New Biotech Company Launches After Discovery

Casandra Andrews, Press-Register

MOBILE, Ala. (AP) — A scientific discovery made at the University of South Alabama College of Medicine has helped launch a new biotech company in Mobile.

The business, Exscien -- which in Latin means 'for science' -- was recently awarded a grant by the National Institutes of Health to support the development of a new drug aimed at preventing and reversing acute lung injury.

Led by Steve and Christine Cumbie, the biotech company's co-founder is Dr. Mark Gillespie, a professor and member of the Center for Lung Biology at USA's College of Medicine.

Medical school staffers are collaborating with Exscien in an effort to quickly develop the treatments that initially will be used in lung transplantation surgeries.

There are no drugs available to effectively manage acute lung injury, Gillespie said, adding that the condition can complicate medical disorders ranging from trauma and infection to transplants.

The $148,000 grant will help fund research to examine the effectiveness of a drug in increasing the number of lungs available for transplant and in reducing lung rejection, school officials said.

Gillespie said most lungs available for transplant arent used, sometimes because of concerns that they will fail after transplantation. As a result, of the 14,000 or so people waiting for a lung transplant in the U.S., only about 2,500 surgeries are performed each year.

Maneuvering through the heavy lifting of basic research to the expensive proposition of drug trials is a daunting task, Gillespie said. Because of the high cost of medical trials, many new drugs and other therapies never make it to market.

The concept behind this new therapy to treat injured lungs has been at least a decade in the making. About 10 years of basic research by USA investigators pointed to the idea that the new drug, when administered to donor lungs, could increase the number of lungs available to be safely transplanted by treating them prior to a transplantation.

Gillespie said he hopes the drug will eventually be used to target a major complication of lung transplantation called primary graft dysfunction, an issue that arises when the lung fails within the first two days after being transplanted.

In the past decade, multiple studies by Gillespie and colleague Dr. Glenn Wilson showed that damage to the DNA of mitochondria known as the powerhouse of a cell

functions like a fuse box, killing off lung cells in various diseases when a bad cell is detected.

This new drug targets a repair enzyme to fix the DNA and protect the lung cells from injury, Gillespie said. It has real potential to emerge as a treatment for acute lung injury.

During the first year of the grant, researchers hope to verify the effectiveness of the drug.

If all goes as planned, the researchers should be ready to begin experimenting in lung transplant patients in as soon as two years, Gillespie said.

The FDA and good science requires that it be tested in animal models and also tested in human lungs that cannot be used for transplant because they are too diseased, he said. If that happens, we are a very short step away from launching clinical trials.

Most of development and research, including the manufacturing processes to make the drug, will take place in Mobile, Gillespie said.

The grant and new company are developments that emerged from an earlier five-year grant of about $1.75 million awarded by NIH to a team of pulmonary scientists at USA's Center for Lung Biology.

That grant was recently renewed to examine the causes and consequences of pneumonia. Its stuff like this, Gillespie said, that keeps you passionate and excited about your job.

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