



# K-BRIN

Kansas Biomedical Research Infrastructure Network

## Training and Mentoring Newsletter

Fall 2003 Volume 2 Issue 2

# IDeA symposium to facilitate collaborative research projects

### Staff Report

On November 1, 2003, the K-BRIN sponsored the 1<sup>st</sup> Kansas IDeA symposium at the University of Kansas Student Union in Lawrence, Kansas.

Over 118 investigators, involved with the four Centers of Biological Research Excellence (COBRE) programs or the K-BRIN, met in four focus groups to find common interests and initiate contacts.

The goal of the conference, as stated by conference organizer, Dr. Paul Terranova, was to facilitate the establishment of collaborative research projects amongst Kansas biomedical researchers.

The four focus groups emphasized the areas of microbiology, cell physiology and developmental biology, neurobiology and cancer biology.

The symposium was highlighted by a greeting by the University of Kansas Chancellor, Robert Hemenway.

The Keynote speaker, R. Michael Roberts of the University of Missouri, Columbia, discussed the importance of collaborations in science and discussed several successful collaborative efforts that led to seminal discoveries in biomedical research.

K-BRIN Director Dr. Joan Hunt dis-

cussed the role of the IDeA office at the University of Kansas Medical Center and summarized the grant proposal that was recently submitted to continue the K-BRIN program.

Dr. Paul Smith discussed how bioinformatics is be

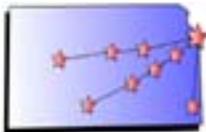
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*Attendees of the 1st Annual Kansas IDeA symposium listen to a talk during the day-long event. Over 118 people took part in the meeting. (Photo by Zeyna Pruzhanovsky)*

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# Denell presented Dolph Simons Award

K-BRIN mentor Robin Denell of K-State was awarded the Dolph Simons Award in Biomedical Sciences from the University of Kansas.

He accepted the award at a reception on Oct. 22 in the Bruckmiller Room of the KU Alumni Association.

Denell conduct genetic, developmental and molecular research on insects, focusing on the genetic control of early embryonic organization. The genes he studies are shared with humans and are especially important because they have been implicated in the origins of some cancers.

In 2000, Denell was named a University Distinguished Professor and in 2003 Director of the Terry C. Johnson Center for Basic Cancer Research.

The Simons Research Award is given in recognition for research achievement in the biomedical sciences that has had a major and substantial impact and is of national and/or international interest. The research is characterized either as profoundly seminal in nature or as representing a productive record of significant research. It also must be related to biomedical problems. The Dolph Simons Research Award is given for biomedical research in such as those related to medicine, pharmacy, the biological and behavioral sciences, bio-engineering and veterinary sciences.

*KSU News Service*

# Seifert research to be published

Information Provided by Virginia Rider

*Campus Coordinator*

K-BRIN student Clint Seifert of Pittsburg State University, co-wrote an article that will be published in the journal *Endocrinology*.

Only about 30% of submitted articles are accepted. The article should be published in the December issue.

The data included in the piece provides a conceptual advance about the action of the sex hormones estro-

gen and progesterone on target cells in the uterus.

Seifert presented his research during the 1st Annual K-BRIN Symposium this past January.

The citation for the manuscript is:

**Rider V, Thoumson E, Seifert C** 2003 Transit of rat uterine stromal cells through G1 phase of the cell cycle requires temporal and cell-specific hormone-dependent changes on the cell cycle regulators. *Endocrinology*, in press.

# Red flour beetle chosen for genome sequencing

As the result of the research of scientists from Kansas State University and the U.S. Department of Agriculture's Grain Marketing and Production Research Center in Manhattan, Kans. the red flour beetle was selected for genome sequencing by the National Genome Research Institute.

Co-investigators on the project included K-BRIN mentors Susan Brown and Robin Denell. Adjunct Professor of Entomology Richard Beeman was also a co-investigator.

*KSU News Service*

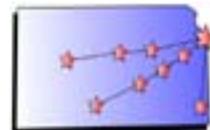
# Ross presents winning poster

K-State student Kyle Ross presented a winning poster at the Central Chapter of the American College of Sports Medicine.

Ross won the Outstanding Student Poster award at the event that was held at Kansas City Embassy Suites on October 11 and 12.

The category for student posters included graduate and undergraduate student posters at the meeting.

The Central Chapter covers the states of Kansas, Missouri, Oklahoma and Arkansas.



# Munson takes new position as KU campus coordinator

## Staff Report

Robert Hanzlik stepped down as KU K-BRIN campus coordinator to make time for his administrative duties of an NIH-funded COBRE grant on Protein structure and function. Dr. Eric Munson was selected to take his place. Munson was able to share some of his hopes and goals he has for his new position.

