



Keeping the Program Rolling

PetSmart Charities® grant supports shelter medicine and Mobile Surgery Unit

Fourth-year students Megan McLaughlin, Hunter Like and Gina Callari travel with the Mobile Surgery Unit this fall.

A special CVM program that gives veterinary students hands-on surgical experience will keep rolling thanks to \$236,508 grant from PetSmart Charities, the leading funder of animal welfare in North America.

The most visible part of the program is the College of Veterinary Medicine's 32-foot Mobile Surgery Unit used for performing on-site, pre-adoption spay/neuter procedures and provide medical care to enhance the health and adoptability of shelter animals. The recent grant from Phoenix-based PetSmart Charities will specifically help support operational costs in the Shelter Medicine Program.

In 2014, the School received an initial grant for \$200,000 from PetSmart Charities to secure the Mobile Surgery Unit. This year's grant will bring the funder's

total commitment to more than \$400,000.

Since the program launched in April 2015, the Mobile Surgery Unit has regularly visited area shelters within a two-hour radius of Manhattan over the past two years. Students are exposed to each shelters' unique processes and challenges.

"There are many benefits for students who participate in our shelter medicine program," explained Dr. Bonnie Rush, interim dean of the college. "We believe students will develop a strong appreciation for the magnitude of the homeless pet population and will be better prepared to volunteer and advocate for shelters in their own communities after graduation. We are very appreciative of the amazing commitment to animal health and shelter medicine

education expressed through this grant from PetSmart Charities."

"The Shelter Medicine program has made great progress in providing services to underserved organizations in their community while also providing students with a unique learning opportunity to enhance their classroom experience," said David Haworth, DVM, Ph.D., president of PetSmart Charities. "By continuing to invest in the program at Kansas State University, we hope to inspire more veterinary students to investigate a career or volunteer opportunities within the field to help pets and people in need."

To date, the Mobile Surgery Unit has made more than 540 trips to 16 partner organizations where 150 different students have provided more than 10,000 spay/neuter procedures.

Provost names Dr. Bonnie Rush as interim dean



Dr. Bonnie Rush has been named interim dean of the CVM, effective Sept. 27. Dr. Rush, who was serving as acting dean, will continue to

lead the college while a national search is conducted to find a new dean.

"As a longtime faculty member, former department head, and as the college's executive associate dean, I know Dr. Rush understands the specific needs of the College of Veterinary Medicine, and I appreciate her willingness to serve in this important position," said April Mason, provost and senior vice president.

VHC warns of raccoons with canine distemper



The Veterinary Health Center is warning the public to be on the lookout for raccoons, especially those showing up in the daytime, as they could be a health threat to dogs.

The center's exotic, wildlife and zoo animal medicine service has seen a large number of raccoons in the clinic recently suffering from canine distemper.

"While we may see raccoons on a fairly regular basis, there seems to be a recent uptick in cases," said Dr. James Carpenter, professor of exotic pet, wildlife and zoological medicine. "The raccoons are often found out during the day, showing abnormal behavior such as incoordination, difficulty in walking and aimless wandering."

Canine distemper is a highly contagious viral disease and can spread from infected raccoons to susceptible dogs.

Inner ear study uncovers a cause of childhood deafness

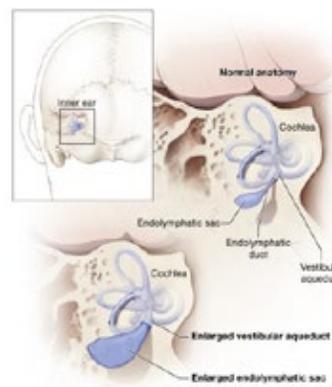
Bigger is not always better, especially when it comes to structures in the inner ear.

Enlargement of the vestibular aqueduct, or EVA, has long been associated with hearing loss. A new study finally reveals the root cause of how this structure becomes enlarged, and could lead to new approaches to preventing and treating hearing loss associated with EVA and similar disorders. The discovery is the result of a collaborative research between Kansas State University and the National Institute on Deafness and Other Communication Disorders, part of the National Institutes of Health. The institute and the NIH's National Center for Research Resources, now known

as the National Center for Advancing Translational Sciences, funded the study.

