

**A simple and rapid method for blood collection from walking catfish, *Clarias batrachus* (Linnaeus, 1758)**

ABSTRACT

Blood is collected from experimental animals for a wide range of scientific purposes including; hematology, clinical biochemistry parameters, immunology, studies in bacteriology, parasitology and investigations in reproductive performance and health. The number of methods employed to collect blood from fish include; the puncture of caudal vein, dorsal aorta or cardiac vessels and the severance of the caudal vein. Unfortunately, all these procedures are practically found to be slow and stressful to *Clarias batrachus*, including the popular caudal vein approach, likely due to the small size of caudal veins relative to the size of the species. In line with the universal ethical recommendations for taking blood from small research animals, we propose an alternative one-operator approach for *C. batrachus* that is simple, rapid and without the need to sacrifice the fish as with other methods. This procedure targets the dorsal aorta (a relatively larger blood vessel) in a sedated fish, punctured by inserting a needle directly from the anterior part of the anal fin about 2-5 mm behind the genital papilla, to draw the desired amount of blood. The technique is a one-operator procedure not requiring the help of an assistant or any special equipment to restrain the fish. The operation of the protocol is unique since it permits the continuous collection of blood from the same experimental fish over a varied time course and reduces the need for a large number of replicate animals. The advantages of the proposed protocol are also highlighted and discussed in detail.

**Keyword:** Haematology; Catfish; Aquaculture; Blood sampling; *Clarias batrachus*