



# *lifelines*

News from the  
College of Veterinary Medicine  
at Kansas State University

February 2016

Vol. 11 No. 2

## CVM students volunteer on service trip to Nicaragua



By Chantal Girard, class of 2018

On Jan. 3, 2016, I was part of a group of K-State veterinary and pre-veterinary students who traveled to Managua, Nicaragua, to embark on a service trip with the non-profit organization, Vida Volunteer. The mission of our trip was to 1) provide health examinations and spay and neuter services to pets and livestock in underprivileged communities, 2) spread knowledge regarding animal health and welfare, and 3) gain invaluable clinical experience and an understanding of the role of veterinary medicine in developing regions. We had the privilege of working alongside veterinarians from Central America to set up temporary clinics in two separate communities during our stay.

Following orientation on Day 1, we headed to meet our home-stay families and settle into our first community, Masaya. The next three days were filled with early mornings, long days, and dirty scrubs. Our stay in Masaya consisted of two days of small animal clinics, followed by one day of large animal work. We set up our small animal clinic in a schoolroom, complete with an intake/physical exam station, a pharmacy, a surgical prep area, three surgical tables, and a recovery area. Under the supervision

of the veterinarians and technicians working with us, we performed countless physical exams, prepped dogs for surgery, monitored anesthesia, assisted in spays and neuters, and stayed with our patients in recovery to monitor and prepare them to return to their families.

Large animal day looked a bit different in that we traveled to the animals, at their respective farms, rather than the animals being brought to the clinic. We dewormed and administered vitamins to cattle, horses, pigs, sheep, and goats. There was never a dull moment on large animal day, we either had pigs squealing, roosters crowing, or goats fleeing. This first large animal day was the end of our stay in Masaya, and so the following morning we said goodbye to our homestay families and headed to our next community, Diriamba. Upon arriving, we prepared for another two days of small animal clinics and one final day of large animal work. The clinic days here were very much like our clinics in Masaya, but having those first few days of experience under our belts, we were able to see more patients, interact more with owners, and gain a better understanding of the impact we were making in these communities.

Read more at Lifelines online: [www.vet.k-state.edu/lifelines/1602.html](http://www.vet.k-state.edu/lifelines/1602.html)



K-State veterinary students volunteer to work on Large Animal Day in Masaya, Nicaragua. Back (from left): Chantal Girard, Brittani Gimenez, Donny Toland, Kim Kalosy and Lisa Lawrence. Front: Stephanie Skinner, Marie Keith and Megan Cabot.

### Inside this issue of *lifelines*



**DM/P research  
adorns cover.**

See page 2



**Teaching 'Zoo  
Sprouts!'**

See page 4



**Celebrating a best  
poster award.**

See page 4

## AAVMC names former Dean Ralph Richardson its recipient of 2016 Recognition Lecture Award



Dr. Ralph Richardson

Former CVM Dean Dr. Ralph Richardson has been chosen to deliver the 2016 Recognition Lecture at the Association of American Veterinary Medical College's (AAVMC's) 2016 Annual Conference on Friday, March 4.

The Recognition Lecture is an annual honor presented by the AAVMC to an individual whose leadership and vision has made a significant contribution to academic veterinary medicine and the veterinary profession.

Dr. Richardson has provided almost 50 years of service in veterinary medicine, including 17 years as dean of the CVM before retiring this past summer. He is presently serving as interim dean and CEO of KSU's Olathe campus.

This year's AAVMC conference, themed Fifty & Forward, is a special conference commemorating the association's 50th anniversary. Dr. Richardson's lecture, titled "Reflecting on the Past, Looking to the Future," will identify opportunities that resulted from defining moments of his career. "My hope is that, by so-doing, I will encourage and assist others to pursue an equally exciting and rewarding career," said Dr. Richardson, who also chairs the AAVMC's 50th Anniversary Celebration Committee.

He will also identify key concerns for the future of academic veterinary medicine and possible ways to address those concerns.

