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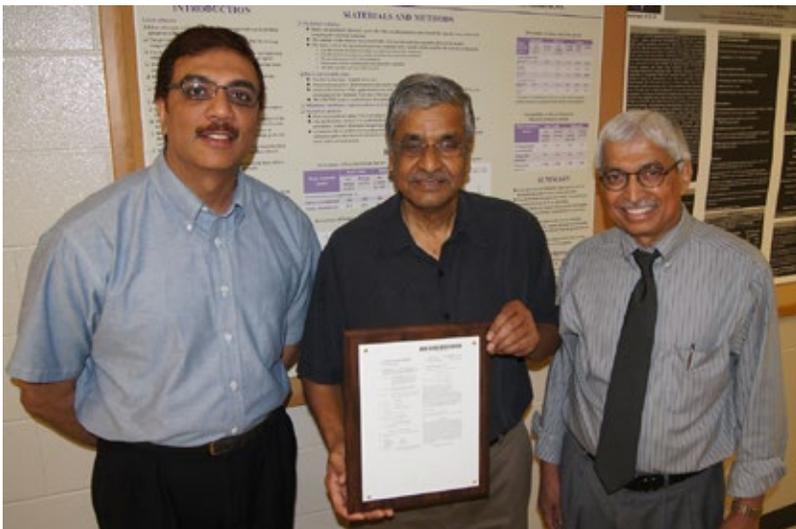
News from the
College of Veterinary Medicine
at Kansas State University

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Teaming up on a new patent

Protein discovery leads to treatments for infections caused by *Fusobacterium*



*Drs. Sanjeev Narayanan, T.G. Nagaraja and M.M. Chengappa display a plaque for a new patent for treating infections caused by *Fusobacterium*.*

A U.S. patent was recently awarded for technology created by researchers in the College of Veterinary Medicine at Kansas State University. Drs. Sanjeev Narayanan, Amit Kumar, T.G. Nagaraja and M.M. Chengappa collaborated to develop compositions and methods for treating infections caused by *Fusobacterium* that is well-known in veterinary medicine for causing liver abscesses in cattle and sheep. *Fusobacterium* has also been identified as a human pathogen.

“Part of our charge was to find effective ways to control and treat fusobacterial infections without the use of antibiotics,” explained Dr. Narayanan, professor of anatomical pathology. “Vaccines have proven to have limited efficacy, so these compositions and methods provide veterinarians and medical professionals with good, useful alternatives.”

The team discovered a specific protein that plays a pivotal role in mediating *Fusobacterium* attachment to the host cells that allow pathologic infection of the host.

“The discovery and characterization of the protein have allowed the researchers to develop a novel approach to prevent fusobacterial infections,” said Dr. Nagaraja, university distinguished professor of microbiology. “We learned how the protein attaches to cells and have used that knowledge to create compositions and methods that would prevent attachment of *Fusobacterium* to the cells in the rumen (first compartment of cow stomach) and liver. If bacteria do not attach to cells, they are highly unlikely to cause infection. Our ‘invention’ helps induce an immunologic response in the host, which would prevent attachment and establishment of *Fusobacterium* in cattle, thus providing protection against the infection.”

The patent covers the use of the invention in a wide variety of usages including expression systems, adjuvants, gene therapies, injectable solutions, oral compounds and vaccines. The patent is effective for 20 years and is administered through the Kansas State University Research Foundation.

Inside this issue of *lifelines*



Students win scholarships.

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A ‘sound’ gift from the class of 2016

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Fourth-year student Jenni Wright wins prestigious equine scholarship

The American Quarter Horse Association recently announced that Jenni Wright, Hope, Kansas, now beginning her fourth year, was one of two national recipients of the Coyote Rock Ranch Veterinary Scholarship. This scholarship was created by the owner of Coyote Rock Ranch, Penny Knight of Hillsboro, Oregon, and is administered by the American Quarter Horse Foundation. The scholarship awards \$75,000 each to two fourth-year veterinary students who intend to pursue a career in an equine-focused veterinary practice upon graduation.

“From the time I was 5 years old, I knew I wanted to be a veterinarian,” Wright said. “My long-term goal is to practice as a board-certified equine surgeon and research exercise and muscle physiology in performance horses.”

While working on her Doctor of Veterinary Medicine degree, Wright has been working on a master’s degree and has been a participant in the Basic Research Immersion Training Experience (BRITE) program in the veterinary college, which provides research-oriented DVM students with a subsidized, in-depth, mentored research experience. The opportunity can be used to gain research experience, to obtain a master’s degree, or to jump-start work toward a doctoral program.

“As a BRITE scholar, I really think the research work I’ve done is what helped me compete for this scholarship,” Wright said.

Ideal candidates for the Coyote Rock Ranch Veterinary Scholarship are students enrolled at an American Veterinary Medical Association-accredited college of veterinary medicine in the United States or Canada whose studies are equine-focused



and who have a minimum cumulative 3.0 grade point average. While preference is given to students with American Quarter Horse involvement, students with significant equine involvement or experience with other breeds or disciplines are also encouraged to apply. Recipients must indicate a desire to pursue a career with an equine-focused veterinary practice.

