

Leishmania major: Immune response in BALB/c mice immunized with stress-inducible protein γ encapsulated in liposomes

Author(s): Badiie, A (Badiie, Ali); Jaafari, MR (Jaafari, Mahmoud R.); Khamesipour, A (Khamesipour, Ali)

Source: EXPERIMENTAL PARASITOLOGY **Volume:** 110 **Issue:** 2 **Pages:** 127-134 **DOI:** 10.1016/j.exppara.2006.07.002 **Published:** FEB 2007

Times Cited: 18 (from Web of Science)

Cited References: 01 [[view related records](#)]  [Citation Map](#)

Abstract: Protection against leishmaniasis is depending upon generation of a Th γ type of immune response. Field trials of first generation Leishmania vaccine showed a limited efficacy even with multiple doses mainly due to lack of an appropriate adjuvant. In this study, susceptible BALB/c mice were immunized with rLmST γ encapsulated in liposomes to explore the extent of protection induced by Leishmania antigen encapsulated in the liposomes against challenge with Leishmania major. The results showed that s.c. immunization of BALB/c mice with liposomal rLmST γ induced a significant protection against challenge and a significant lower parasite burden in spleen up to 14 weeks after challenge. The protected animals showed a significantly smaller footpad thickness after challenge, and a higher level of anti-SLA IgG antibodies before and after challenge with a predominant IgG γ titer. The data supports the possibility of using liposomal Leishmania antigens as a vaccine. (c) 2006 Elsevier Inc. All rights reserved.

Accession Number: WOS:000243220700004

Document Type: Article

Language: English

Author Keywords: Leishmaniasis; Leishmania major; liposome; LmST γ ; adjuvant; CMI; vaccine

Keywords Plus: CUTANEOUS LEISHMANIASIS; T-CELLS; DENDRITIC CELLS; PREFERENTIAL STIMULATION; VISCERAL LEISHMANIASIS; INTRADERMAL CHALLENGE; MURINE LEISHMANIASIS; RECOMBINANT ANTIGENS; PROTECTIVE IMMUNITY; EXOGENOUS ANTIGEN

Reprint Address: Jaafari, MR (reprint author), Mashhad Univ Med Sci, Sch Pharm, Biotechnol Res Ctr, POB 917701360, Mashhad, Iran.

Addresses:

1. Mashhad Univ Med Sci, Sch Pharm, Biotechnol Res Ctr, Mashhad, Iran

2. Mashhad Univ Med Sci, Pharmaceut Res Ctr, Mashhad, Iran

3. Univ Tehran Med Sci, Ctr Res & Training Skin Dis & Leprosy, Tehran, Iran

E-mail Address: mr_jaafari@yahoo.com

Publisher: ACADEMIC PRESS INC ELSEVIER SCIENCE, 020 B ST, STE 1900, SAN DIEGO, CA 92101-4490 USA

Web of Science Categories: Parasitology

Research Areas: Parasitology

IDS Number: 1221Y

ISSN: 0014-4894