### *How did you become a campus coordinator?*

"I was asked to be campus coordinator by Professor Bob Hanzlik, the former campus coordinator. Professor Hanzlik was looking for someone who would be enthusiastic

about having undergraduate participation in research, and I had been very active in recruiting students from our pharmacy class to the K-BRIN program."

### *Why did you want to take on the responsibilities of a campus coordinator?*

"I feel that as campus coordinator, I can promote undergraduate research by encouraging students across all disciplines to explore the exciting opportunities in biomedical research. Many students believe that research is focused only on their particular discipline. For example, undergraduate chemistry majors may think that chemistry is unrelated to biomedical research, when in fact, biomedical research encompasses disciplines ranging from physics to biology to the engineering sciences. My research program at the University of Kansas is very interdisciplinary, as is my own research background. This allows me to interact with all of the

disciplines related to biomedical research, and to promote research interests throughout all of these disciplines."

### *In what ways do you think you can help student researchers at KU?*

"In addition to promoting an interdisciplinary approach to research, I think that as a campus coordinator I can help identify those students early in their careers who have the potential to do outstanding research and encourage them to pursue graduate level and eventually postdoctoral research in their field of interest. In many ways, the decision to continue in a research career is made at

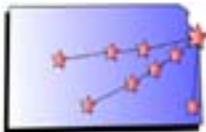
the senior undergraduate level. I hope that the K-BRIN program, by fostering undergraduate research opportunities for young scientists, will result in many more bright researchers emerging from the state of Kansas."

### *Why do you think it is important for students to gain experience in laboratory research?*

"When I started graduate school, I had little experience in laboratory research. I was fortunate in that I really enjoyed research and was able to transition quickly from class work to laboratory work. Now, having undergraduate research experience is almost a prerequisite to admission to graduate school. Moreover, having a strong undergraduate research record indicates a commitment to a research career, and increases the probability of receiving graduate fellowships and awards at the time of admission to graduate school."



*Dr. Eric Munson (Photo Submitted)*



# Hunt believes in benefits, future of K-BRIN

**Joseph Chapes**  
*Editor*

While the most important parts of the K-BRIN are the student researchers, let's take some time to look at the person at the top of the K-BRIN organization, Dr. Joan Hunt

Hunt is a University Distinguished Professor and Senior Associate Dean for Research and Graduate Education at University of Kansas Medical Center.

She has a PhD in immunology, but became interested in the maternal-fetal relationship and how pregnancy might happen when babies and mothers were genetically different.

It is interesting to note that Hunt was not originally training to be a scientist.

"As an undergraduate, I was most interested in philosophy, and took all of the graduate courses offered in the subject.

But I always liked science and kept up on course work so that when my parents suggested that I should pursue a career where there were clear opportunities for jobs, I finished a degree in microbiology; and have never regretted the switch," Hunt said.

As K-BRIN director, Hunt mostly just plans and organizes.

"Developing a program that effectively utilizes more than eight million dollars is a considerable challenge. The execution or carrying out of the plans is done by Heiata Chapman and her crew in the Administrative Office, the communications experts servicing the TeleResearch Network, the Bioinformatics core directors and bioinformaticists, and the Campus Coordinators,

who have established what we hope will be a seamless path for young men and women to choose biomedical research as a career," Hunt said.

Since K-BRIN was created, Hunt believes the organization has accomplished many goals.

"The BRIN has achieved much, including the development of a network of scientists across Kansas who now know one another and interact on scientific projects, the establishment of communications networks

as well as ways and means for training and mentoring potential researchers, and the establishment for the first time of bioinformatics stations for researchers in the State of Kansas," Hunt said.

Hunt also has ambitions for K-BRIN's future.

"My hope for the future is that this network will not only stay intact but will expand and develop in such a manner that

Kansas becomes a model for interactive networks promoting high level research," she said. "It is my hope that the our application for another 5 years of support for this program will be successful and that the end result will be a better supported, more sophisticated complement of biomedical scientists in the State of Kansas."

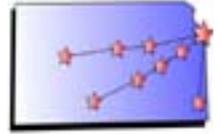
Students involved in K-BRIN will be able to get many benefits for scientific research.

"Students involved in the BRIN may well learn that science is the very most satisfying of all occupations. In a more minor sense, I would hope that students

