ABSTRAK

GAMBARAN RESISTANSI *Vibrio parahaemolyticus* (FUJINO *et al*., 1951) TERHADAP TIGA JENIS ANTIBIOTIK PADA BUDI DAYA UDANG VANNAMEI *Litopenaeus vannamei* (BOONE, 1931) DI PROVINSI BANTEN

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Paparan limbah antibiotik di perairan laut menimbulkan mutasi gen yang menyebabkan bakteri mengalami resistansi terhadap antibiotik. Penggunaan air pada budi daya udang tanpa *treatment* memungkinkan bakteri yang resistan terhadap antibiotik dapat masuk ke lingkungan budi daya berpotensi menyebabkan penyakit pada udang dan sulit ditanggulangi. Penelitian ini bertujuan untuk mempelajari resistansi bakteri *V. parahaemolyticus* terhadap tiga jenis antibiotik pada tambak dan *hatchery* di Provinsi Banten. Metode yang digunakan adalah eksploratif. Sebanyak 120 sampel udang vannamei diambil dari tambak dan *hatchery* udang vannamei (*Litopenaeus vannamei*) di Provinsi Banten. Isolat terduga *V. parahaemolyticus* diidentifikasi dengan uji biokimia, kemudian dikonfirmasi menggunakan PCR konvensional. Sebanyak 21 isolat *V. parahaemolyticus* diuji menggunakan difusi cakram dengan tiga antibiotik. Hasil uji menunjukkan persentase sensitivitas *V. parahaemolyticus* sebesar 100% sensitif terhadap tetrasiklin, 100% sensitif terhadap oksitetrasiklin, dan 19,05% intermediat resistan terhadap enrofloksasin. Nilai *minimum inhibitory concentration* (MIC) isolat intermediat resistan adalah 2 µg/mL. *V. parahaemolyticus* dengan interpretasi intermediat resistan berpotensi untuk menyebarkan gen resistan ke bakteri lain.

Kata kunci: Antibiotik, enrofloksasin, oksitetrasiklin, resistansi, tetrasiklin, *Vibrio parahaemolyticus*.

ABSTRACT

THE DESCRIPTION OF *Vibrio parahaemolyticus* (FUJINO *et al*., 1951) RESISTANCE TO THREE TYPES OF ANTIBIOTICS IN CULTIVATION OF VANNAMEI SHRIMP *Litopenaeus vannamei* (BOONE, 1931) IN BANTEN PROVINCE

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Exposure to antibiotic waste in marine waters causes gene mutations that caused bacteria to develop resistance to antibiotics. The use of water without treatment in shrimp culture allows bacteria that are resistant to antibiotics to enter the cultivation environment, potentially causing disease in shrimp and being difficult to control. This study aimed to determine the resistance of *V. parahaemolyticus* bacteria to three types of antibiotics in ponds and hatcheries in Banten Province. The method used was exploratory. A total of 120 samples of vannamei shrimp were taken from ponds and hatcheries of vannamei shrimp (*Litopenaeus vannamei*) in Banten Province. Suspected isolates of *V. parahaemolyticus* were identified using biochemical tests, then confirmed using conventional PCR. A total of 21 *V. parahaemolyticus* isolates were tested using disk diffusion with three antibiotics. The test results showed that the sensitivity percentage of *V. parahaemolyticus* was 100% sensitive to tetracycline, 100% sensitive to oxytetracycline, and 19.05% intermediate resistant to enrofloxacin. The minimum inhibitory concentration (MIC) for resistant intermediate isolates was 2 µg/mL. *V. parahaemolyticus* with the interpretation of intermediate resistance had the potential to spread resistance genes to other bacteria.

Keywords: Antibiotics, enrofloxacin, oxytetracycline, resistance, tetracycline, *Vibrio parahaemolyticus*.