New drug for menstrual cramps shows promise in early clinical trial

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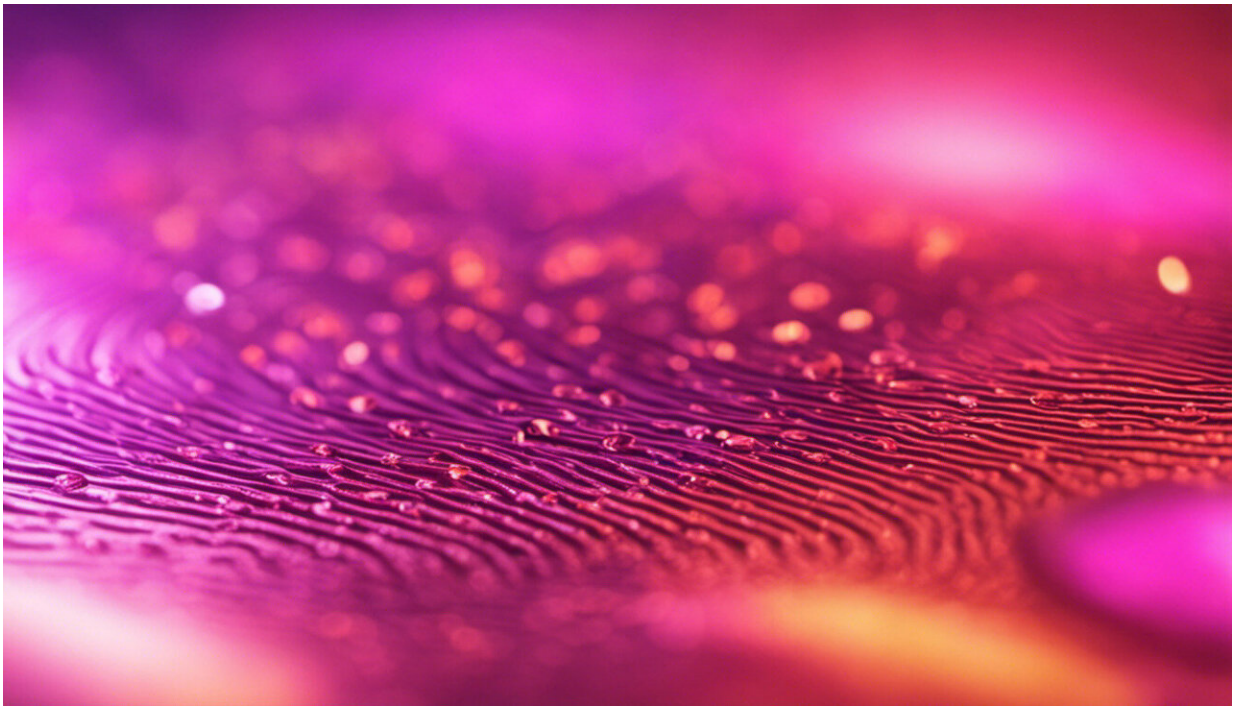

Credit: AI-generated image (disclaimer)

Scientists today described the discovery of a new drug, which is currently in Phase II clinical trials, designed to specifically target the root cause of painful menstrual cramps, not just the symptoms. The condition, called dysmenorrhea, is the leading cause of absenteeism from school and work among women in their teens and 20s. The

scientists described the study at the American Chemical Society (ACS) 239th National Meeting, being held here this week.

"We hope that the drug will provide a more effective treatment option for millions of women worldwide with this painful condition," said Andrzej R. Batt, "Dysmenorrhea not only diminishes the quality of life for millions of women, but also has a hidden, society-wide economic cost that involves an enormous number of days lost from work and school. Batt is with Vantia Ltd, a pharmaceutical company in the United Kingdom, which is developing and testing the drug.

Batt pointed out that dysmenorrhea affects between 45 and 90 percent of women of child-bearing age, In addition to pain in the abdomen and back, symptoms may include nausea, vomiting, sweating, and dizziness. Existing treatments for the condition include pain-relievers, anti-inflammatory drugs, and oral contraceptives that stop menstruation. However,these treatments are ineffective in almost one-third of women with moderate to severe cases. Some of them relieve only the symptoms, rather than targeting the underlying cause of dysmenorrhea, and may have unwanted side effects such as mood alteration and stomach upsets.

Menstrual cramps are caused by contractions of the uterus during menstruation. In dysmenorrhea, the uterus contracts with increased frequency, causing unusually severe, cramping pain. The cause, scientists believe, is increased blood levels of the hormone vasopressin, which plays a role in regulating contraction of the uterus. The Vantia scientists reasoned that blocking this hormone might relieve dysmenorrhea..

Their search for such a potential drug involved shifting through hundreds of chemical compounds and led to one with the desired effects. Scientists then re-engineered the compound, known by the code word ,VA111913, to fine-tune its effects. One modification allowed the drug to be administered orally, as a pill, rather than in an injection. They will

reveal VA111913's molecular structure for the first time at the ACS meeting.

Batt said that last year VA111913 successfully passed a landmark toward becoming a new drug, when the first stage of clinical trials showed that it was safe for further clinical studies, with no apparent ill-effects. The next phase of clinical trials is currently underway in the U.K. and the U.S. (at sites in Peoria, Ariz.; Austin, Texas; and Salt Lake City) to evaluate how well it works to control pain in a group of women with dysmenorrhea. Investigators expect results to be available later this year. If studies continue to show promise, the drug could be available to patients in four years, the scientists say.

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