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Resumo	Background: Between 40,000-70,000 people die yearly of rabies, an incurable disease. Besides post-bite vaccination, no treatment is available for it. Methods: First, virus dilution for antiviral effects in mice was determined. Then, animals were treated as follows: control (NaCl 250 µL/animal/day); bufotenine (0.63, 1.05 and 2.1 mg in 250 µL of NaCl/animal/day); rabies (10-6,82CVS dilution); and test (10-6,82 CVS dilution and bufotenine, in the above-mentioned doses). Animals were observed daily for 21 days or until the 3rd stage of rabies infection. Twitch-tension and liposome studies were applied to understand the possible interaction of bufotenine with receptors, particularly acetylcholine. Results: Bufotenine was able to increase the survival rate of intracerebrally virus-infected mice from 15 to 40%. Bufotenine did not seem to interfere with the acetylcholine response in the skeletal muscle, indicating that its mechanism of action is not blocking the virus entrance due to nAChR antagonism. By analyzing liposomes, we could observe that bufotenine did not passively penetrates cell membranes, indicating the necessity of complementary structures to cell penetration. Conclusions: Bufotenine is a promising candidate for drug development. After further chemical modification, it might be possible to dissociate minor side effects, increase efficiency, efficacy and pharmacokinetics, yielding a true anti-rabies drug.
Fomento	