



Innovations

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Message from Jack Brittain



The U has received many kudos for its contributions to Utah's economy. There is growing recognition across the state that the research and technology development occurring at the U is creating an economic future that includes high quality jobs, prosperity supporting all economic sectors, and a leadership role in the global knowledge economy. Utah is consistently ranked among the nation's best places to do business and is an emerging technology powerhouse.

How do we keep the momentum going? This may seem an odd question, but now is the time to examine what brought us to this juncture. Utah has an opportunity to firmly establish an industry/commercial base as dominating as the Research Triangle, Austin, and Madison, areas that are built on the foundation of great research universities. Like the Red Queen in *Through the Looking Glass*, we have to keep running just to stay in one place. We need to run smart to stay ahead of the pack.

Utah's "secret to success" is a collaborative research environment and a willingness to support research focused on answering big questions. Collaboration gets more difficult as the University gets larger, which is all the more reason to support efforts like the USTAR Initiative. It is the interdisciplinary teams, like the USTAR teams, that are going to provide fundamental answers and improve the lot and lives of the human population. The University of Utah is a unique environment for doing research and is worthy of support by the citizens and businesses of the state who are committed to investing in Utah's future.

Enhancing Commercialization and Educational Opportunities through International Partnerships

Utah Governor Jon Huntsman's trade delegation to India initiated a long-term international collaboration with that country and the University of Utah. During the trade mission, Jack Brittain, vice president of Technology Venture Development at the University of Utah signed four memorandums of understanding between the University of Utah and four reputable Indian companies: Globberian, Global Health Private Ltd. MediCity, Manipal AcuNova Ltd., and Pregna International. Gov. Huntsman witnessed each of the signings which took place in Mumbai and New Delhi, India.

The dynamic partnership between the University of Utah and Pregna International, a world leader in contraceptive manufacturing located in Mumbai, India, will focus on the commercialization of cutting edge anti-HIV and contraceptive delivery products for

the Indian marketplace.

"There are over two-million individuals living with HIV/AIDS in India today with 84 percent of the infections resulting from sexual transmission of the virus," says Patrick Kiser, an assistant pro-



fessor of bioengineering at the University of Utah. "The University's portfolio of innovative technologies coupled with the product development experience of Pregna could help control of the spread of this devastating disease. This partner-

What you'll find in

Innovations

- *Enhancing Commercialization and Educational Opportunities through International Collaboration*
- *Zions Bank partners with the Utah Entrepreneur Challenge to start entrepreneurial outreach*
- *Technology Venture Development Podcasts now available at www.utah.edu/podcast - click business!*

India story continued...

ship will give the University a chance to place their technologies in the hands of people that need them most and will enhance the value of our technologies in the developed world."

One of the technologies that may be commercialized through a partnership with Pregna is a molecular condom that protects against AIDS. This technology was developed by Kavita Madanlal Gupta and Kiser. Gupta is an international student from India and is currently working toward a Ph.D. in bioengineering at the University of Utah.

Microbicides, such as the microbicial molecular condom developed by Gupta, are seen as a way for women to gain power by protecting themselves from HIV. Together, Pregna, and the University, will work on this and a variety of other technologies which have the potential to provide humanitarian aid to the people of India.

The university will work with each of the four companies to create a progressive alliance to accelerate commercialization of university-invented technologies, expand educational and research opportunities, as well as aid in humanitarian efforts.

"The University of Utah is continually contributing to the strength of Utah's economy through the commercialization of their cutting-edge research and technologies," said Governor Huntsman. "As the home of Nobel Prize winner Mario Capecchi, the University of Utah has been appropriately recognized as an international leader in research. Working collaboratively with India through these four international partnerships, the University of Utah will open up opportunities for existing businesses and aid in the start-up of new companies which will create meaningful jobs through a strong humanitarian focus."

Globerian, headquartered in New Delhi, India, is a world leader in health information technology, research and healthcare practice management. Globerian's resources will help medical and bioinformatics researchers and students at the University of Utah identify emerging opportunities for the development and commercialization of the U's medical informatics expertise. Future collaborative efforts may include advancing health information research and data management technologies to provide individuals and institutions global access to health information.

Manipal AcuNova Ltd., a global clinical research organization based in Bangalore, India, will help university researchers more efficiently conduct clinical trials in India, accelerate collaborative medical technology commercialization, and offer students a practical experience in an international business-research setting.

Global Health Private Ltd., MediCity, is currently developing a four-million-square-foot, 40-acre facility in Gurgaon, India. This institution, backed by clinical and biotechnology research, will provide medical care to the growing middle class in India. This partnership will facilitate collaborative efforts to enhance healthcare delivery while providing international experience for students.

"These Indian companies are unique partners for the University of Utah," Brittain says. "Their leaders are innovative and eager to bring new medical technologies to their community. Partnering with Indian companies will allow the University to benefit from their expertise and willingness to engage in collaborative research and development. Through this alliance we will be able to accelerate commercialization of University technologies and provide economic benefits to both the United States and India." ✨



A Manipal AcuNova researcher performs experiments in the lab.

