

## **Abstract**

*Staphylococcus aureus* is one of the main causes of nosocomial and community-acquired infections. Methicillin - resistant *Staphylococcus aureus* strains (MRSA) is the most important cause of nosocomial infections. Resistance to methicillin is caused by the *mecA* gene encoding protein (PBP2a). The gene is located in staphylococcal chromosome cassette (*SCCMEC*). Typing of this region is essential for understanding transduction pathways and genetic studies of the bacteria. More ever precise study of *Staphylococcus aureus* in genetic level essential for understanding of the involved mechanisms in resistance. The main objective of this study was to identify the types I - V *SCCmec* in clinical *Staphylococcus aureus* isolates from the city of Zabol by multiplex-PCR method. After DNA extraction by boiling method and multiplex-PCR using specific primers, *SCCMEC* genes were identified in these bacteria. Results showed 5% type I, 45% type II, 30% Type III and Type V 20% among the 100 *Staphylococcus aureus* isolates, and *SCCmec* II was dominant in the *Staphylococcus aureus* isolates of Sistan hospitals.

Key words : Methicillin-resistant *Staphylococcus aureus* (MRSA), PBP2a, staphylococcal cassette chromosome (*SCCMEC*)



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**The thesis submitted for the degree of M.Sc  
(in the field of Molecular Genetics)**

**Identification of type I - V *SCCmec* in *Staphylococcus aureus* isolated from clinical samples in the city of Zabol by  
Multiplex PCR**

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January 2015