

FOCUS



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KANSAS NSF EPSCoR BEGINS 2003 WITH RENEWED COMMITMENT



A DAY-LONG TOUR OF THE UNIVERSITY OF KANSAS FACILITIES, AND MEETINGS WITH VARIOUS KANSAS-NSF EPSCoR PARTICIPANTS YIELDED A NEW LEVEL OF ACCORD AS THE PROGRAM ENTERS ITS SECOND DECADE. ENJOYING LUNCH AT THE ALUMNI CENTER, FROM LEFT TO RIGHT: CHANCELLOR ROBERT E. HEMENWAY, KU; PROVOST DAVID E. SHULENBERGER, KU; JAMES FIRNBERG, NSF CONSULTANT; THOMAS N. TAYLOR, KANSAS NSF EPSCoR PROJECT DIRECTOR; TRACY TAYLOR, PRESIDENT OF KTEC; SAM CAMPBELL, PRESIDENT OF CAMPBELL-BECKER, INC.; TED R. KNOUS, KSU ASSOCIATE VICE PROVOST FOR RESEARCH.

After nearly a decade of investments in science and technology research, the National Science Foundation EPSCoR is encouraging participating states to re-dedicate their efforts to the program's success.

On a mission from the NSF, Dr. James Firnberg, chancellor emeritus at Louisiana State University-Alexandria, visited the University of Kansas on October 28, 2002. More than 30 Kansas NSF EPSCoR researchers and administrators gathered to hear his message.

"NSF EPSCoR faces a continuing challenge," Dr. Firnberg explained, "one of demonstrating its relevance and effectiveness in stimulating competitive research through development of the research infrastructure in EPSCoR states."

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PHASE IV AWARD CHAMPIONS A DECADE OF SCIENTIFIC ACHIEVEMENT

As the top-ranked of only three state proposals funded by NSF this year, Kansas NSF EPSCoR scored \$9 million for university research. The initial award of \$3 million per year will span March 2003

through February 2004, with additional increments of \$3 million expected in FY 2004 and FY 2005.

"We are extremely pleased with this award," explained Thomas N. Taylor, project director for Kansas NSF EPSCoR. "These funds will enable scientists at Kansas State University, the University of Kansas, and Wichita State University to build a new life sciences infrastructure and pursue research in bioinformatics, lipidomics and at the interface of ecology and genomics."

In a detour from the focus of proposals

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FROM THE DIRECTOR

Dear Colleagues:

In the last issue, I reported that the Kansas NSF EPSCoR Research Infrastructure Improvement proposal was being reviewed, and that I was optimistic it would be funded. While our optimism was rewarded and the Phase IV grant of \$9 million began on April 1, 2003, it was not without the hard work of Barbara Paschke, Doug Byers, and Pat Schmidt of the Kansas NSF EPSCoR office. Many of you know these dedicated professionals personally, or via telephone and e-mail, and therefore fully appreciate that they continually strive to make our program the model among EPSCoR states, while at the same time helping to increase the total research enterprise in Kansas. A measure of their collective success, coupled with the assistance of many researchers at WSU, KSU, and KU is the fact that our proposal received the highest rating of any of the funded awards in this round of competition.

As we begin a new three year funding cycle designed to increase faculty and program competitiveness in Kansas, we also embark on a number of new strategies to extend the passion we all share about science, engineering, technology, and mathematics to students at various levels of education throughout Kansas. We want to encourage students and faculty to explore collaborations at various levels.

One of the primary goals of Kansas NSF EPSCoR is to develop both human and physical infrastructure so as to make researchers throughout the state more competitive for regular funding programs at the National Science Foundation. Our efforts will continue to be directed at maximizing our dollars in working with the universities and their research faculty. Although the Phase IV award has just started, it is not too early to begin to think about the focus of our next competitive proposal. Where should NSF EPSCoR and our state partner KTEC focus resources in the future so as to be well positioned to meet the challenges in the research arena? I look forward to your suggestions as we begin the planning process as to how Kansas researchers can strengthen their role and become key players in this ever-changing research landscape.

