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Hampton Falls firm wins federal green tech grant

Itaconix LLC, a green technology company based in Hampton Falls, has received a \$1.8 million grant through the Joint Biomass Research and Development Initiative Goal of the U.S. Department of Energy and U.S. Department of Agriculture.

The award, announced at the University of New Hampshire, will fund efforts by Itaconix, in partnership with Cambridge, Mass.-based Microbia Inc. and the University of Maine, to produce Itaconix's green polymers from itaconic acid fermented with sugars extracted from hardwood biomass.

Itaconix develops, produces and markets a new generation of super absorbents and dispersants that are made from renewable resources. The firm's work is based on green chemistry that was initially developed at the University of New Hampshire.

The new chemicals are designed to replace the petroleum-based chemicals used in such products as detergents and diapers.

Itaconix is currently introducing green polymers in the forms of Itaconix Super Absorbent and Itaconix Dispersant for major consumer products that are environmentally friendly and reduce the use of petroleum.

John R. Shaw, principal of Itaconix, said the goal is to use sugar extracted from biomass wood as feedstock for production of the chemicals. Use of biomass wood "will make our products that much more sustainable," he said.

The whole process is a joint effort. The University of Maine extracts the sugars from wood, Microbia uses metabolic engineering to improve the production of itaconic acid during fermentation from the wood, and Itaconix polymerizes the itaconic acid into the super absorbents and dispersants.

Itaconix was one of only nine companies to receive the government grants from among more than 900 applications.

"This is a pretty major achievement for our company," said Shaw. "So we're pretty excited about it."

By developing the technologies and capabilities necessary to produce green fuels and chemicals from biomass instead of corn, corn will no longer be diverted away from food use, he said.

According to Shaw, this is especially important for New Hampshire because the corn industry here is limited. Switching to biomass wood is a fairly new concept but will offer more opportunities for production.

The Itaconix technology was developed by UNH graduate student Ming Cao, who won second place in this year's Paul J. Holloway Business Prize Competition at UNH.

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Itaconix was founded by Yvon Durant, associate research professor in material sciences, and Shaw, president of Kensington Research Inc. – LAURA CHAMBERLAIN/NEW HAMPSHIRE BUSINESS REVIEW

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