

COMPANIES TO WATCH

Biotech firm aims to improve treatment of diabetes**By Kennerly Clay**

This is a series featuring the firms cited as "Companies To Watch" in last year's Enterprise Awards competition.

**DAVID KING**

Diabetes currently afflicts 18.2 million people in the United States, but that number is increasing due to the epidemic of obesity, which is a precursor to Type 2, or adult onset diabetes. More than 90 percent of diabetics have Type 2, in which the body fails to properly use insulin.

"It's one of the most devastating and fastest growing illnesses in humankind," according to David King, CEO of BioRexis Pharmaceutical Corporation, a King of Prussia-based company dedicated to developing superior pharmaceuticals through protein engineering.

Founded in July 2002, BioRexis has developed a unique protein engineering technology — its main product being a

peptide for Type 2 diabetes fused to BioRexis' carrier protein — that makes diabetes drugs more effective, less costly, and more convenient for patients.

Fewer injections needed

Typical treatment of the disease involves oral anti-diabetic agents in the initial stages of the disease followed by injections of protein drugs. One of the most exciting biotherapeutics under development is a peptide with a half-life of about 90 seconds. If a drug has a 90-second half-life, for example, half the drug will be gone within 90 seconds of injection.

For the drug to be effective, therefore, the patient needs frequent, high-dose injections, which can lead to unpleasant side effects and ultimately cause the patient to stop following the regimen.

The BioRexis technology increases a drug's half-life to days rather than hours. The engineered protein version helps maintain a more constant level of the drug in the bloodstream so the patient needs fewer injections and lower doses.

"By stretching out the time frame in which a patient needs to be injected,

we're increasing patient compliance as well as convenience," says King. "It's not only easier for the patient, but also for the pharmaceutical companies. We're

"We're increasing patient compliance as well as convenience. We're simply making a better drug."

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The engineered protein version is also more cost-effective. Lower and less frequent doses mean less demand placed on drug manufacturers already producing at capacity. And while many protein drugs are manufactured in mammalian cell cultures — a costly endeavor — BioRexis has been able to develop proteins more economically in yeast.

Investors recognize value

The firm is now developing and testing

its technology in a variety of animal models and plans to file an IND (investigational new drug) application with the FDA by early 2005.

Investors have quickly recognized the value BioRexis intends to deliver. With worldwide sales in the therapeutic protein market projected to triple from the current \$21 billion to \$65 billion by 2010, investment has come from firms such as Tullis-Dickerson & Company, Prism Venture Partners, Quaker BioVentures, ProQuest Investments, Johnson & Johnson Development Corporation, Gund Investment Corporation and Anthem Capital. BioRexis recently announced another \$30 million round of funding, bringing its total raised capital to \$38 million.

The BioRexis venture "is without question the most exciting thing I've done in my life," says King, formerly a corporate lawyer for more than 25 years with Morgan, Lewis and Bockius. "I see BioRexis as changing the paradigm and really making a major contribution to the treatment of diabetes."

To learn more about this Company To Watch, go to www.biorex.com.