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| Título | Immunization with PhtD truncated fragments reduces nasopharyngeal colonization by *Streptococcus pneumoniae* |
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| Resumo | Despite the undeniable success of polysaccharide vaccines against *Streptococcus pneumoniae* infections, there is a consensus on the scientific field that this approach should be revised in order to overpass the problems related with these formulations, such as serotype replacement and high production costs. The study of conserved pneumococcal proteins or its truncated fragments has emerged as a serotype independent alternative. In this work, we have characterized the immune response elicited by systemic immunization of mice with the Histidine triad protein D (PhtD) and its' amino and carboxyl terminal fragments. The proteins were shown to be immunogenic and protective against pneumococcal colonization, with increased IL-17 production, and induction of antibodies able to limit pneumococcal adhesion to human respiratory cells. Antiserum against PhtD_Nter, but not C_ter or PhtD, promoted an increase in bacterial phagocytosis *in vitro*. Interestingly, antibodies against the PhtD_Nter displayed cross-reactivity with two other pneumococcal proteins, PspA and PspC, due to sequence similarities in the proline rich region of the molecules. On a whole, our results support the inclusion of PhtD, and more specifically, its N-terminal fragment, in a multicomponent serotype independent vaccine. |
| Fomento | |