Thomas N. Taylor
Project Director

RESEARCH DISTINGUISHES A GREAT UNIVERSITY

Research. This particular meeting was only about research: how to fund research; how to gather consensus and support for research; how to write better research proposals; how to disseminate research results. The objective was clear, and it was repeated throughout April 8, the date of the Kansas Statewide EPSCoR Conference held at the University of Kansas.

More than 150 researchers, administrators, and students gathered to hear by keynote speakers, federal agency staff, and faculty skilled in the art of proposal preparation. In addition to panel discussions and poster sessions, participants learned of the importance of helping both state and federal legislators to understand university research.

Keynote speaker State Representative Sydney Carlin (D-Manhattan) shared ideas on imparting the research message to state legislators and to the general public. She stressed the importance of condensing the message into one-two sentences. "Lawmakers are extremely busy and usually only have a few minutes to focus on most issues," she said.

As a former mayor and city commissioner in KSU-based Manhattan, Carlin understands the relationship between university research and the economic impact it may have on a community.

The evening keynote, presented by Mary Woolley, President of Research!America, of Alexandria, VA, focused on the reduction in the amount of the federal gross domestic product that is dedicated to scientific research. She encouraged Kansas scientists contact their Washington, D.C. delegation on a regular basis to keep them informed about important research going on in the state.

Woolley also shared results of a statewide public opinion poll that focused on citizens' attitudes about university research. The poll found that 96 percent of Kansans think the state legislature should continue supporting science and engineering research at its universities. In the same poll, 92 percent of respondents said that university research is important to the Kansas economy.

Woolley echoed Carlin's advice that scientists develop a two-minute speech that gives a capsule summary of their research. A brief prepared presentation is an effective way to convey the importance of the work without taking too much of a legislator's time.

WHAT MAKES A SUCCESSFUL PROPOSAL?

EXCERPTS FROM PANELISTS...

“A grant proposal is a 5-minute advertisement, but it also is a story, ideas, people, and the tools to be used in achieving the research goal.”

“You must have a research plan—the facilities, the component solutions, the institutional commitment.”

“Reviewers look for two major criteria: intellectual merit, and the broader impacts that the research could have outside of the discipline.”

“Have a dialog with project directors—ask them how to direct the proposal, allow them to ask critical questions to help you stay on track.”

“You need to have a charismatic topic, a formidable hypothesis, and have done your homework.”

“Have a colleague read the proposal to reduce jargon, proofread, and double-check grammar.”

“Follow the order of the program announcement.”

“Add a little humor.”

“Develop a creative title, and make sure you have a good summary.”

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HONOREES

At the Statewide EPSCoR Conference on April 8, Kansas NSF EPSCoR honored a few of its outstanding mentors and dedicated partners.

JIM HOEHN — The Kansas program has had a connection with Hoehn since he joined NSF EPSCoR in 1991 as a Senior Program Director. In 1998, Hoehn was promoted to Head of the National Science Foundation's EPSCoR office where he has served as an advocate for every EPSCoR state and as a respected and trusted friend to Kansas.

BETH BROUGH — Although Brough now lives in West Virginia, for many years she dedicated her days to the university research programs funded by the Kansas Technology Enterprise Corporation. In 2001, when the Kansas NSF proposal was not funded, Brough was instrumental in helping Kansas maintain its First Award program through funding at KTEC. Brough's dedication to strengthen research in Kansas was recognized at the conference.

At the university level, several individuals with thorough knowledge of agency guidelines and requirements have helped EPSCoR and other proposals succeed.

ANITA FAHRNY — Since the early '90's, Fahrny has served as the Assistant Director of PreAward Services in the Office of Research and Sponsored Programs at KSU. She is renowned for her involvement in special and large interdisciplinary projects, and complex contract negotiations with both private sponsors and state and federal agencies.



ACKNOWLEDGMENT OF OUTSTANDING PARTICIPANTS IN THE KANSAS-NSF EPSCoR PROGRAM INCLUDED THE PRESENTATION OF AWARDS TO (LEFT TO RIGHT) JAMES B. HOEHN, HEAD OF NSF EPSCoR; BETH BROUGH, FORMER KTEC VICE PRESIDENT; AND ANITA FAHRNY, KSU ASSISTANT DIRECTOR OF PREAWARD SERVICES. BARBARA PASCHKE, ASSISTANT DIRECTOR, AND THOMAS N. TAYLOR, PROJECT DIRECTOR OF KANSAS NSF EPSCoR, STAND WITH THE AWARDEES.

