Animal Bioresource in Japan

Vitamin C Deficiency Fails to Protect Mice from Malaria

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Abstract:

Nutritional deficiencies are frequent in malaria-endemic areas. It seems that micronutrient antioxidants play an important role in malaria parasite's proliferation. Thus, the effect of vitamin C deficiency on malaria infection was examined in mice. When vitamin C deficient mice, L-gulono-γ-lactone oxidase gene knockout mice which are unable to synthesize ascorbic acid, were infected with a lethal dose of Plasmodium berghei NK65-infected red blood cells, the knockout mice showed similar parasitemia kinetics and survival rates as wild-type mice. The results indicate that deficiency of vitamin C might not affect the development of the malaria parasite in mice.

Key Word:

free radical, malaria, vitamin C

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