



VHC team successfully treats porcupine with potentially contagious skin condition

The point of a newly published article illustrates how a fungal skin infection in a porcupine was carefully diagnosed and successfully treated.

Christine Hackworth, a veterinary technician at the Veterinary Health Center, wrote up the diagnosis and treatment of a zoo-kept porcupine with a skin condition that was potentially zoonotic, meaning it can be transmitted to humans. In this case, the porcupine was diagnosed with *Microsporum gypseum* dermatophytosis, more commonly associated with household pets and referred to as ringworm. Hackworth's article appeared in the most recent Journal of Zoo and Wildlife Medicine.

"Sydney the porcupine was presented to us from Manhattan's Sunset Zoo showing signs of unilateral pedal crusting and alopecic dermatopathy," said Hackworth, who works in the zoological medicine and dermatology sections. "Testing revealed a fungal infection called *M. gypseum*. One of the zookeepers was suspected to have acquired a dermal fungal infection three days after contact with Sydney, which was quickly and successfully treated. From what we understand, this is the first report of *M. gypseum* diagnosed and treated in a captive

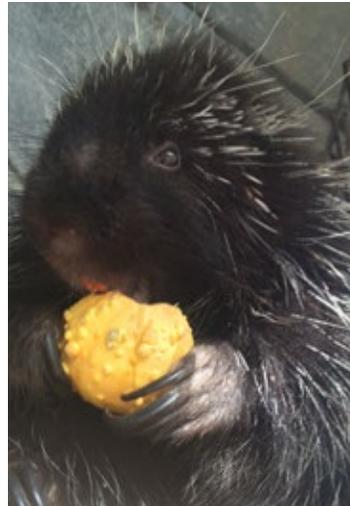
North American porcupine, so zookeepers and veterinary staff should be aware of this potentially zoonotic infection."

Scott Shoemaker, director of Sunset Zoo, said "Kansas State University and Sunset Zoo have had a long and excellent relationship. Their veterinarians provide first-class care for the animals in the zoos collection. This is just one more example of VHC veterinarians diagnosing and treating an infection that not only impacted our animal collection, but our staff as well."

For the first nine days, the porcupine was administered topical treatments of miconazole, an antifungal medication. This was followed by oral doses of a second antifungal medication called terbinafine.

"About four weeks after the initial examination, Sydney's clinical signs were definitely improving, and fungal cultures of the front foot, muzzle, and noninfected area along the dorsum were negative for any indication of *M. gypseum*," Hackworth said.

Examinations of the porcupine were conducted regularly after these treatments. More than 80 days after the initial evaluation, Hackworth said the clinical signs had completely resolved and repeat fungal cultures were negative.



Sydney the porcupine enjoys a treat at Manhattan's Sunset Zoo.

"In this porcupine case, Christine was able to combine her clinical skills from her work in the dermatology service and the zoological medicine service," said Dr. Eshar, assistant professor in companion exotic pets, wildlife and zoo animal medicine. "We are very fortunate to have her as part of the team. It is not easy to make the efforts to write a clinical report, but Christine's drive to educate others goes beyond the limits of the veterinary college. All veterinarians working with all species are also in the frontline to alert the public on diseases that can potentially also harm people, and those working with zoo-kept animals are no exception to that."

Dr. Coetzee receives animal welfare award



AVMA Pres Dr. Tom Meyer with Dr. Hans Coetzee.

Dr. Hans Coetzee, head of anatomy and physiology, was named recipient of the 2017 Animal Welfare Award by the AVMA at its 2017 convention in Indianapolis.

"Dr. Coetzee is one of, if not the most highly respected professionals in the field of pain management in cattle and other animals," said Dr. Tom Meyer, president of the AVMA. "He has brought about enormous change in the livestock industry regarding awareness of pain and concern for managing painful procedures. His research and leadership have been instrumental in transforming the attitudes and practices of veterinarians, farmers and food animal practitioners."

VHC awards Dr. David Biller for mentoring



Dr. Elizabeth Davis presents award to Dr. David Biller.

Clinical Sciences has announced Dr. David Biller as recipient of the 2017 Award of Excellence in Resident Mentoring. Dr. Biller, who is a professor and section head of radiology, was presented with a plaque and \$1,000 award.

