

Plant used in Chinese medicine fights chronic pain

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A plant used for centuries as a pain reliever in Chinese medicine may be just what the doctor ordered, especially when it comes to chronic pain. A key pain-relieving ingredient is a compound known as dehydrocorybulbine (DHCB) found in the roots of the flowering plant *Corydalis*, a member of the poppy family, according to researchers who report their findings in the Cell Press journal *Current Biology* on January 2.

"Our study reports the discovery of a new natural product that can relieve pain," says Olivier Civelli of the University of California, Irvine. "This analgesic acts in animal assays against the three types of pain that afflict humans, including acute, inflammatory, and neuropathic or chronic pain."

Civelli, along with Xinmiao Liang, made the discovery as part of the "herbalome" project, an effort to catalogue all of the chemical components of traditional Chinese medicine. The *Corydalis* plants that were the focus of the new study grow mainly in central eastern China, where underground tubers are harvested, ground, and boiled in hot vinegar. Those concoctions are often prescribed to treat pain, including headaches and back pain.

The researchers went looking for compounds in *Corydalis* that appeared likely to act in a manner similar to morphine. "We landed on DHCB but rapidly found that it acts not through the morphine receptor but through other receptors, in particular one that binds dopamine," Civelli explains.

The discovery adds to earlier evidence showing that the dopamine D2 receptor plays a role in [pain sensation](#).

While *Corydalis* extracts or isolated DHCB work against all types of pain, they hold special promise for those who suffer with persistent, low-level chronic pain. For one thing, DHCB doesn't appear to lose effectiveness with time in the way that traditional opiate drugs do.

"We have good pain medications for [acute pain](#): codeine or morphine, for example," Civelli says. "We have pain medication for [inflammatory pain](#), such as aspirin or acetaminophen. We do not have good medications for chronic pain. DHCB may not be able to relieve strong chronic pain, but may be used for low-level [chronic pain](#)."

Although *Corydalis* preparations of various types can already be purchased online, Civelli and Liang say DHCB isn't ready for prime time just yet. Further testing for toxicity is needed before doctors should consider prescribing it to patients.

More information: *Current Biology* [DOI: 10.1016/j.cub.2013.11.039](https://doi.org/10.1016/j.cub.2013.11.039)

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