PHYTOCEE®

Non-specific Immune Response Stimulation Potential of Ingredient of PHYTOCEE® : *Ocimum sanctum*

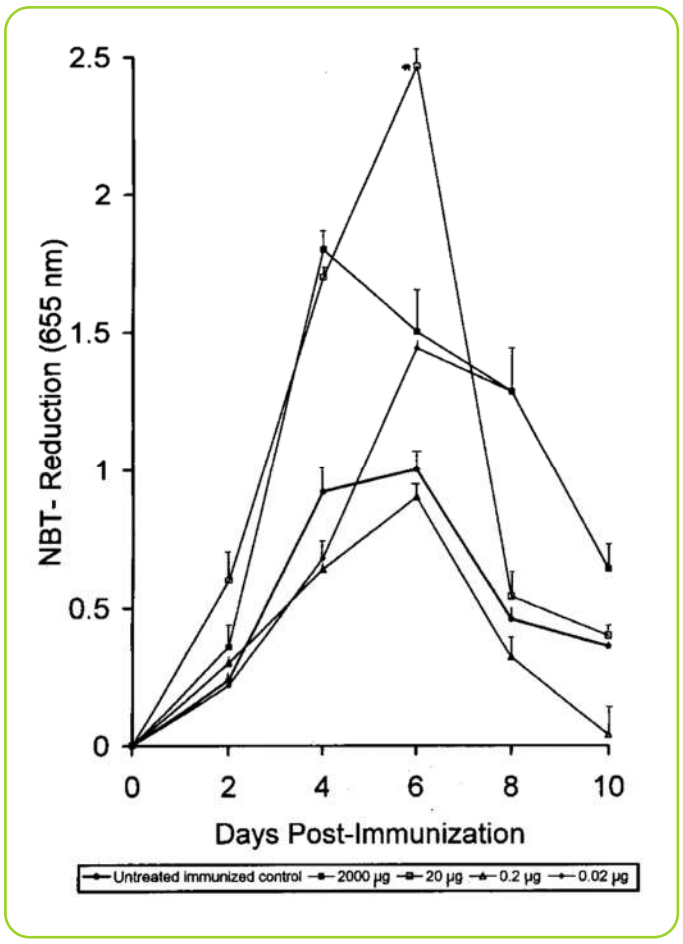
OBJECTIVE

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

MATERIALS AND METHODS

10% crude extract of leaf of *Ocimum sanctum* was used in this study. Heat aggregated bovine serum albumin (HA-BSA) was used as antigen for non-specific immune response studies. Experimental fish (n=6/group) were injected with different doses of the leaf extract of *Ocimum sanctum* viz. 2000 µg, 20 µg or 0.2 µg two days prior to immunization with 5 mg of HA-BSA. An untreated immunized control (n=6) was maintained. The nitroblue tetrazolium (NBT) assay was performed for every 2 days post immunization.

RESULTS



Effect of *Ocimum sanctum* leaf extract on neutrophil activity

Each data point represents the mean ± SE; Significance at $p<0.01$

CONCLUSIONS

- The results of neutrophil activity clearly show the enhancing effect of Ocimum sanctum leaf extract on neutrophil respiratory burst activity as evident from the increased NBT-reduction. 20 µg of extract enhanced the neutrophil activity maximally (day 6, $p<0.01$).
- These results depicted that Ocimum sanctum was shown to possess non-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.