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Título	Systemic immunization with rPotD reduces <i>Streptococcus pneumoniae</i> nasopharyngeal colonization in mice
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Resumo	<p><i>Streptococcus pneumoniae</i> (pneumococcus) is a human pathogen that can cause otitis media, pneumonia and, in severe cases, meningitis and bacteremia. The pneumococcus expresses PotD, a protein belonging to the polyamines transporter complex called PotABCD. PotD is a membrane-associated protein that binds polyamines and has been shown to be important for virulence. In this work we demonstrate that subcutaneous immunization with rPotD reduces the bacterial load in the nasal tissue of mice, following intranasal challenge with a type 6B pneumococcus. The protective effect correlated with the induction of high levels of antibodies in the immunized group; the antibodies were able to increase bacterial phagocytosis by mouse peritoneal cells. The cellular immune response was characterized by the production of gamma-interferon, IL-2 and IL-17 by splenocytes and nitric oxide by peritoneal cells of immunized mice, upon stimulation with rPotD. Taken together our results suggest that PotD is a promising candidate to be included in a protein based pneumococcal vaccine, able to induce phagocytic antibodies, a Th1 cellular immune response and production of IL-17, reducing nasopharyngeal colonization, the main event responsible for transmission of pneumococci in humans.</p>
Fomento	