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Assessment of vitellogenin in the genome of two clariid catfishes – *Heterobranchus bidorsalis* and *Clarias gariepinus*

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Polymerase chain reaction (PCR) was conducted on 160 catfish DNA using the vitellogenin for the selected reproductive primers. DNA sequence analysis was used to analysis the differential expression of vitellogenin from the catfish. Two sets of PCR were conducted that revealed the two vitellogenin alignments using the CLC Sequence Viewer software 7. The first alignment generated 381 nucleotides out of which 281 had 100% consensus resolving the samples to be aligned by 75%. Second alignment revealed 384 nucleotides, only 15 had 100% consensus. In other words, the samples are aligned by 4%. *Clarias* male had 384 nucleotides; *Heterobranchus* female had 165 nucleotides and is the main event responsible for the enormous growth of the oocyte in most teleost. Vitellogenin is not normally found in male fish, due to the absence of endogenous oestrogenic stimulation but this study observed that the males of the two clariid species possess vitellogenin. The indoor artificial propagation study observed that the rate of hatchability and survival is higher in *Clarias* species compared to *Heterobranchus*. Higher number of unhatched eggs resulted in low hatchability rate in *H. bidorsalis* could be linked with the presence of oestrogen which could have affected testicular composition. The study revealed the presence of vitellogenin in the male *H. bidorsalis* species. Therefore, assessment of vitellogenin in the genome of *H. bidorsalis* has revealed the presence of oestrogen which mostly results in feminization of male species and hinders successful fish production.

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