# Researchers say they can create grapefruit hybrid that won't interfere with medicine

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(PhysOrg.com) -- For years, doctors and pharmacists have warned people to steer clear of fresh grapefruit or grapefruit juice when taking certain medicines.

But University of Florida researchers now believe within the next few years, they'll be able to release a grapefruit-pummelo hybrid that those who enjoy the zingy fruit can consume, without risking adverse side effects from their medicine.

The researchers' findings are presented in the current issue of the *Journal of the American Society for Horticultural Science*.

"We have the possibility to develop new products that are going to be very similar to grapefruit, and we won't have these issues. And they can be used as a fresh fruit, or people can make juice from them, and all these folks who are on the medicines won't have to worry about them," said Fred Gmitter, a UF citrus breeder based at the university's Citrus Research and Education Center in Lake Alfred.

In 1989, scientists doing a study on how alcohol consumption might interact with a prescription drug attempted to disguise the alcohol's taste by mixing it with grapefruit juice and discovered what is now commonly called the "grapefruit juice effect."

In conjunction with some medicines, including those meant to lower cholesterol, the grapefruit can change how much of the drugs are

absorbed in the patients' bloodstream, intensifying therapeutic or side effects. A chemical naturally found in some vegetables and fruits called furanocoumarin has been identified as primarily responsible for the grapefruit juice effect.

The UF study began when Florida Department of Citrus research scientist Paul Cancalon, also based at the Lake Alfred center, asked Gmitter's laboratory for samples of Florida-grown grapefruit to compare to grapefruit grown in other places around the world.

Cancalon noticed that the Florida-grown grapefruit demonstrated lower furanocoumarin content than grapefruit grown in other places, prompting Gmitter and Cancalon to begin checking more grapefruit and pummelo varieties, as well as hybrids, for furanocoumarin levels.

Eventually, Gmitter said, they found several hybrids with little to no furanocoumarins, including one seedless variety he believes will have wide appeal for consumers.

Besides Gmitter and Cancalon, the team included UF associate scientist Chunxian Chen and Carl Haun, a Florida Department of Citrus chemist.

Lisa House, a UF professor in food and resource economics who studies consumer preferences, led two focus groups in Atlanta in early 2011. One group was made up of grapefruit consumers; the other of non-consumers.

Although it's difficult to draw big conclusions from a small group, she said, in general, both consumer groups liked the idea of a grapefruit hybrid that didn't interfere with prescription drugs – more so after taste tests.

"Both groups saw it as a fruit to add to their diet, not just something to

replace grapefruit," she said.

Provided by University of Florida