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lifelines

KANSAS STATE UNIVERSITY COLLEGE OF VETERINARY MEDICINE



NIH recognizes Dr. Nguyen's passion with \$370,000 grant

A woman's body may be its own worst enemy. Early onset of puberty and delay of pregnancy as well as other factors have been shown to increase risks of developing breast cancer.

Dr. Annelise Nguyen, a K-State researcher who also sees herself as being at risk, has recently conducted promising research in trying to understand how cancer cells communicate with each other and how to enhance the receptiveness of cancer cells to drug treatments. The National Institutes of Health agreed that her research has potential, so she was awarded with a \$370,000 grant as of the first of August.

"For the past five years, I've focused on cell communication and understand the pathways between cells," said Dr. Nguyen, assistant professor of toxicology in the

Department of Diagnostic Medicine and Pathobiology. "The idea that I came up with is 'What if giving a patient drugs, including chemotherapeutic drugs and pain relievers, actually shuts down cell communication, preventing the drug to pass from one cell to the next?' If so, the drug is not very effective, and that's why you have to increase dosages to reach most cells. Increasing the drug levels makes you resistant to the drug itself; thus, drug resistance is one of the challenges in the treatment of cancer."

"Dr. Nguyen brings a very unique dimension to research and graduate training programs in the college," said Dr. M.M. Chengappa, University Distinguished Professor and department head. "She's a very hard working and very ambitious young faculty member with



Dr. Annelise Nguyen runs a busy lab with two graduate students, three undergraduates and a veterinary research scholar.

tremendous skills in cancer biology."

As the principal investigator, Dr. Nguyen worked with Dr. Duy Hua, University Distinguished Professor in the chemistry department at K-State, to synthesize a new compound – a class of substitute quinolines – and found that it possessed potent inhibitory activities against T47D breast cancer cells.

"What I demonstrate with this compound is that it enhances cell communication in breast cancer cells," Dr. Nguyen said. "What if we re-open the channels where cancer cells have low cell communication activity? In conjunction with existing chemotherapeutic drugs, can we reduce the concentration of these drugs by treating the patient with our cell communication enhancer? If so, the toxicity of these drugs will pass from cell to cell much more efficiently than previously. That is what this grant is all about."



Dr. Annelise Nguyen and her lab students: Morgan Armbruster, sophomore in microbiology; Ying Ding, third year in biochemistry Ph.D. program; Luis Chavez, junior in human nutrition; Julie Bernzweig, second year in veterinary medicine; and Kristina Bigelow, junior in biology.



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VTPRK students prepare for the worst

By Kayla Chrisman



Michelle Colgan checks a door with a Geiger counter to check for radiation.

Summer is often a time for lounging, unless you are a member of the Veterinary Training Program for Rural Kansas (VTPRK). As a part of VTPRK training, students spent their summer learning. Four students took part in two different preparedness programs this summer: the USDA Foreign Animal Disease (FAD) Practitioner's training course and Agriculture Emergency Response Training (AgERT). These programs train veterinarians to aid in relief efforts and protect the public in case of a hazardous situation.

Tiffany Moses and Jodi Wright, third-year students, traveled to the National Animal Disease Center in Ames, Iowa, to take part in the USDA FAD Practitioner's course. They participated in interactive lecture sessions on foreign animal diseases that are a potential threat to the United States. Some of the speakers were webcasted from the Plum Island Animal Disease Center in New York, while others were live in Ames. Hands-on labs included necropsies, blood draws and pro bang testing on calves, sheep and chickens. The final day was spent participating in a mock

FAD outbreak in which all the proper measures were taken to handle the emergency.

"It was a good refresher course on the different FAD viruses after just completing a semester of virology," Jodi said. "It also gave us a look into what the state and federal veterinarians do, how to respond in an outbreak and what role the local veterinarian can play."

