

## **Accelerating Venture Creation: University of Virginia Economic Development Accelerator (UVEDA) Program Status Update: FY 2013-2014 (December 2013)**

In partnership with the Commonwealth, the University of Virginia (UVA) established an economic development fund to increase research, promote economic development, and enhance the innovation ecosystem. The Commonwealth's investment will match private contributions to develop the UVA Economic Development Accelerator (UVEDA), a public-private partnership that will provide a unique set of resources to streamline and accelerate select technology-based business development opportunities based on research carried out at the University of Virginia.

The UVEDA is planned to have a proof-of-concept fund, a management team, and a seed investment fund, along with facilities, amenities, and technical and business development resources needed to successfully identify, evaluate, launch, capitalize, and manage emerging companies based on University research. The UVEDA also will be able to leverage the pipeline of projects which are being supported through the newly funded Virginia Innovation Partnership, an award received through the i6 Proof-of-Concept competition managed by the Department of Commerce. The Virginia Innovation Partnership funded through the i6 award will create a network of enhanced innovation and proof-of-concept capacity throughout the Commonwealth. By working closely with the Virginia Innovation Partnership, UVEDA's pipeline of new company possibilities, as well as its business development resources and translational research capacities, will be greatly enhanced.

### **Accomplishments to date:**

- ➔ **Redesigned UVA Innovation:** to maximize the impact of University of Virginia research discoveries by creating opportunities for University innovators and partners to advance these discoveries to the global community. This redesigned University-wide initiative accelerates the adoption of innovative UVA technologies in the market by cultivating mutually beneficial relationships with industry and other strategic partners. The program grows the local economy by providing UVA entrepreneurs with useful resources, guidance, mentorship and networks to launch innovation-based business ventures and facilitates research advances and the dissemination of knowledge by providing UVA researchers and their collaborators with the tools to protect and share their innovative discoveries. Initial investments include support for nationally renowned Innovation expert, Mark Crowell, and his team. Crowell's 25-year career in university innovation includes extensive experience in technology licensing, start-up company formation, seed capital development, and innovation-based economic development initiatives and planning.
  - **Outcome:** Over time University-affiliated ventures have created 862 jobs, with 421 of them in the region. The ventures have generated more than \$329 million in external funding and created 342 products that are either on the market or in development. The companies also employed 92 UVA interns and occupy about 125,000 square feet of real estate in the Charlottesville area.

- **New Business Development Entrepreneur-in-Residence Program:** UVa created a new Entrepreneur-in-Residence program to support innovative University spin-offs. The University appointed its first entrepreneur-in-residence, expanding resources available to UVa researchers wishing to commercialize their discoveries. Former Life Technologies Corp. and ATCC executive Brian A. Pollok joined the UVa team this year. As entrepreneur-in-residence, Pollok is charged with identifying new venture opportunities and mentoring University researchers pursuing innovation-based ventures. He works closely with the UVa Licensing & Ventures Group to identify and develop new venture opportunities and with researchers seeking to launch their innovative ventures.
- **Outcome:** Pollok is working with leading UVa faculty researchers to develop business plans, go-to-market and financing strategies, and other key business development materials fostering new company formation and spur local job creation.
- **Nationally Recognized Virginia Innovation Partnership (VIP):** UVa developed a statewide innovation partnership with the U.S. Department of Commerce designed to accelerate innovation and economic growth through proof-of-concept project funding. One of only seven multi-institution initiatives to win federal funding as part of the U.S. Department of Commerce's i6 Challenge, the Virginia Innovation Partnership brings together universities, community colleges, corporations, investment capital and other resources to drive promising research discoveries forward. The UVa supported projects will allow innovative research to be developed into new prototypes and businesses.
- **Outcome:** Each year, the partnership will fund multiple UVa projects with the expectation of attracting significant follow-on funding and forming new Virginia companies in the Commonwealth's burgeoning IT and bioscience industries
  - **Outcome:** UVa organized the Virginia Ventures Networking Forum attracting venture capital funds and high-quality intellectual and business partners from around the country to the Commonwealth. As one of the largest university-based venture gatherings in the world, this forum enhanced exposure of our i6-funded researchers to private sector investors managing over \$5 billion in investment capital thus enhancing the deal flow to new ventures.
- **Groundbreaking Microbiome Research Awards:** To promote new research directions and collaborations in the biosciences, UVa identified the microbiome as an emerging field with a significant potential impact on research. The microbiome is the collective of microorganisms that reside on and within us. While the importance of the microbiome is becoming increasingly clear, its composition and function are not well understood due to its complexity and diversity. Many faculty members have relayed observations on how the microbiome influences homeostasis and disease in their domains of interest with the intention of nucleating new research activities in this area. The goal is to nucleate a project and provide preliminary data to move it forward.

