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Founders Week 2017

ENTREPRENEUR OF THE YEAR

BARTLEY P. GRIFFITH, MD

SCHOOL OF MEDICINE
Thomas E. and Alice Marie Hales Distinguished Professor
in Transplant Surgery
Founder, Breethe, Inc.

"Road to a Deep Breath"

University of Maryland Baltimore

OCT. 18, 2017 | 4 P.M.
BIOPARK LIFE SCIENCES CONFERENCE CENTER

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Lung failure is a progressive and debilitating disease that contributes to the death of more than 270,000 people annually in the United States alone. Those with end stage lung disease suffer breathlessness that makes even the simple pleasures of life impossible.

Bartley P. Griffith couldn't bear to watch his patients go through that. So the world-renowned heart and lung transplant surgeon set out to do something about it.

More than 20 years later, he has developed the world's first wearable, artificial lung system and founded Breethe, Inc. in 2014 to perfect and commercialize it.

"There is no worse death than one from loss of lung function," Griffith says. "For those now desperate for their next breath, life might be enjoyed again."

Based at the BioPark, Breethe, Inc. is deep into product development, funded to date through three rounds of equity capital with Griffith playing an active role.

He credits his Breethe partners — former business lawyer Carl Cohen and medical device executive Marshal Linder — for the company's progress toward filing a 501(k) request for approval with the Food and Drug Administration, which is expected in 2019.

"These two pillars are the only reason we exist and look to beat the odds," says Griffith, who also is grateful to UM Ventures, UMB's commercialization arm. "How lucky I am to have them. It's the three of us working together that drives Breethe."

The pump lung unit, which is a little larger than a Coke can and sits on the patient's belt, draws blood out down through the cannula. It oxygenates and removes carbon dioxide from the blood, which then goes back in the body. The unit also is attached to a portable pack on wheels, which contains batteries, the oxygen source, and the pump motor to control it.

"Our artificial lung device is different because of its inherently biocompatible and efficient design," says Griffith, who also has built a resistance to clotting into it. "These attributes are the result of more than a decade of NIH funding and drives our belief in a wearable unit for use at home. The entire drive system to add power and respiratory gases to the pump and lung will be no more than 20 pounds and will be housed in a 'cool' small roller bag."

Showing he hasn't lost his sense of humor, Griffith adds, "I am pushing for exterior mood lighting and sparkle-mag wheels!"