

Wayne State Start-up Company NextCAT Awarded Nearly \$500,000 From NSF For Phase II SBIR

EurekaAlert

DETROIT - NextCAT, Inc., a Wayne State University startup company, has received a Phase II Small Business Innovation Research (SBIR) award from the National Science Foundation (NSF) in the amount of \$498,830. This brings NextCAT's total grant funding to \$1.3 million.

NextCAT is working to advance a biofuel catalyst technology developed at the National Biofuels Energy Laboratory at Wayne State University. The company's goal is to commercialize a class of catalysts that enable biodiesel producers to convert cost-effective raw materials - such as waste vegetable oil, animal fats and residual corn oil - into biodiesel. This technology offers a unique process solution for an industry that has been mostly idled in the United States since 2008, when rising feedstock prices rendered the production of biodiesel uneconomical. With a cost savings of at least \$1 per gallon versus the traditional biodiesel production process, the NextCAT solution greatly changes the economics of a biodiesel plant.

In addition to the National Science Foundation funding, NextCAT has secured seed funding from Automation Alley and the Michigan Pre-Seed Capital Fund to design, build and install a pilot reactor at a biodiesel equipment manufacturer's engineering center.

The SBIR project proposes a potentially viable solution for many financially stressed biodiesel producers. Producers will simultaneously be able to use low-cost feedstock and greatly simplify the biodiesel production process. Also, currently idled facilities will be able to produce biodiesel fuel at prices competitive with petroleum diesel and help meet anticipated global market demand of approximately 8 billion gallons of biodiesel by 2015. The new process will also add jobs in economically depressed areas of the United States and bring the nation closer to energy independence.

In addition to the cost and energy savings associated with biodiesel fuel, there are several advantages that make it a smart choice to manufacture and use. Biodiesel is nontoxic and biodegradable, and therefore it is environmentally safe. Advanced biofuels in general are produced domestically, thus lessening dependence on foreign oil. Also, producing advanced biofuels can stimulate the local economy through job creation in farming, transportation and production.

The NextCAT science team includes Steven Salley, Ph.D., professor of chemical engineering at WSU; Shuli Yan, Ph.D., research director at NextCAT; and Simon Ng, Ph.D., P.E., chief technology officer at NextCAT and interim associate dean for research in WSU's College of Engineering.

"This is very exciting news," said Ng. "The new funding will allow NextCAT to

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Published on Chem.Info (<http://www.chem.info>)

demonstrate our novel catalyst technology in an industrial facility, getting it one step closer to commercialization. It is satisfying to see academic research translated to industrial applications, and contributing to energy sustainability and security. Hopefully, NextCAT can participate in President Obama's new \$500 million advanced biofuels initiative to spur the biofuels industry and enhance America's energy security."

"This award is great news for NextCAT," said Gloria Heppner, associate vice president for research at Wayne State University. "Their technology offers an exciting alternative to the current biodiesel fuel production process, and has great potential to make a major impact on our environment and economy."

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Source URL (retrieved on 12/17/2014 - 8:49pm):

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