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## **U.S. Government Awards DuPont, Partners with Technology Investment Agreement for Macroalgae-to-Biobutanol Research**

*Next-Generation Biofuels Awarded \$17.7 Million by U.S. Department of Energy*

WILMINGTON, Del., March 2, 2010 – The U.S. Department of Energy (DOE) Advanced Research Projects Agency-Energy ([ARPA-E](#)) has awarded a Technology Investment Agreement to [DuPont](#) for the development of a process to convert sugars produced by macroalgae into next-generation biofuels called isobutanol. [Bio Architecture Lab](#) (BAL) will be a subrecipient on the program. Under this award, the DOE will fund \$8.8 million and DuPont and BAL will cost share the balance of the total award, forming a joint cost share program between DOE and DuPont. [Butamax™ Advanced Biofuels LLC](#), a joint venture between DuPont and [BP](#), will be responsible for commercialization of the resulting technology package.

The macroalgae-to-isobutanol project will establish technology and intellectual property leadership in the use of macroalgae as a low cost, scalable and environmentally sustainable biomass for biofuel production. Efforts will focus on: improving domestic macroalgae aquaculture; converting macroalgae to bio-available sugars; converting those sugars to isobutanol; and economic and environmental optimization of the production process. More than 60 scientists in [Wilmington, Del.](#), and Berkeley, Calif., will work on this research and development program. The macroalgae aquafarming project will be conducted in Southern California.

“Our capabilities in the field of metabolic engineering and advanced industrial biotechnology techniques make this a natural addition to our existing R&D pipeline,” said [John Pierce](#), vice president – DuPont Applied BioSciences - Technology.

“Bio Architecture Lab is the leader in the development of technology to utilize macroalgae as low cost, scalable and sustainable biomass for the production of biofuels,” said Nikesh Parekh, CEO of Bio Architecture Lab. “Our partnership with DuPont and Butamax™ validates our core technology and will help us extend it into the production of isobutanol.”

Butamax™ has a multi-generational program to introduce isobutanol from different feedstocks to the market. Initially, isobutanol will be produced from feedstocks such as corn, wheat, and sugarcane. Subsequently, isobutanol production can be based on cellulosic feedstocks and, eventually, advanced feedstocks such as macroalgae.

“We project macroalgae to biobutanol technology will reduce greenhouse gas emissions significantly compared to petroleum,” said Butamax™ CEO Tim Potter. “Butamax™ is expanding its

feedstock flexibility to deliver isobutanol sustainably to achieve ever-cleaner transportation fuels. This evolutionary feedstock approach will enable greater reductions in carbon intensity as sustainable lower carbon feedstocks emerge.”

DuPont and BP were the first to identify the potential of isobutanol as an advanced biofuel. Their partnership was formalized in July 2009 with the creation of the Butamax™ Advanced Biofuels LLC joint venture. Butamax™ and its parent companies have validated the potential of isobutanol to be a viable opportunity to advance biofuels through fleet testing and examination of the fuel value chain. Butamax™ will commercialize isobutanol, a fuel that:

- has a higher energy content per gallon than many first generation biofuels;
- does not absorb water and can be transported through the existing oil and gasoline distribution infrastructure;
- can be used in gasoline-powered vehicles without modification at higher volumes than first generation biofuels, enabling greater concentrations of renewables into the transport fuel mix.

Butamax™ Advanced Biofuels is the culmination of the partnership between DuPont and BP and will be the leader in isobutanol technology development and marketing. The synergy between Butamax™ as a fast moving and flexible commercialization enterprise and the considerable experience of DuPont and BP in the areas of advanced biotechnology development, transportation fuel design and marketing will achieve rapid market acceptance of the technology developed under this award.

[Bio Architecture Lab](#) is a pioneer in the application of synthetic biology and enzyme design to the development of biofuels and renewable chemicals from aquafarmed, native macroalgae (seaweed), which is a low cost, scalable and sustainable biomass.

[DuPont](#) is a science-based products and services company. Founded in 1802, DuPont puts science to work by creating sustainable solutions essential to a better, safer, healthier life for people everywhere. Operating in more than 70 countries, DuPont offers a wide range of innovative products and services for markets including agriculture and food; building and construction; communications; and transportation.

**Forward-Looking Statements:** This news release contains forward-looking statements based on management’s current expectations, estimates and projections. The company does not undertake to update any forward-looking statements as a result of future developments or new information. All statements that address expectations or projections about the future, including statements about the company’s strategy for growth, product development, market position, expected expenditures and financial results are forward-looking statements. Some of the forward-looking statements may be identified by words like “expects,” “anticipates,” “plans,” “intends,” “projects,” “indicates,” and similar expressions. These statements are not guarantees of future performance and involve a number of risks, uncertainties and assumptions. Many factors, including those discussed more fully elsewhere in this release and in DuPont’s filings with the Securities and Exchange Commission, particularly its latest annual report on Form 10-K, as well as others, could cause results to differ materially from those stated. These factors include, but are not limited to changes in the laws, regulations, policies and economic conditions of countries in which the company does business; competitive pressures; successful integration of structural changes, including acquisitions, divestitures and alliances; research and development of new products, including regulatory approval and market acceptance, and seasonality of sales of agricultural products.

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Butamax™ is a trademark of Butamax™ Advanced Biofuels LLC, a BP-DuPont joint venture.