

Also inside this issue of *lifelines*:



What are chimeric rats? See page 2



Trick or Treat? See page 3



To New York and back. See page 3



Ryan Engel goes Under the Microscope. See page 4

Facebook friends to the Max

Great Dane inspires passion and support amidst medical ordeal

Three weeks ago, Melissa noticed something different about Max, her 6-yearold Great Dane. He was being a little clumsy. While this breed of dog is known for being awkward and clumsy, this was different. He was walking very slowly and bumping directly into things he would normally avoid.

Melissa and her husband Jon Pohlmann, who live in Lincoln, Neb., took Max to the Animal Care Clinic, run by K-State alumni Dr. L.R. Buller, DVM 1977, and Dr. K.J. Anderson, DVM 1991. A mass was discovered and Max was declared blind. Max had suffered a stroke and his condition required advanced care, so he was referred to K-State's Veterinary Medical Teaching Hospital.

Shortly before his visit to K-State, a message was posted by "Tank Great Dane" at the College of Veterinary Medicine Facebook page: "You guys please keep taking good care of our friend Melissa Meinecke Pohlmann's MAX the Great!"

The college Facebook page has received messages from grateful clients before, but this was the first post from a sympathetic friend — in this case, the friend was a dog who had a page created by his human family. This comment was followed in the next couple of days by other comments posted by Great Dane owners who were members of a Facebook group called "The Dane Yard." Max was known in this group because Melissa had joined it about a year ago.

Little did Melissa realize she had made friends with an extraordinarily compassionate and caring group of people in the Dane Yard. Yet, this was not the only way the Dane Yard showed its compassion. Several members called the college to ask about Max and started giving to help pay Max's medical expenses. In all, 38 donations



Melissa Pohlmann walks Max in front of the Veterinary Medical Teaching Hospital. She brought Max after he suffered a stroke at their home in Lincoln, Neb., through a referral from a clinic run by K-State alumni Dr. L.R. Buller, DVM 1977, and Dr. K.J. Anderson, DVM 1991.

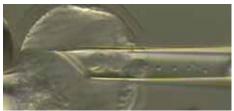
were made for a total of \$1,160 on Max's behalf.

"It's overwhelming," Jon Pohlmann said. "We never asked for donations —never mentioned it. The way people have responded has been a complete surprise."

(Read more at Lifelines online.)

Breeding rats to expand genetic research





Chimeric rats are produced through a new genetic modification technique in Dr. Mark Weiss' laboratory. Above, Dr. Weiss and graduate student James Hong modify blastocysts from rats. In science, sometimes big developments come in small packages. Recently, K-State researchers in the veterinary college learned how to breed rats with missing, added or altered genes for studying different medical conditions.

Dr. Mark Weiss and his laboratory have perfected a technique using embryonic stem cells to introduce targeted genetic modifications to rats.

"We're trying to build tools, trying to build models that will have broad applications," said Dr. Weiss. "If you're interested in neural differentiation or if you're interested in response after an injury, we're trying to come up with cell lines and animals that will teach us, help us to solve a medical mystery."

Similar methods were developed with mice over 30 years ago but the technique has become more elusive with rats.

"The mouse is a preferred model because we could do it," Dr. Weiss said. "Lots of research goes better with rats due to their size and their better similarity to human physiology. If we could produce rats that have those modifications, we can answer questions that can't be asked in the mouse."

Creating a rat that featured a favored trait, such as a dark fur, is a multistep process. Embryonic stem cells are modified to carry genes for dark-colored fur, which are implanted into an albino rat, which then gives birth to chimeric rats that can carry the genes for both white and dark fur.

To learn more about stem cell research at K-State, visit: www.vet.kstate.edu/research/stemcell/index.htm.

For more in-depth and video coverage, visit: www.vet.k-state.edu/ dept/development/lifelines/1111.htm.

Dr. Elizabeth Davis: One of the top 150 scientists in Kansas

When it comes to being "healthy as a horse," one need only think about the work of Dr. Elizabeth Davis.

An associate professor of clinical sciences and section head of equine medicine and surgery at Kansas State University, Dr. Davis researches equine health and ways to improve it. Recently the Ad Astra Kansas Initiative named her as one of the top 150 scientists to operate in Kansas within the past 150 years.

Despite that saying about a horse's health, the animal is actually prone to viruses and illness. Dr. Davis hopes to curb that by investigating the immunologic, neurologic, respiratory and gastrointestinal diseases that affect the horses.

In her studies Dr. Davis has investigated antimicrobial proteins as well as mechanisms that allow immunizations to protect horses from infection. These findings are expected to improve the overall understanding of warding off infectious disease as well as enhance vaccine protocols combating these diseases.

Currently she's researching how vaccines affect horses on a cellular level.

Throughout the year Ad Astra is spotlighting Kansas researchers, inventors and engineers from the past to the present who have advanced their field. Dr. Davis is the 13th active faculty member at K-State to be named a top scientist in the project, "Science in Kansas: 150 Years and Counting," which celebrates the state's sesquicentennial. It is meant to emphasize the importance of science and the career possibilities in research and innovation to K-12 students. She joins other historically noted Kansas researchers on the list like George Washington Carver, Charles H. Sternberg, Clyde Cessna, Clyde Tombaugh, and Dr. T.G. Nagaraja from the CVM's Department of Diagnostic Medicine and Pathobiology.



