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ALTERNATIVE FUELS

Biotechs rush to embrace alternative fuels

The recent push to develop alternative fuels is driving biotechnology's growth into the industrial sector.

By Paul Elias

Associated Press

SAN FRANCISCO --

Biotechnology was first applied in medicine, then farming. Today, dozens of lifesaving drugs are on the market, while many crops are genetically engineered to withstand weed killers.

Now a 2-year-old push to develop alternative fuels is driving biotechnology's growth into the industrial sector.

Thousands of corporate executives and scientists gather this weekend in Orlando for an industry trade show specifically aimed at touting biotechnology's so-called third wave, industrial applications. The word on everyone's lips: ethanol.

After decades of unfulfilled promise and billions in government corn subsidies, energy companies may finally be able to produce ethanol easily and inexpensively thanks to breakthroughs in biotechnology.

Most of the 5 billion gallons of ethanol produced annually in the United States is still made by fermenting corn, but the crop is expensive and its use in biofuels cuts into the nation's food supply. So the Canadian biotech company Iogen Corp. has developed a method for deriving ethanol from a variety of plants including wheat, oats and barley. Others are genetically engineering microbes to produce enzymes that will convert the cellulose in crop waste, wood chips and other plants into ethanol.

President Bush helped breathe new life into this once-sleepy biotech sector by touting the need to ramp up production of this "cellulosic ethanol" in his last two State of the Union speeches.

The president wants to reduce the country's oil consumption by 20 percent within 10 years, and he sees alternative fuels as the way to get there. Bush visited the North Carolina biotechnology company Novozymes last month to underscore the industry's vital role in accomplishing that ambitious goal.

Government agencies led by the Department of Energy are sinking millions into biotech projects aimed at making ethanol more efficiently. And startups dedicated to turning plants into fuel have captured the fancy of deep-pocketed venture capitalists like Vinod Khosla. The billionaire co-founder of Sun Microsystems is investing hundreds of millions of dollars in green technology and will be a featured speaker this year at the World Congress on Industrial Biotechnology & Bioprocessing.

Other heavy hitters attending the conference include University of California scientist Jay Keasling, Discover magazine's Scientist of the Year in 2006 and a leader in the burgeoning "synthetic biology" field, which aims to create living species that will spit out drugs and fuel.

Oil companies are also investing heavily in biotechnology these days, and executives from ConocoPhillips, Chevron and Shell will also be on hand at Walt Disney World for the conference, which starts today.

By contrast, these annual gatherings have historically been sleepy affairs. Last year's industrial biotech meeting, sponsored by the Biotechnology Industry Organization, drew little interest even though it was held in Hawaii in January.

Past conferences have featured discussions on topics like biotech's role in manufacturing enzymes used to help laundry detergent break down dirt and give blue jeans the stone-washed look. But this year's meeting will be focused on the industry's role in making ethanol and other alternative fuels.