"What is particularly interesting is that unlike wasabi or garlic compounds that also activate these receptors in humans, catnip appears to selectively activate insect receptors," Gallio said. Research suggests this may be due to an unusual interaction between one of the active ingredients of catnip and a molecular component found in the cat's brain's reward system. The Gallio Laboratory in Northwestern studies the sensory systems of common laboratory fruit flies Drosophila, including the mechanisms that control the response to external heat and pain. "Plant-derived compounds represent an emerging new approach to developing insecticides, in which plants have long known how to protect themselves from insect pests." Access to Catnip can have major implications in developing countries where mosquito-borne diseases are a major problem.