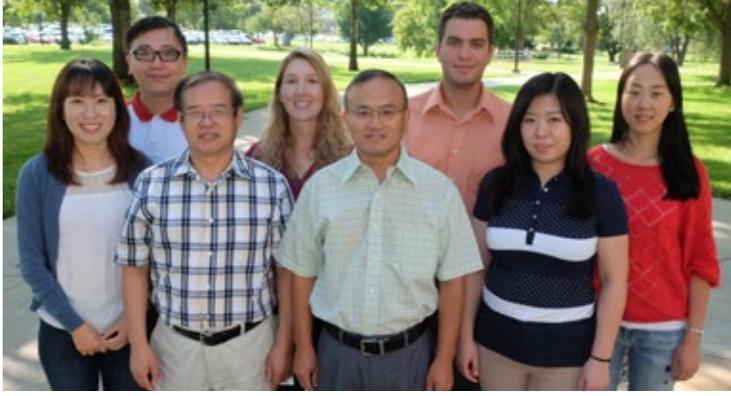
The paper, "Molecular architecture underlying fluid absorption by the developing inner ear," was published online Oct. 10 in the journal *eLife*.

"The purpose of this study was to gain insight into the functional, molecular and cellular architecture of the endolymphatic sac and to identify the components of the physiologic developmental pathway that is disrupted in EVA," said Dr. Philine Wangemann, university distinguished professor of anatomy and physiology "We showed that the endolymphatic sac absorbs fluid that is dependent on the gene, SLC26A4."



This diagram shows the anatomy of the inner ear. Hearing loss and deafness may occur when the inner ear is enlarged due to failure of fluid absorption in the endolymphatic sac. This failure of fluid absorption has now been established as a root cause of hearing loss.

Dr. Wenjun Ma obtains pair of grants to study swine diseases



Front: Jinhwa Ransburgh, Yonghai Li, Wenjun Ma and Yuekun Lang. Back: Yuhao Li, Rachel Palinski, Michael Duff and Liping Wang.

Dr. Wenjun Ma is taking aim at swine diseases with the help of two major grants. He has received a National Institutes of Health R21 grant of \$411,664 and a contract grant worth \$303,865 from Merck Animal Health.

The NIH grant will be used to investigate the connections between respiratory swine disease and influenza B virus.

“Unlike influenza A virus that infects a wide range of species, influenza B virus infections are almost exclusively restricted to humans, despite sporadic infections reported in seals,” Dr. Ma said. “It is unclear whether other animal species can support the replication of influenza B virus and serve as a reservoir.”

One of Dr. Ma’s previous studies provided evidence that domestic pigs are susceptible to influenza B virus infection. Swine herds previously exposed to porcine reproductive and respiratory syndrome virus, or PRRSV, had a higher prevalence of influenza B virus antibodies.

“Studying the differences between human and swine influenza B virus isolates might improve our understanding of how influenza B viruses are maintained when they are not circulating in humans,” Dr. Ma said. The Merck grant is to study the molecular epidemiology and pathogenicity of porcine circovirus 3, or PCV3, in pigs.

Trio wins Merck scholarships at AABP



Fourth year students Taylor Crandall, Maxwell Beal and Ben Bennett represent K-State in national scholarship competition.

Three CVM were among 18 students selected nationwide to each receive a \$5,000 scholarship award from Merck.

The company presented the students with an American Association of Bovine Practitioners Bovine Veterinary Student Recognition Award at the association’s recent annual conference in Omaha. Merck Animal Health has sponsored the award since 2004.

“These recipients are capable of not only providing quality cattle care but also of serving as the driving force behind important advancements in the field of veterinary medicine in the years to come,” said Rick Sibbel, executive director of food

animal technical services for Merck Animal Health. The following K-State students received the 2017 AABP Bovine Veterinary Student Recognition Award: Taylor Crandall, Hillsboro, earned a Bachelor of Science in agriculture from Kansas State University. She spent several summers working at Tallgrass Veterinary Hospital in Concordia. After graduating, Crandall plans to work as a veterinarian in rural Kansas.

Maxwell Beal, Bakersfield, California, earned his bachelor’s degree in animal science from the University of California, Davis. He intends to work as a mixed animal practitioner with an emphasis in food animal medicine after graduating.

Ben Bennett, Mount Vernon, Ohio, is also working on a master’s degree in feedlot health from Kansas State University. After graduating, he plans to own a private veterinary practice.

Grad students deliver policy presentation



Mariana Guerra-Maupome and Izabela Ragan, Ph.D. students in Diagnostic Medicine/Pathobiology, joined Nicole Green, a Ph.D. student in biochemistry, to present “Making a CASE for Science: An Intro to Science Policy” at the K-State Student Union in September.

CVM News Ticker



Dr. Waithaka Mwangi is featured in this month’s Lifelines Researcher Profile video, where he talks about his internationally recognized, collaborative research on cattle antibodies that have shown a capability to neutralize the HIV virus and how that might one day have impact on human health.



Meet the new group of recipients of the Veterinary Training Program for Rural Kansas scholarship. From left: First-year students Jared Heiman, Ashley Joseph, Izabella Carmona, Braxton Butler, Megan Westerhold, Lena Fernkopf and Dr. Bonnie Rush.

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