

Life Sciences

DISCOVERY FUND

NEWS RELEASE

For Immediate Release

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LIFE SCIENCES DISCOVERY FUND ANNOUNCES RESEARCH AND DEVELOPMENT GRANTS TO COMMERCIALIZE HEALTH-RELATED TECHNOLOGIES

SEATTLE, Washington, December 14, 2012 — The Life Sciences Discovery Fund (LSDF) today announced over \$1 million in five awards to support commercial development of new health and health-care products within both the non-profit and for-profit sectors in Washington.

Two of the five new grants were made under the 2012 Commercialization grant competition and focus on promising diagnostic technologies developed in the state's non-profit research organizations. Gerard Cangelosi of the University of Washington will develop and evaluate a rapid test to detect health care-associated infections. Nathan Sniadecki of the University of Washington will create a prototype device to assess risk of internal bleeding in trauma patients.

Two awards were made under the 2012-2013 Proof of Concept granting program to help position early-stage Washington companies for private equity investment. Epoch Medical Innovations, Inc. (principal investigator Michael Ballas) will develop a system that improves the fit and comfort of prosthetic legs by automatically adjusting to volume changes in the residual limb. Crux Medical Innovations (principal investigator Bob Clements) will create a prototype device to enhance quality, yield, and speed of gastrointestinal biopsy collection, with the ultimate aim of improving disease diagnosis.

The fifth award provides additional funding to advance commercialization of technology developed through one of LSDF's previous grants. Daniel Chiu of the University of Washington has created an assay that would allow doctors to detect signs of cancer recurrence early to improve survival. The new funding will support validation of novel technology to further increase the test's sensitivity and better position the team to commercialize the product in Washington.

“We are pleased to use our funding to not only improve the diagnosis and treatment of serious medical conditions, but also catalyze the flow of dollars into our state and promote the development of Washington’s life sciences corporate community,” stated LSDF executive director John DesRosier.

The LSDF Board of Trustees made the final award selections following review of grant proposals for scientific and technical merit, commercial potential, and possible health and economic benefits.

Lura Powell, chair of the Board of Trustees, explained the rationale behind LSDF’s strategy of funding research and development at both non-profit and for-profit organizations. “This coordinated approach serves to push promising discoveries out of our first-rate research institutions and into companies, and also help those companies thrive in Washington so that our state can reap the economic and health benefits associated with commercialization.”

LSDF is currently accepting pre-proposals from Washington for-profit and non-profit organizations for both Proof of Concept and Opportunity grants. Up to \$6.5 million is available for award through June 2013. For more details, please visit the LSDF website at <http://www.lsdfa.org/>, email programs@lsdfa.org, or call 206-456-9577.

Funding for the new awards comes from Washington’s allocation of payments under the Master Tobacco Settlement Agreement of 1998, revenues arising from multi-state litigation with tobacco product manufacturers.

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The Life Sciences Discovery Fund, a Washington state agency established in May 2005, makes grant investments in innovative life sciences research and development to benefit Washington and its citizens.

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BACKGROUNDER INFORMATION

LIFE SCIENCES DISCOVERY FUND AWARDS, DECEMBER 2012

Gerard Cangelosi, University of Washington, \$250,000

Project Title: *Improved Diagnosis of Healthcare-Associated Infections*

Project Focus: To develop and evaluate a rapid test to detect infections that are commonly contracted in hospitals

Grant Mechanism: 2012 Commercialization Grant Competition

Healthcare-associated infections (HAIs) result in billions of dollars in preventable medical costs annually in the US. HAIs can be difficult or slow to diagnose, and thus patients are often treated incorrectly or unnecessarily. Dr. Cangelosi and his team will develop and evaluate a rapid and accurate diagnostic test for HAIs, utilizing high-sensitivity, high-specificity molecular viability testing technology. The commercialization partner is AttoDx, a Seattle start-up company that has an exclusive license to the underlying intellectual property. AttoDx will build an instrument to automate the test in parallel with the LSDF grant.

Nathan Sniadecki, University of Washington, \$250,000

Project Title: *Platelet-Dx: An Innovative, Point-of-Care Product for Detecting Trauma-Induced Coagulation Problems and Improving Emergency Medicine*

Project Focus: To develop a prototype device to assess risk of internal bleeding in trauma patients

Grant Mechanism: 2012 Commercialization Grant Competition

Trauma is the leading killer of people under the age of 44, and trauma cases in Washington have tripled over the last 15 years. Trauma patients are often at risk of internal bleeding – a major cause of mortality – due to injury to platelets, a component of blood important to blood clotting. Unfortunately, there is no suitable method for detecting platelet injury. Dr. Sniadecki and his colleagues are developing Platelet-Dx, a handheld device that will rapidly assess platelet function and bleeding risk in the field and/or the hospital, both saving lives (by allowing medical

personnel to treat patients appropriately) and facilitating efficient management of limited blood products. The LSDF grant will support building of a prototype instrument that can be used for bench top and preclinical studies. The University of Washington Center for Commercialization has assembled a team to help translate this technology into a commercial product.

Michael Ballas, Epoch Medical Innovations, Inc., \$250,000

Project Title: *Adaptive Compression System for Lower Limb Prosthetics*

Project Focus: To develop a system that improves the fit and comfort of prosthetic legs by automatically adjusting to volume changes in the residual limb

Grant Mechanism: 2012-2013 Proof of Concept Granting Program

There are approximately 1.5 million amputees in the US. Amputees face many challenges in using prosthetics, including changes in fit – induced by fluid volume changes in the residual limb – that can cause potentially debilitating skin sores. The goal of this project is to develop a technology that allows for rapid, automatic adjustment of the prosthetic's socket in response to limb volume changes. Epoch Medical Innovations anticipates that the LSDF grant will catalyze development of new intellectual property and attract private investment funding.

Bob Clements, Crux Medical Innovations, \$250,000

Project Title: *Crux Multiple Core Biopsy Device*

Project Focus: To create a prototype device to enhance quality, yield, and speed of gastrointestinal biopsy collection

Grant Mechanism: 2012-2013 Proof of Concept Granting Program

There have been no substantive innovations in endoscopic biopsy devices in nearly 40 years. Notably, current gastrointestinal (GI) biopsy forceps are associated with issues such as damage to the collected specimens and sampling inefficiencies. Crux seeks to develop the Multiple Core Biopsy device to enhance quality, yield, and speed of GI biopsy collection, with the goal of improving disease diagnosis. Target customers are hospitals and physicians in the GI endoscopy market. This grant will support prototype design, fabrication, and testing. Crux anticipates that having a functional prototype will help secure funding for further development.

Daniel Chiu, University of Washington, \$80,000

Project Title: *Isolation of Rare Cells and Circulating Tumor Cells with Low-Expression Biomarkers*

Project Focus: To validate novel technology to further increase the sensitivity of an assay, developed through prior LSDF funding, for early detection of cancer recurrence

Grant Mechanism: Reinvestment in Previously Funded Project

Dr. Chiu, under a prior LSDF grant, developed new technology for the isolation of rare cells in general, and circulating tumor cells (CTCs) in particular, and subsequently created two spinout companies to commercialize this technology. CTCs are a marker of cancer recurrence, and their presence could be used diagnostically to re-initiate treatment of presumed metastases. However, CTCs are very rare and require highly sensitive detection methods. The new funding will support validation of novel technology that Dr. Chiu developed to greatly increase the sensitivity of the CTC assay. This work is expected to facilitate commercial translation of the technology, help attract large pharmaceutical companies as development partners, and position the spinout companies as leaders in this rapidly moving and competitive field.

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