



Norovirus research merits \$5.1 million grant for Dr. Chang

Noroviruses make most people sick to the stomach, but not Dr. Kyeong-Ok Chang. Instead, the study of noroviruses has become his career focus and has now resulted in a \$5.1 million NIH cooperative research grant for his project.

Originally from Korea, Dr. Chang earned his DVM in 1989 and a master's degree in 1991, both from Seoul National University. He then earned a doctorate from The Ohio State University in 1999. While working on his Ph.D., Dr. Chang became interested in noroviruses, and has continued to pursue this line of research while working as a research fellow at National Institutes of Health and as an assistant professor in veterinary virology in the Department of Diagnostic Medicine/Pathobiology at K-State's College of Veterinary Medicine.

"Human noroviruses are the leading cause of food- or water-borne gastroenteritis illnesses responsible for more than 60 percent of outbreaks," Dr. Chang said. "These outbreaks can occur in humans and animals, including pigs, cattle and minks. There are no commercially available vaccines or antivirals against noroviruses, despite an estimated 23 million cases of illness, 50,000 hospitalizations and 300 deaths each year in the United States alone."

Dr. M.M. Chengappa, University Distinguished Professor and head of the

Department of Diagnostic Medicine/Pathobiology, added, "Noroviruses are a major problem in humans, particularly on cruise ships or with military units – anywhere people are contained in a small area – and it's highly contagious. Dr. Chang is a very hard-working, energetic and productive young scientist who is well-equipped and trained to handle the challenges in this field of

research. He has an excellent research and graduate training program, fits well with our other faculty and is an excellent team player. We are fortunate to have a person of his caliber in the department."

While Dr. Chang is the principle investigator of the norovirus research project at K-State, his co-principle investigators are Dr. Linda Saif from Ohio State, Dr. William Groutas at Wichita State University and Dr. Duy Hua, a University Distinguished Professor in the chemistry department at K-State.

While it's a massive project, the \$5.1 million grant will provide support for the next five years.

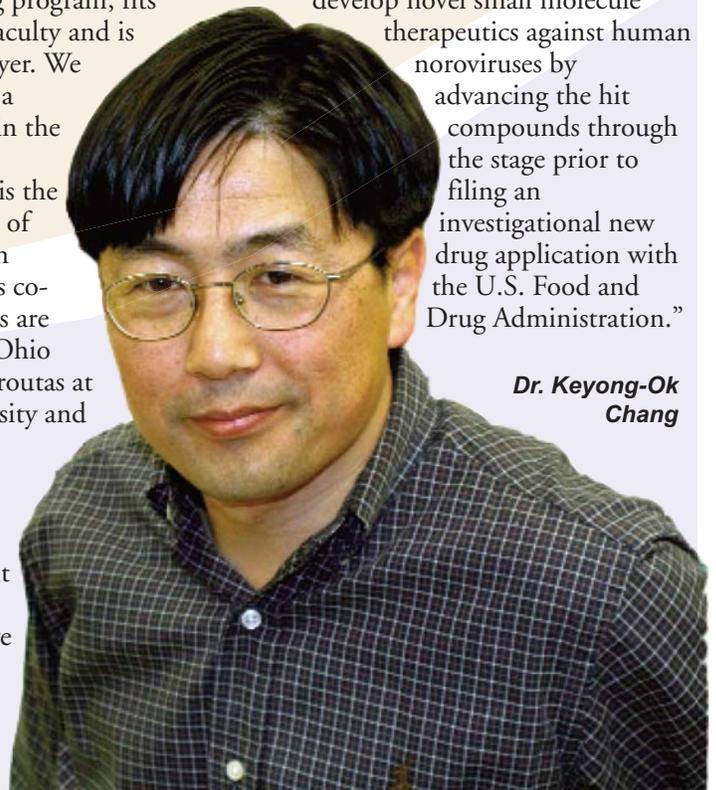
"This is my first major grant as a principle investigator and it allows me to continue to study norovirus replication and antiviral drug development, which I have studied for the last 10 years," Dr. Chang said.

