



lifelines

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News from the College of Veterinary Medicine at Kansas State University

Gibbon the gift of sight: VHC performs cataract surgery on blind baby ape

A common procedure in humans has given a new outlook for an uncommon animal patient. Veterinary specialists at Kansas State University performed what is thought to be the first cataract surgery on a youthful member of the ape family: a 2-year-old gibbon named Booger.

“Booger is unique in that in my research and my understanding she is the youngest gibbon I know about to have cataract surgery,” said Dr. Jessica Meekins, assistant professor of ophthalmology in the College of Veterinary Medicine. “The only other report I found was a gibbon of about 5 years old, and that was outside the country.”

The gibbon’s owner, Dana Savorelli, operates Monkey Island Rescue and Sanctuary in Greenwood, Missouri, east of Kansas City, which houses a variety of primates, lemurs and reptiles. Booger was born in the sanctuary, but her vision problems were not immediately obvious.

“You would have to watch her a little bit to know she was more or less blind in her own area because she’s got it down so smooth how everything operates,” Savorelli said. “A lot more smelling. A lot more touching than what the other ones

would do because the eyes aren’t giving her what she needs.”

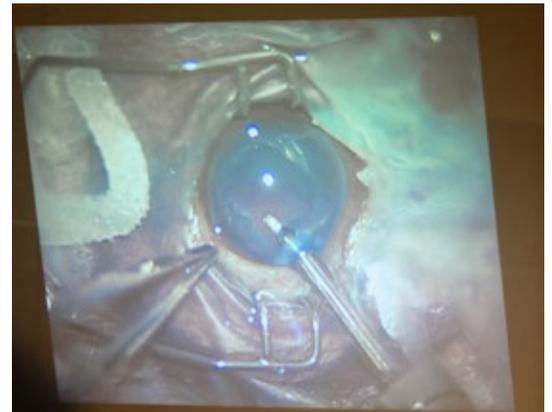
Savorelli brought Booger to the Veterinary Health Center where she was first examined by Dr. James Carpenter, professor of wildlife and zoological medicine.

“When Dana contacted us, the first thing we did was discuss the case with the ophthalmologists, because they are the specialists,” Dr. Carpenter said. “And when we presented the case to them, Dr. Meekins was very excited. She informed us of what would be required to do a cataract surgery on a gibbon.”

Dr. Carpenter explained there were numerous people involved in performing the procedure.

“Today was a real team effort,” Dr. Carpenter said. “We had two ophthalmologic surgeons, two anesthesiologists, two specialists from our exotics pets/zoological medicine service, and a cast of many, many students, so it was a great teaching opportunity as well.”

Dr. Meekins said there are several similarities in the eye structures of most animals, including cases of cataracts.



The eyes on Booger, a gibbon, look cloudy in this Facebook image posted by owner Dana Savorelli prior to surgery at the Veterinary Health Center. A video monitor in the surgical suite at the shows the procedure up close in real time.

See GIBBON, page 3

Inside this issue of *lifelines*



BRI provides TAD training.

See page 2



Dr. Tamura works on cancer project.

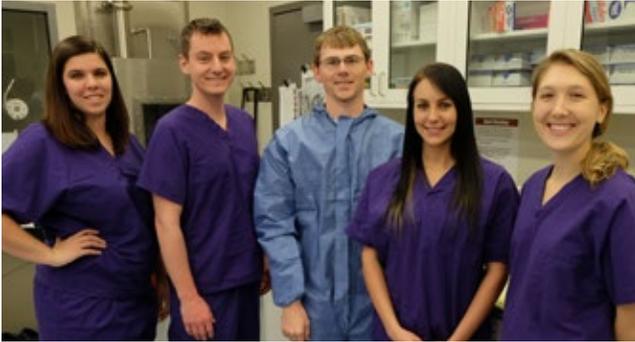
See page 2



Gaining leadership lessons in Chicago.

See page 4

BRI provides training in transboundary animal diseases



Fellows in the transboundary animal diseases training program don scrubs and protective outer wear in a teaching laboratory at the Biosecurity Research Institute: From left, Laura Constance, Christopher Holderman, Christian Rittmann, Victoria Ayers and Rachel Palinski.

Some of the biggest threats to national security come from enemies that cannot be easily contained inside of geographic borders. These threats take the forms of highly contagious epidemic diseases called transboundary animal diseases (TADs).

Kansas State University is helping to confront these diseases through a special research fellowship program supported by the U.S. Department of Homeland Security, and administered through the

Biosecurity Research Institute (BRI) and the College of Veterinary Medicine.

