

IL-6 Deficiency Affects the Course of Infection with *Leishmania major* in Mice

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Since interleukin-6 (IL-6) may promote Th2 responses, we infected BALB IL-6-deficient (IL-6^{-/-}) mice with *Leishmania major*. There was not a significant difference between the courses of infection (lesion size and parasite burden) in IL-6^{-/-} and wild-type mice, but IL-6^{-/-} mice expressed lower levels of Th2- and Th1-associated cytokines.

Interleukin-6 (IL-6) is a pleiotropic cytokine that has been shown to be involved in a wide variety of biological processes, including hematopoiesis, immune response, and tissue repair. IL-6 is produced by a variety of cells, including macrophages, T cells, and fibroblasts. It has been shown to be involved in the regulation of the immune response, particularly in the development of Th2 cells and the production of Th2-associated cytokines. IL-6 has been shown to be involved in the regulation of the immune response to *Leishmania major* infection. IL-6-deficient mice (IL-6^{-/-}) have been shown to have altered immune responses to *L. major* infection, including altered lesion size and parasite burden. In this study, we investigated the effect of IL-6 deficiency on the course of infection with *L. major* in mice. We infected BALB IL-6^{-/-} mice and wild-type mice with *L. major* and monitored the course of infection. We found that there was no significant difference between the courses of infection in IL-6^{-/-} and wild-type mice. However, IL-6^{-/-} mice expressed lower levels of Th2- and Th1-associated cytokines. These results suggest that IL-6 may play a role in the regulation of the immune response to *L. major* infection, but that its deficiency does not significantly affect the course of infection in mice.

\bar{a} , -4, $n\bar{a}$, -13, A , n , h , n ,
 \bar{a} , h^2 , n , (3, 10, 12, 18). m , \bar{a} , -12, $n\bar{a}$
 m , n , 7, n , (-9) m , A , n , h , 7,
 n , 7, h , \bar{a} , n , 7, h^1 , n , $n\bar{a}$, h
 n , \bar{a} , n , 7, L . *major* (3, 10, 18). n ,
 m , \bar{a} , 7, -10, m , A , n , n , -10, -
12, $n\bar{a}$, -g, n , h , h , n (3, 10, 14,
18, 23).
 \bar{a} , n , n , m , $n\bar{a}$, n , n , h , n , \bar{a} , n , $n\bar{a}$, n ,
 \bar{a} , n , n , h , \bar{a} , h , n , m , (13). h , m , n , \bar{a} , 7,
7, n , n , m , h , n , \bar{a} , n , n , (\bar{a} , n , h , n).
 m , $n\bar{a}$, m , 7, m , b , n , -4, -10, -12,
 $n\bar{a}$, -g, n , \bar{a} , m , \bar{a} , n , n , h , \bar{a} , \bar{a} ,
(13, 17). A , m , 7, m , -13, n , n , \bar{a} , n ,
 n , n , n , n , n , n , n , n , n , n ,
 A , A , A , A , A , A , A , A , A , A ,
 A , A , A , A , A , A , A , A , A ,
 A , $n\bar{a}$, h , n , n , n , \bar{a} , (n , n , n ,
 n , \bar{a} , 7), h , n , n , n , -13, n ,
 $n\bar{a}$, n , n , n , n , n , n , n , n , n ,
 $n\bar{a}$, h , n , m , (13, 17), h , \bar{a} , 7, m ,
B, 7, h , n , n , n , (n , n , \bar{a}).
 h , h , 7, h , n , 7, n , h , 1, 7, n ,
 n , 7, A , h , n , n , 7, n , 5, (A , h ,
 n , h , n , $n\bar{a}$, 7), h , 7, h , h , 7,

() -6, $\vec{a} \cdot \vec{b} = 7$, $h = \vec{a} \cdot \vec{b} / |\vec{a}| |\vec{b}|$, $m = n \cdot 7$, $h = h_1 \cdot n \vec{a}$
 $h_2 = \vec{a} \cdot \vec{a} / |\vec{a}|^2$ (21).
 A. $h = h_1 \cdot n$, $h_2 = -6$, $n = \dots$, $\vec{a} \cdot \vec{b} = 7$, $h = \vec{a} \cdot \vec{b} / |\vec{a}| |\vec{b}|$, $m = n \cdot 7$, $h =$
 $h_1 \dots h_2 = \vec{a} \cdot \vec{a} / |\vec{a}|^2$, $n = m \cdot n^7$, $\vec{a} \cdot \vec{b} = h \cdot L \cdot major$, $n =$
 7 , $h = m \cdot n$, $n = \dots$, $h = \dots$, $h = n_1, \dots$)

