME

Hence, possibility of using *Ocimum sanctum* as immunostimulant in the maintenance of finfish health in intensive freshwater aquaculture is suggested.

Reference:

Logambal SM, Venkatalakshmi S, Dinakaran Michael R. Immunostimulatory effect of leaf extract of *Ocimum sanctum* Linn. in *Oreochromis mossambicus* (Peters). *Hydrobiologia*. 2000;430:113-20.