KRISTI MICHELLE BILLINGER — Armed with a degree in business accounting and business administration plus several years of private sector work, Billinger joined the University of Kansas Center for Research (KUCR) as a Proposal Services Officer in 1997. She has helped many KU faculty prepare winning proposals.

LANDRA FAIR — An understanding of the biological sciences is one of the strengths Fair brings to her position as a proposal preparation specialist for KUCR. She was intimately involved in the preparation and submission of EPSCoR's Research Infrastructure Improvement proposal in 2001.

SUZANNE HENDERSON — As a grant monitor at KUCR, Henderson assists faculty

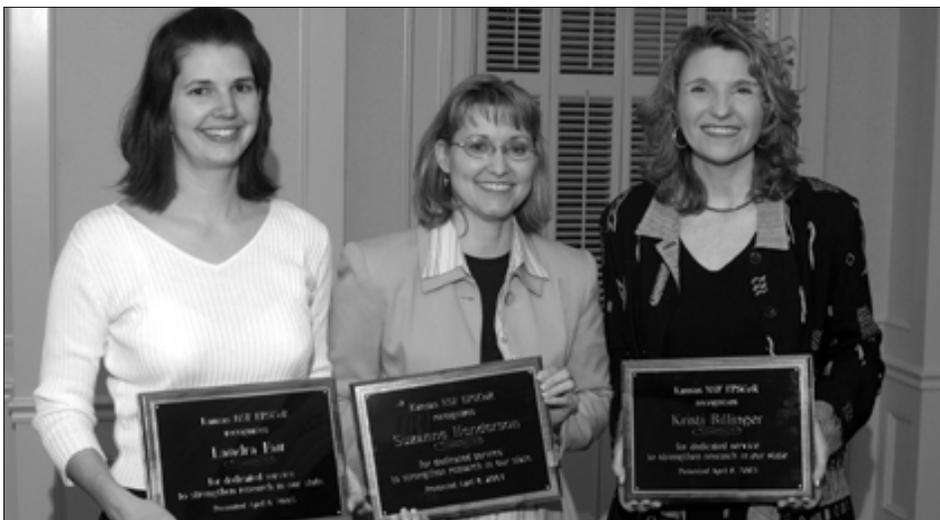


EMILY McREYNOLDS HELPS COORDINATE EPSCoR ACTIVITIES AT WICHITA STATE UNIVERSITY.

in preparing and reviewing proposals prior to submission to funding agencies. In 2002, she assisted the Kansas NSF EPSCoR staff in the submission of the Research Infrastructure Improvement proposal.

EMILY McREYNOLDS — As assistant to the associate vice president for research at WSU, McReynolds disseminates grant program information to faculty and staff. She is the chief liaison between the Office of Research Administration and two compliance committees, the Institutional Review Board, and the Institutional Animal Care and Use Committee.

CAROLE ROBARCHEK — With a job description that includes "proposal review, edit, re-write, organization, and evaluation" Robarchek is a key individual for proposals coming through the Office of Research Administration at WSU. She is also their "electronic" specialist, assisting faculty with the electronic submission of proposals to federal agencies.



CONTRIBUTING TO THE DEVELOPMENT OF A SUCCESSFUL GRANT PROPOSAL IS A FULL-TIME JOB FOR THESE KU CENTER FOR RESEARCH EMPLOYEES (LEFT TO RIGHT) LANDRA FAIR, SUZANNE HENDERSON, AND KRISTI BILLINGER.

PHASE IV AWARD

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received between 1992 and 2001, the Kansas team chose to aim its Phase IV proposal on a plan that would mesh with two regional developments. In 2001, the world-class Stowers Institute for Medical Research in Kansas City opened, with a goal of creating one of the top areas nationally for life sciences excellence. More than 100 scientists and business leaders participated in the Stowers initiative. The second regional development that influenced the direction of Kansas NSF EPSCoR proposal was the commitment in 2002 of the Kansas Legislature to finance new scientific research and development facilities at Kansas State University, Wichita State University, and the University of Kansas School of Medicine.

