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INNOVATION UTAH insights
monthly e-bulletin

Volume 9, Issue 54 May 13, 2015

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In The News

University of Utah researchers have developed an algorithm they believe could improve diagnosis and treatment of ovarian cancer. By studying patterns of DNA anomalies, the team developed a mathematical technique that can better predict how long a woman will live and how her tumors will respond to chemotherapy. "We believe this is a first step toward bringing ovarian cancer into the age of precision medicine," said team leader Orly Alter, a USTAR associate professor of bioengineering and member of the U.'s Scientific Computing and Imaging Institute.
Read more

Synthetic spider silk holds promise as a leading biomaterial of the future with its unrivaled combination of strength and elasticity. Utah State University researchers, guided by USTAR Biology Professor Randy Lewis, have led efforts to create recombinant spider silk proteins through the Lewis Lab's novel use of transgenic goats, bacteria, alfalfa and silkworms.
Read more

Recent research has linked

Innovation Insights: The Energy Edition

Utah's pressing energy issues are being addressed by the TOIP team on a number of levels using a variety of tools and collaborations across Utah. At the Energy & Geoscience Institute (EGI) in the University of Utah (UofU) Research Park, USTAR East Director Al Walker and Dr. Andrew Sweeney are coordinating eight research projects through the Utah Energy Research Triangle (ERT) and supporting GOED Technology Commercialization Innovation Program (TCIP) grants.

These leading-edge programs are tackling Utah-centric energy issues including air quality, waxy crude flow assurance and safety, greenhouse gas (GHG) reduction, and others, while ensuring the professional development of our future researchers. Additionally, the TOIP student interns support USTAR professors BJ McPherson, John McLennan, Shelly Minteer, Mano Misra, and Caroline Saouma with business analysis under the direction of Walker and Sweeney.

In eastern Utah, critical outreach and research is being completed at Utah State University (USU) research arms in Vernal and Price. At the Bingham Research Center in Vernal, Dr. Seth Lyman is conducting research and commercialization of instrumentation for air quality monitoring, and spearheads the Uinta Basin Ozone and Air Quality Study (UBOS) to deal with the unique issue of wintertime ozone in Duchesne and Uintah counties. In Carbon and Emery counties, Dr. Scott Hill is directing efforts at the Carbon Energy Innovation Center (CEIC) to utilize coal and coal waste in high quality coke production, and to develop solid waste gasification techniques, and is pursuing Economic Development Administration support for continued study of the regional economic development needs within CEIC.

Read more here

the thin air of higher elevations to increased rates of depression and suicide. But a new study shows there's also good news from up in the aspens and pines: The prevalence of attention deficit hyperactivity disorder (ADHD) decreases substantially as altitude increases. In Utah, for example, an analysis of information from two national health surveys correlated with the average state elevation of 6,100 feet showed that the rate of diagnosed ADHD cases is about 50 percent of states at sea level.
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Clean and Renewable Energy in Eastern UT

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The buzzwords for energy today are 'Clean and Renewable.' Utah State University (USU), with support from USTAR, is helping develop clean and renewable energy in Utah. The Carbon Energy Innovation Center (CEIC), located near Helper, Utah is supporting regional economic development by assisting companies in commercializing energy-related technologies. The CEIC provides industrial space for the demonstration of pilot-scale facilities for technologies that have been successfully demonstrated at a laboratory-scale and a bench-scale.

The CEIC also provides tools and equipment, work areas, warehouse-type space, and office space. Additional services that are available include: Chemical analyses at the USU Uintah Basin Campus in Vernal, UT, and machining, welding, and CAD support at the USU Eastern campus in Price, UT. The CEIC facility can also provide on-the-job-training in an industrial setting for students associated with USU's regional campuses.

Read more here

Master of Science, Petroleum Engineering

On Friday May 8, the first students will graduate from the University of Utah's Department of Chemical Engineering Master of Science (MS) degree in Petroleum Engineering. Course enrolment began for this degree in the fall of 2013.

This is a sixteen-month, 33 semester hours, program of course work, practical field and design work, and a project or thesis. The course work incorporates petroleum engineering fundamentals and advanced topics, fundamental petroleum geologic concepts as well as exposure to constraints on energy technologies (geopolitical and economic considerations, environmental issues).

John McLennan, USTAR faculty member in Chemical Engineering and petroleum program director, said this degree is a collaborative endeavor between the Department of Chemical Engineering and the Energy & Geoscience Institute at the University of Utah.

One of the intentional key differentiators of this petroleum engineering degree program is that a large portion can be taken by distance learning. Working professionals are able to participate in order to facilitate career change or improve their standing within their current employment setting.

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USTAR Alternative Energy

The USTAR Alternative Energy cluster is focused on two main processes: the production of fuels from carbon dioxide and the use of fuels and lights to produce electrical energy in fuel cells and solar cells.

Caroline Saouma's group is focused on synthetic inorganic chemistry for energy and catalysis. They are developing catalysts for the reduction of carbon dioxide. The two-electron/two-proton reduction of carbon dioxide can give carbon monoxide or formic acid, the former of which can be converted to higher alkanes via Fischer-Tropsch technology, and the latter of which is being developed as a hydrogen storage material.

Shelley Minteer's group is interested in sequential catalytic systems, but from the point of view of utilizing fuels and photons to produce electrical energy. The team uses hybrid catalytic cascades incorporating biological, metal nanoparticle, and organocatalysts for providing sequential oxidation steps of complex fuels (i.e. methanol, ethanol, glycerol, sugars and carbohydrates, JP-8 jet fuel, etc.) into electricity. The team designs, engineers, and synthesizes novel hybrid catalytic cascades, immobilizes them on scaffolds on electrode surfaces, and incorporates the electrodes into fuel cell prototypes.

Read more here

Governor's Energy Summit

Please join Governor Herbert at his fourth annual Governor's Utah Energy Development Summit on May 20-21 at the Salt Palace Convention Center.

This year's Summit will feature a morning keynote by Greg Goff, president and CEO of Tesoro, and an afternoon keynote by Jonathan Weisgall, VP of Legislative & Regulatory Affairs for Berkshire Hathaway Energy. It will also feature a National Energy Policy panel hosted by Jack Gerard, CEO of the American Petroleum Institute.

Attendees will have the opportunity to participate in a dozen break-out sessions on a variety of pressing economic, regulatory, and technological issues, visit energy trade show and exhibit areas, and enjoy networking receptions on both days. Supported by dozens of Utah's top energy producers and suppliers, the Summit is expected to draw 1,500 attendees from around the globe.

The Summit is presented by the Governor's Office of Energy Development in partnership with the Utah Media Group, who together intend to foster a productive discussion that serves to expand and enhance Utah's energy economy.

Register here.