- **Outcome:** Two outstanding junior UVa faculty were awarded the inaugural Microbiome awards this year and as a result of the preliminary data generated from these awards expect significant external federal follow-on funding.
- **Life-saving PureMadi Water Purification:** brings together UVa faculty, students and alumni to improve water quality, human health, local enterprise and quality of life in the developing world. UVa researchers are making life-saving water purification tools more widely available in rural areas of South Africa, where access to clean water is limited. An estimated 780 million people worldwide do not have access to clean water. The UVa team developed silver-impregnated ceramic water filters and tablets, or MadiDrops, that are highly effective at disinfecting contaminated water. A co-operative of Mukondeni potters are already making and selling these filters at a community-based nonprofit production facility in the Limpopo province of South Africa, while UVa researchers recently formed a Virginia for-profit company, MadiDrop LLC, expected to create new jobs and business in the Commonwealth. The MadiDrop is an innovative and completely new point-of-use water treatment technology.
- **Outcome:** Simple and inexpensive to produce, the palm-size ceramic tablets can be dropped in a large water container and continually disinfect water for up to six months with the potential to improve the human condition for millions of people across the world.
- **Revolutionary Chip Cooling Technology:** Funded groundbreaking UVa engineering research exploring thermal management as it impacts the microprocessor industry. The research approaches the problem through two steps. The first is to stop the wasteful power consumption at the source through best-effort power-aware design. The second is to extract and dissipate the heat using a novel phase-change approach that avoids many of the operational limits, and allows energy recovery from the resulting high-quality heat. This research has the potential to revolutionize the microprocessor industry and the University has a patent-pending for the cooling design of these high-performance computer chips
- **Outcome:** This new technology will enable high-end computer chips and electronics to operate cooler and more efficiently and will enable stacking of computer chips, leading to savings of billions of dollars in operational costs in datacenters, by using less energy upfront and recovering a larger portion of used energy.
- **Southeast Bio Investor Conference in Virginia for the First-time Ever:** Lead organizing role in recruiting and designing the SE BIO Investor Conference in Nov 2013 – the first time ever in Virginia. The annual event helps foster the growth of the life sciences industry in the region by promoting entrepreneurship and bringing together the key stakeholders active in the development of the industry. To date, over 350 biotechnology, medical device, pharmaceutical, diagnostic and healthcare IT companies from across the Southeast have presented at SEBIO's annual Investor and Partnering Forum. These companies, in aggregate, have raised more than \$2.5 billion in public and private funding since their presentations.

- **Outcome:** Hundreds of biotech and medtech investors, corporate executives, university representatives, entrepreneurs, and service providers attended the event. As the Southeast region's premier life sciences and medical technology conference, we connected emerging companies with potential investors and partners in a forum that provided meaningful networking opportunities.

→ **US Manufacturing Base for Energy Efficient, Affordable Homes and Disaster Recovery Shelters:**

Through the internationally recognized reCOVER and ecoMOD programs, UVa students and faculty are providing safe, affordable and environmentally conscious transitional housing for those affected by natural disasters. With additional funds, we are jumpstarting the process of bringing our proven building system to market, both domestically and internationally to perform the research and analysis needed to make the initiative sustainable. The University of Virginia initially received a \$2,445,000 grant from the Virginia Tobacco Commission Indemnification & Community Revitalization Commission to help transform industry in Southside Virginia utilizing housing designs created through the University's School of Architecture.

- **Outcome:** Develop additional funding mechanism to support this award winning technology that aids in disaster relief efforts across the world and provides manufacturing job opportunities here in Virginia.