“This program leverages the expertise and resources of the BRI and the National Emerging Infectious Diseases Laboratory (NEIDL) to train next-generation Ph.D., DVM and post-doctoral researchers to work in high and maximum-containment environments on TADs,”

said Dr. Dana Vanlandingham, assistant professor of virology in the Department of Diagnostic Medicine/Pathobiology. “So far, we have developed five classes in diagnostic medicine/pathobiology and will develop one more for the summer.”

Some of the classes include “DMP 690 Essential Practices for BSL-3 Research Settings,” “DMP 895-B Select Agent Studies,” and “DMP 893 Principles of

Biosafety and Biocontainment.” The BRI started training its first group of TAD Fellows in August 2016.

“Our objective is to support graduate-degree-seeking individuals, or individuals who are just beginning their postdoctoral careers,” said Dr. Vanlandingham.

The students currently enrolled in the program are Victoria Ayers, Prague, Oklahoma; Laura Constance, Clyde, North Carolina; Christopher Holderman, Iola, Kansas; Rachel Palinski, Suwanee, Georgia; and Christian Rittmann, Oberlin, Kansas.

“I’ve been working under Dr. Megan Niederwerder and Dr. Bob Rowland in the veterinary college to study porcine reproductive and respiratory syndrome virus, classical swine fever virus and African swine fever virus,” said Constance, who is working on both her DVM degree and a Ph.D. in pathobiology at Kansas State University. “Ultimately I would like to become involved with the One Health Initiative as well as pursue a career in a high-containment research facility as a veterinarian.”

Dr. Masaaki Tamura collaborates on aerosol-based treatment for lung cancer



Dr. Masaaki Tamura

Lung cancer patients may one day be able to breathe a sigh of relief due to a new treatment for this insidious disease.

Kansas State University’s Dr. Masaaki Tamura is collaborating on

a National Institutes of Health (NIH)-funded research project for a therapeutic compound that would be administered directly to the lungs in aerosol form.

“The standard treatments for lung cancer include chemotherapy, radiation and/or surgery,” said Dr. Tamura, who

is an associate professor of anatomy and physiology in the College of Veterinary Medicine. “Cisplatin is a first-line chemotherapy for lung cancer, but intravenous delivery can be complicated by a variety of factors such as toxicities, poor penetration into tumors and lymph nodes, organ damage and spontaneous drug resistance. Cancer becomes poorly responsive to chemotherapeutics after repetitive uses.”

Dr. Chad Groer, chief science officer, with Hylapharm, Lawrence, Kansas, is the principal investigator on the project, which has received a \$150,000 business development grant from the NIH. Hylapharm develops chemical-based therapeutics to treat cancer, and partners with universities to test delivery methods and effectiveness of potential treatments and methods.

“We call this product, HylaPlat,” Dr. Groer said. “It delivers high-dose targeted cisplatin directly to the lungs to target primary lung cancers and lymphatic metastases. This would replace IV cisplatin therapy for advanced CD44+ non-small cell lung cancers.”

Dr. Tamura said Hylapharm approached him to collaborate on this project because of his expertise in lung cancer research.

“We have been collaborating since 2015, and already have one publication,” Dr. Tamura said. “Lung cancer is the leading cause of cancer deaths with more than 200,000 new diagnoses made each year. We’re hopeful the pulmonary delivery of aerosolized HylaPlat will be more efficacious and more tolerable than IV cisplatin.”

Gibbon | VHC team performs cataract surgery on a 2-year-old lesser ape

continued from page 1



Dr. Jessica Meekins prepares equipment for cataract surgery on Booger the gibbon.

“We call it comparative ophthalmology because despite a lot of variation in the species we may see, the eyes are remarkably similar,” Dr. Meekins said. “A lot of the structures are very similar or identical, and so the basic methodology of the surgery was exactly what I would do in one of the animals that I’m more accustomed to doing surgery on, like in a dog.”

Precision was very important.

“The incision is actually very tiny, it’s only about 3 or 4 millimeters in length and it’s basically just long enough to facilitate the insertion of the instrument

that we use to actually break up the cataract,” Dr. Meekins said. “We were able to remove the lenses completely – the cataracts. Her capsules, which is the clear tissue that surrounds the lens – those were pretty clear, so I’m hopeful she’s going to have a good vision outcome even though there were some factors that prevented us from putting in artificial lens in her eyes. Even still, her vision should be better than it was with the cataracts blocking her sight, and so she should have basically the equivalent of farsightedness.”

The surgery was filmed by an educational and informational television

program called “Scaly Adventures” that has already featured Booger on an earlier episode. The show is hosted by Pierce Curren and produced by his mother and father, Tanya and Rick Curren.

