

Promising device snags young inventors coveted spot at IShow

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The BlueScale simultaneously records a variety of patient information, including weight, heart rate, blood pressure and cardiac output, in a mere 10 seconds. When combined, those daily measurements offer a good picture of the health of the patient's cardiovascular system and can be predictive of acute episodes, such as heart failure. Credit: University of Houston

The IShow is for young inventors what "American Idol" is for young performers, and a pair of local researchers has won a coveted spot in the IShow finale in Palm Desert, Calif., this weekend.

If their unique health-monitoring device wins at the American Society of Mechanical Engineers Innovation Showcase, also known as the IShow,

on Sunday, University of Houston MBA student Nithin Rajan and Steve Xu, who both work at the Abramson Center for the Future of Health in the Texas Medical Center, could receive up to \$10,000 in seed funding from ASME. And that's just the beginning.

All finalists get to pitch their inventions to venture capitalists and "angel investors" who will be in attendance to get their hands on the next big thing.

"The IShow is known for picking the cream of the crop. We know we're facing stiff competition. But, we're passionate about our design, our team and our company moving forward," said Xu. "I can tell you this: We're going to Palm Desert to win."

Though the team's device looks a lot like a standard bathroom scale connected to a bicycle-like handlebar, it is actually a heavy-duty piece of technology meant to offer congestive [heart failure](#) patients both peace of mind and significant health-care costs savings.

"Nithan and Steve are developing a technology that is very useful medically, will benefit a large group of patients, and is simple for people to use," said Dr. Cliff Dacso, director of the Abramson Center, the John S. Dunn Sr. Research Chair in General Internal Medicine at The Methodist Hospital, and professor at UH's College of Technology. "Such elegance and purpose of design are rare and tend to be highly sought by investors."

The device, known as the BlueScale, simultaneously records a variety of patient information, including weight, heart rate, blood pressure and cardiac output, in a mere 10 seconds. When combined, those daily measurements offer a good picture of the health of the patient's cardiovascular system and can be predictive of acute episodes, such as heart failure.

If used daily, the device will indicate when a patient needs to seek medical attention, potentially heading off dangerous episodes and preventing costly emergency room visits and ambulance rides, the inventors said.

Luca Pollonini, a post-doctoral fellow at UH who worked with the team, called the device "intuitive."

"The design of Blue Scale is inspired by two everyday actions: stepping on a bathroom scale and riding a bicycle. Since everyone is familiar with these simple actions, the usage of Blue Scale is seamless," Pollonini said.

Rajan, who, like Xu, is a research associate at The Methodist Hospital Research Institute, said the device has received good reviews from patients involved in preliminary clinical testing, which will make convincing investors that much easier.

"I am excited about the marketing presentation, even with limited experience with investors, because I look forward to telling our story, which I firmly believe is compelling and important to changing the way we deliver health care in this country," he said.

Xu and Rajan both said they were emboldened when their product landed them at the IShow.

"When we were accepted, it was truly an exciting moment, because, while we believe in the technology to our core, sometimes we need to hear it from someone else who has no vested interest," Rajan said.

The device was developed at the Abramson Center for the Future of Health, a joint partnership between UH's College of Technology and The Methodist Hospital Research Institute.

"A central mission of the Abramson Center is to improve chronic disease management," Rajan said. "We are developing technologies for diabetes and asthma management as well, but the BlueScale is the most advanced technology. During the course of the initial clinical trial, I spoke to many patients with heart failure, and it has made this project a very personal one rather than just a research exercise."

Marco J. Mariotto, UH's dean of graduate and professional studies and co-director of the Abramson Center, lauded the student-driven effort to deliver a low-cost, technology-driven health aid "for addressing the management of chronic disease, especially for underserved populations."

"It represents the intersection of engineering technology, health care and business and fits with UH's role in producing entrepreneurs, especially in the melding of UH's expertise in science, engineering and business with our Methodist partner's expertise in medicine," Mariotto said.

Source: University of Houston ([news](#) : [web](#))

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