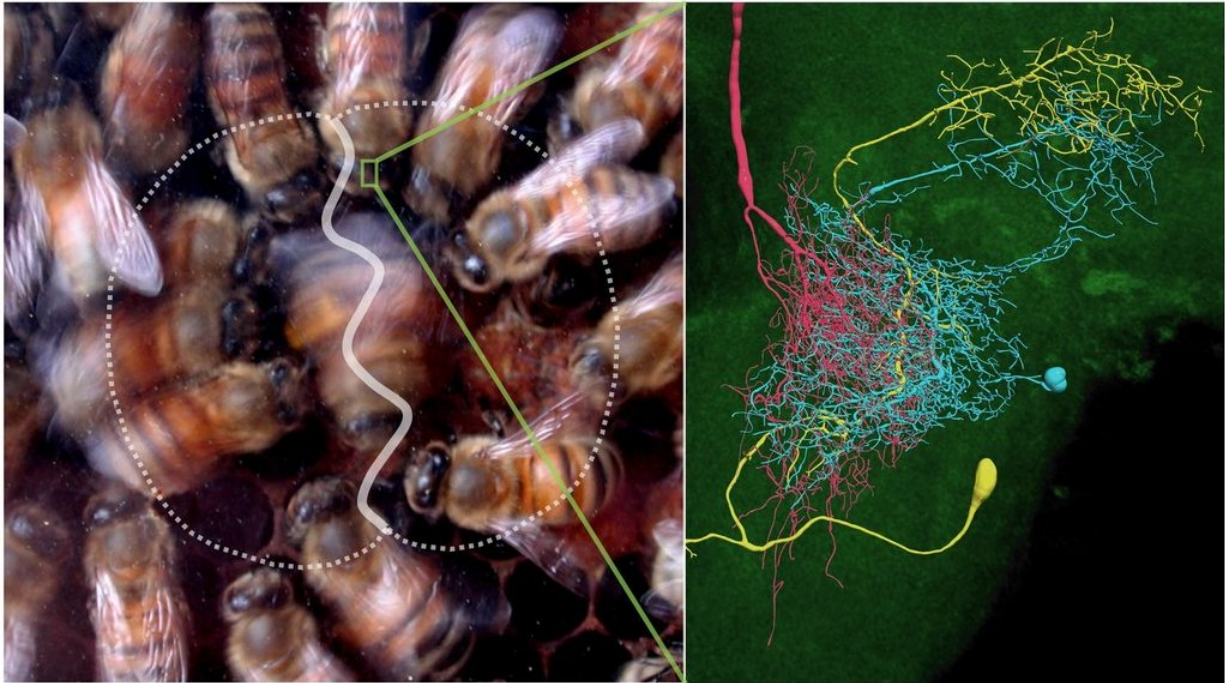


How honeybees read the waggle dance

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Left: To inform their hivemates about the location of profitable flowers, a honeybee performs the waggle dance with specific vibration patterns. Right: Composite image of three interneurons in the honeybee brain which show unique responses to such vibrations. Credit: Ai et al.

Neurons that enable honeybees to sense the waggle dance—a form of symbolic communication used by female bees to inform the hivemates about the location of a food source—are investigated in new research published in *Journal of Neuroscience*.

Upon returning to the hive, female working bees perform a dance that represents the distance and direction of nectar-rich flowers. Since the waggle dance was first described in 1967 (and its discovery awarded the Nobel Prize in Physiology or Medicine in 1973), it has remained unknown how the honeybee brain deciphers the dance into useful information.

Hiroyuki Ai and colleagues raised honeybees in hives on the Fukuoka University campus in Japan to study how three major types of interneurons in the auditory center of the [honeybee](#) brain respond to vibration pulses similar to those produced during the waggle phase of the dance.

Their work lays a foundation for understanding how social insects process symbolic communication.

More information: Interneurons in the honeybee primary auditory center responding to waggle dance-like vibration pulses, *Journal of Neuroscience*, [DOI: 10.1523/JNEUROSCI.0044-17.2017](https://doi.org/10.1523/JNEUROSCI.0044-17.2017)

Provided by Society for Neuroscience

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