

Taking the Next Step Toward Growing Our Own Fuel



Developing a petroleum-free fuel from corn co-products is one of the goals of a new research project at the University of Illinois.

Eight research laboratories will pool their expertise, attacking the problems from different directions in order to work to improve the efficiency of bioconversion of plant fibers into fuels and other value-added products.

This is the seventh theme to be chosen for the Institute for Genomic Biology at the University of Illinois under the direction of Harris A. Lewin, Gutgsell Endowed Chair in the Department of Animal Sciences.

Lewin said that the new Institute of Genomic Biology research theme led by Hans Blaschek will address one of the most critical problems facing our nation. "With crude oil at \$50 per barrel, we must examine renewal sources of energy as a viable alternative to fossil fuels," said Lewin. "The vision and experience of Blaschek and his co-workers will be important in setting the national agenda for future research on renewable energy sources. Importantly, the outcomes of this research may have direct benefit to farmers and the agricultural industries of

the Midwest. I am proud to have the new theme on molecular bioengineering of biomass conversion as part of the IGB's research, education, and economic development portfolio."

Blaschek is a microbiologist in the University of Illinois College of Agricultural, Consumer and Environmental Sciences. He has been studying microorganisms that are used in fermentation processes for over 20 years. He wants to try to overcome the obstacles related to biomass conversion into value-added products.

"The beneficiaries of this research will be agriculture and agriculture-based industries in Illinois," said Blaschek, "but ultimately all of us will benefit as consumers of energy." He believes that renewable fuel made from corn is the direction we need to go in order to be free from our dependence on petroleum products.

"This program will focus on an integrated multidisciplinary approach toward replacing the petroleum-based economy with a biobased economy that uses agricultural crops as the platform.

"The U.S. has access to significant amounts of bio-based resources, including those of the highly productive corn/soybean cropping system in the Midwest — arguably the largest man-made ecosystem on the planet," said Blaschek. "This agro-ecosystem is still largely focused on providing raw materials for the food, feed, and fiber industries and not on chemicals and fuels."

Blaschek hopes that this research will change that focus and provide the need for an additional 200 million bushels of corn for the production of butanol and acetone alone. "The boom in construction of dry-mill based ethanol plants that has tripled the production of ethanol in a five-year period is evidence of the biobased opportunities in this area," he said.



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