

## ValveXchange Licenses University of Colorado Technology for Personalized 3D Heart Modeling

*CU technology converts complex medical images into physical models through 3D printing technology*

**AURORA, Colo. – Nov. 19, 2009** – ValveXchange Inc. recently executed a license agreement with the University of Colorado for a process to transform cardiac imaging data into high-quality three-dimensional models used for heart valve product development, clinician training, and pre-procedure planning.

Based on the work of John D. Carroll and Shih-Yung (James) Chen, both of the University of Colorado Denver School of Medicine (Department of Cardiology), this technology converts data from routine medical imaging of soft tissues (ultrasounds and CT and MRI scans) into 3D models, which are then transformed into physical models using 3D printers. ValveXchange will use the technology in conjunction with its implantable heart valve program. ValveXchange is developing a novel artificial heart valve that has all the advantages of today's tissue-based heart valves, but can be implanted and replaced through a small incision between the ribs. This approach is expected to replace traditional open-heart surgery for many heart valve procedures.

The licensed 3D Heart Modeling Technology offers a unique opportunity to develop the valve technology using patient-specific heart anatomy examples, and later to train physicians in implant techniques in a highly realistic manner. Cardiovascular diseases, particularly heart attacks and strokes, are responsible for the death of seventeen million individuals worldwide annually. Improved valve designs coupled with more advanced clinician training and patient-specific procedure planning are expected to significantly improve both treatment and quality of life of patients requiring these implants. "We expect this advance in 3D heart modeling to provide ValveXchange with a real advantage in the market space," said ValveXchange CEO Larry Blankenship. *"By being able to work with a model of the specific patient's heart before the heart valve replacement procedure, physicians are expected to be able to decrease procedure time and increase success rates. This will be one more reason for them to select the advanced heart valve technology being developed by ValveXchange."*

"The models are a powerful tool for procedure planning and physician and patient education, and they will complement ValveXchange's expertise in medical device development," added Paul Tabor of the University of Colorado Technology Transfer Office. *"We are hopeful the marriage of these technologies results in a leap forward in the design, testing and performance of implantable heart valves."*

ValveXchange was recently notified of a grant award of \$250,000 to develop this technology under Colorado's Early Stage Bioscience Company Grant Program, one of several funding initiatives created by the State of Colorado in 2008 to accelerate the commercialization of bioscience technologies developed at the state's research institutions. This state funding is matched by research funding from the National Institutes of Health (NIH).

Dr. Ivan Vesely, a PhD Biophysicist, an NIH-funded scientist and founder of ValveXchange, said *"Matching funds from the state are critical to filling in the funding gaps that invariably arise when rapidly moving technology companies rely on a centralized funding system designed to support basic research with typically a 5-year time horizon."*

### About the Technology Transfer Office and the University of Colorado

The CU Technology Transfer Office (TTO) pursues, protects, packages, and licenses to business the intellectual property generated from research at CU. The TTO provides assistance to faculty, staff, and students, as well as to businesses looking to license or invest in CU technology. For more information about technology transfer at CU, visit [www.cu.edu/techtransfer](http://www.cu.edu/techtransfer).

The University of Colorado is a premier teaching and research university with four campuses: the University of Colorado at Boulder, the University of Colorado at Colorado Springs, the University of Colorado Denver and the University of Colorado Anschutz Medical Campus. More than 55,000 undergraduate and graduate students are pursuing academic degrees on CU campuses. CU is ranked seventh among public institutions in federal research expenditures in engineering and science by the National Science Foundation. Academic prestige is marked by the university's four Nobel laureates, seven MacArthur "genius" Fellows, 18 alumni astronauts and 19 Rhodes Scholars. For more information, go to [www.cu.edu](http://www.cu.edu).

### **About ValveXchange Inc.**

ValveXchange, Inc. is developing advanced heart valve designs based on the work of Dr. Ivan Vesely, an internationally recognized expert in artificial heart valves. The company's products are designed to resolve the decades-old dilemma of "How to live with an artificial Heart Valve". Currently, the only choice is a mechanical valve with a lifetime on anticoagulant medication with severe side effects and a sedentary life style, or a tissue valve that will allow a full, active lifestyle but will wear out in 15 years and require open-heart surgery again to replace. The ValveXchange products are designed for minimally-invasive access through a small incision between the ribs, without cardiopulmonary bypass. Neither the first implant, nor the subsequent valve exchanges will require open-heart surgery. The company has been funded by government research grants and private investors. ValveXchange, Inc. is located in the Fitzsimmons BioScience Park Center in Aurora, Colorado. For more information go to [www.valvexchange.com](http://www.valvexchange.com).

### **Contact:**

Lindsay Polak, University of Colorado Technology Transfer Office:  
303-735-5518, [lindsay.polak@cu.edu](mailto:lindsay.polak@cu.edu)

Larry Blankenship, ValveXchange  
303-648-4077, [lblankenship@valvexchange.com](mailto:lblankenship@valvexchange.com)

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