

# KU Discovery & Innovation

News from KU Research

August 2014

## HIGHLIGHTS

- 1 Proposal Deadline Nears
- 1 KU Ceremony Recognizes Remote Sensing Pioneer
- 2 Three Level I Strategic Initiative Grants Awarded
- 2 Summer Undergraduate Research Session a Success
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## Strategic Initiative Proposals Due September 15

Since it started in 2012, the [Strategic Initiative Grants program](#) has awarded more than \$5.1 million in Level I awards to Lawrence researchers for innovative, collaborative projects. These 15 projects all relate to one or more of the four *Bold Aspirations* strategic initiative themes and are an indication of the progress being made in "Driving Discovery and Innovation." This spring, for example, three new Level I grants were awarded:

- **Establishing Social-Computational Collaboration Towards Credible Social Media**
- **Dissecting the Function of Pediatric Disease Genes in Model Systems**
- **Consortium Targeting Small Ubiquitin-related Modifier (SUMO) for the Treatment of Inflammatory-Related Diseases**

Mary Lee Hummert, interim vice chancellor for research and chair of the Research Investment Council, has announced the next two deadlines for Level I proposals: **5 p.m. on Monday, September 15, 2014** and **5 p.m. on Monday, February 16, 2015**. Level II proposals use a rolling evaluation process and can be submitted at any time.

Information about the program is [available online](#), along with links to the secure, online application forms. Hummert encourages KU researchers to review the application materials and submit a proposal this fall and/or in the spring.



[Colleagues and friends of the late Richard K. Moore](#) gathered at Nichols Hall August 6 for a ceremony dedicating a conference room in his honor. Speakers were, from left, Michael Branicky, School of Engineering; Donnis Graham, Radar Systems and Remote Sensing Laboratory; Glenn Prescott, Electrical Engineering and Computer Science; and Mary Lee Hummert, KU Research. The plaque reads "Dedicated by a grateful university in recognition of his world-renowned and pioneering research in radar remote sensing of the earth."



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## Level I Strategic Initiative Grants Awarded

Three Level I Strategic Initiative Grants were awarded over the summer. The recipients (from the March 1 submission cycle) were chosen by the Research Investment Council.

### Establishing Social-Computational Collaboration Towards Credible Social Media (\$206,305, two years)

- Fengjun Li, Electrical Engineering and Computer Science
- Hyunjin Seo, Journalism and Mass Communications

This project works toward the goal of examining and defeating social spamming and automated “astroturfing” attacks. Success of the project will establish intensive collaboration between social and computational science researchers at KU and develop an interdisciplinary, self-sustainable research program to understand and enhance online credibility.

### Dissecting the Function of Pediatric Disease Genes in Model Systems (\$299,330, three years)

- Brian Ackley, Molecular Biosciences
- Erik Lundquist, Molecular Biosciences
- Stuart Macdonald, Molecular Biosciences
- Robert Ward, Molecular Biosciences

The team will work with the Center for Pediatric Genomic Medicine at Children’s Mercy Hospital to obtain information about genetic changes in sick children that may underlie their diseases. The team will then use well-established model organisms and create equivalent lesions in the genomes to determine whether they are detrimental to the organisms.

### Consortium Targeting Small Ubiquitin-related Modifier (SUMO) for the Treatment of Inflammatory-Related Diseases (\$299,680, three years)

- Nancy Muma, Pharmacology and Toxicology
- Yoshiaki Azuma, Molecular Biosciences
- Jeff Staudinger, Pharmacology and Toxicology

