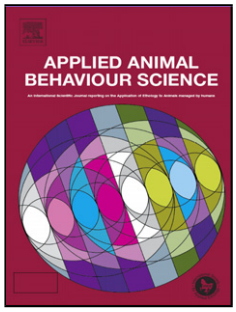

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Do bottlenose dolphins display behavioural response to fish taste?

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ABSTRACT

The chemosensory abilities (i.e. taste, smell and trigeminal perception) of odontocete cetaceans are still widely unknown. However, a better understanding of their potential use of these senses would not only improve our knowledge of their behavioural ecology, but also allow us to develop behavioural enrichment strategies for captive odontocetes using sensory stimulation. While studies on taste bud anatomy and the taste receptor genes in these animals have provided useful information, ultimately behavioural experiments are crucial to assess whether odontocetes use their sense of taste in water. Go/no go and conditioning experiments in bottlenose dolphins (*Tursiops truncatus*) have previously shown that they can perceive basic tastes, but it is still unclear whether they are able to detect food-related chemical mixtures. We thus designed a spontaneous choice experiment using floating taste diffusers in order to test whether captive bottlenose dolphins could detect and display attraction behaviours towards a natural fish taste stimulus. Four dolphins, two adult males and two juvenile