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Jenrin adds twist in quest for drug to battle obesity

- by John George

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photo by Jenrin Jenrin leaders Robert Chorvat (left) and John McElroy.

WEST CHESTER — **John McElroy** isn't daunted by Big Pharma's struggles to develop a safe and effective treatment for obesity.

To the contrary, McElroy is looking to build off the successes and mistakes.

He is president and chief scientific officer of [Jenrin](#) Discovery, a Chester County biotechnology company that is working on what it believes may be a ground-breaking approach to treating obesity.

"Obesity is one of the two holy grails, the other being Alzheimer's disease, where the market is just enormous," McElroy said.

Health experts project that by 2015, 75 percent of adults will be overweight — and 41 percent will be classified as obese. The Centers for Disease Control and Prevention (CDC) issued a report in August that estimated 72.5 million people in the United States, or 26.7 percent of the population, are currently obese. The same study estimated annual medical costs attributed to obesity total \$147 billion.

"Obesity continues to be a major public health problem," said Dr. **Thomas Frieden**, director of the CDC. "We need intensive, comprehensive and ongoing efforts to address obesity. If we don't more people will get sick and die from obesity-related conditions."

In the 1990s, Big Pharma companies led by [Sanofi-Aventis](#) started working on treating obesity by targeting cannabinoid and cannabinoid receptors. Cannabinoids are chemical compounds that

occur naturally in the nervous and immune system and help control mental and physical processes related to, among other behavior, appetite.

Marijuana stimulates cannabinoid receptors causing increased hunger, commonly called the “munchies.”

Developing a compound to block those same receptors, pharmaceutical makers hypothesized, should suppress hunger.

Sanofi-Aventis received approval for its synthesized CB1 cannabinoid receptor antagonist, Acomplia, in the European Union in 2006. Other companies including Merck, Pfizer and Bristol-Myers Squibb had similar products in development when, in 2008, the Food and Drug Administration rejected Sanofi’s new drug application for Acomplia and the drug was pulled off the market in Europe because of psychiatric side effects, primarily depression and anxiety, linked to the product.

“Everything imploded after the FDA rejected Sanofi’s application,” McElroy said. “Almost like dominoes, one after another, Merck then Pfizer then Bristol-Myers all dropped their (CB1 antagonist) development programs. This was supposed to be the next breakthrough in obesity and it just dropped off the map.”

Founded in 2005, Jenrin is looking to improve on the work done by Sanofi-Aventis. It has developed a technology that produces a peripherally selective CB1 receptor antagonist that can reach CB1 receptors in metabolic tissue — including liver, muscle and fat — while restricting access to the CB1 receptors in the brain in order to reduce the risk of psychiatric side effects in patients.

Robert Chorvat, Jenrin’s vice president of chemistry, said the company made more than 900 experimental compounds in the lab by tinkering with the molecules already shown to bind to and block CB1 receptors. Their goal was to create a compound that preserved that activity, but had a limited ability to penetrate the brain.

McElroy said the effort has produced about two dozen promising compounds, from which it now plans to pick one or two to advance into preclinical studies.

“We’re probably about two years from human testing,” McElroy said.

McElroy and Chorvat are both former DuPont Pharmaceutical Co. executives who left the Wilmington company after it was bought by Bristol-Myers Squibb for \$7.8 billion in 2001.

Jenrin has raised \$5.5 million from investors including BioAdvance, Ben Franklin Technology Partners of Southeastern Pennsylvania and two venture capital firms.

Largely a virtual company, Jenrin has four employees.

McElroy said the company has attracted attention from larger pharmaceutical companies interested in the company's technology. In addition to obesity, McElroy said, Jenrin is also looking at its compounds as a potential treatment for liver disease and type-2 diabetes.

“Big Pharma has its take on what our target is useful for,” he said. “We’ve had different companies approach us for each of the three [potential indications].”

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