

GMO plants could boost production of earth-friendly biofuels

A study at the U.S. Department of Energy's Brookhaven National Laboratory identifies new details of how a sugar-signaling molecule helps regulate oil production in plant cells. As described in [a paper appearing in the journal The Plant Cell](#), the work could point to new ways to engineer plants to produce substantial amounts of oil for use as biofuels or in the production of other oil-based products.

The study builds on previous research led by Brookhaven Lab biochemist John Shanklin that established clear links between a protein complex that senses sugar levels in plant cells and another protein that serves as the “on switch” for oil production Using this knowledge, Shanklin's team recently demonstrated that they could use combinations of genetic variants that increase sugar accumulation in plant leaves to drive up oil production.

“Making oil is demanding,” [Shanklin said,] you want to make it when you have lots of energy — which in cells is measured by the amount of sugar available. By understanding how the availability of sugar drives oil production, we hope to find ways to get plants to boost the priority of making oil.”

Read full, original article: [How a molecular signal helps plant cells decide when to make oil](#)