## DM/P research on swine disease featured as debut cover art on journal

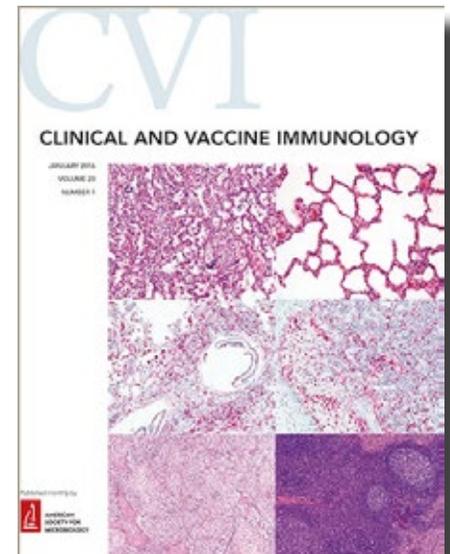
Purple and lavender patterns are common at Kansas State University and are now part of the debut cover art for an international academic journal thanks to a team of swine disease researchers. Dr. Megan Niederwerder, assistant professor in the Department of Diagnostic Medicine/Pathobiology and Kansas State Veterinary Diagnostic Laboratory in the College of Veterinary Medicine, was the lead author on an article about vaccination and infection of two porcine viruses in the December 2015 issue of *Clinical and Vaccine Immunology*. Images from this article were selected as cover art for the January 2016 issue, marking the first time the journal had featured photography on its cover.

"This work is very interesting as it details how a widely used porcine reproductive and respiratory syndrome virus (PRRSV) vaccine can potentiate disease caused by another widely distributed virus of pigs, porcine circovirus type 2 (PCV2)," Dr. Niederwerder said. "This has particularly important field applicability in swine herds lacking a

consistent PCV2 vaccination program. Several individuals from K-State were involved in this project. In addition, Mal Hoover, our college's certified medical illustrator, was instrumental in revising the cover photo for the journal specifications. It is truly an honor to have the journal select our work to be featured as their inaugural cover image."

"We started featuring cover art to give CVI a new, colorful and bright image that would reflect our renewed enthusiasm, desire to grow and better serve our readers," said Marcela F. Pasetti, Ph.D., editor in chief of *Clinical and Vaccine Immunology*. "This is one of several new initiatives that CVI will be launching this year to highlight significant advances and timely topics of scientific and public interest in the fields of vaccine and clinical immunology."

*(Cover photo published with permission from American Society for Microbiology.)*



*lifelines* is published monthly by Marketing and Communications in the College of Veterinary Medicine, edited by Joe Montgomery, [jmontgom@vet.k-state.edu](mailto:jmontgom@vet.k-state.edu). Read online at [www.vet.k-state.edu/lifelines/1602.html](http://www.vet.k-state.edu/lifelines/1602.html)

Connect with us!  
[facebook.com/ksucvm](https://facebook.com/ksucvm)  
[youtube.com/ksucvm](https://youtube.com/ksucvm)  
[twitter.com/ksucvm](https://twitter.com/ksucvm)



## Diagnostic research, vaccine work are key to controlling Zika virus outbreak, Biosecurity Research Institute director says

With the Zika virus outbreak growing, a Kansas State University infectious disease expert says that research is crucial to combating this outbreak and preventing the spread of other mosquito-borne viruses.

“One of the strengths that we have here at the Biosecurity Research Institute is the development of diagnostics and vaccine work,” said Dr. Stephen Higgs, director of the Biosecurity Research Institute (BRI). “That is exactly what is needed to enable timely responses to new diseases as they come along.”

Kansas State University’s BRI is researching Japanese encephalitis, which is a mosquito-borne virus similar to Zika virus. While the institute is not currently performing Zika virus research, it does have isolates of the African lineage of Zika virus, which is similar to the Asian lineage involved in the current outbreak.

Zika virus is transmitted by mosquitoes to people and can cause fever, rash, joint pain, muscle aches and conjunctivitis, among other symptoms. While it is typically found in Africa and Asia, it appeared in Brazil in May 2015 and has spread to other countries. Several U.S. cases have been confirmed, and the Centers for Disease Control and Prevention recently issued travel guidelines for pregnant women.

“What is unusual with this current epidemic in the Americas is that we are seeing cases where pregnant women

who get infected are passing on the virus,” Dr. Higgs said. “In Brazil, there have been almost 4,000 cases of babies born with birth defects. This aspect of infection has never been seen with Zika virus and, unfortunately, we don’t know why this is suddenly occurring in the Americas.”