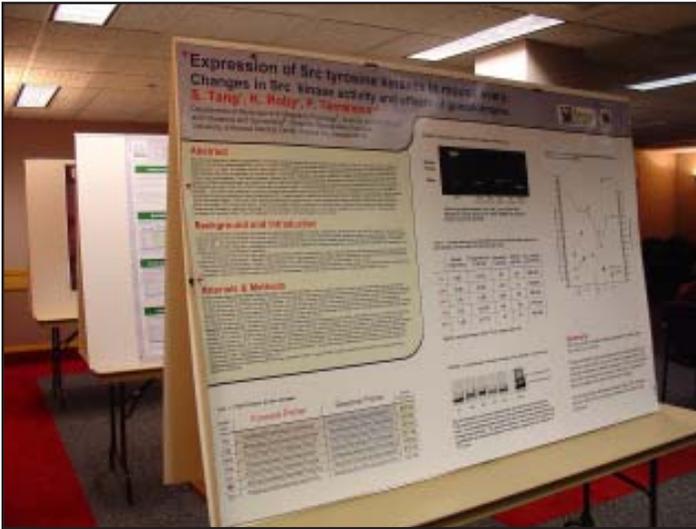


*Dr. Joan Hunt*

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# 1st Annual Kansas IDeA symposium



Posters were presented during the symposium. (Photo by Zeyna Pruzhanovsky)

*Continued from Page 1*

ing developed in the State of Kansas and Dr. Robert Hanzlik discussed the facilities available at the University of Kansas for the analysis of protein structure and function.

Oral presentations and posters allowed for the dissemination of data and served as focal points to initiate discussions.

Lunch, coffee breaks and an end of the day discussion were also programmed to initiate interactions amongst the participating investigators.

## *Dr. Joan Hunt, Continued*

will develop communication skills and, more importantly, logical pathways of thought," Hunt said.

Hunt believes there are many other advantages of careers in biomedical research.

"Advantages of having a career in biomedical research include knowing that you are contributing

overall to the quality of human life, having opportunities for interacting with intelligent, thoughtful individuals with similar interests, and being presented with travel and educational opportunities unknown to most other occupations," Hunt said. "The best part is discovery - learning things that no one else knows."

## ***NOTICE:***

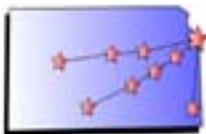
**Mark your calendars for the  
2nd Annual K-BRIN Student Symposium!**

*January 17 and 18*

*KSU Alumni Center, Manhattan, Kansas*

*Register On-line at [www.kumc.edu/kbrin](http://www.kumc.edu/kbrin)*

*Questions? Contact Heiata Chapman at [hchapman@kumc.edu](mailto:hchapman@kumc.edu)*



## Focus on Washburn University

The "Focus on" section is made up of features on students and/or faculty at different K-BRIN Universities and how they see the K-BRIN organization. This issue looks at Washburn University.

### Joy Spicer, student

Mentors: Dr. Shaun E. Schmidt and Dr. Thomas Wolf  
Project: Studying the N-alkylation of Cyclic Urea and Fluorescent Patterning in the External Genitalia of *Drosophila*.

*What is the best thing about learning about science at your institution?*

"At Washburn, everyone is encouraged to become involved in research. You do not have to be a major in a specific discipline to get involved in research in that discipline. Washburn encourages multi-disciplinary learning and teaching. If you discover a particular type of research just doesn't fit your style or tastes, at the end of your commitment, you are encouraged to try it again in another area or in another type. Going to graduate school and beyond is a big commitment, and Washburn helps us try our scientific wings and discover all the possibilities available to us, so we are well informed when we make those type of life choices. Even if we aren't doing research for credit or under K-BRIN, we are encouraged to be involved with research in one form or another."

"Another best thing is the intimate relationships we

get to develop with all our professors. Small class size allows personal interaction with the professors. You can go to them with questions and for help. Their offices are always open to us. You won't find a grad student or TA lecturing or teaching a lab. This type of individual attention is priceless and cannot be had at larger universities!"



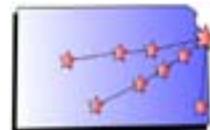
*Joy Spicer, center, stands with former K-BRIN Student Rachel Schuette, left, and campus coordinator Janice Barton, right. (Photo submitted)*

*In what ways do you think this experience will help you in the future?*

"I have been given a true competitive edge over my peers in applying for graduate school. While most undergraduates may do research, I've been afforded the opportunity to do three different types (besides the chemistry and genetics, I am currently in the development stages of a sociology research project

regarding racial self-perception.) While some undergraduates may have the opportunity to present their findings in the form of a poster within their department or even at a school-wide forum, I have had the opportunity to present my findings all over the country and internationally, as well. To date, I've given eight poster presentations. While a few

*(Continued on Page 8)*



## *Focus on* **Washburn University**

### **Danson Kamunyu, Student**

Mentor: Dr. Janice Barton  
Project: Isolation and Quantification of Fluorescence Molecules in *Drosophila melanogaster* brain

*How does your mentor help you?*

“She (Dr. Barton) monitors my research project and assists me if I need help”

*What is the best thing about learning science at your institution?*

“The professors, students and staff who are always willing to help and support your project.”

*How has K-BRIN helped you expand your scientific knowledge and experience?*

“K-BRIN has helped me realize my goal in life by giving me a chance to apply my science knowledge to



*Danson Kamunyu (Photo Submitted)*

practice”

*In what ways do you think this experience will help you in the future?*

“It will make me a better researcher because I have been exposed early to research.”

