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**Garbage Gas: Polytechnic University Researcher Develops
Bioplastic as a Disposable Source of Biodiesel**

New York City – March 21, 2007 – In an effort to develop a new source of sustainable energy, researchers at Polytechnic University, the premier New York-based technology and engineering higher education institution, have bioengineered a fuel-latent plastic that can be converted into biodiesel. The Defense Advanced Research Projects Agency has awarded the researchers \$2.34 million to advance this innovative technology and transfer it to industry. The commercialization of the technology will lead to a new source of green energy to households worldwide.

Professor Richard Gross, director of Polytechnic University's National Science Foundation (NSF) Center for Biocatalysis and Bioprocessing of Macromolecules (CBBM) developed the new bioplastic using vegetable oils. He also partnered with DNA 2.0, a biotechnology company specializing in gene synthesis, to develop enzymes that can both synthesize and break the fuel-latent plastic down into biodiesel after its use.

"We showed DARPA that we could make a new plastic from plant oils that has remarkable properties, which includes being tougher and more durable than typical polyethylenes. Additionally, the bioplastic can be placed in a simple container where it is safely broken down to liquid fuel," said Dr. Gross.

"Polytechnic University has a long history of innovation, and we are confident Professor Gross' research will revolutionize how we produce and consume biofuels," noted Jerry M. Hultin, president of Polytechnic University. "Gassing up at the pump could be part of the past thanks to the possibility of this research."

The process of converting biengineered fuel-latent plastics into biodiesel is of interest to DARPA since the U.S. military can use this technology on the frontline. "Military units generate substantial quantities of packaging waste when engaging in stationary field operations. If we can turn this waste into fuel, we will see a double benefit - we will reduce the amount of waste that we have to remove, and we will reduce the amount of new fuel that we must deliver to the units," explained Khine Latt, program manager for DARPA's Mobile Integrated Sustainable Energy Recovery program.

The next phase of the research will entail developing a more efficient low-cost process for both manufacturing the bioplastic and converting it into biodiesel. The personal generation of biodiesel is an important step in developing green technologies and reducing waste.

MORE

About Polytechnic University

Polytechnic University, one of the nation's oldest private engineering universities, was founded in 1854 in Brooklyn, New York. Today, it is the New York metropolitan area's preeminent resource in science and technology education and research. In addition to its main campus at MetroTech Center in Brooklyn, Polytechnic offers programs at sites throughout the region, including Long Island, Manhattan and Westchester. Additionally, the University offers several programs in Israel.

For more information and to learn more about The Power of PolyThinking, visit www.poly.edu.

About DARPA

DARPA is the central research and development organization for the US Department of Defense (DoD). It manages and directs basic and applied research for DoD and pursues research and technology that provide dramatic advances in support of military missions.

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