University of Pittsburgh Launches Center to Reduce Global Health Disparities for Women

A $20 million investment will create the Vijayalakshmi Innovation Center in Women's Health Analytics and Research.

The University of Pittsburgh is poised to counter major disparities in health and wellness faced by women around the world through the creation of the Vijayalakshmi Innovation Center in Women's Health Analytics and Research (VIHAR).

In addition to a major investment from Pitt's School of Medicine, the center will benefit from a generous gift from Dr. Vishnu Vardhan and Harsha Vardhini. Brother and sister Dr. Vardhan and Mrs. Vardhini are cofounders of Vizzhy Inc. The company is a Texas-based pioneer in the development and application of generative AI systems for innovative health care applications, with a mission to leverage technology to tackle the root causes of metabolic diseases and develop personalized guidance for managing chronic illnesses.

VIHAR will build upon the foundations laid by the University of Pittsburgh School of Medicine's Pattern Recognition from Biomedical Evidence (PRoBE) laboratory and its founder Vanathi Gopalakrishnan, associate professor of biomedical informatics, Pitt School of Medicine.

"Issues facing women and girls are underrepresented in medical research, which results in fewer treatments available for them," said Anantha Shekhar, senior vice chancellor for the health sciences and John and Gertrude Petersen Dean of the School of Medicine at Pitt. "VIHAR will directly address this issue by coalescing communities of researchers and developing innovative AI tools for efficient analyses."

In making the gift, Vardhan sought to address a global problem.

"Women and girls from Pittsburgh to my hometown in India suffer from a lack of understanding about the issues that uniquely affect their health and wellness," he said. "My sister and I believe our gift will accelerate the process of eliminating those disparities and lead to an improved quality of life for women and the people who love them."

Vardhan and Vardhini chose to name the new center after their mother.

"Our mother struggles mightily with diabetes and should not have to. Her condition is what encouraged my brother and me to create our company," Vardhini said. "The center, named in her honor, has the potential to make life better for millions of women and girls by harnessing the knowledge we already have to create new discoveries and better global health."

VIHAR will be the first global innovation center to bridge women's health research data with advanced AI and analytics. It will build upon the strengths of the University's Department of Biomedical Informatics (DBMI) and the School of Medicine's biotechnology facilities. VIHAR will partner with regional, national, and international organizations such as the Women's Health and Education Center and the World Health Organization.

"At Pitt, we have developed an ecosystem for health analytics data mining that is second to none, and it has become a training ground for pre- and postdoctoral researchers," said Michael J. Becich, Distinguished Professor and chair of DBMI. "With the addition of VIHAR, we will establish a new area of concentration in the application of artificial intelligence for women's health—leading to new understanding and breakthroughs."

PRoBE laboratory founder Gopalakrishnan will serve as the founding director of VIHAR. Gopalakrishnan will drive the formation of a global team of scientists from top universities to accelerate world-class research and training; she expects that work will eventually lead to the development of female digital health twins. At the same time, the center will develop solutions for multimodal data production and harmonization, and integration of diverse aspects of women's health across the lifespan.

"This support will allow us, for example, to combine artificial intelligence with mobile applications and sensor-based approaches to identify how we can directly benefit vulnerable populations such as at-risk mothers by proactive resource allocations," Gopalakrishnan said. "I cannot thank Vishnu and Harsha enough for their vision and trust in us to advance science and make a global impact."

Initial steps will include recruitment of staff members and purchasing hardware and software for the center with a focus on accelerating the center's work of gathering and analyzing vast amounts of health data.

VIHAR will bolster the University's schools of the health sciences' significant commitment to addressing and improving women's health. It also is part of a concerted and larger effort at the University of Pittsburgh to intensify the use of computational tools and analytics for the benefit of everyone's health. Some of those efforts include ensuring every medical and graduate student at the School of Medicine is literate and savvy with artificial intelligence and building an AI community in Pittsburgh with industry leader NVIDIA and Carnegie Mellon University.

About the University of Pittsburgh

Founded in 1787, the University of Pittsburgh is an internationally renowned leader in health sciences learning and research. A top 10 recipient of NIH funding since 1998, Pitt has repeatedly been ranked as the best public university in the Northeast, per The Wall Street Journal/Times Higher Education. Pitt consists of a campus in Pittsburgh—home to 16 undergraduate, graduate, and professional schools — and four regional campuses located throughout Western Pennsylvania. Pitt offers nearly 500 distinct degree programs; serves more than 33,000 students; employs more than 14,000 faculty and staff; and awards 9,000 degrees systemwide.

About the University of Pittsburgh School of Medicine

As one of the nation's leading academic centers for biomedical research, the University of Pittsburgh School of Medicine integrates advanced technology with basic science across a broad range of disciplines in a continuous quest to harness the power of new knowledge and improve the human condition. Driven mainly by the School of Medicine and its affiliates, Pitt has ranked among the top recipients of funding from the National Institutes of Health since 1998. In rankings released by the National Science

Foundation, Pitt is in the upper echelon of all American universities in total federal science and engineering research and development support.

Likewise, the School of Medicine is equally committed to advancing the quality and strength of its medical and graduate education programs, for which it is recognized as an innovative leader, and to training highly skilled, compassionate clinicians and creative scientists well-equipped to engage in world-class research. The School of Medicine is the academic partner of UPMC, which has collaborated with the University to raise the standard of medical excellence in Pittsburgh and to position health care as a driving force behind the region's economy. For more information about the School of Medicine, see www.medschool.pitt.edu.

About Vizzhy Inc.

Vizzhy Inc. is the world's first full-stack metabolic signature program which addresses the root cause of metabolic diseases using its AI-based multi-omics platform consisting of genomics, metabolomics, microbiome analysis, and biomarkers delivered through an IoT-enabled clinical decision support system platform.