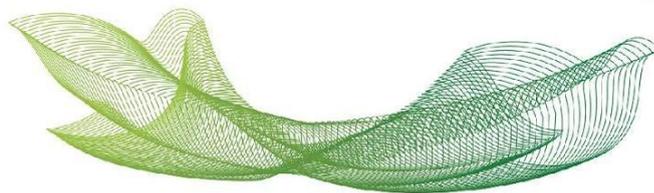


Tipo	Periódico
Título	Influence of the Polysaccharide Capsule on the Bactericidal Activity of Indolicidin on <i>Streptococcus pneumoniae</i>
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Resumo	<p><i>Streptococcus pneumoniae</i> is a pathogen responsible for high morbidity and mortality worldwide. The polysaccharide capsule confers protection against phagocytosis and influences many aspects of pneumococcal pathogenesis. The capsular polysaccharides (CPS) are highly immunogenic and exhibit great structural variability, with more than 100 serotypes described so far. Antimicrobial peptides (AMPs) are an important part of the innate defense mechanisms against many pathogens. Indolicidin is a cationic AMP produced by bovine neutrophils, with bactericidal effects against several bacteria. CPS has been shown to interfere with the ability of AMPs to kill pneumococci, but the effects of capsule variability on susceptibility to indolicidin have not been explored. The present work determined the effects of capsule on resistance to indolicidin in vitro. Using a bactericidal plate assay, we observed that different pneumococcal serotypes exhibited variable resistance to indolicidin, which correlated with the capsule net charge. Interestingly, the effect of capsule expression on resistance to indolicidin was dependent on the serotype; bacteria with lower zeta potential were more resistant to indolicidin when capsule was present, while those with less negative surface charge were more resistant in the absence of capsule. The addition of purified CPS partially rescued the bacteria from the bactericidal effects of indolicidin, while the addition of anticapsular antibodies accentuated the peptide's bactericidal action, suggesting a</p>



	possible new protective mechanism induced by polysaccharide-based pneumococcal vaccines.
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