### **Dr. Janice Barton, Campus Coordinator**

*Why do you think K-BRIN is a good program?*

“K-BRIN has made a great difference in students’ interest in doing research. Before this program, occasionally students could be found on campus doing research in the summer. With K-BRIN, it seemed students filled the science building busily working on their projects and enjoying the experience for the past two summers. K-BRIN has changed attitudes and in some cases career objectives with more interest in biomedical research. With the mini-grant funds, the program is also supporting faculty research interests.

Because of K-BRIN, biology and chemistry faculty have been inspired to initiate interdisciplinary projects, all of which involve our undergraduate students.”

*Why do you think it is important to involve undergraduates in research?*

“Through the research process, students obtain a more realistic view of the nature of science. They learn that science is discovery through posing and answering questions using the appropriate controls. They learn science is fun, creative, and yes sometimes difficult. They enhance their skills for analysis and problem solving and thus become better prepared for whatever career pursued.”

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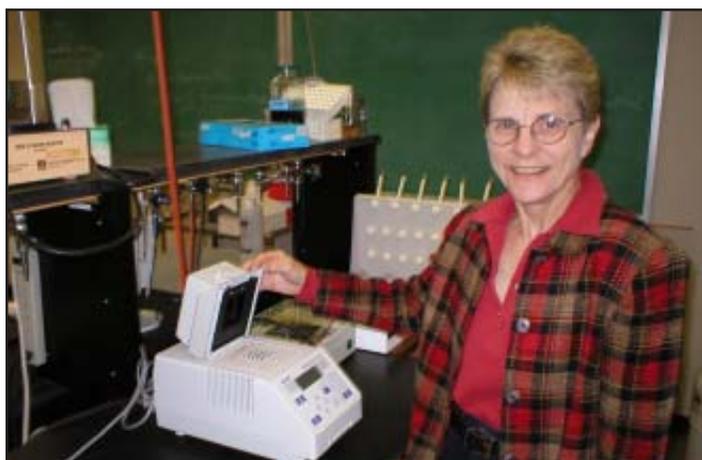
Focus  
on

# Washburn University

*Janice Barton, Continued from Page 7*

*What do you believe are the attributes of students who have successful undergraduate lab experiences?*

“Successful undergraduate researchers like their projects and enthusiastically pursue them. They work in the laboratory on a regular basis and start reading the literature. Laboratory experiences are more rewarding when students learn to accept lack of instant success and are not excessively disappointed when experiments don’t work as expected or have to be repeated due to instrument malfunction. Perhaps most importantly, they think about their projects and participate in explaining results, designing the next experiment, and presenting the story of their work to others. Of course, enthusiastic encouragement by the faculty mentor also helps a lot. An excellent example is Rachel Schuette, chemistry and biology major, who graduated in May 2003. Rachel was a summer/semester scholar last year. By choice, she spent many hours in the laboratory and consulting with her mentors, Dr. Stephen Angel, Chemistry, and Dr. Thomas Wolf, biology. She was rewarded for her efforts with first place award for her research poster at the Kansas Academy of Science in April 2003. Currently, she is in Texas working in a medical research laboratory and planning to work on the MD/Ph.D.”



*Dr. Janice Barton (Photo Submitted)*

*Joy Spicer, Continued from Page 6*

undergraduates may have the opportunity to present their findings in the form of an oral presentation, I’ve done it now and find it quite exhilarating.”

“I know for sure now that I like hands-on bench work as much as I like paper/journal research. I’ve become quite the expert at finding information through the library and the internet. If the information is out there, I’ll find it.”

“In becoming more comfortable with professors, scientists, and other figures of authority and impressiveness, I know I’ll perform better in my interviews for graduate school and beyond. At least I have a bunch of lab anecdotes to bring up now.”

## **K-BRIN Administration**

Dr. Joan Hunt, Director  
Dr. Paul Terranova, Associate Director  
Dr. Stephen K. Chapes, Training & Mentoring Core Coordinator  
Dr. Paul Kelly, Bioinformatics Core Director  
Ms. Heiata Chapman, Administrative Officer  
Mr. Joseph Chapes, Training & Mentoring Newsletter Editor

## **Campus Coordinators:**

Dr. Janice Barton, WU  
Dr. Stephen K. Chapes, KSU (Co)  
Dr. Tom Dixon, HINU (Co)  
Dr. Charles Haines, HINU (Co)  
Dr. Robert Hanzlik, KU  
Dr. William Hendry, WSU  
Dr. Michael Madden, FHSU  
Dr. Virginia Rider, PSU  
Dr. Michael Sarras, KUMC  
Dr. Dave Saunders, ESU  
Dr. Larry Williams, KSU (Co)

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