

Efficacy of *Aloe vera* Against *Aeromonas hydrophila* in Gold Fish (*Crassius auratus*)

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Sri Lanka is a pioneer county of ornamental fish industry. Guppy, Goldfish, Swordtail, Moly are some fresh water fish species which have high export potential. Disease is one of the major constraints to the development of the ornamental fish industry and bacterial infections are very common in ornamental fish. Herbal medicines have become cheaper and better alternatives to antimicrobial drugs to treat bacterial infections in fish. Therefore, this experiment was conducted to determine the efficacy of *Aloe vera* for gold fish growth and against artificially injected *A. hydrophila*. *A. hydrophila* was isolated from a septicemic fish and the identity was confirmed through conventional bio chemical tests and Polymerase Chain Reaction- Restriction Fragment Length Polymorphism (PCR-RFLP). Fresh and mature *A. vera* leaves were used for the experiment. Antibacterial efficacy of *A. vera* was tested in *in-vitro* by using *A. vera* supernatant. To examine *in-vivo* antibacterial efficacy, *A. vera* supernatant was combined with commercial fish feed and three different *A. vera* concentrations, *i.e*; 250 g/kg, 500 g/kg and 750 g/kg were used with a control. According to the results, there was a positive effect of *A. vera* against *A. hydrophila in-vitro*. Original *A. vera* supernatant had the highest inhibition zone *in-vitro*. Inhibition zone diameter was decreased with increased dilution. When consider about the *in-vivo* method, a noticeable increase in body weight and Feed Conversion Efficiency was observed as the *A. vera* concentration in feed goes up, though the values are not statistically significant. Different levels of mortalities were observed in all groups, but the highest mortality within the observed period was recorded in control group and the lowest in the group fed with highest *A. vera* concentration.

Keywords: Bacterial infections, PCR- RFLP, Feed conversion efficiency, Antimicrobial drugs, Ornamental fish industry.