

Identification and Expression of vitellogenin gene in the Gouramy (Osphronemus Gourammy) under photoperiods manipulation

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<b>First Author</b>	Prayogo, Norman Arie; Siregar, Asrul Sahri; Sukardi, Purnama;
<b>Last Author</b>	Bessho, Yasumasa
<b>Authors</b>	Prayogo, NA; Siregar, AS; Sukardi, P; Nugrayani, D; Ekasanti, A; Riviani; Bessho, Y;
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<b>Abstract</b>	Vitellogenin was protein hormone where controlled gonad development in fish. Expression of this gene regulated from the external and internal factor. Photoperiods are the external factor that regulated endocrine gland activities in gonadal development, gametogenesis and reproductive cycles. Aim of the research to find out the effect of photoperiod on gouramy reproductive performance by manipulating photoperiod. Design experimental with three photoperiod treatments, namely 14L: 10D (control), 8L: 16D (short photoperiods) and 18L: 6D (long photoperiods). Four aquaria consisting of nine fishes each were served as replicates. Fishes were kept under these photoperiods for 8 weeks. The observed variable was the liver activities. Liver activity was evaluated by measuring gene expression of Vitellogenin. The normalized data were subjected to ANOVA followed by Tukey's multiple-comparison tests. The length of Vitellogenin cDNA was 1136 bp. The vitellogenin precursors encoded cDNA consisted of 378 amino acids. The average of vitellogenin gene in each experimental group significantly increased according to longer photoperiods ( $P < 0.05$ ). These results indicated that photoperiods had a stimulatory effect in improving gouramy reproductive performance
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<b>Author</b>	Dr NORMAN ARIE PRAYOGO, S.Pi, M.Si