Winners of the 2009 Richard Holland Future Scientist award

**Oral presentation category:**

1st Catherine Sargus, LaVista, Neb.
UNL “Elongation of procine embryos in vitro using alginate hydrogels as a three-dimensional extracellular matrix”

2nd Brandon Mizner, Grand Island, Neb.
UNK “Nox4 in Mitochondria: A possible link between NADPH oxidase and mitochondria in Angiotensin II Intraneuronal signaling”

3rd D.J. Narwandar, Omaha, Neb.
UNO “Knock down of CSCR2 enhances sensitivity to chemotherapy”

**Poster presentation category:**

1st Julia Warneke, Omaha, Neb.
UNO “A new graph theoretic approach to the assembly of short read sequences”

2nd Kyla Ronhovde, Lincoln, Neb.
Doane “The role of methylmalonate semialdehyde dehydrogenase in Arabidopsis thaliana germination”

3rd Andrea Gilkey, Lincoln, Neb.
UNL, Anthropometric evaluation of suit-seat Interface”

The Nebraska Coalition for Lifesaving Cures awards Third Annual Student Research Awards

Six undergraduate students from four Nebraska colleges and universities recently received the 2009 Richard Holland Future Scientist Award from the Nebraska Coalition for Lifesaving Cures.

The awards were announced Aug. 5 at the annual conference in Grand Island for students in the institutional Development Award (IDeA) Networks of Biomedical Research Excellence (INBRE) Program.

These top six students, selected by INBRE faculty associates, received monetary awards from the Nebraska Coalition for Lifesaving Cures, totaling $2,700. The awards were named in honor of Richard Holland, an Omaha philanthropist and longtime supporter of research.

The students were honored in two categories representing oral and poster presentations. Awards were presented to the students who placed first, second and third.

“These students represent the future of research in the state of Nebraska,” said Sanford Goodman, president of the Nebraska Coalition for Lifesaving Cures.

“The recognition that the Nebraska Coalition for Lifesaving Cures is providing goes a long way to reinforce the importance of this research experience. We appreciate the support NCLC has shown for our program,” said James Turpen, Ph.D., vice chairman for genetics, cell biology and anatomy at the University of Nebraska Medical Center and director of the INBRE program.
May 1, 2009 marked a milestone for the Nebraska INBRE. We were awarded a competitive renewal that will extend the INBRE project for another five years, through 2014 and enable us to continue to build the research capacity on the undergraduate campuses throughout the State.

As I was reflecting on our success I felt it was important to acknowledge the contributions of a number of participants in the project, people who have worked together since the initiation of BRIN in 2001.

Founders Award Recipients

Suzanne Ortega, University of New Mexico
Michael Johnson, University of Illinois at Chicago
Richard Murphy and Sandor Lovas, Creighton University Medical Center
Jack Morris and Charles Wood, University of Nebraska-Lincoln
William Chaney, James Eudy, David Crouse, Mary Helms and Penni Davis, University of Nebraska Medical Center

Cami Stoner’s summer research experience at the University of Nebraska at Kearney had such an impact on her that she has already committed to pursuing a career in biomedical research.

The Kearney High School senior spent eight weeks working with Kim Carlson, Ph.D., an assistant professor of biology at UNK.

"It really opened my eyes to all the different scientific careers," Stoner said.

Dr. Carlson was equally impressed with Stoner’s enthusiasm.

"Cami is a hard-worker who contributed to the ongoing research in the lab. I look forward to working with her again next summer," Dr. Carlson said.

Stoner was joined by two other high school students, two undergrads from UNK and two high school teachers.

Stoner said she has always been interested in science and this opportunity only fueled the fire.

Thus, at the annual meeting, the contributions of our “Founding Members,” members who have served eight or more years in the INBRE, were recognized in what was to me a very special ceremony. These founders come from all phases of the project and their contributions have been essential to both our initial and our continuing success.

