

A simplified multiplex PCR assay for fast and easy discrimination of globally distributed staphylococcal cassette chromosome mec types in meticillin-resistant *Staphylococcus aureus*

Abstract

A multiplex PCR assay was developed for the identification of major types and subtypes of staphylococcal cassette chromosome mec (SCCmec) in meticillin-resistant *Staphylococcus aureus* (MRSA) strains. The method uses a novel 9 valent multiplex PCR plus two primer pairs for *S. aureus* identification and detection of meticillin resistance. All 389 clinical MRSA isolates from Malaysia and 18 European isolates from the Harmony collection harbouring different SCCmec types that we tested were correctly characterized by our PCR assay. SCCmec type III and V were by far the most common types among both hospital- and community-acquired Malaysian MRSA isolates, with an apparent emergence of MRSA harbouring the IVh type.

Keyword: PCR assay; Staphylococcal cassette chromosome mec; *Staphylococcus aureus*