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## Researchers find 'drunk gene' in worms

**SAN FRANCISCO, California (AP) --Researchers found a gene responsible for drunkenness in worms after plying thousands of the tiny creatures with booze, a discovery that could boost the fight against alcoholism.**

The experiment was conducted by University of California, San Francisco researchers and was to be published Friday in the science journal *Cell*.

Because it is believed that alcohol affects all animals similarly, humans, like worms, may also possess a single gene responsible for drunkenness.

"Our end goal is to find a way to cure alcoholism and drug abuse," Dr. Steven McIntire said. "We hope to develop effective therapeutics to improve the ability of people to stop drinking."

After six years of work on the project, McIntire can now spot a soused worm about as well as a highway patrol trooper can spot a drunken driver.

He and the other scientists dosed hundreds of thousands of worms with enough alcohol that they would be too drunk to drive legally -- if they were human with the same blood-to-alcohol levels.

The drunken worms moved slower and more awkwardly than sober ones, and laid fewer eggs. Teetotaler worms form a neat S shape to power propulsion while the bodies of drunken worms were straighter and less active.

Researchers found that the sober worms had the same mutated gene that appears to make them immune to alcohol's intoxicating effects.

The natural job of the gene they found is to help slow brain transmissions. Alcohol increases the gene's activity, which slows down brain activity even more. But if the gene is disabled, as it was in the mutant worms, the brain never gets the chance to slow down.

Still, McIntire and other addiction experts caution there's much research left to do before the leap to people can be made.

"Humans are a lot more complicated than the worm," said neurobiology professor Steven Treisman of the University of Massachusetts Medical School. Treisman said many other genes are probably involved in helping people get drunk and that McIntire's work with worms couldn't measure other human intoxicating effects such as slurred speech and loss of inhibition.

Nonetheless, Treistman said the findings are important because they highlight an important new target in the fight against alcoholism.

According to the National Institute of Alcohol Abuse and Alcoholism, 14 million Americans abuse alcohol.

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