

## INTISARI

### ISOLASI DAN IDENTIFIKASI BAKTERI PROTEOLITIK DARI LELE (*Clarias* sp.) SEBAGAI KANDIDAT PROBIOTIK

Probiotik merupakan salah satu objek riset yang terus dikembangkan dalam akuakultur berkelanjutan. Adanya peningkatan usaha budidaya dan tingginya kebutuhan protein dalam pakan melatarbelakangi penelitian ini dilakukan guna menjadi alternatif dalam membantu meningkatkan pencernaan dan efisiensi pakan. Penelitian ini bertujuan untuk mengisolasi dan mengidentifikasi bakteri proteolitik dari saluran pencernaan lele (*Clarias* sp.) sebagai kandidat probiotik (*host-associated prbiotic*). Penelitian ini menggunakan metode eksploratif dengan mengambil sampel ikan dari lele hasil budidaya di Pokdakan Mina Dompon Sejahtera, Kalurahan Gilangharjo, Kapanewon Pandak, Kabupaten Bantul. Seleksi bakteri proteolitik dilakukan menggunakan medium *skim milk agar* 3%, kemudian dilakukan uji toleransi terhadap pH asam, uji resistensi terhadap antibiotik, dan uji non-patogenitas. Hasil pengujian menunjukkan 27 isolat memiliki aktivitas proteolitik, 25 isolat toleran terhadap pH asam, 22 isolat sensitif terhadap antibiotik, dan dua isolat bersifat non patogen terhadap ikan uji. Berdasarkan hasil tersebut dipilih isolat MD24 dan MD29 untuk diidentifikasi secara molekuler menggunakan gen 16S rRNA dan secara fenotipik berdasarkan karakteristik biokimia. Hasil identifikasi menunjukkan bahwa kedua isolat tersebut berasal dari genus *Priestia* sp. dan *Bacillus* sp., keduanya berpotensi dijadikan sebagai kandidat probiotik.

Kata kunci : *Bacillus*, lele, *Priestia*, probiotik, proteolitik

## ABSTRACT

### ISOLATION AND IDENTIFICATION OF PROTEOLYTIC BACTERIA FROM CATFISH (*Clarias* sp.) AS A PROBIOTIC CANDIDATE

Probiotics are one object of research that continues to be developed in sustainable aquaculture. The increase in the cultivation business and the high need for protein in feed is the background of this research to be an alternative in helping to improve digestibility and feed efficiency. This study aimed to isolate and identify proteolytic bacteria from the digestive tract of catfish (*Clarias* sp.) as a candidate probiotic (host-associated prbiotic). This study used an exploratory method by taking fish samples from catfish cultivated in Pokdakan Mina Dompon Sejahtera, Kalurahan Gilangharjo, Kapanewon Pandak, Bantul Regency. Selection of proteolytic bacteria was carried out using 3% skim milk agar medium, then followed by tolerance test to acid pH, antibiotics resistance test, and non-pathogenicity test. The test results showed 27 isolates had proteolytic activity, 25 isolates were tolerant to acid pH, 22 isolates were sensitive to antibiotics, and two isolates were non-pathogenic strain. Based on these results, isolates MD24 and MD29 were selected to be identified molecularly using the 16S rRNA gene and phenotypically based on biochemical characteristics. The identification results showed that the two isolates were from the genus *Priestia* sp. and *Bacillus* sp., both of which are potential probiotic candidates.

Keywords: *Bacillus*, catfish, *Priestia*, probiotics, proteolytic