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Governor Jon Huntsman Jr.

The University of Utah's Kavita Gupta and a research partner perform research in the department of Bioengineering.





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SPEAKER DEVIN THORPE

Opportunity Quest Goes State-Wide:

Zions Bank and Utah Entrepreneur Challenge create entrepreneurial outreach program

Zions Bank and the Utah Entrepreneur Challenge (UEC) have teamed up to support entrepreneurship across the state. Through the generous support of Zions Bank, the UEC will establish a statewide entrepreneurial outreach program at seven colleges and universities throughout the State of Utah. This outreach program will allow students to participate in local business plan competitions.

"It is exciting to collaborate with The Utah Entrepreneur Challenge," says Scott Anderson, CEO of Zions Bank, "We are hoping to see the next big entrepreneurs emerge from this program. Through real world experience, they will be able to develop their ideas into real businesses."

This new entrepreneurial outreach program is designed to get students involved in entrepreneurial activities in at a local level. The Utah Entrepreneur Challenge will be responsible for setting up the infrastruc-

ture to ensure this program's success. Zions Bank is providing scholarships for two students at each school to run the local business plan competitions. These student outreach representatives will work directly with the UEC to educate students in entrepreneurship through their experience in the competition.

"We are excited to expand this program from one state-wide business plan competition to include seven different local competitions," says Troy D'Ambrosio, Director of the Pierre Lassonde Entrepreneur Center, "This outreach program will give even more students the opportunity to experience and learn about entrepreneurship in real-life situations."

The new outreach program will help educate students on how to develop their ideas into business plans. Zions Bank participation goes beyond their support and scholarships. They will help provide participating

students with experienced mentors. Zions Bank will also help find competition judges.

The competitions will take place during fall semester at each school and will be modeled after the Utah Entrepreneur Challenge state-wide business plan competition. The winning teams from each school will automatically be qualified as semi-finalists in the UEC Top 25. They will then enter their business plans to the test for the chance to win \$40,000 in start-up funding. Schools participating in the entrepreneurial outreach program include Utah State University, Utah Valley State College, Salt Lake Community College, Weber State College, Southern Utah University, Dixie State College and Westminster University.

For more information on these educational entrepreneur programs, please visit <http://www.lassonde.utah.edu>. *

Did you know?

The TCO Post-Doctoral Associate

Did you know that the Technology Commercialization Office employs a life science post-doctoral associate? This is a unique position created to train and expand post-doctoral education in translational research and commercialization in a real world business environment.

There is an ever growing demand by industry to better train scientists in the principles of technology commercialization and to provide valuable professional experience in understanding the interface between great science and great business. TCO's post doctoral associate has the opportunity to be exposed to new invention disclosures,

patent searches, technology assessment, valuation, market research and the basics of starting university based technology companies.

In particular, the post-doc works with TCO and ARUP Laboratories encouraging and enhancing the interactions between the scientists of both institutions and facilitating new translational research opportunities. The post-doctoral associate works with the technology commercialization office for two years.

For more information about TCO's post-doctoral associates, please contact Dr. Rajiv Kulkarni at Rajiv@tco.utah.edu. *

Have you received multiple copies of *Innovations*? Pass any extras on to others interested in The University of Utah.

University Start-up Company RayScale is Working Behind the Images

You don't have to be a computer scientist to appreciate the world of computer graphics. You can't go a day without running into them - they're seen on television, the internet, in movies and even seen while playing Halo3. If you take the time to look beyond the pictures, you'd understand that hundreds of

computer graphics artists and programmers are responsible for the images you see every day.

Computer graphic artists are limited by time, costs and current computer capabilities to digitally reproduce the world around us. Producing high-end three-dimensional realistic computer images requires long development cycles. RayScale, a University of Utah start-up company, was developed by Steven Parker, PhD and Peter Shirley, PhD from the University of

Utah's School of Computing. Their technology brings interactivity and visual accuracy to the computer graphics market, greatly speeding the process and realism whereby computer graphics can be produced. Their software and patented algorithms allows ray tracing technology to break free of their historical computing limitations by using light waves, physics, and faster raster graphics technologies.

Parker and Shirley believe their innovative graphics software will drive the next-generation of graphics applications such as 3D and animation authoring, video gaming, photorealistic advertising and designing, medical imaging, and computer generated (CG) motion pictures. The benefit for you? Significantly better realism in medical imaging, video games, computer graphic movies, product simulations, print media and the like.

Initially, the company will offer interac-

tive ray tracing rendering plug-in software, enabling graphics artists and programmers to accelerate their development activities. The first plug-ins will be released in Q1 2008. RayScale believes their technology is uniquely positioned to become the leading ray tracing technology to drive the adoption and migration from existing technology, broadly used by the video game market, to next generation life-like and real-time ray-traced video games.

RayScale is a State-of-RT Affiliate. For more information, please contact Mike Fahner at mfahner@rayscale.com. *