"We established a comprehensive plan aimed at developing anti-noroviral therapeutics in cooperation with medicinal chemists and virologists from various institutions," Dr. Chang said. "We have identified two classes of hit compounds that have significantly reduced virus replication with distinct mechanisms. This project aims to

develop novel small molecule therapeutics against human noroviruses by

advancing the hit compounds through the stage prior to filing an investigational new drug application with the U.S. Food and Drug Administration."

Dr. Keyong-Ok Chang



Human noroviruses are the leading cause of food-or water-borne gastroenteritis illnesses responsible for more than 60 percent of outbreaks.

- Dr. Kyeong-Ok Chang



April 10: Kind Hearts Caring Hands/White Coat Ceremony
Mosier and Trotter Halls/
K-State Student Union, Main Ballroom

April 24: Pet Tribute Ice-Cream Social
3:00-4:30 p.m.,
Trotter Room 2

May 27-29: International conference on the use of antimicrobials in cattle production
K-State Student Union

June 7-10: 71st Annual Conference for Veterinarians
K-State Student Union

CVM faculty team up on first vaccine against E. coli O157 in beef cattle

Drs. Dan Thomson and T.G. Nagaraja, from the CVM, have collaborated with EpiTox LLC, on a project resulting in the United States' first vaccine against E. coli O157 in beef cattle.

"Researchers have done so much to focus on the post-harvest food safety aspect, whether it's E. coli or salmonella," said Dr. Thomson, Jones Professor of Production Medicine and Epidemiology in the Department of Clinical Sciences.

Dr. Thomson led both challenge studies and field studies to help the vaccine garner approval from the U.S. Department of Agriculture. It was developed by researchers Dr. Daryll Emery, Darren Straub and Doug Burkhardt of EpiTox LLC in Willmar, Minn. Dr. Thomson collaborated with

Dr. T.G. Nagaraja, University Distinguished Professor from the CVM's Department of Diagnostic Medicine/ Pathobiology, and Dr. Guy Loneragan of West Texas A&M University.

"We have been a research collaborator for EpiTox to conduct the work that lead to this conditional approval," Dr. Thomson said. "EpiTox will now be able to offer this pre-harvest food safety tool to beef producers."

The researchers conducted a challenge study at K-State and studies of



Dr. Dan Thomson



Dr. T.G. Nagaraja

commercial feed yards in Nebraska and Great Bend in 2007 and 2008.

Dr. Thomson said K-State appreciates the research partnership with EpiTox on this important pre-harvest food safety tool and that the partnership

allowed several K-State graduate students to participate in the study. They included Trent Fox, a December 2007 doctoral graduate in pathobiology and now a third-year veterinary medicine student; Ashley Thornton, a December 2007 master's degree graduate in biomedical science; and Dr. Ben Wileman, a doctoral student in pathobiology.

Pet Tribute makes connections; near and far

The connections people make with each other over a lifetime are priceless, and the connections made with animals are no different. The CVM's Pet Tribute program helps to make both possible.



Sharon Greene shows a letter and pictures she received from the White House. Shown in the pictures are the Bush's former cat and dog: India (aka Willie) and Spotty. Sharon honored both pets in the CVM's Whispering Garden.



Dr. Emily Klocke, Sharon Greene and Dr. Mac Hafen smile after the annual Pet Tribute pizza meet-and-greet held for third-year students. Dr. Klocke, a Pet Tribute board member, discussed the importance of Pet Tribute and "Clay Paws," while Dr. Hafen explained his clinical-student video evaluations. These evaluations are designed to help students enhance the human-animal bond through their interactions with clients.

Erin Kane's AASV presentation earns \$2,500 scholarship

Second-year student, Erin Kane, recently earned a \$2,500 scholarship for her presentation on the effects of vaccination timing and diet source on the growth performance of nursery pigs in the Student Seminar Competition at the annual meeting of the American Association of Swine Veterinarians (AASV). Her abstract and presentation were among the top five out of 45 submissions.

"Prior to the summer of 2008, I had never even touched a live pig," Erin said. "However, because I was interested in gaining experience with swine, I began working with Dr. Steve Dritz as a swine research assistant. After learning a bit about swine management, medicine, and research, I was able to take the lead on this research project."

