



CVM lands at No. 4 on Top 10 list



Fourth-year students Malaina Lough and Kristen May prepare a kitten for surgery with the Mobile Surgery Unit.

A national publication produced by students for students has recently placed the Kansas State University in the upper half of a list of the top 10 veterinary colleges in the United States.

Citing what it calls an “I Kan(sas)” attitude toward solving problems, College Magazine listed several factors to support a No. 4 ranking for K-State among U.S. veterinary colleges, including a high standard of excellence in patient care and scientific

discovery in infectious diseases. Further emphasis was placed on K-State’s large animal expertise, impact on the cattle industry, learning objectives, student proficiency and the ability to identify and treat diseases.

College Magazine specifically named the CVM’s Center of Excellence for Emerging and Zoonotic Animal Diseases, Rabies Laboratory, and Center for Epithelial Research, as standouts in the program.

“We are honored to be ranked among these exceptional peer institutions and universities,” said Dr. Bonnie Rush, interim dean. “It is gratifying to be recognized for areas we have identified as our own strategic priorities: exceptional teaching, impactful research, outstanding service and extraordinary graduates.”

Second-year student Maggie Massey, Butler, Missouri, was quoted for expressing her appreciation of the large animal faculty, citing K-State instructors raise students to a “different level” in order to groom them to be industry leaders.

College Magazine’s ranking methodology is based on a variety of factors, such as data from the NCES, news articles, university websites, course catalogs and student statements. The site also considers scholarship opportunities and note-worthy initiatives, and then applies a formal list of criterion scored on a 1-5 scale, with the lowest scores placing schools on top.

Anatomy Lab reopens after renovations



Faculty and staff check out the newly renovated gross anatomy lab on Trotter Hall’s third floor.

The CVM welcomed back its first-year veterinary students with a special treat — a completely renovated laboratory with a fresh, modern look. The college held an open house for its newly redesigned third-floor gross anatomy laboratory in Trotter Hall Tuesday, Jan. 16.

“The goal of this project was to renovate the original first-year space into a state-of-the-art facility for anatomy instruction and collaborative study,” said Dr. Bonnie Rush, interim dean. “We now have a contemporary learning environment to allow students to focus on mastery of the material.”

With the new lab, students are able to perform dissection work on canine specimens using a dedicated down draft ventilation table. The tables provide a built-in ventilation system to remove formalin vapors from the breathing zone of the dissection team, allow constant air movement away from personnel working with specimens and provide a pathway to safely remove formalin fumes from the laboratory space.

A rolling cart will provide technology to microanatomy and gross anatomy, allowing each group of students access to a monitor for display of microanatomy or radiology images.

The lab’s student success center was created to serve as a home base for students throughout the semester.

Dr. Wenjun Ma’s lab receives \$2 million grant to investigate influenza viruses in bats

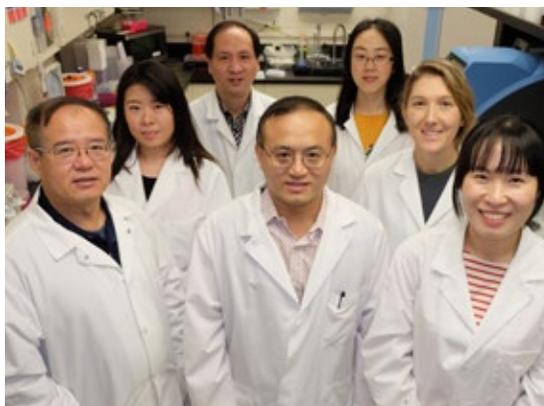
Recent news headlines have amplified the connection between bats and rabies, but these tiny, flying mammals are also known to spread more than 60 different diseases. In an effort to curtail one of these disease threats: influenza, Dr. Wenjun Ma, associate professor, has obtained an NIH R01 grant totaling \$2,046,511.

“Influenza pandemics are typically caused by the emergence of novel influenza A viruses, which transmit efficiently within human populations that lack preexisting immunity,” Dr. Ma said. He further explained how genome sequencing has been used to discover new viruses in bats that are now named as bat influenza A-like viruses, or BIALVs.

“Concerns were raised that these novel BIALVs, HL17NL10

and HL18NL11, may pose significant spillover threats to humans,” Dr. Ma said. “This is because antibodies to influenza A viruses and influenza B viruses have no cross-reactivity to novel BIALVs. To understand these novel viruses, reverse genetics have been established for both viruses.”

Dr. Ma said bats have been tested sero-positive for influenza



Dr. Wenjun Ma (center) works with a team including (left to right) Yonghai Li, Yuekun Lang, Rui Wu, Liping Wang, Rachel Palinski and Jinhwa Ransburgh.

A viruses, frequently to the H9N2 viruses. Furthermore, bat cells from different species have been demonstrated to support human, swine and avian influenza A virus replication.

