Nitric oxide activates a potassium current in olfactory receptor neurons from Caudiverbera caudiverbera and Xenopus laevis

Schmachtenberg, Oliver

Bacigalupo, Juan

The putative role of nitric oxide (NO) in the physiology of olfactory receptor neurons (ORNs) is controversial. Here we report that pulses of NO caused an outward current in voltage-clamped isolated olfactory neurons. The I-V relation of this effect, its sensitivity to charybdotoxin and its dependence on external potassium suggest that NO activates a K+-conductance. As blockers of soluble guanylyl cyclases failed to affect the current, we conclude that NO opens K+-channels in a cGMP-independent manner.