

## INTISARI

### PENGARUH VAKSIN INAKTIF POLIVALEN *Aeromonas* spp. TERHADAP PERTAHANAN NON-SPEKIFIK SELULER DAN HUMORAL IKAN LELE (*Clarias* sp.)

Vaksinasi merupakan salah satu upaya dalam pencegahan penyakit. Salah satu penyakit yang umum menyerang budidaya ikan lele (*Clarias* sp.) adalah penyakit *Motile Aeromonas Septicaemia* (MAS) yang disebabkan infeksi *Aeromonas* spp. Tujuan dari penelitian ini yaitu untuk mengetahui respon imun non-spesifik seluler dan humoral ikan lele terhadap vaksinasi. Terdapat dua perlakuan yaitu P1 (kontrol) dan P2 (vaksinasi). Pengamatan parameter seluler dan humoral dilakukan pada hari ke-0, 7, dan 15. Parameter seluler meliputi hematokrit, leukokrit, total eritrosit, total leukosit, diferensiasi leukosit, aktivitas fagositosis dan indeks fagositosis, dan ledakan respirasi. Parameter humoral meliputi superoksida dismutase, aglutinasi alami, aktivitas antibakterial serum, aktivitas lisozim, dan total protein plasma. Hasil penelitian menunjukkan peningkatan signifikan pada parameter total eritrosit, total leukosit, persentase limfosit dan monosit, aktivitas fagositosis, ledakan respirasi, superoksida dismutase, aglutinasi alami, aktivitas antibakterial serum, aktivitas lisozim, dan total protein plasma. Parameter hematokrit, leukokrit dan indeks fagositosis menunjukkan hasil tidak signifikan. Berdasarkan hasil penelitian, vaksin inaktif polivalen *Aeromonas* spp. dapat meningkatkan respon imun non-spesifik seluler dan humoral ikan lele (*Clarias* sp.) melalui peningkatan total eritrosit, total leukosit, persentase limfosit dan monosit, aktivitas fagositosis, ledakan respirasi, superoksida dismutase, aglutinasi alami, aktivitas antibakterial serum, aktivitas lisozim, dan total protein plasma.

**Keywords:** sistem kekebalan tubuh ikan, vaksin inaktif formalin, *Aeromonas hydrophila*, *Aeromonas dhakensis*, vaksin injeksi

### ***ABSTRACT***

#### **EFFECT OF POLIVALENT INACTIVE VACCINE *Aeromonas* spp. ON NON-SPECIFIC CELLULAR AND HUMORAL IMMUNE RESPONSE OF CATFISH (*Clarias* sp.)**

Vaccination is one of the important measures in disease prevention. The most common disease in catfish (*Clarias* sp.) is *Motile Aeromonas Septicaemia* (MAS) caused by *Aeromonas* spp infection. This study aimed to determine the effect of vaccination on cellular and humoral non-specific immune response of catfish. There were two treatments, P1 (control) and P2 (vaccination). Cellular and humoral parameters were observed on days 0, 7, and 15. Cellular parameters include hematocrit, leukocrit, total erythrocytes, total leukocytes, leukocyte differentiation, phagocytic activity and phagocytic index, and respiration burst. Humoral parameters included superoxide dismutase, agglutination, serum antibacterial activity, lysozyme activity, and total plasma protein. The results showed that vaccines significant increased total erythrocytes, total leukocytes, percentage of lymphocytes and monocytes, phagocytic activity, respiration burst, superoxide dismutase, agglutination, serum antibacterial activity, lysozyme activity, and total plasma protein. Insignificant result was shown on the hematocrit, leukocrit, and phagocytic index. Based on the results of the study, polyvalent inactivated vaccines of *Aeromonas* spp. enhanced the cellular and humoral non-specific immune responses of catfish (*Clarias* sp.) through increases in total erythrocytes, total leukocytes, percentage of lymphocytes and monocytes, phagocytic activity, respiration burst, superoxide dismutase, agglutination, serum antibacterial activity, lysozyme activity, and total plasma protein.

**Keywords:** fish immune system, formalin killed vaccine, *Aeromonas hydrophila*, *Aeromonas dhakensis*, injection vaccination