



CVM swine research experts aid fight against H1N1 flu

If some day you are tested for the H1N1 virus without the painful prick of a needle, thank a team of CVM researchers and their collaborators who connect animal and human health.

Drs. Dick Hesse and Bob Rowland — along with a research partner at Iowa State University — are collaborating with Dr. Susan Wong, a scientist at the New York State Department of Health, on diagnostic and intervention tools for the H1N1 virus.

Dr. Hesse is an associate professor of diagnostic medicine and pathobiology and head of diagnostic virology in the K-State Veterinary Diagnostic Laboratory.

Dr. Rowland is a professor of diagnostic medicine and pathobiology.

One of the ways these scientists' work intersects is in a method for identifying the H1N1 virus. At K-State, Drs. Rowland and Hesse are working on a diagnostic method for pigs that analyzes saliva rather than blood.

"Just as we are developing noninvasive techniques to collect samples from animals, it provides the New York State health lab the opportunity to develop the same oral fluids technique for humans,"

Dr. Rowland said. "Using a saliva swab rather than a needle to draw blood works especially well for kids."

The K-State researchers also contribute to the human health side by providing Dr. Wong's lab with antigen targets and by validating test systems.

"We bring a lot to the table, but at the same time they bring a lot to us,"

Dr. Rowland said. "One of the nice things is we can study the virus in pigs and get the type of reagents and samples from which to develop the tests. You can't do that with people."

Such benefits to human health stem from K-State's efforts to help swine producers across Kansas. The K-Staters are developing multiplex system tests to profile swine herds and determine what's

circulating, what the antibody response is, and with that knowledge help producers make sound management decisions.

"This standardized diagnostic testing is to help the citizens of Kansas,"

Dr. Hesse said. "We herd profile on the veterinary end of things, and you can consider the human population a herd you can profile as well."

Dr. Rowland said some of the benefits of their testing system are providing more information, better accuracy and reduced costs for producers.

"This is the next generation of diagnostic tests that will replace a lot of things we've done in the past," he said. "The bottom line is these producers have to be able to afford the tests we provide them," he said. "At the end of the day, these diagnostics help maintain the healthy agriculture economy of the state."

The importance of the K-State researchers' efforts is magnified with diseases like the flu that humans share with other animals.

"This really gets back to the concept of one health, one medicine," Dr. Rowland said. "Veterinary and human medicine have a lot of interaction, especially on the infectious disease side, where we look at infectious agents that may circulate in both human and animal populations."



Drs. Bob Rowland and Dick Hesse combine their research efforts in a battle against viral agents that can threaten swine and humans.

Calendar of Events

Sept. 18, 5-9 p.m.:
One Health Fest
Manhattan City Park

Sept. 19:
Merial Rabies Symposium
K-State Alumni Center

Sept. 20: Small Animal
Internal Medicine,
Cardiology and Oncology
Conference
Frick Auditorium
Mosier Hall

Oct. 10-11: 16th Mid-Western
Exotic Animal Medicine
Conference
Frick Auditorium
Mosier Hall

Second-year students complete summer internships on Plum Island

Michelle Mazur and Stephan Gibson, both class of 2012, spent the summer working at Plum Island Animal Disease Center (PIADC). The opportunity was made available through a cooperative effort between the Oak Ridge Institute for Science and Education, United States Department of Agriculture and Department of Homeland Security. Each student spent 12 weeks working in the facility in Plum Island, N.Y., on an assigned project.

Michelle worked in veterinary pathology on a study investigating the pathogenesis of foot-and-mouth disease (FMD) in persistently infected animals, while Stephan assessed the usefulness of a lymphocyte blastogenesis assay for

measuring the T-cell response of cattle to FMD vaccine trials.

Both students gained valuable laboratory experience as well as experience in working in a biocontainment laboratory. PIADC is classified as a biolevel 3 facility, and it is the only place in the U.S. where scientists can conduct research and diagnostic work on FMD.

