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In The News

Veristride, a start-up company housed in BioInnovations Gateway, has been named by Forbes as one of the top five most disruptive technologies at the 2015 Consumer Electronics Showcase. Led by U of U researcher Stacy Bamberg, Veristride is developing unobtrusive shoe-based technology that will measure and provide active feedback on how well you walk.
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The USTAR Genetic Discovery team has discovered that the insulin infused venom in cone snails enables them to catch prey. Insulin is a hormone used throughout the animal kingdom to remove excess glucose from blood. But if you have too much insulin, your glucose levels drop and you become disoriented, confused and you can eventually lose consciousness and die.
The cone snails appear to subvert insulin's normal physiological role to use it as an offensive weapon.
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Ivy V. Estabrooke, Ph.D., has settled into her role as executive director for the Utah Science and Technology Research initiative (USTAR) after being appointed to the position by Gov. Gary Herbert this past spring. She sees big things in the future for USTAR and the University of Utah professors whose research plays an integral role in helping the initiative to succeed. Estabrooke is leading USTAR into a new era

Utah's SBIR-STTR Assistance Center

Utah entrepreneurs can nearly double their odds of winning research and development federal funding through Utah's SBIR-STTR Assistance Center.

Funded through the Utah Science Technology and Research Initiative (USTAR), the SSAC is available to all Utah small businesses with a technology focus no matter their stage of business.

Mary Cardon, director of the SSAC, with a background in entrepreneurship, business management and writing, lends strong expertise to running the center and assisting its clients. Cardon launched the SSAC in 2008 as part of USTAR's Technology Outreach Innovation Program (TOIP).

"The SSAC assists small business owners and entrepreneurs win these very competitive grants at a much higher success rate than what is possible going through this process on their own," said Cardon. "The national average is 14-17 percent, we are better than 25 percent."

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"Smart" insulin adjusts blood sugar

For patients with type 1 diabetes (T1D), the burden of constantly monitoring their blood sugar and judging when and how much insulin to self-inject, is bad enough. Even worse, a miscalculation or lapse in regimen can cause blood sugar levels to rise too high (hyperglycemia), potentially leading to heart disease, blindness and other long-term complications, or to plummet too low (hypoglycemia), which in the worst cases can result in coma or even death.

To mitigate the dangers inherent to insulin dosing, a University of Utah biochemist and fellow scientists have created Ins-PBA-F, a long-lasting "smart" insulin that self-activates when blood sugar soars. Tests on mouse models for type 1 diabetes show that one injection works for a minimum of 14 hours, during which time it can repeatedly and automatically lower blood sugar levels after mice are given amounts of sugar comparable to what they would consume at mealtime.

Ins-PBA-F, acts more quickly, and is better at lowering blood sugar, than long-acting insulin detimir, marketed as LEVIMIR. In fact, the speed and kinetics of touching down to safe blood glucose levels are identical in diabetic mouse models treated with Ins-PBA-F and in healthy mice whose blood sugar is regulated by their own insulin. A study showing these findings will be published Feb. 9 in PNAS Early Edition.

"This is an important advance in insulin therapy," says co-first author Danny Chou, Ph.D., USTAR investigator and assistant professor of biochemistry at the University of Utah. "Our insulin derivative appears to control blood sugar better than anything that is available to diabetes patients right now."

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and spoke to This Week @The U recently about her vision for the future and decision to come to Utah. Read More

USU opens facility to manufacture spider silk

NORTH LOGAN — Utah State University conducted a ribbon-cutting ceremony Thursday morning for the newly constructed Bioproducts Scale-Up Facility at its Innovation Campus. The facility is designed for the production of large amounts of synthetic spider silk for commercial use.

The idea for the facility started with the research of USU Professor Randy Lewis and his work in the development of synthetic spider silk. Soon, the university realized that the synthetic spider silk could be commercialized for products like ligament and tendon repair, advanced coatings, high-tech clothing, parachutes and airbags, to name a few. It can also be used to create a gel that, when combined with medication, can be injected to provide long-term drug delivery.

In order to produce enough spider silk for these purposes, the research facility needed large fermentors. Working with the Utah Science Technology and Research initiative and the Woodbury Group, they were able to build the new research facility.

Construction took about a year and cost over a million dollars. However, the facility provides a new set of equipment that isn't available anywhere else in the university. In fact, according to Scott Hinton, the director of the Synthetic Bio-Manufacturing Institute, there are very few similar facilities in the United States.

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U of U Spin-Out Receives G2M Award

Sentius, a Software as a Service company that spun out of technology developed at the University of Utah, has won a Utah Science Technology and Research Initiative (USTAR) Phase I Go-To-Market award grant (G2M). In addition to private funding, this G2M award will assist the company in launching its pilot program, on a national level, within the next few weeks.

The software is based on Business Intelligence (BI) concepts and technology developed at the University of Utah (U of U) hospital and subsequently licensed to Sentius. Andrew Wood, director of finance for nursing at the University Hospital, and creator of the Sentius analytics tool, utilized the resources at the University's Technology and Venture Commercialization Office (TVC), an office that bridges the gap between research and commercialization, to find a partner that could explore the software's commercialization potential. That's where Wood met Jeremiah Jones, co-founder and CEO, along with Jones' business partner Bryce Ott, who were exploring various technologies at the TVC office.

"The concepts and technology behind Sentius allowed the executive team at the U of U hospital to drill down deeply in to issues related to how items were being billed, the use of resources, areas where the hospital was losing money, as well as maintaining proper staffing ratios," said Jones.

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