Again, I just want to say “thank you” to the following people and recognize their commitment to the INBRE.

William Tapprich and Donald Rowen, University of Nebraska-Omaha
Julie Shaffer, University of Nebraska-Kearney
Jeff Isaacson, Garry Duncan and Angela McKinney-Williams, Nebraska Wesleyan University
Shawn Pearcy and Doug Christensen, Wayne State College

Kearney high school student focused on research

“Cami Stoner’s summer research experience at the University of Nebraska at Kearney had such an impact on her that she has already committed to pursuing a career in biomedical research.”

Benjamin Klein, a high school science teacher from Lexington can’t wait to get back into the lab.

“Dr. Carlson is one of the best scientists to do research for,” Klein said. “Once she is sure you have the basics she lets you go.”

Klein should know he also did his undergraduate research with Dr. Carlson. During that time he picked up a lot of scientific study skills, but in the four years since he graduated and began teaching he felt those skills slipping away.

The summer research opportunity quickly brought Klein back up to speed and fed his scientific intellect.

“As teachers we often have to simplify many things to allow our students to grasp concepts quickly. This research gave me an opportunity to engage in some very intellectually stimulating conversations with some of the smartest people in Nebraska,” he said.
High schoolers work with researchers

Mixing vinegar and baking soda in biology class is the closest some high school students come to conducting scientific research.

But for two months this summer eight lucky students had the chance to do more.

A $600,000 educational supplement through the National Center for Research Resources, (a division of the National Institutes of Health), provided summer research opportunities for the high school students and five high school science teachers.

INROADS in the lab at Doane College

The summer research project made Laura Turner feel just like the high school students she teaches at Waverly High.

Unsure, nervous and excited.

“It was a good reminder of what it’s like to be the student and not the teacher. To be the one who doesn’t get it when an expert is teaching a concept,” Turner said.

It was also the best summer vacation she’s had in years, she said.

Working in the lab of Andrea Holmes, Ph.D., a professor of chemistry at Doane College, Turner got to not only see how the scientific process works but participate in a collaborative research project between Dr. Holmes and the electrical engineering department at the University of Nebraska-Lincoln.

“The opportunity to learn the latest trends in technology, to refresh and refine lab techniques and network with researchers is priceless to me as a high school science teacher,” Turner said.

Tenth grade biology doesn’t come close to what Kellen Restau encountered when he stepped into a lab at Nebraska Wesleyan University this summer.

“It was a lot to take in,” said the Lincoln High School junior, who spent eight weeks working in the lab of Terry McGinn, Ph.D., an assistant professor of biology at Wesleyan.

Restau was one of two high school students who worked in Dr. McGinn’s lab along with high school science teacher, Betsy Barent, and four undergraduates from Wesleyan.

The experience gave him priceless skills he’ll use this fall, he said, when he’s working on his project for the school science fair.

“Kellen is a great student who took the knowledge he acquired in 10th grade biology class and ran with it in the research lab. I was very impressed with Kellen’s ability to wrap his head around some very abstract cell biology concepts,” Dr. McGinn said.

Barent, an advanced biology teacher at Norris High School in Firth, Neb., said the experience reaffirmed her goal to incorporate more inquiry based learning in the classroom.

“It allowed me to think on a completely different level, which I haven’t done since graduate school and offered me a greater understanding of cell biology and immunity,” Barent said.

Both Barent and Restau will return to Dr. McGinn’s lab next summer and she is happy to have them back.

“Kellen is a great student who took the knowledge he acquired in 10th grade biology class and ran with it in the research lab. I was very impressed with Kellen’s ability to wrap his head around some very abstract cell biology concepts,” Dr. McGinn said.

Students explore science at Nebraska Wesleyan

Toll like receptors, western blotting, gel electrophoresis. Whoa!
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The INBRE program is funded by the National Center for Research Resources. NCRR is part of the National Institutes of Health, U.S. Department of Health and Human Services.