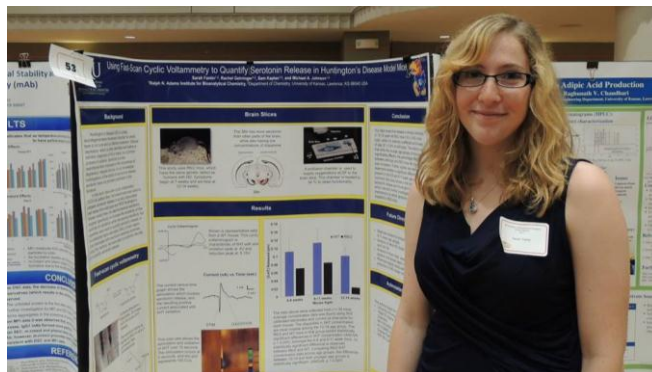
The consortium employs existing KU strengths in drug discovery and development to develop novel methods to screen for therapeutically relevant drug targets. The binding of a SUMO protein to target proteins is a relatively newly discovered post-translational modification. Research in multiple disciplines has identified the SUMOylation pathway as an “Achilles heel” in controlling inflammation. Using KU Core Facilities, the team will create three novel approaches to interrogate drug targets and identify lead compounds. It will also establish an annual symposium on SUMO research breakthroughs.



## KU Summer Undergraduate Research Draws Large Audience for Poster Session

Students attending 48 colleges and universities from 27 states, Puerto Rico and Ireland presented work as part of the [KU Summer Undergraduate Research Poster Session](#), held July 25 at the Kansas Union Ballroom. About 100 students participated in the public event, which was co-sponsored by the KU Center for Undergraduate Research and the Madison & Lila Self Graduate Fellowship.

Among the presenters was Sarah Fantin (below) of the University of Indianapolis. Her project was “Using Fast-Scan Cyclic Voltammetry to Quantify Serotonin Release in Huntington’s Disease Model Mice.” She worked with Michael Johnson, KU associate professor of chemistry.



Photos: KU Center for Undergraduate Research

## Leadership Transition Begins at KUIC

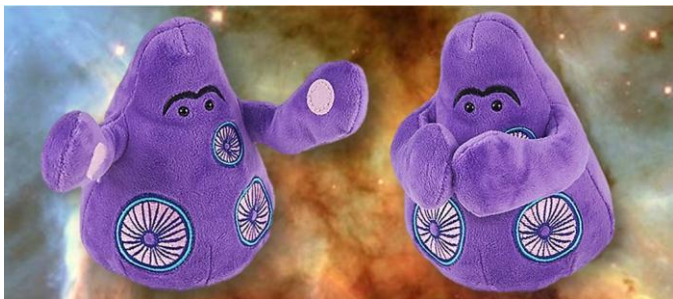


Julie Nagel, executive director of corporate partnerships with **KU Innovation and Collaboration (KUIC)** has been named interim associate vice chancellor for innovation and entrepreneurship. She will also serve as interim president of KUIC.

Nagel succeeds Julie Goonewardene, who will join the University of Texas System on Sept. 15 as associate vice chancellor for innovation and strategic investment.

Nagel came to KU in 2011 from Discovery Park at Purdue University, where she was managing director of the Oncological Sciences Center. As interim associate vice chancellor and president of KUIC, she will be responsible for all universitywide commercialization efforts, including intellectual property, company formation, corporate outreach and foundation research relationships.

“KUIC is a very important part of KU’s overall economic development strategy,” said Mary Lee Hummert, interim vice chancellor for research at the Lawrence campus. “She knows the KUIC organization and has both academic and company experience that will serve us well moving forward.” Hummert said there will be a national search for Goonewardene’s permanent successor.



## Research-Based Toy Makes its KU Debut

A new Higgs Boson plush doll (above) was developed by the **KU Quarked!** team of physicists, museum educators and designers, aided by KU Innovation and Collaboration. It is now **available online at the KU Bookstore** and at the KU Natural History Museum store. The Higgs Boson is a subatomic particle. The six-inch doll (\$12) comes with printed information about the Higgs field and its importance, i.e., without it “atoms and molecules would not be able to form, and the world of matter as we know it would not exist.”

## KU Researcher Kudos

- **Kristin Bowman-James**, university distinguished professor of chemistry and project director of Kansas NSF EPSCoR, is principal investigator on a three-year, **\$6 million NSF award** for the Kansas-Nebraska consortium on “Controlling Ultrafast Dynamics of Atoms, Molecules, and Nanostructures.”

