

Learning Experience Enables Mice to Discriminate Odors among Liquors

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Summary

Have you ever wonder how some people can discriminate a wide variety of wines just by taking a sniff of it? Could odors possibly be "learned" through the sense of smell? To find out the answer to these questions, a series of behavioral assays were conducted using mice as the test organism. Water-deprived mice learned to choose the odor of a particular red wine (red wine A) by rewarding a drop of water for the correct response. Each mouse was then placed in a Y-maze individually to test its ability to distinguish odors between red wine A and other liquors, such as sake, ume liquor, rose, and white wine. Subsequently, the mice were tested for their abilities to discriminate odors among different types of red wine. It was observed that the mice could easily discriminate the odor of red wine A from odors of other liquors. Although the mice were unable to distinguish any difference in odors between red wine A and another strongly-scented red wine, after several more learning sessions, they were able to make the distinction. This experimental result suggests that mice were able to discriminate odors among liquors through their learning experience.