ABSTRAK

DETEKSI SECARA GENOTIPIK PATOGEN *Staphylococcus aureus* ISOLAT ASAL KASUS MEDIK VETERINER DAN MANUSIA

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Staphylococcus aureus merupakan bakteri yang memiliki habitat normal pada kulit dan selaput lendir pada banyak spesies hewan termasuk manusia dan merupakan patogen penting. Bakteri ini penyebab masititis pada hewan dan beberapa infeksi pada manusia seperti infeksi kulit, pneumonia, dan infeksi lainnya. *Staphylococcus aureus* dapat bertransmisi antar hewan, antar manusia, maupun antar hewan dan manusia. Penelitian ini bertujuan untuk deteksi *Staphylococcus aureus* asal hewan dan manusia secara genotipik.

Sebanyak 17 *Staphylococcus aureus* digunakan dalam penelitian ini. Tujuh isolat hewan diperoleh dari Laboratorium Patologi Klinik Fakultas Kedokteran Hewan UGM dan sepuluh isolat manusia berasal dari Laboratorium Patologi Klinik Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan UGM. Semua isolat telah diidentifikasi secara fenotip oleh penelitian sebelumnya. Isolat *S. aureus* dikonfirmasi dengan mengamplifikasi gen spesifik 23S rRNA dan *nuc* menggunakan teknik *Polymerase Chain Reaction* (PCR), serta gen koa sebagai faktor patogen virulensi.

Berdasarkan karakterisasi genotipik menunjukkan bahwa semua isolat hewan dan manusia positif mengandung gen 23S rRNA (100%) dan gen *nuc* (100%) yang mengkonfirmasikan strain *S. aureus*. Semua isolat *S. aureus* memiliki faktor virulensi berdasarkan keberadaan gen koagulase (100%).

Kata kunci: *Staphylococcus aureus*, identifikasi, genotipik, faktor virulensi, PCR.

ABSTRACT

GENOTYPIC DETECTION OF *Staphylococcus aureus* PATHOGEN ISOLATED FROM VETERINARY AND HUMAN MEDICAL CASES

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Staphylococcus aureus is a bacterial that has a normal habitat on the skin and mucous membranes of many animal species including humans and is an important pathogen. This bacterial causes mastitis in animals and several infections in humans such as skin infections, pneumonia, and other infections. *Staphylococcus aureus* can be transmitted between animals and humans. This study aimed to genotypicly detect *Staphylococcus aureus* isolated from animals and humans.

A total of 17 *Staphylococcus aureus* were used in this study. Seven animal isolates were obtained from the Clinical Pathology Laboratory of the Faculty of Veterinary Medicine UGM and ten human isolates were derived from the Clinical Pathology Laboratory of the Faculty of Medicine, Public Health, and Nursing UGM. All isolates were identified phenotypically by previous research. The *S. aureus* isolates were confirmed by amplifying the specific genes 23S rRNA and *nuc* using *Polymerase Chain Reaction* (PCR) technique, as well as *coa* gene as a virulence pathogen factor.

Based on the genotypic characterization showed that all animal and human isolates were positive for the 23S rRNA gene (100%) and *nuc* gene (100%), confirming the *S. aureus* strains. All *S. aureus* isolates had a virulence factor based on the occurrence of coagulase gen (100%).

Keywords: *Staphyloccus aureus*, identification, genotypic, virulence factor, PCR.