“The partnership created with business and government leading a regional effort to develop excellence in the life sciences allows our Phase IV award to play a major role by improving infrastructure and supporting basic research in ecology, genomics, lipidomics, and bioinformatics,” Taylor added.

The Kansas Technology Enterprise Corporation will provide \$1,125,000 in matching funds for the grant, and KSU, KU and WSU will each provide \$375,000 to bring the state’s required match to \$1.5 million in year one of the award.

Throughout the Kansas university system, 55 individuals will be involved in the various projects, including 11 graduate research assistants and 12 postdoctoral fellows. In addition, special emphasis will be placed on developing educational opportunities in science, technology, engineering and mathematics for women and other underrepresented groups.

Specifically, NSF funding will support the purchase of high tech instrumentation; “first awards” to assist new faculty in building research programs; planning awards to organize new research initiatives; “start-up” funds to purchase laboratory equipment for newly hired faculty; and new educational opportunities for students from the Haskell Indian Nations University and the community college to participate in university research.



MORE THAN 150 RESEARCHERS, ADMINISTRATORS AND STUDENTS GATHERED AT THE KANSAS STATEWIDE EPSCoR CONFERENCE, APRIL 8. JAMES A. ROBERTS, KU ASSOCIATE VICE PROVOST FOR RESEARCH (LEFT) INTRODUCED THE MORNING KEYNOTE SPEAKER, REP. SYDNEY CARLIN (SECOND FROM LEFT) (D-MANHATTAN); AND THOMAS N. TAYLOR, KANSAS NSF EPSCoR PROJECT DIRECTOR (RIGHT) INTRODUCED THE EVENING KEYNOTE SPEAKER, MARY WOOLLEY (SECOND FROM RIGHT), PRESIDENT OF RESEARCH!AMERICA.



FOLLOWING THE MORNING’S KEYNOTE SESSION, (LEFT TO RIGHT) JAMES B. HOEHN, HEAD OF NSF EPSCoR; KEVIN CARR, VICE PRESIDENT OF KTEC COMMERCIAL AND UNIVERSITY PROGRAMS; AND GREG MONACO, PROGRAM DIRECTOR IN THE NSF DIVISION OF ADVANCED NETWORKING INFRASTRUCTURE AND RESEARCH, EACH DESCRIBED THE KINDS OF RESEARCH FUNDED BY THEIR ORGANIZATION.



KEITH THOMPSON, DEPARTMENT OF DEFENSE EPSCoR MANAGER, DESCRIBES HOW TO FIND DEFENSE FUNDING OPPORTUNITIES ON THE INTERNET AS A PART OF THE AFTERNOON’S PANEL DISCUSSIONS.



CONFERENCE KEYNOTERS, REP. SYDNEY CARLIN (D-MANHATTAN) AND MARY WOOLLEY, PRESIDENT OF RESEARCH!AMERICA, BOTH STRESSED THE IMPORTANCE OF KEEPING ELECTED OFFICIALS INFORMED ABOUT RESEARCH.



RESEARCHERS FROM KSU, KU, AND WSU WERE MORE THAN PLEASED TO DISCUSS THEIR RESEARCH WITH CONFERENCE ATTENDEES AS THEY TOOK TIME TO VIEW POSTERS DURING SEVERAL BREAKS AT THE KANSAS STATEWIDE EPSCoR CONFERENCE.

POSTER CONTEST SHOWCASES EPSCoR RESEARCH

Colorful graphics and detailed illustrations were the hallmark of nearly 30 poster entries at the Statewide EPSCoR Conference on April 8. The contest was sponsored and funded by the Kansas Technology Enterprise Corporation to encourage researchers to communicate their science to the general public.

