

Female mice prefer unfamiliar male songs

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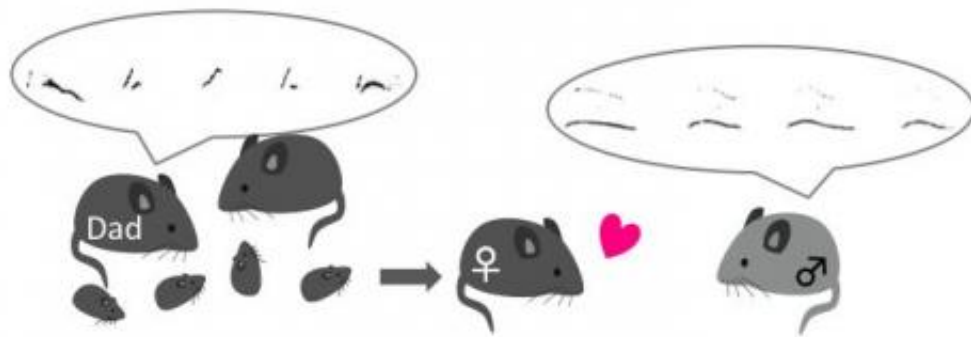


Female and male mouse. Credit: Akari Asaba

Female mice prefer songs of mice that are different from their parents when selecting a mate, according to a study published February 5, 2014 in *PLOS ONE* by Akari Asaba from the Azabu University, Japan, and colleagues. Furthermore, these preferences may be shaped by early social experiences with their fathers.

Many animals can learn the characteristics of a desirable mate when they are young, and this includes the ability to recognize and avoid mating with close relatives. Male mice emit ultrasonic vocalizations, or songs, when they encounter females, and the scientists in this study investigated whether [female mice](#) can learn, remember, and prefer specific male song characteristics. Female mice were raised with their [biological father](#), a different father, or no father. Researchers then recorded songs from 4 male mice, one of which was a close relative. The female mouse was placed in a cage with compartments containing the male songs, as well as their sexual scents, and scientists recorded the time each female searched before making a selection.

The authors found that female mice displayed an innate preference for male songs from different families, and this preference was influenced by the female's reproductive cycle and scent-based sexual cues from the male. Female mice raised by non-biological also preferred songs from other families, and no preference occurred when there was no father; these results indicate a possible learned behavior through exposure to the father's song. This is one of the first studies in mammals to demonstrate that male songs may contribute to kin recognition and [mate choice](#) by females in order to avoid inbreeding.



Female mice prefer songs of mice that are different from their parents when selecting a mate. Credit: Akari Asaba

More information: Asaba A, Okabe S, Nagasawa M, Kato M, Koshida N, et al. (2014) Developmental Social Environment Imprints Female Preference for Male Song in Mice. *PLoS ONE* 9(2): e87186. DOI: [10.1371/journal.pone.0087186](https://doi.org/10.1371/journal.pone.0087186)

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