Florida Researchers Develop Medically Safer Hybrid Grapefruit

Grapefruit fans who gave up the fruit to avoid potentially dangerous interactions with their prescription medications may soon be able to indulge in the tangy fruit without risk.

Tests on a new hybrid grapefruit developed in Florida found very low levels of the organic chemical compounds implicated in what is known as the “grapefruit juice effect,” said Fred Gmitter, a University of Florida citrus researcher and breeder.

More than 85 drugs may interact with standard grapefruit, 43 with serious side effects, and the number is growing, according to a recent report in the Canadian Medical Association Journal.

Among the drugs which may interact with grapefruit are certain cholesterol-lowering statins, some cancer and heart drugs and antibiotics.

The problem with grapefruit, according to Gmitter, is a family of organic chemical furanocoumarins believed to inhibit enzymes from breaking down certain medication, leading to drugs entering the blood stream in higher concentrations than intended, causing an overdose.

Potential adverse effects include sudden death and kidney or respiratory failure, according to the medical journal.

Gmitter said chemical analysis of the hybrid grapefruit, known for now as UF914, found levels of furanocoumarins at a small fraction of the level in standard grapefruit.

Subsequent tests of the juice in human cell cultures indicated

the fruit would not produce harmful side effects, he said. Human clinical trials would be needed to stake an absolute claim that the hybrid has solved the problem of fruit and drug interactions, he added.

As word began to spread about the hybrid to people on medications who had been warned away from grapefruit, Gmitter said, “I’ve gotten phone calls from all around the country … saying, oh my gosh, I miss my Florida grapefruit, when can I have this grapefruit, I miss grapefruit so much.”

The University of Florida is in the process of commercializing the hybrid, a cross between pomelos and red grapefruit, with large-scale production likely five to seven years from now. Discovery of the lower levels of furanocoumarins was a serendipitous bonus in a breeding project Gmitter said was intended to create a sweeter and less bitter variety.

In focus groups the hybrid, which is seedless, and larger, juicier, sweeter and less bitter than a standard grapefruit, won approval from people who liked and didn’t like grapefruit, he said.