In addition to working on their respective projects, Stephan and Michelle also had the opportunity to attend a two-week intensive Foreign Animal Disease Diagnostician course. They heard a series of lectures describing the pathogenesis and characteristics of 20 different foreign animal diseases, and observed clinical cases and necropsies of each disease.



Stephan Gibson and Michelle Mazur work on disease research projects at Plum Island.

K-State wins hosting role for World Rabies Day

In support of World Rabies Day efforts, Student American Veterinary Medical Association (SAVMA) chapters competed to raise funds for rabies prevention and educational programs. This year's winner, K-State, earned an on-site rabies symposium sponsored by Merial, scheduled for Sept. 19, 2009 at the K-State Alumni Center.

"Rabies awareness and education is critical to public health and safety in the United States and around the world," said Dr. Ralph Richardson, dean of the College of Veterinary Medicine. "K-State is committed to efforts to help prevent rabies and is excited to host the Merial Rabies Symposium."

With the recent passing of Dr. George Baer, the "Father of Oral Rabies Vaccination," this year's event will have special meaning. Dr. Baer was regarded as an international wildlife rabies expert and was credited with developing one of the first oral vaccines that eliminated red fox rabies from several countries in Western Europe. In recognition of his efforts, the 2009 rabies symposium will be dedicated to him.

The daylong event – free of charge – starts with breakfast at 7:15 and will feature a session on the global perspective of rabies, a second session on the national perspective and a final session including recent rabies cases and implications. In addition, attendees can enter a drawing for a chance to win a K-State

Scholarship for \$2,500. The symposium concludes with a reception from 5 to 6 p.m.

"Merial is pleased to partner with student AVMA chapters, and this year brings a unique rabies education event to Kansas State University students and state veterinarians," said Dr. Hal Little, director of Veterinary Field Services at Merial. "As a global leader in rabies prevention, we truly understand the importance of educating communities about this fatal disease."

In addition to the symposium, Merial supports other rabies awareness and educational efforts including the sponsorship of nine rabies training seminars for Noah's Wish, an international nonprofit organization that rescues and cares for endangered animals during natural disasters; and sponsorship of World Rabies Day.

For more information or to register to attend the 2009 Merial Rabies Symposium at K-State, visit: www.worldrabiesday.org/EN/Events/KSU_Symposium.html.



Dr. Thomson chairs international cattle welfare committee

Dr. Dan Thomson, K-State's Jones Professor of Production Medicine and Epidemiology in the department of clinical sciences, traveled to Paris, France, in late July to chair the OIE Beef Cattle Production and Animal Welfare committee.

Beef cattle production and international beef trading is important to the economic base of many developed and developing countries. Dr. Thomson said the purpose of this committee was to bring people from diverse cattle production backgrounds to create one set of standards for beef cattle production and welfare to serve the needs of all countries.

The committee included animal welfare experts from Uruguay, Kenya, Australia, China and Ireland.

"OIE is the world organization for animal health," Dr. Thomson said. "It represents 174 countries around the world on issues such as animal health and disease control. The OIE has decided to include animal welfare as one of its interests."

He said the OIE's mission and international scope for animal health is equivalent to the World Health Organization's mission for human health.

"This is the first time the OIE has put together standards for animal care and welfare," said Clayton Huseman, executive director of the feedyard division of the Kansas Livestock Association. "They are internationally recognized in

international trade and countries look to them for animal health information. What the committee comes up with has a huge impact on the countries they represent. It is really good to know we have a Kansan leading that charge. I have confidence in Dan's scientific knowledge and more importantly his knowledge of how modern production agriculture works in the U.S."

As the OIE moves forward setting animal welfare code as part of their business, it will definitely be involved in international trade and the World Trade Organization, Dr. Thomson said.

Dr. Thomson said, "To my knowledge, there are no other published international standards for beef cattle welfare. Our group of eight who sat around the table in Paris came from diverse backgrounds, not only from the standpoint of the development of our country, but in the way we raise beef cattle. My involvement is recognition of Kansas' and U.S. beef production as international leaders in animal welfare."



Dr. Dan Thomson and wife, Cynthia, in Paris.

