

Imported food-products in Germany - a relevant source for PVL-positive *Staphylococcus aureus*?

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Panton-Valentine leukocidin (PVL) producing *Staphylococcus (S.) aureus* can cause recurrent, large skin abscesses, which can lead to severe human infections and stigmatization. Although food is not considered a relevant source for human *S. aureus* colonization, the potentially grave consequences of infection with PVL-positive *S. aureus* require monitoring of food for this kind of bacteria.

Since 2014, the German NRL for Coagulase-positive Staphylococci incl. *S. aureus* has screened *S. aureus* isolates in routinely submitted and research samples for the occurrence of the *lukS-PV* gene as PVL marker. All *lukS-PV*-positive isolates were further typed, characterized and sequenced allowing to decipher phylogenetic relationships.

In total, 31 *S. aureus* strains have been identified as *lukS-PV*-positive (30/4144 investigated Methicillin-resistant *S. aureus* (MRSA) strains and 1/681 investigated Methicillin-sensitive *S. aureus* (MSSA) strains). More than half of the strains originated from studies that targeted imported food products and insects intended for food production purposes.

Our results indicate that PVL-positive MSSA/MRSA strains occur relatively often in imported fish, seafood and beef in contrast to food / food-producing animals from Germany and could cause a public health threat as clonal lineages differ considerably from common livestock-associated MRSA strains in Germany.

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Professional Status of the Speaker

Senior Scientist

Junior Scientist Status

No, I am not a Junior Scientist.

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