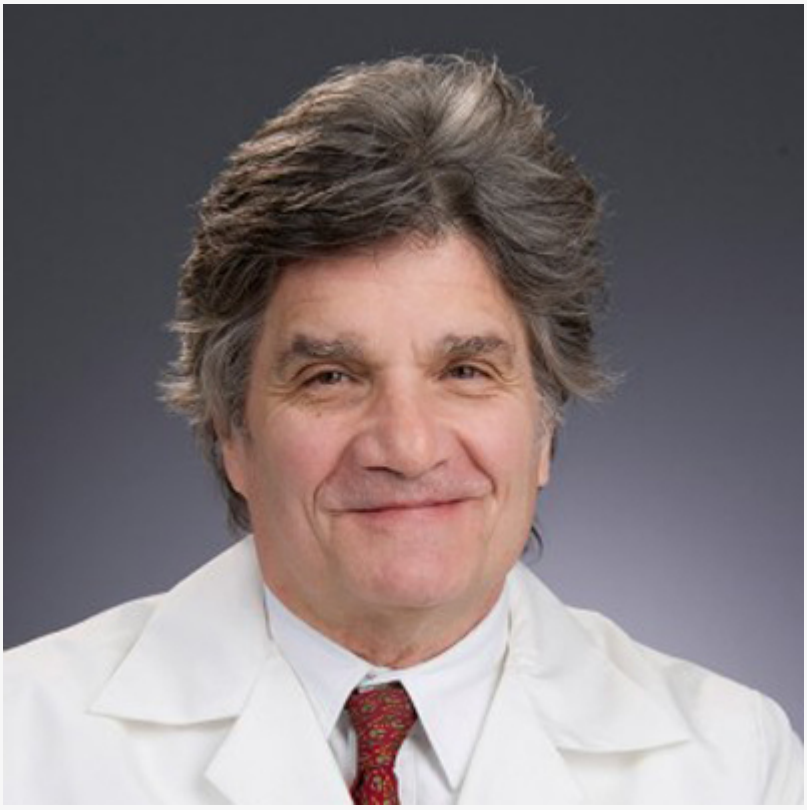
Medical Pioneer Dr. Thomas H. Shaffer to be Featured on CUTV News Radio



CHADDS FORD, PENNSYLVANIA, UNITED STATES, January 2, 2019 /EINPresswire.com/ -- Throughout his career, pulmonary physiologist and pioneering clinical research scientist Dr. Thomas H. Shaffer has sought to bridge the disciplines of applied mathematics and engineering with our understanding of how organ systems work, specifically the lungs. For more than 40 years, he's dedicated his research to the needs of the neonatal and pediatric populations. His revolutionary work with treatments for respiratory distress syndrome is known world-wide, and he is considered an international expert in this field.

Dr. Shaffer is most well-known for leading the first clinical trial using oxygen-rich liquid ventilation to help premature infants breathe.

"When I started my career, only about 50 percent of the babies under 1500 grams or 34 weeks of gestational age were surviving," recalls Dr. Shaffer. "There just wasn't much you could do for them at that time. We hadn't yet developed the concept of neonatologists and neonatal intensive care units (NICUs). At that time, the unit was just called the 'small baby' nursery. Since then, survival outcomes have changed rather dramatically with the intervention of mechanical ventilation and surfactant, but the fundamental problem remains: a very premature baby's lungs are not ready to breathe air. They have not developed the alveoli in the lungs, such that oxygen enters the blood stream and CO2 is released effectively".

First and foremost an engineer and mathematician, while in graduate school, Dr. Shaffer developed the initial concept of a system and method for demand-controlled ventilation with oxygen-rich inert liquid. In 1989, this concept was demonstrated in the classic science fiction movie and book, The Abyss.

"I had a graduate adviser who was an avid scuba diver. He was interested in going deeper while avoiding the problems associated with decompression sickness," recalls Dr. Shaffer. "One of the concepts we developed together was to use oxygen-rich liquids instead of breathing gas in a demand-regulated SCUBA system. This liquid is not compressible--there's no nitrogen in it–so you don't get the bends when you decompress."

In 1972, Dr. Shaffer started as a postdoctoral fellow and would later join the Faculty in the

Department of Physiology and Pediatrics, University of Pennsylvania School of Medicine, where he began working with premature babies.

“No one had ever considered using this inert oxygen-rich liquid in a premature baby,” says Dr. Shaffer. “But babies are living in a liquid environment for nine months: they are surrounded with liquid; their lungs are filled with liquid. Fully developed lungs are lined with surfactant, which allows the lungs to open easily. When babies are born very prematurely, they have to start breathing gas at a time when their lungs are not prepared for it. So why not address the transition: put the liquid in their lungs as soon as possible so that they will not be damaged by gas in their lungs.”

Dr. Shaffer’s work was featured on “Good Morning America” 1989, “The Body Human 2000,” “CBS Tomorrow’s World,” in the Readers Digest article "Miracle Baby" in June 2006, "Unbelievable Stories" and “France 2” in 2009, and "The New Scientist" in 2010, as well as numerous network coverage, national and international press releases.

According to Dr. Shaffer, there are many applications for liquid ventilation, including adult respiratory distress, induction of hypothermia and even advanced cancer treatment. “Unfortunately,” says Dr. Shaffer, “these possibilities have had the adverse effect of distracting clinical trials for treatment in premature babies. It has yet to be approved by the FDA.”

“You have to be optimistic,” says Dr. Shaffer. “As far as I'm concerned, I believe in this concept as strongly as I believe in gravity. That's how confident I am that liquid ventilation works.”

CUTV News Radio will feature Dr. Thomas H. Shaffer with Doug Llewelyn on January 4th at 1pm EST.

Listen to the show on BlogTalkRadio.

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