- KU graduate students **Banupriya Sridharan** (left), bioengineering, and **Aishik Chakraborty**, chemical



and petroleum engineering, will be recognized September 9 at the **Kansas City Area Life Sciences Institute annual dinner**. “Science art” created in their

labs will be part of a silent auction fundraiser and they will appear on a video during the program.

- **Bala Subramaniam**, Dan F. Servey distinguished professor of chemical and petroleum engineering, wrote an entry for “Science 2034,” a Science Coalition initiative that looks out 20 years to predict what the future may hold in various research fields. His text will be posted soon at [www.SCIENCE2034.org](http://www.SCIENCE2034.org).
- **Judy Wu**, university distinguished professor of physics and astronomy, has been selected for the 2014 **KU Women of Distinction Calendar**. She and others will be recognized at a September 4 ceremony.
- The **KU Natural History Museum** unveiled new exhibits in August featuring spectacular artifacts of pre-Columbian archaeology, the dazzling expressions of the color red in nature, and the real bones of a new Tyrannosaurus rex skeleton. The exhibits are part of a two-year makeover of the sixth floor of the museum.
- Four past and present **KU students have received Fulbright awards** for international study in 2014-15:
  - **Vincent Artman**, geography, Kyrgyzstan
  - **Qi Chen**, chemical engineering, United Kingdom
  - **Nicholas Cunigan**, history, The Netherlands
  - **Irene Olivares**, history, Spain

Since the program’s inception in 1946, 447 KU students have been awarded Fulbrights.

## KU's Large Data Management Summit Now Rescheduled for September 21-22

"Harnessing Information, Multiplying Knowledge" is one of the four *Bold Aspirations* strategic initiative themes. An on-campus event next month relates directly to that theme and will address a major research infrastructure challenge.

The Large Data Management Genomic Biodiversity Summit will take place September 21-22. It was originally scheduled for March 2-3 but was cancelled due to a snowstorm. The event is free and open to all interested persons.

A reception at the Oread on the 21<sup>st</sup> will be followed on the 22<sup>nd</sup> by an all-day program at The Commons in Spooner Hall. Sponsors are KU Research, KU Innovation and Collaboration, the Office of the Provost, KU Information Technology, Microsoft Azure, and Internet2.

Invited speakers include representatives of Argonne National Laboratory, the Field Museum of Natural History, the University of Oklahoma, Microsoft, and Internet2. KU presenters include Jeff Vitter, provost and executive vice chancellor; Kris Krishtalka, director of the Biodiversity Institute; and Jorge Soberón and Paulyn Cartwright of the Department of Ecology and Evolutionary Biology. Registration is [required and available online](#).



## Save the Date: 2014 Kansas Economic Policy Conference Thursday, October 23

The annual state-of-the-state program (2013 session shown above) will focus on "The Affordable Care Act in Kansas: Impacts on People, Business and Providers." It will take place at the Kansas Union and at a satellite location in Ulysses, Kansas. The conference is presented by the Institute for Policy & Social Research, with support in Ulysses from Pioneer Communications and the Grant County Chamber of Commerce and Tourism. More [information will be posted](#) as the date approaches.

## KU Research Notes

### "RA-101" Begins September 10 at Nichols Hall

"[Research Administration 101](#)" (RA 101) is a free, 10-session intramural course sponsored by KU Research. It provides participants with an overview of research administration at KU. Topics include grant proposal preparation, award terms and conditions, contracts and subcontracts, award spending and monitoring, payroll, human resources, the responsible conduct of research, effort reporting, and technology commercialization.

Departmental and central administrators involved with externally funded projects will find this course especially useful. Sessions are held once a week on Wednesday afternoons from 2:30-4:30 p.m. through November 19, except for September 17. The location is the Ron Evans Apollo Auditorium in Nichols Hall. More information about the schedule will be available soon.

### Next Thursday Research Topics Sessions is September 11

"[Research at KU: Who We Are, What We Do, Why It Matters](#)" is the next Thursday Research Topics on September 11. The presentation will be made by Kevin Boatright, director of communications, KU Research. All TRT programs take place at 11-11:50 a.m. in the Simons Laboratories Auditorium. The program, sponsored by KU Research, is free and open to interested staff members.