“What is our passion at ‘Scaly Adventures’ is showing people these amazing, beautiful animals and the amazing, beautiful people that take care of them,” Rick Curren said. “The surgeons were amazing, and just to get an opportunity to come in and document this amazing procedure and show the doctors’ skill and show the team working together was really, really first class.”

The cataract procedure is not expected to keep Booger down for very long.

“We would expect the incisions into her lenses to be essentially healed within about two weeks,” Dr. Meekins said. “Most of the time we like to have the patient be fairly quiet and exercise-restricted for about a month after surgery.”

“She is doing great,” Savorelli said, after returning home with Booger. “She has the run of the front room kitchen and dining room and is never caged. It is so cool to see her look and touch things with accuracy. We here at Monkey Island have been blessed to get to work with the professionalism of all who were involved at the Veterinary Health Center.”

Dr. Brad White appointed to director of Beef Cattle Institute

The CVM has announced the appointment of Dr. Brad White to director of the Beef Cattle Institute (BCI).

Since October 2015, Dr. White has served as interim director of the BCI. He has been on the faculty in the agricultural practices section of the college’s clinical sciences department since 2005, and was promoted to the rank of professor in 2016. Dr. White earned his DVM from the University of Missouri in 1997, and an M.S. from Mississippi State University in 2005. Dr. White was in private practice as a veterinarian for the Perry

County Veterinary Hospital in Perryville, Missouri, from 1997 to 2003.

“We thank Dr. White for his excellent service as the interim director, and we have great confidence in his ability to guide the Beef Cattle Institute toward continued success,” Dean Tammy Beckham said. “During his time as interim director, Dr. White has assembled a multidisciplinary leadership team composed of faculty from the College of Veterinary Medicine and the College of Agriculture. He has worked with industry leaders to establish a vision for

the future of the institute, and I have complete confidence he will continue to build partnerships and strengthen the relevance of the institute and its ability to serve the beef



Dr. Brad White

cattle industry of Kansas and the nation.”

CVM students gain leadership lessons in Chicago



Brett Montague, Alexandra Allen (left) and Kelsey Smith (far right) join veterinary students from other colleges at a Chicago eatery.

Leadership is a popular topic for students at Kanas State University. Three students in the College of Veterinary Medicine recently had a unique opportunity to engage in a national leadership conference in Chicago. The students were Alexandra Allen, class of 2020; Brett Montague, class of 2019; and Kelsey Smith, class of 2020. The office of academic programs and student affairs provided travel funding for the students to attend.

“Attending the AVMA Veterinary Leadership Conference was one of the most exciting and influential experiences I have ever had, especially in regards to my career within the veterinary profession,” Alexandra said. “We were lucky enough to represent our College of Veterinary Medicine and attend the conference as student leaders due to the graciousness of our school.”

The AVMA Veterinary Leadership Conference, organized by the American Veterinary Medical Association was held in January, and cover areas such as developing leadership skills and increasing the comfort level with veterinary leadership.

Wedding registry requests oncology donations

By Sara Wallace, KSU Foundation

Instead of asking for kitchenware on their wedding registry, Janelle Phillips and Jan Elsasser asked for something more dear to their hearts – donations to the oncology program at the CVM.

Tucker, Elsasser and Phillips’ Corgi of six years, passed away due to Lymphoma. From this experience a bond was made between Elsasser, Phillips and the oncology department.

“Most of the wedding guests weren’t surprised about this. They know how much we cared about Tucker and all our dogs,” Elsasser said. “There isn’t a thing we could possibly need, so our direction went back to Tucker. He was so well taken care of and we thought giving back would be a longer-lasting gift.”



Janelle Phillips and Jan Elsasser

CVM News Ticker

Dr. Manuel Chamorro-Ortega attended the North American Veterinary Community Conference Feb. 4-8, where he presented, “Vaccination of calves IFOMA; Alternative use of colostrum replacers in dairy calves; BVDV vaccination and BRDC prevention.”

Dr. Neala Boyer spoke at the K-State Olathe campus for area veterinarians and technicians on Feb. 22, and presented, “Chronic Pain Management in Dogs and Cats and the Diagnostic Evaluation of Itchy Dogs and Cats for the General Practice Veterinarian.” She also presented “A day in the life of a small animal practice veterinarian” to the Veterinary Voyagers Club.

Dr. Mofazzal Hossain, a postdoctoral research associate in Dr. Bob Rowland’s research group presented research findings he 8th World Congress on Virology was held Nov. 28-30, 2016, in San Antonio, Texas. He also served as a co-chair of the session: Organ specific cancer and tumor virology, recent advances in drug discovery, current focus in virology research, viral immunology and vaccines development, and veterinary virology.



Dr. Mofazzal Hossain presents research findings on multiplex detection of classical swine fever virus in San Antonio.

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