Dr. Jianfa Bai obtains SHIC grants for swine influenza research



Dr. Jianfa Bai

swine disease viruses that occur across the globe. Two research grants worth \$173,400 from the Swine Health Information Center (SHIC), Ames, Iowa, will help continue research that began in 2016.

“With the two SHIC grants funded in 2016, we are in the final stage of building real-time PCR assays for swine influenza B, C and D and porcine circovirus 3 (PCV3),” said Dr. Jianfa Bai, an associate professor and director of molecular research and development for the Kansas State Veterinary Diagnostic Laboratory. “These current grants will be a logical continuation of

Swine disease research at Kansas State University is now getting closer to developing new, reliable diagnostic tests for several

the 2016 grants. With the 2016 grants we are building PCR assays for pathogen detections, and current grants will support the development of antibody detection assays to monitor animal responses to these viruses.”

Dr. Bai explained how the challenging part of this research stems from the different variations of swine influenza and circo viruses.

“Swine influenza is a highly contagious viral respiratory disease caused by influenza A, B, C and D viruses,” Dr. Xuming Liu, a research assistant professor, said. “Influenza A virus is the most common pathogen, and previously it was assumed to be the only influenza virus that could infect swine. Recent evidence has demonstrated that Influenza B and Influenza C also have the potential to infect swine. As for Influenza D Virus, since its discovery in swine in 2011 in the US, the virus has been reported in Italy, China, Mexico, France and Japan.”

Dr. Jishu Shi makes inroads on CSF vaccine research



Dr. Jishu Shi

swine disease overseas. A second discovery by the researcher could improve vaccines for the disease and help protect the U.S. from an outbreak.

A professor of vaccine immunology and director of U.S.-China Center for Animal Health in the CVM, Dr. Shi has developed a method of producing a classical swine fever vaccine safely and inexpensively. The disease can cause devastating epidemics among pigs if left unchecked.

Dr. Shi's vaccine uses a protein from the virus rather than live or attenuated virus, which means the vaccine poses no biosecurity risk to produce in the U.S., where classical swine fever was eradicated in 1978.

Dr. Shi licensed his new subunit vaccine to an animal health company in China to continue to study its field efficacy. Classical swine fever has not been eliminated in China, and each

Dr. Jishu Shi has licensed a new vaccine to an animal health company to fight a highly contagious

of the 700 million pigs raised annually in the country currently receives two doses of vaccine against the virulent disease. Dr. Shi's version requires only one dose.

“We need to test the vaccine in the field to prove it will work,” Dr. Shi said. “If it does, we can help China eradicate the disease, which further secures the U.S. by ensuring the disease doesn't spread to our shores.”

Pigs given the current modified live virus classical swine fever vaccine test positive for the disease. Dr. Shi's other discovery will help develop a test to differentiate infected from vaccinated animals, known as a DIVA strategy. He and his collaborators identified two specific antibodies that can be used to differentiate whether pigs are infected or vaccinated, and he is working with colleagues at the USDA, in Europe and in China to conduct more trials and gain full validation.

“This exciting discovery could result in solving an economic and trade problem in China — vaccines are expensive, and countries with classical swine fever can't export pork — and a security problem for the U.S.,” Dr. Shi said

Oncologists launch research center

The Kansas State University Center of Excellence for Translational and Comparative Oncology Research (CETCOR) was first established in late 2017, having received generous start-up funding from Kansas State University's Johnson Cancer Research Center and support from the College of Veterinary Medicine.

“The overriding objective of CETCOR is to expedite the pre-clinical and clinical development, production and/or licensure of novel or improved medical interventions (drugs, immunotherapeutics, and medical devices) for the treatment, diagnosis, and monitoring of both human and animal cancers,” said Dr. Raelene Wouda, assistant professor of oncology.



Dr. Raelene Wouda will lead the new CETCOR.

CVM News Ticker



Dr. Yulan Xiong

A new journal publication by a CVM researcher is focusing on a transgenic solution for tackling Parkinson's disease.

“Parkinson's disease is recognized as the most common movement disorder, affecting up to 1 percent of the population above the age of 60 and 4-5 percent above the age of 85,” said Dr. Yulan Xiong, an assistant professor in A&P. “According to the National Institutes of Health, one million people in the United States are suffering from Parkinson's disease. Unfortunately, there is no cure or proven disease modifying therapy for this disease.”

Dr. Xiong explained how Parkinson's disease is caused by a combination of risk factors including environmental exposure, age and a positive family history for disease.



Congratulations to Dr. Emily Klocke and Kathy Shike, RVT, each recently recognized with awards from the Kansas Veterinary Medical Association, announced at its January convention. KVMA director Megan Kilgore (left) presents Dr. Klocke with the 2017 KSU Distinguished Service Award. In the right photo, Shirley Arck, Lisa Bryant and Dr. Tom Schwartz congratulate Kathy on receiving the 2017 Health Care Team Member of the Year award.

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