### KU Innovation and Collaboration Relocates to BTBC

The university's technology commercialization unit, KU Innovation and Collaboration (KUIC), has a new Lawrence campus address. The group relocated from Youngberg Hall to the recently completed Phase II of the Bioscience & Technology Business Center (BTBC) in July.

### Staff Additions in KU Research and KUIC

- **Shantanu Balkundi** joined KU Innovation and Collaboration in June as a licensing associate in the physical sciences. He received M.S. and Ph.D. degrees in biomedical engineering at Louisiana Tech University and came to KU from a postdoctoral experience at the University of Nebraska Medical Center, where he interned with UNeMed Corporation.
- **Matthew Stevens** is a new grant specialist in Pre-Award Services. He is a KU graduate in business accounting and comes to Pre-Award (Team 3) from Summers Spencer & Company, a public accounting firm in Lawrence.

# Upcoming Events

Additional details are available at the [KU Calendar](#).

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**AUGUST 22**

**KU Postdoc Association Lunch: "Grant Funding for Postdocs"**

Noon – 1 p.m.

Burge Union, Relays Room

**AUGUST 25**

**2014 Animal Health Research Symposium:**

**Antibiotics: Choosing the Path of Least Resistance**

8 a.m. – 2 p.m.

Kansas City (MO) Convention Center

**SEPTEMBER 9**

**Kansas City Area Life Sciences Institute Annual Dinner:**

**Going Viral: Technology Integration in Healthcare**

Speaker: Daniel Kraft, "Reinventing the Future of Health and Medicine: Where Technology Can Take Us"

Arvest Bank Theatre at the Midland, Kansas City, MO

**SEPTEMBER 10 – NOVEMBER 19**

**"Research Administration 101"**

2:30 – 4:30 p.m.

Nichols Hall, Ron Evans Apollo Auditorium

**SEPTEMBER 11**

**Thursday Research Topics: Kevin Boatright,**

**"Research at KU: Who We Are, What We Do, Why It Matters"**

11 – 11:50 a.m.

Simons Laboratories, Auditorium

**KU Common Book Event: "Is This Real Life?"**

5:30 – 7:30 p.m.

Spencer Museum of Art and Natural History Museum

**SEPTEMBER 15**

**Deadline: Strategic Initiative Grants Level I Proposals**

**SEPTEMBER 16**

**Hall Center Humanities Lecture Series:**

**Katherine Boo, "Behind the Beautiful Forevers"**

7:30 p.m.

Kansas Union, Woodruff Auditorium

**SEPTEMBER 21-22**

**Large Data Management Genomic Biodiversity Summit**

9 a.m. – 4:30 p.m.

Spooner Hall, The Commons

**SEPTEMBER 30 – OCTOBER 2**

**59<sup>th</sup> Annual Midwest Ground Water Conference**

Holiday Inn Convention Center, Lawrence

**OCTOBER 7**

**Hall Center Humanities Lecture Series: John Symons,**

**"What Can We Teach Our Posthuman Descendants?"**

7:30 p.m.

Spooner Hall, The Commons

**OCTOBER 17-18**

**7<sup>th</sup> Great Plains Regional Annual Symposium on Protein and Biomolecular NMR**

Simons Laboratories, Auditorium

**OCTOBER 23**

**Kansas Economic Policy Conference: "The Affordable Care Act in Kansas: Impacts on People, Business and Providers"**

Kansas Union and Ulysses, Kansas Satellite Location

**NOVEMBER 12-13**

**Governor's Conference on the Future of Water in Kansas**

Hilton Garden Inn, Manhattan

**NOVEMBER 13 [RESCHEDULED FROM OCTOBER 23]**

**KU Grant Coordinators Quarterly Meeting**

10:30 a.m. – Noon

Simons Laboratories, Auditorium

**NOVEMBER 17-13**

**Global Entrepreneurship Week**

**FEBRUARY 16, 2015**

**Deadline: Strategic Initiative Grants Level I Proposals**

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