Two medical technologies coming out of Virginia Commonwealth University are among the four finalists selected to present at the annual Southeast BIO/Plan Competition, a yearlong program designed by Southeast BIO (SEBIO) to bring forward the most promising opportunities from the region’s research universities.

Over the past few months, VCU Tech Transfer has worked with the faculty inventors of both technologies, along with business advisory groups consisting of investors and innovation-experienced entrepreneurs to develop comprehensive commercialization plans. These plans were evaluated by the SEBIO selection committee, and both VCU technologies were chosen as finalists to present at the annual SEBIO Investor Forum in Palm Beach, Fla., on Nov. 1. The audience will include venture capital and angel investors, serial entrepreneurs and industry representatives. All finalists are awarded face-to-face, private meetings with top investors in the region to further promote their opportunities and commercialization plans. These meetings will be scheduled in the months following the forum.

Identification, protection and advancement of high-potential technologies is a major focus for VCU Tech Transfer, which has enhanced its commercialization strategy over the past year in regards to new venture creation and economic development.

“We have initiated a pre-licensing value creation program inside the university to ‘de-risk’ promising innovations and to connect our inventors with external resources and expertise,” said Ivelina Metcheva, Ph.D., executive director of VCU Tech Transfer.

The two VCU finalists represent opportunities that can have a significant impact on health care. The technologies include:

**Development of a handheld device for testing cardiac ischemia.**

Millions of patients are admitted to the hospital each year for heart attack symptoms, and 75 percent fall into a “gray zone” in which their ECG readings are non-diagnostic and biological markers are not yet elevated. These patients must be monitored and given additional tests until a conclusive diagnosis can be made. In total, only 15 percent of non-traumatic chest pain patients are actually diagnosed as having a heart attack. The proposed handheld point-of-care device allows for fast testing (minutes) of an early marker of ischemia, which can help clinicians to make more timely treatment or discharge decisions. This device could be utilized in the ER but also has the potential to expand into the home or in ambulatory settings. The VCU team that developed the hand held device are: Todd Gehr, M.D., professor and vice chair in the Department of Internal Medicine; Lynne Gehr, M.D., assistant professor in the Department of Anesthesiology; and Don Farthing, Ph.D., affiliate assistant professor in the Department of Pharmaceutics.

**Development of an optimized surgical mesh for hernia repair.**

In the hernia mesh market, the problems of infection, adhesion and recurrence are well known throughout the surgical community and result in significant “follow-on” health care costs. The proposed device utilizes a platform electrospinning technique to create a monofilament, lightweight, dual-sided architecture. As opposed to other products currently on the market, which focus on product composition, this well established, inexpensive and scalable technique uses the architecture of the mesh to overcome the issues of adhesion, recurrence and infection. The VCU team that worked on the electrospinning technology are Gary Bowlin, Ph.D., professor in the Department of Biomedical Engineering, and David Simpson, Ph.D., associate professor in the Department of Physiology and Biophysics.

Richmond has been selected to host the 2013 SEBIO Investor Forum next fall. VCU Tech Transfer will be heavily involved in promoting VCU to attendees during the forum.

“We’re very excited to help host the annual SEBIO Investor Forum here in Richmond next year,” said Frank Macrina, Ph.D., VCU’s vice president for research. “It
will be an important and wonderful opportunity to share VCU’s research enterprise with venture capital and angel investors, serial entrepreneurs and industry representatives who will be visiting Richmond for the forum."

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