Dr. Elizabeth Davis

Student travels to Plum Island and Cornell for research program



The group takes a break in front of a waterfall outside of Ithaca, N.Y. Darla Dwyer, second-year student, is located in the second row, fifth from the left.

This past summer Darla Dwyer, third-year student, had the chance to participate in the Smith-Kilborne program sponsored by the USDA-Animal and Plant Health Inspection

Service. The program is designed to expose veterinary students to various foreign animal diseases that could potentially threaten the domestic animal population. The program includes both presentations on animal disease and their implications combined with laboratory experiences. The program occurs at two locations. Cornell University in Ithaca, N.Y. and the Plum Island Animal Disease Center.

"I honestly enjoyed everything, it was an awesome experience," Darla said. "To pick a couple of high points, I really enjoyed getting to know everyone from the other schools as well as all of the people who put the program together. They were all really wonderful. It was also neat to see some of the diseases first hand. There were four different ones we were able to see."

The program lasts about a week, but the experiences last much longer. Darla said she felt that the program helped her out professionally.

"This program is definitely something I consider important for me as career training," she said. "Hopefully that was the first and last time I see those diseases first hand, but it's really valuable to have actually seen them myself once already. The hands-on things and the way they had us go through the situations really gave me a better idea of how the government and world-scale sides of things works and how to work with them."

CVM pets and children go trick-or-treating for Halloween



All ready for trick-or-treating, Clara goes as a pink poodle. (Submitted by Dr. Lindsey Blevins, Clinical Sciences.)



Staying true to her name, Cricket the kitten dressed up as a cricket. (Submitted by Kellie Lewis, class of 2014.)



Josh sits on Mom's lap (Amy Brusk, grants specialist) and becomes a veterinarian for Halloween. His first patient is Chase the German shepherd.



Ryan Engel Radiology Technician Supervisor, VMTH

Hometown: Topeka, Kan. (born in Oklahoma City)

Family Information: My beautiful wife, Courtney, and newborn son, Sterling.

Pets: I don't have any at the moment, but I want a cattle dog that can catch a frisbee or a Rhodesian ridgeback.

Do you have any special Thanksgiving traditions? Dallas Cowboys football!

If you could visit another time period, what one would you choose? It would have to be the Middle Ages, as long as I wasn't a peasant, because castles are awesome, but I wouldn't want to have to clean one.

What is something that you are thankful for? I'm thankful that my two and a half month old kid is so well-tempered.

CVM's new Early Admissions Scholars



Congratulations to the 2011 class of Early Admissions Scholars! Pictured left to right, first row: Christa Curtiss, Lauren Jarnigan, Kathleen Flanagan, Karsen Brown, Hayley Chauvin, Alyssa Fink, Bayli Endicott and Megan McLaughlin. Second row: Katherine Kramer, Amanda McGuire, Keely Penna, Shelbie Martel, Kelly Nyffeler, Kelsey Madden, Anne Clark and Jessica Eisenbarth. Third row: Jordan Pieschl, Jacob Beck, Brett Wheeler, Chase Miller, Rickey Deo, Sara Alves and Mckenzie Gee. Not pictured: Chelsea Porter.



CVM NEWS TICKER

Congratulations to fourthyear students Shayla Sorenson, Theresa Lamontagne, Julia Roque, Whitney Revell and Rochelle Reddig (Whitney and Rochelle are pictured to the right) for being selected to each received a



\$1,500 American Royal Association scholarship. The five students were housed in Kansas City while working with the official veterinarian for the Kansas City American Royal, Dr. Bud Hertzog. Some of the students were there for as much as a couple of weeks.



The 2011 Samuel Kelsall III Memorial Hunt occurred on Oct. 10 at Ringneck Ranch in Tipton, Kan. Participants enjoyed trap shooting, country gourmet meals, a guided hunt and a chance to win a shotgun. Pictured left to right: Ranch guide John Peckham, Kevin Payne, Dr. Mike Christensen, DVM 1984, Sam Kelsall IV and Dean Ralph Richardson.

UPCOMING EVENTS

Nov. 12 - Cat Town - KSU vs. Texas A&M - 2:30 p.m. Nov. 15 - Upson Lecture - 2011 Miss America Teresa Scanlan Dec. 3 - Cat Town - KSU vs. Iowa State - 11:30 a.m. Dec. 9 - Small Ruminant Conference* *Continuing Education Events, visit: http://www.vet.ksu.edu/CE/Conference.htm

lifelines is published each month by the Development and Alumni Affairs Office at the College of Veterinary Medicine. The editors are Joe Montgomery, jmontgom@vet.k-state.edu, and Dana Avery, dlaavery@ vet.k-state.edu. Read online at www.vet.k-state.edu/ depts/development/lifelines/1111.htm

find us on facebook: www.facebook.com/ksucvm