"The department of clinical sciences believes mentoring is critical to the growth of individual members and the department as a whole," said Dr. Elizabeth Davis, interim department head.

Dr. Katie Reif receives funding for tick-control research from Lawrence-based animal health company

Dr. Katie Reif, assistant professor in diagnostic medicine/pathobiology, recently received \$10,000 from Integrated Animal Health for the purposes of researching and developing novel tick and tick-borne pathogen control measures.

Dr. Reif, a member of the Center of Excellence for Vector-Borne Diseases, said, "We are interested in identifying novel strategies to combat ticks and tick-borne pathogens through studying the intrinsic and

dynamic relationship between tick vectors and tick-borne pathogens. Projects in my lab range from understanding molecular mechanisms tick-borne pathogens employ to invade, adapt and replicate in tick cells, to more applied investigations of tick control methods. As infection of a single pathogen species or genotype is rare, we are also interested in how competition



Dr. Katie Reif works in her research lab.

between co-infecting or resident microbiota effects pathogen establishment, maintenance and transmission from the tick vector."

Dr. Roman Ganta explains connection between lone star ticks and red meat allergies



Dr. Roman Ganta is director of the CEVBD.

Reports this summer have alerted the public to a little-known health threat that could occur from the bite of a lone star tick: the development of an allergy to red meat.

A CVM researcher says this health threat is more of a concern to people who have been repeatedly exposed to this tick.

“If someone has been bitten by a lone star tick for the first time, they shouldn’t feel they will develop a red meat allergy,” said Dr. Roman Ganta, director of the university’s Center of Excellence for Vector-Borne Diseases. The center researches human and animal diseases caused by ticks, mosquitoes and other vectors.

Lone star ticks feed on a nonhuman host, such as white-tailed deer, that has a particular type of carbohydrate, alpha-gal, which is not present in humans. Over time, the buildup of alpha-

gal in the human bloodstream will produce an immune — or allergic — response when a person consumes meat, such as a steak, hotdog or hamburger, Dr. Ganta said.

Cases of the allergy could become more frequent because the lone star tick may be more prevalent than it was 10 or 15 years ago, Dr. Ganta said.

“Its expansion is linked to the spread of white-tailed deer, which is the major host of this particular tick,” Dr. Ganta said.

Human activity is a factor in the spread of the deer.

“Any time there’s a rapid expansion, such as new construction, we’re not restricting our own boundaries,” Dr. Ganta said. “We keep chopping all the wooded places, so deer are adapting to the population in the city. It’s very common in Manhattan, Kansas, to see white-tailed deer. Ticks from the deer will drop into the lawn, backyard or front yard, or even parks.”

Other animals also can be hosts for the lone star tick.

“You’d be surprised to know we see them a lot on wild turkeys,” Dr. Ganta said. “The wild turkey is also present in large numbers.”

Tips on avoiding tick bites are available from the Centers for Disease Control and Prevention.

Veterinary Health Center welcomes residents



The VHC introduces a new group in July. Back row (left to right): Drs. Kalyn White, Elizabeth Perry, Calli Coffee, Stacy McHaney and Loren Easterwood. Front: Drs. Hannah Turner, Heather Bornheim, Samantha Sedgwick and Stacy Kramer.

VRSP scholars conclude summer program



The Veterinary Research Scholars Program gives scholars in-depth research experiences. Top: Third-year veterinary student Jennie Kim explains her research poster to Dr. Bruce Schultz. Bottom left: Asia Fernandes, a Purdue DVM student, visits with Dr. Peying Fong. Bottom right: Margherita Zecchin, a DVM student from the University of Padova, Italy, explains her poster at the NIH National Veterinary Research Symposium in Washington, D.C.

CVM News Ticker



Fourth-year students Bayli Endicott, William Poland and Mary Grace Dailey work with alum Dr. David Ripple, class of 1972, the Dodge City Rodeo.



Drs. Olga Norris, Kate KuKanich, Tara Noro and Loren Easterwood help Dr. Greg Grauer retire in style.



Congratulations to **Dr. Russell Hardin**, DVM class of 1946, who was presented with an alumni recognition award at the K-State Veterinary Medical Alumni Association reception at the AVMA Convention in Indianapolis.

See more in **Lifelines** online.

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