The BRI, in Pat Roberts Hall, is equipped to help with any research that may find a solution for the virus, said Dr. Higgs, who researches mosquito-virus-vertebrate interactions.

“Our capability to work with animals, plants, food and diseases that can infect people gives us the extraordinary capacity to do interdisciplinary research across Kansas State University,” Dr. Higgs said.

University scientists have studied two similar mosquito-borne viruses: chikungunya, which affects humans and includes fever and joint pains, and Japanese encephalitis, which is found in pigs and birds and can transmit to humans through mosquitoes. Japanese encephalitis has been identified as an



*Dr. Stephen Higgs, an infectious disease expert and director of the Biosecurity Research Institute, says that research is crucial to combatting the Zika virus outbreak and preventing the spread of other mosquito-borne viruses.*

important disease for research at the National Bio and Agro-defense Facility, or NBAF, the U.S. Department of Homeland Security’s foremost animal disease research facility that is being built adjacent to the university’s Manhattan campus.

“We’re doing the first U.S. studies of this type in 50 years and we’re looking at whether Japanese encephalitis could be transmitted by mosquitoes currently in North America,” Dr. Higgs said.



## Meet our researcher of the month: Dr. Fernando Pierucci-Alves

*Dr. Fernando Pierucci-Alves seeks to understand how disruptions in transforming growth factor beta (TGFB)-signaling leads to infertility associated with antisperm antibodies and leukocytospermia. Watch this month’s video profile about our featured researcher of the month at the KSUCVM YouTube channel and in our online edition of Lifelines:*

[www.YouTube.com/watch?v=YaR3Zycx-Y4](http://www.YouTube.com/watch?v=YaR3Zycx-Y4)

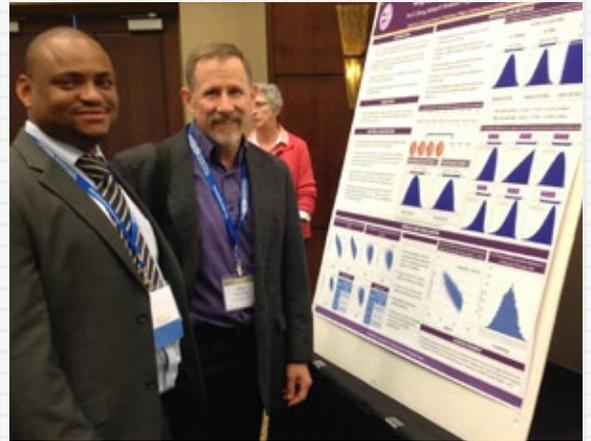
[www.vet.k-state.edu/lifelines/1602.html](http://www.vet.k-state.edu/lifelines/1602.html)

## Exotics Team teaches 'Zoo Sprouts'



The Zoological Medicine Team and three senior veterinary students hosted a workshop for "Zoo Sprouts" at the Veterinary Clinic at Manhattan's Sunset Zoo. Zoo Sprouts are 3-4 year old students enrolled in a nature-based pre-kindergarten day care program at the Sunset Zoo. As part of their science experience, the children participated in examining and bandaging their stuffed animals under the supervision of the veterinary team. This experience benefited the children, and allows the CVM to get an early start in training the next generation of KSU veterinarians. All the children indicated that they wanted to be zoo veterinarians.

## CVM News Ticker



Kudos to **Pius Ekong** who won an award for the Best Graduate Student Papers/Poster Presentations at the International Society for Veterinary Epidemiology and Economics Conference in Merida, Yucatan Mexico. Ekong is a GRA for Dr. Mike Sanderson (pictured above). His poster was titled, "Bayesian estimation of true prevalence, sensitivity and specificity of three diagnostic tests for detection of E coli O157 in cattle feces."

# Arrow Coffee

*Now Serving*

**Breakfast and Lunch**  
*in Trotter Hall Basement*

*Daily Specials*

[www.arrowcoffeecompany.com](http://www.arrowcoffeecompany.com)



### Hours

*Monday - Friday*

7 a.m. - 2 p.m.

*Saturday*

8 a.m. - noon