Dr. Jeni Nezerka receives Bayer Excellence in Communication Award

Bayer HealthCare LLC Animal Health recently announced that Dr. Jeni Nezerka, Kansas City, Missouri, a 2016 graduate, was the Kansas State University recipient of a Bayer Excellence in Communication Award (BECA). Twenty-seven veterinary schools participated in the 2016 competition that presented a total of \$70,000 in scholarship awards.

“Effective client communication is a really important aspect of veterinary medicine,” Jeni said. “I am very honored to be recognized for my communication skills. I hope to keep working on developing good methods to effectively communicate with clients throughout my career.”

“We greatly appreciate the support that Bayer Animal Health gives our outstanding veterinary students,” said Dr. Ronnie Elmore, associate dean for academic programs, admissions and diversity programs. “We are committed to not only helping our students gain veterinary knowledge, but also to help them to develop the skills required to effectively practice veterinary medicine. This includes effective communication skills. We are very proud of Jeni and her accomplishments.”

Incorporating effective communication skills in veterinary practice, as well as other medical professions, has long been recognized as one of the main tasks in delivering comprehensive medical care to patients. The competition challenged students to submit a filmed interview in a clinical setting between the veterinary student and a client. Entries submitted at each school were evaluated by a panel of faculty judges. Faculty selected their school’s local winner using a scorecard developed by nationally renowned veterinary faculty who specialize in communication. Each regional level winner received a \$2,500 scholarship.



Fourth-year student Michelle Chen, left, presents Dr. Jeni Nezerka with the Bayer Excellence in Communication Award at the senior honors banquet.

Faculty and Alumni reap recognition at 78th Annual Conference



Dr. David Franz, DVM class of 1970, is recognized with the 2016 Distinguished Alumnus Award.



Dr. James Carpenter, exotics professor, accepts the 2016 ER Frank Award.



Dr. Taylor Truitt, DVM class of 2006, is the 2016 Outstanding Young Alumnus.



Daughter Caitlin and Wife Trisha accept the 2016 Distinguished Service Award on behalf of the late Dr. Walter Cash.



Dr. Howard Erickson, emeritus professor and DVM class of 1959, is surprised to receive the KVMA Lifetime Service Award.



Dr. Tom Jernigan, DVM Class of 1979 from Council Grove, is the KVMA Veterinarian of the Year.



Dr. Bonnie Rush, clinical sciences head, presents Dr. James Carpenter with the KSU Distinguished Service Award.



Dr. Dan Thomson surprises Drs. Brady, Melissa and Nick Luke, classes of 2010 and 2014 - Beloit, with the KVMA's Rising Star Award.



Dr. Elizabeth Davis, equine section head, accepts a KVMA President's Award from KVMA President Dr. Marty Vanier, a 1981 K-State DVM alumna.

CEEZAD duo tests for MERS in Jordan



Two scientists from the Center of Excellence For Emerging Zoonotic and Animal Diseases (CEEZAD) recently returned from a week-long visit to Jordan where they worked with a team from the NIH and local veterinarians on identifying and fighting cases of Middle East Respiratory Syndrome (MERS).

Dr. Juergen Richt, director of CEEZAD, and Chester McDowell, research assistant, worked with scientists from the NIH and faculty in veterinary medicine from the Jordan University of Science and Technology (JUST) on the project, which focused on identifying the MERS Coronavirus (MERS-CoV) in camels. The NIH team was led by Vincent Muenster, an expert on the study of MERS. The research team spent much of its time collecting sera and various swabs from camels living in the northeastern part of Jordan near that nation's borders with Iraq, Saudi Arabia and Syria, finding the virus in young camels. Dr. Richt termed the effort "very successful."

Class of 2016 gives ultrasound units to VHC



Dr. Laura Armbrust and Dr. Shawna Jo Cikanek, 2016 class president, demonstrate one of two new ultrasound units on Charlie. The units were a gift from the class of 2016.

CVM News Ticker



The Beef Cattle Institute (BCI) at Kansas State University is offering a new online resource – for free. The BCI partnered with animal health experts Dr. Mike Apley of the CVM and Dr. Brian Lubbers

of the Kansas State Veterinary Diagnostic Laboratory, to create an online informational module that answers frequently asked questions regarding the Veterinary Feed Directive (VFD) issued by the U.S. Food and Drug Administration. Changes to the regulations as a result of the directive are scheduled to take place Jan. 1, 2017. The free informational modules for beef producers and veterinarians can be found at BCI website: <http://www.beefcattleinstitute.org/>

Dr. Landa Colvin-Marion was recently honored during the School of Pharmacy hooding and awards ceremony at the University of Kansas. She was presented with a 2016 Preceptor of the Year Award. Dr. Colvin-Marion was one of four recipients to receive the honor, chosen by the fourth-year pharmacy students for her work in training them during their Advanced Pharmacy Practice Experience rotations. The Veterinary Health Center accepted 23 pharmacy students for the last academic year from two different schools of pharmacy, and is expecting 31 students for the 2016–2017 academic year under Colvin-Marion's supervision.

Dr. Chris Blevins arranged for a group of senior veterinary students to attend the Exploring Sand Hills trail ride in Hutchinson, Kansas. **Dr. Michelle Tucker**, equine intern, took the group of students to provide veterinary care.

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