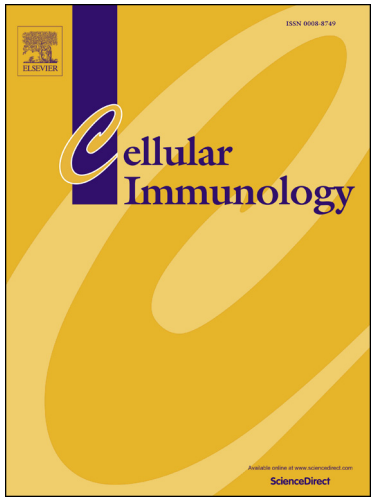

Research paper

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Abstract

Genetically modifying *Leishmania major* by eliminating essential virulence genes have been proposed as potential vaccine candidates. p27 is a COX component that is responsible for ATP synthesis. In this study a new mutant of *Leishmania major* (*L. major*) (MRHO/IR/75/ER) lacking the p27 gene (*Lmp27*$^{-/-}$) was produced via homologous recombination, marking the first time such a strain has been developed. *In vitro* macrophage infectivity and *In vivo* safety, and overall immunogenicity were evaluated at various time periods following inoculation into *BALB/c* mice. Skin lesion development, parasite burden in the liver and spleen, cytokine and antibody levels, splenocyte proliferation, and delayed type hypersensitivity (DTH) were the measured variables.