

Genetically engineered E.coli used for clean, efficient propane production

A team of scientists has transformed E.coli bacteria into a propane factory.

In their *Nature* magazine article, researchers from the University of Turku (Finland) and Imperial College (United Kingdom) described a new metabolic pathway for producing propane from *Escherichia coli* (E.coli).

In “normal” E.coli, a biological process exists that turns fatty acids into cell membranes. In their September 2014 article, Dr. Pauli Kallio, et. al. describe a way to shift this pathway so that the bacteria produce propane instead. This shift is achieved by using enzymes to channel the fatty acids that previously made cell walls and, instead, use them to make propane that is engine-ready.

Propane is the bulk component of liquid petroleum gas. LP gas is used around the world, for activities including cooking and heating in India and some rural areas of the United States. Used in its gas form, but frequently stored as a more energy-dense liquid, LP gas is perhaps best known for its role on campsites and outdoor BBQ grills. LP gas is also used as a gasoline alternative (“autogas”) in motor vehicles.

The scientists ultimately want to insert this engineered propane-producing system into photosynthetic bacteria. The system would then be capable of directly converting solar energy into a chemical fuel that is engine-ready. No processing or refining required.

Read the full, original story: [Researchers produce propane using E.coli bacteria](#)