"Erin's project has major significance because it addressed widespread reports from swine producers and veterinarians indicating an increased number of failures-to-thrive pigs in the early period immediately after weaning," said Dr. Dritz, swine specialist in the Department of Diagnostic Medicine/Pathobiology. "We identified two major factors that could be involved: nursery diet and vaccination. Erin's project



Erin Kane, class of 2011, won a \$2,500 scholarship for her presentation on the effects of vaccination timing and diet source on the growth performance of nursery pigs at the annual AASV meeting.

indicated both factors can have negative influences on feed intake in the period immediately after weaning and that they are additive. This means if you have poor diet and vaccination, the impact is larger than if you have either alone. Thus, her data demonstrated that either or both of these stressors alone could be involved in the increase in failure-to-thrive pigs noted in the field."

STUDENTS AND PARENTS

Leave your mark at K-State

Honor the time spent as a veterinary student at K-State with a personalized granite tile in the Centennial Plaza (between Mosier and Trotter Halls).

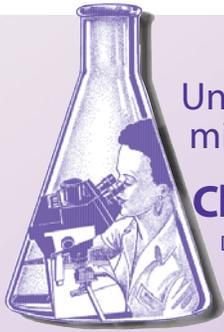
Imagine the joy a gift of this type would provide for the veterinary student in your family, and the pride you'll feel each time you return to K-State and visit the College of Veterinary Medicine.

Each donation to this program supports the College of Veterinary Medicine.

Different sizes and options are available.



To place an order, please visit us online at <http://www.vet.ksu.edu/centennial/plaza.htm> or call us at 785-532-4043



Under the microscope:

Chris Stephens

Development Officer
Alumni and Development Office



Place of birth: Wesson, Mississippi

Family Information: My parents are Mark and Ann Stephens, and I have a sister Erica, who is currently completing her Registered Nurse (RN) degree.

Pets: I grew up on a farm where our family bred Registered Hereford Cattle and my family has owned and bred Registered Labrador Retrievers for more than 20 years. My current lab is named Zoey. She is a 3-year-old yellow English Labrador Retriever.

What is your favorite way to spend free time? I love to travel, watch sporting events, spend time cooking for friends and reading.

If you could spend a day with anyone from the past or present who would you choose? My grandfather.

Where was the last place that you visited? Oklahoma.

Who is someone that you admire? My parents — for their work ethic, high morals, strong character and unwavering support of their children.

What music would be playing in your car if it was on right now? Country 106.9, Legendary Country Radio — the best radio station I have found.

A Bonnie farewell



Bonnie Thompson celebrates her retirement at a reception held in her honor April 3. Dr. Frank Blecha, Department Head for Anatomy and Physiology, thanks her for 26 years of service at the CVM.

CVM News Ticker

CBS-TV correspondent to give convocation speech

CBS news staff correspondent Dr. Debbye Turner Bell will deliver the All College Convocation address Friday at 11:00 a.m. in Frick Auditorium, Mosier Hall, as part of Kind Hearts, Caring Hands day. Dr. Turner Bell graduated from the University of Missouri-Columbia in 1991 with a Doctor of Veterinary Medicine degree. She earned a bachelor's degree in agriculture in 1986 from Arkansas State University.



Dr. Debbye Turner Bell

On March 27, **Dr. Mike Apley** presented at the Keseca Veterinary Clinic in Geneva, N.Y. He spoke to around 100 clients on prudent drug use.

On April 2, **Dr. Bonnie Rush** presented at the AAVC Department Head Meeting in Atlanta. Her topic was "Tracking Students Clinical Competencies through the One45 system."

On April 17, **Dr. Robert Larson** will speak at the American Board of Vet Practitioners in Austin, Texas. Topics are as follows: Selection and Evaluation of Beef Heifers; Nutritional Development of Beef Heifers; Case Studies: Heifer Development and Reproduction Failures; Bovine Reproductive Disease (Abortion): Neosporosis, Leptospirosis, and BVD; Bovine Reproductive Disease (Infertility): Trichomoniasis and Vibriosis, Biosecurity to Control Reproductive Disease.

new arrivals welcome

- Jennifer Zeliff - VMTH
- Mira Bendevis - VDL
- Rebecca Eaves - DMP
- Rodger Belyea - VMTH

recent departures thanks

- Sung Hun Kim - A&P
- Debra Wilcox - DMP
- Hiromitsu Miyazaki - A&P
- Leslie Sargeant - VMTH