

# Tri-Cities research may help biofuels take flight

If you stop and think about it, some pretty interesting people and stuff have roots in the Tri-Cities.

Many Tri-Citians have gone on to be professional athletes, entertainers, scientists and engineers, doctors, lawyers and humanitarians, to name just a few.

And a lot of ground-breaking discoveries — many born of strategic collaborations resulting from purposeful economic development efforts — have emerged from work at our local national laboratory.

Just recently, Pacific Northwest National Laboratory entered into a \$2 million collaboration with Seattle biofuel producer Imperium Renewables and other partners to develop a new method to make renewable jet fuels.

Successful development of the catalytic process, which converts biomass-based alcohols into renewable drop-in jet fuels, could lead to additional renewable jet fuel production facilities being built and operated in the Northwest.

"This joint project with Imperium started with an economic analysis of Imperium's biodiesel process through our Technology Assistance Program, or TAP, initiated after the company's CEO was invited to speak at a tech event in Richland back in 2007," said PNNL economic

development manager Gary Spanner. "The TAP project was a great way to develop a partnership with Imperium for future R&D efforts."

PNNL uses the TAP to reach out to small businesses by providing up to a week's worth of a researcher's time at no charge to help them address specific technical challenges or answer lingering business questions. To date, about 550 companies have participated in TAP projects, which often lead to additional research collaborations, new products, and even

the formation of companies. Often, the fruits of these efforts stay local.

In this case, the "fruit" was a large chunk of a \$5 million grant from the Department of Energy toward a new biofuel research project led by LanzaTech of Roselle, Ill. DOE is providing up to \$4 million for the project, about \$2 million of which is going to PNNL for its collaboration with Imperium.

Using the grant money, LanzaTech will work on the first half of the process, which converts biomass to intermediates, such as alcohols, while PNNL and Imperium further hone the process to convert those alcohols into renewable drop-in fuel that works in today's existing aircraft. So far, the novel process has produced a meaningful amount of fuel that is being evaluated to

determine how well it can blend with traditional, petroleum-based jet fuel.

This work, being tackled by PNNL researchers at the Biological Sciences and Engineering Laboratory, or BSEL, on Washington State University Tri-Cities' campus, will serve to further solidify BSEL, and inherently the Tri-Cities, as a major player in the emerging aviation biofuels sector in the Northwest.

BSEL's ongoing research efforts have the potential to give biofuels wings — literally — in an industry that has historically relied and continues to rely on the consumption of obscene quantities of petroleum.

It's no mistake that exciting advancements like pumping up renewable jet fuel production in the Northwest might call the Tri-Cities home.

Various local organizations and individuals are constantly working to find and create opportunities that will allow our area's economy to thrive in a post-Hanford landscape.

Economic development efforts, including programs such as the TAP, help match those opportunities with people who can make the most of them. If we all do our part, together we will soar.

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Economic  
Diversity