

Intisari

ISOLASI DAN IDENTIFIKASI BAKTERI *Aeromonas* sp. DARI LELE DUMBO (*Clarias* sp.) DI KABUPATEN NGAWI

SRI REJEKI

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Penelitian ini bertujuan untuk mengisolasi, mengidentifikasi dan mengetahui pathogenesis bakteri *Aeromonas* sp. dari lele dumbo (*Clarias* sp.). Sampel ikan lele didapatkan dari tiga kecamatan di Kabupaten Ngawi. Terdapat 15 isolat dari hasil isolasi kemudian dilanjutkan uji postulat Koch dengan suntikan 0,1 ml/ekor dan diamati gejala eksternal dan internalnya. Karakterisasi dan identifikasi melalui pengujian morfologi sel, morfologi koloni, fisiologi dan uji biokimia. Uji patogenesis dilakukan dengan cara penyuntikan pada konsentrasi $10^4, 10^6, 10^8$ cfu/ml pada lele ukuran 7-9 cm. Patogenesis bakteri didasarkan pada nilai *Lethal Dosage* 50 (LD_{50}).

Hasil penelitian menunjukkan bahwa 12 isolat (GKJ1, GKJ3, GKJ4, GGN1, GGN2, GGN3, GGN4, GGN5, GGN6, GPR2, GPR3 dan GPR4) teridentifikasi sebagai bakteri *Aeromonas hydrophila* dengan persentase kesesuaian berturut-turut 96,67%, 93,33%, 93,33%, 90%, 90%, 90%, 86,67%, 96,67%, 86,67%, 93,33%, 90% dan 90%. Gejala penyakit yang terserang bakteri secara umum berupa luka borok pada kulit, pembengkakan pada bagian perut dan kerusakan ginjal. Isolat *A. hydrophila* GKJ1, GKJ4, GGN2, GGN5, GPR2 dan GPR4 bersifat virulen terhadap lele dumbo dengan LD_{50} ($1,55 \times 10^6$), ($3,89 \times 10^6$), ($7,24 \times 10^6$), ($2,39 \times 10^6$), ($6,61 \times 10^5$) dan ($1,95 \times 10^5$ cfu/ml). Tiga isolat (GKJ2, GKJ5 dan GPR1) teridentifikasi sebagai bakteri *A. salmonicida* dengan persentase kesesuaian berturut-turut 86,67%, 83,33% dan 83,33%.

Kata kunci: *Aeromonas*, identifikasi, lele dumbo, patogenesis

ABSTRACT

ISOLATION AND IDENTIFICATION OF *Aeromonas* sp. FROM AFRICAN CATFISH (*Clarias* sp.) IN NGAWI REGENCY

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This objective of the research was to study isolation, identification and pathogenicity *Aeromonas* bacteria on African catfish (*Clarias* sp.). The samples of African catfish have been obtained from three sub district in Ngawi regency. There were 15 isolates obtained were injected (0,1 ml/fish) to African catfish based on Koch postulates test, external and internal symptoms of African catfish were observed. Characterization and identification through morphology of bacterial colonies and cells, physiological and biochemical test. Pathogenicity test was done by injected with concentrate of 10^4 , 10^6 , 10^8 cfu/ml in 7-9 cm catfish size. Bacterial pathogenicity based on value of *Lethal Dosage* (LD_{50}).

The result showed 12 isolates (GKJ1, GKJ3, GKJ4, GGN1, GGN2, GGN3, GGN4, GGN5, GGN6, GPR2, GPR3 and GPR4) were identified as *Aeromonas hydrophila* with percentage values of 96,67%, 93,33%, 93,33%, 90%, 90%, 90%, 86,67%, 96,67%, 86,67%, 93,33%, 90% and 90%. The disease symptoms which attacked by the bacteria generally were skin ulcer, abdominal swelling and kidney damage. Isolate of *A. hydrophila* GKJ1, GKJ4, GGN2, GGN5, GPR2 and GPR4 were virulent on African catfish with LD_{50} values of ($1,55 \times 10^6$), ($3,89 \times 10^6$), ($7,24 \times 10^6$), ($2,39 \times 10^6$), ($6,61 \times 10^5$) and ($1,95 \times 10^5$ cfu/ml). Three isolates (GKJ2, GKJ5 and GPR1) were identified as *A. salmonicida* with percentage values of 86,67%, 83,33% and 83,33% .

Keywords: *Aeromonas*, African catfish, identification, pathogenicity