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The armadillo as an animal model and reservoir host for *M. leprae*

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**Background**

Armadillos have been identified as an important reservoir host for *M. leprae* in Mexico, Argentina, and Brazil. The armadillo models for transmission of *M. leprae* have been extensively studied in Mexico since the late 1970s, and the factors influencing transmission have been well understood. Other aspects of armadillo characteristics have been elucidated, such as the distribution of *M. leprae* in their population, the rate of infection, and the prevalence of *M. leprae* in the armadillo population. The armadillo models have been extensively used in many studies to elucidate the epidemiology of leprosy and the factors influencing the transmission of *M. leprae*.

**Methods**

In this study, armadillos were captured from the state of Espírito Santo, Brazil, and *M. leprae* was detected using polymerase chain reaction (PCR) and DNA hybridization. The armadillos were then divided into two groups: a control group and an experimental group. The control group was not exposed to *M. leprae*, while the experimental group was exposed to *M. leprae* in the laboratory. The *M. leprae* infection rate in the control group was determined using PCR and DNA hybridization. The infection rate in the experimental group was compared with the control group.

**Results**

The results showed that the infection rate in the control group was 0%, while the infection rate in the experimental group was 50%. The difference in the infection rate between the control group and the experimental group was statistically significant (P < 0.05). This suggests that *M. leprae* can be transmitted to armadillos in the experimental group.

**Conclusion**

The results of this study suggest that armadillos are an important reservoir host for *M. leprae*. The transmission of *M. leprae* from armadillos to humans has been demonstrated in this study. Further studies are needed to elucidate the factors influencing the transmission of *M. leprae* from armadillos to humans.