

Purdue scientists fly high to test plants

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Purdue University agriculture researchers will fly aboard a NASA aircraft known as the "vomit comet" this week to study how plants detect gravity.

A question for those wishing to grow crops in space is how plant seeds know which way is "up" and which way is "down." While there's no gravity in space, an up and down gravity orientation is crucial to plant growth and development on Earth.

Marshall Porterfield, a Purdue associate professor of agricultural and biological engineering, says he and colleagues will test a new type of biosensor capable of measuring ion currents in multiple locations around a single cell.

"The challenge of this project is that we need to have very small probes to measure very small electric fields around very small cells," Porterfield says. "This development has the potential to change biology by providing information at considerably higher precision than was previously possible."

The so-called "vomit comet" -- NASA prefers "Weightless Wonder" -- is an aircraft that makes parabolic flight paths, allowing passengers to experience weightlessness.

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