Dr. Anderson presents on camelid surgery and bovine welfare

Irish eyes are smiling — at llamas and other camelids. Dr. David Anderson visited Galway, Ireland, in July and presented seven hours of continuing education on surgery of llamas and alpacas at the International Camelid Conference. Veterinarians from more than 10 countries attended the conference, which included hands-on laboratories and visits to the Cliffs of Moher in County Claireil,

Caves of Aillwee, and the ruins at Poul nabrone, which are more than 3,000 years old.

Dr. Anderson also gave two hours of seminars on bovine welfare and pain management at the Ludwig-Maximilians-University of Munich main campus in Germany and visited the Clinic for Food Animals located in Oberschleissheim

in Bavaria, Germany, in July. A new clinic for food animals was constructed there in 2003.

"We enjoyed good fellowship with the faculty while dining on traditional white sausages (weisswurst) of Bavaria!" Dr. Anderson said.



Dr. David Anderson gives a wet lab on surgical techniques for llamas in Galway, Ireland.



Dr. Anderson and his wife, Lane, enjoy the vista from the Cliffs of Moher in Ireland.



Under the
microscope:

Dr. Brandon Reinbold

Research Assistant
Anatomy & Physiology



Place of birth: Oak Grove, Mo.

Family Information: Misty, my wife. Our first child is due Oct. 12 — will the baby be a Tilly or a Paul? I convinced Misty into waiting until birth to discover if we are having a boy or girl — it is one of the few good surprises left in life!

Pets: Bobbi, a Jack Russell Terrier, and Jeff, a cat.

In addition to having a child on the way, Brandon tells us he will start a new job soon: I accepted a position with the American Veterinary Medical Association as an assistant editor in the publications division. October is going to be a crazy month. Our first child's due date is Oct. 12; my final defense for my Ph.D. is Oct. 19; I begin my new job on the 26th; we close on our home Oct. 29; and move in the weekend of Oct. 30. Nuts, huh?

Name a favorite quote: My favorite quote is a Bible verse. "A double minded man is unstable in all his ways." James 1:8

Name three things you would not be able to live without if stranded on a desert island: Internet so I can check out the latest news from the UFC, Diet Mountain Dew™ and hot dogs.

Getting the health into Dodge



Boot Hill meets Powercats at the annual Dodge City rodeo, as the CVM's Equine Field Service team acted on behalf of the PRCA rodeo as veterinarians for the event. From left: Sara Dotson (class of 2010), Dr. Chris Blevins (assistant professor), Kelsey Sapp (class of 2010), Courtney Bassett (class of 2010), Dr. Dave Ripple (local veterinarian and class of 1972), and Bryson Lacey (class of 2010).

CVM News Ticker

Dr. Roman Ganta was elected president for the American Society for Rickettsiology. "The conference is also going well and attendees are very complementary about K-State's contributions in organizing the meeting," Dr. Ganta said. He noted that Dr. Guy Palmer, 2009 Distinguished Alumnus Award recipient and DVM 1972, was elected vice-president. Congratulations!



Congratulations to **Amy Fousek**, class of 2010, for winning a scholarship through the Winner's Circle Scholarship Program (under a partnership of The Race For Education, the American Association of Equine Practitioners Foundation and Platinum Performance).

Congratulations to **Dr. Charles Dodd**, Ph.D. student in food science, who was promoted to Lieutenant Colonel in the Army Veterinary Corps.

Dr. Bob Larson presented at the National Agri Marketing Association meeting in Kansas City on Aug. 20. Topic: "How practicing veterinarians interact with clients and suppliers when choosing veterinary products."

Dr. Mary Lynn Higginbotham presented at the 3rd Annual CVC as part of a special research symposium on "Frontiers in Comparative Medicine: Animal Models for Human Disease," held Aug. 31 in Kansas City. Her presentation was entitled "Canine Non-Hodgkin's Lymphoma: A One Health Disease."

Dr. Kenneth Harkin was also one of the panelists and he presented research entitled "Comparative aspects of dysautonomias in man and animals."

Congratulations to **Amanda McDiffett** (business manager, CVM Business Office), whose baby David was born June 25.

