

BEE ANTIVENOM MADE FROM HORSE SERUM

Bees have been part of man's life for thousands of years, mainly because of their honey, which humans have used as a choice food since prehistoric times. However, it takes only 300 µL of their powerful venom to hospitalize a person.



Source: www.sxc.hu



Description

A solution of horse antibodies that is able to neutralize the toxic effect of venom from the honeybee genus *Apis*. The method involves the production of the solution, antigen recognition, purification, and quality control of the final product.

Benefits

There is no treatment for bee poisoning currently available on the market.

Problem

Accidents involving venomous animals increased by 33% from 2004 to 2010 (Ministry of Health, 2010). Accidents involving multiple bee stings from the genus *Apis* are common in the Americas, causing an estimated 300 to 400 deaths per year. A single sting can cause anaphylactic shock in sensitive people, and this reaction is not dose-dependent. It is estimated that a dose of 20 stings per kilogram of body weight is fatal for humans and animals. An estimated 15 thousand bee attacks occur per year in Brazil, leading to about 140 deaths. Even non-lethal attacks may cause permanent lesions in several organs.

Market potential

Brazil imported approximately 18 billion doses of antivenom sera in 2010, spending about US\$ 132 billion up to September of that year (MDIC, 2010). The Federal Government is currently the major buyer.

Proposed solution

The production of bee antivenom serum in large quantities for use in Human and Veterinary Medicine to treat poisoning from multiple bee stings.

Contact

UNESP Technology Transfer Office - AUIN
E-mail : paulo.carvalho@reitoria.unesp.br
Website: www.unesp.br/auin
Phone: +55 (11) 3393-7901 / 7909