\$1,000 FIRST PRIZE

Characterization of Stable Tearing Fracture Behavior in Aerospace-Grade Titanium Alloy

by Dr. Kevin Lease, KSU Associate Professor of Mechanical and Nuclear Engineering

\$500 SECOND PRIZE

Research on Groundwater Based Economies

by Dr. David Steward, KSU Assistant Professor of Civil Engineering

\$250 THIRD PRIZE

Manufacturing and Design of 3-D Textile Composites

by Dr. Youqi Wang, KSU Associate Professor of Mechanical and Nuclear Engineering

THIRD TIME IS A CHARM FOR VAN STIPDONK

First Awardees in the Kansas NSF EPSCoR program will probably agree that the patience and the good sense to follow the recommendations by proposal reviewers can weight the scales in the right direction.

For example, when Michael Van Stipdonk, assistant professor of chemistry at Wichita State, was denied funding in his first attempt to win an NSF proposal in 2001. However, the reviewers encouraged him to revise and resubmit his proposal in 2002. In addition, they directed him to narrow the scope of his research and strengthen the focal points.

The result—in June 2002, Van Stipdonk was awarded a \$99,902 First Award from Kansas NSF EPSCoR to use mass spectrometry to advance his research on proteomics. In addition, he revised and re-submitted his proposal to NSF, and on March 1, 2003 was awarded a prestigious, 60-month Career

Award, estimated at \$462,000 from the NSF Chemistry Division. His proposal is titled, *Advancing Mass Spectrometry for Peptide/Protein Sequencing*.

Recently, Van Stipdonk expressed his appreciation to the EPSCoR program. “The generation of ideas and preliminary data for that challenging proposal would not have been possible without the support of the

EPSCoR program,” he said.

Van Stipdonk’s identification of peptides and proteins is a crucial step in an effort to understand metabolic pathways, cellular signaling, and the biochemistry of disease. His project will include undergraduate students as integral participants in the research. From their experiences, the experiments for the determination of amino acid sequence in peptides will be condensed, and transformed into novel educational exercises.

A new program will be developed for K-12 grades to assist in science teacher preparation and retention. Already, more than 90 teachers have expressed interest in the program. Hopefully, opportunities will be extended to high school teachers to spend summer months conducting research at WSU, strengthening their knowledge of chemistry and preparing them to translate the excitement and relevance of science to their students.

THE GENERATION OF IDEAS AND PRELIMINARY DATA FOR THAT CHALLENGING PROPOSAL WOULD NOT HAVE BEEN POSSIBLE WITHOUT THE SUPPORT OF THE EPSCoR PROGRAM.

KANSAS NSF EPSCoR BEGINS 2003 WITH RENEWED COMMITMENT



DR. FIRNBERG'S VISIT TO KANSAS AND HIS SUGGESTIONS FOR SUPPORTING AND EXPANDING THE EPSCoR MISSION WERE DISCUSSED AT THE ALUMNI CENTER OVER LUNCH. (LEFT TO RIGHT) KEVIN CARR, KTEC VICE PRESIDENT; JANIE RUTHERFORD, COMMUNICATIONS CONSULTANT; DOUG BYERS, KANSAS NSF EPSCoR BUDGET AND ACCOUNTS ADMINISTRATOR; GENNA HURD, RESEARCH ASSOCIATE, KU POLICY RESEARCH INSTITUTE; CHARLES E. HAINES, BIOLOGY INSTRUCTOR AT HASKELL INDIAN NATIONS UNIVERSITY; ELIZABETH YANIK, AND MARVIN HARREL, ASSOCIATE PROFESSORS OF MATHEMATICS, EMPORIA STATE UNIVERSITY.

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Dr. Firnberg's visit delivered the NSF request to continue developing database information that allows NSF to demonstrate increased participation in its programs by race, ethnicity and gender. In addition, Firnberg worked with state program leaders to better communicate the program's successes. It's a difficult job to parlay the work of early scientists into the expansion and success

of university research programs, and eventually integrate the work as a segment of a state's economic development programs. It takes years.

During his visit, Dr. Firnberg underscored the attractiveness of working and living in Kansas—citing the quality of life, the opportunity for funding, resourcefulness of state agencies, the state government's endorsement of the program, and the collaboration among

the various state universities and programs.

He also commented on major achievements of Kansas NSF EPSCoR—its development of human resources for Kansas and the national influence that Kansas projects are having on research.

Federal expenditures are increasing in Kansas. Kansas is now 4th among EPSCoR states, which indicates an aggressive program with innovative leaders seeking every opportunity.

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