Michelle Colgan, second-year student, and Amy Gerhardt, third-year student, visited the Center for Domestic Preparedness in Anniston, Ala., to participate in the AgERT program. The students learned about how agroterrorism and chemical, biological, radiological, nuclear and explosives (CBRNE) hazards can potentially affect agricultural resources and the community. Lecture subjects included disease surveillance, prevention, control and eradication, FAD, response actions, animal restraint and euthanasia, and animal carcass disposal. The hands-on training provided them with knowledge on proper usage of personal protective equipment (PPE), surveying and

monitoring tools and crime scene preservation. To conclude the week, the students went to Auburn University where they put their new knowledge to work drawing blood from a bull and a goat, and performing a necropsy on a goat, all while dressed head to toe in Level C PPE, which includes three pairs of gloves!

Since Kansas has so many feedlots, it is a prime target for agroterrorism. AgERT helped these students to develop skills to be effective helpers in case of an incident –

accidental or intentional.

"As veterinarians, it will be our responsibility to diagnose the first case so that we can control the agent, rather than let it take control of the food supply and of Kansas' economy," Michelle said. "The training I received will help me be a better veterinarian in Kansas and a better responder in case of any agroterrorism or agricultural emergency."

Amidst all the training, students



Andy Hulsey (Sheriff from Houston, Texas-with his mask off) checks to make sure his team is ready for action as the group gets ready to pull blood from a bull, goat and do a necropsy at Auburn University.

enjoyed networking the most. They worked with veterinarians, veterinary technicians and law enforcement officials from across the United States.

"All of the veterinarians, even those who were there to learn, took time to teach us and help us during the wet labs," Jodi said. "The two state veterinarians from Kansas who attended were wonderful to us."

The students said the connections made and training received from these programs will be useful in their future careers.

"I learned more information from that one day than any books or classes could have taught me," Michelle said. "You never know when these services will be needed right here Kansas, the heartland of the United States."



Michelle Colgan gives a hand to Sheriff Andy Hulsey as he steps into the decontamination pool to get rinsed and scrubbed. Eileen Matson (veterinary technician from Washington) watches over Andy so he doesn't slip and is ready to scrub!

CEEZAD hosts meeting to kick off research agenda

Dr. William “Bill” White, director of the Foreign Animal Disease Diagnostic Laboratory at the Plum Island Animal Disease Center, New York, said he hopes one of the outcomes from the National Bio- and Agro-defense Facility at Kansas State University will be to perfect pen-side tests that would allow medical professionals to determine if farm animals are



Dr. Bill White says he is hopeful that one of the outcomes of the new research center will be to determine a test to see if farm animals are susceptible to foot-and-mouth disease.

susceptible to foot-and-mouth disease.

“We want to continue to develop and validate new diagnostic tests that will allow us to maintain a cutting-edge profile,” Dr. White said at Monday’s kick-off for the U.S. Department of Homeland Security Center of Excellence for Emerging and Zoonotic Animal Diseases, or CEEZAD, at K-State.

The meeting included presentations by top experts in zoonotic diseases from around the world, including White and K-State’s Dr. Jürgen Richt, Regents Distinguished Professor in K-State’s College of Veterinary Medicine and a Kansas Bioscience Authority Eminent Scholar.

The Department of Homeland Security is replacing the Plum Island facility with the National Bio- and Agro-defense Facility, or NBAF, at K-State.

At the Foreign Animal Disease Diagnostic Laboratory, White leads a team of nearly 50 employees at the only facility in the United States allowed to work with the foot-and-mouth disease virus. His team diagnoses foreign animal diseases both domestically and internationally. The facility’s collaborations include working with medical officials in the Philippines on the Ebola-Reston virus; the Porcine teschovirus and new disease outbreaks in Haiti; lumpy skin disease in Afghanistan and Pakistan; as well as partnerships with Nigeria, Saudi Arabia, Iraq, Dominican Republic, Congo and Mongolia. White also has worked on bioforensics with the FBI.

Videos of presentations from the meeting will be available online at <http://www.vet.k-state.edu/CE/2010/ei.htm>

Drs. Anderson and Mason get top mentoring awards

The Veterinary Medical Teaching Hospital recognized two of its faculty members this summer with its excellence in mentoring awards. Below are the recipients and why they were nominated.

Excellence in Resident Mentoring: Dr. Diane Mason

- nominated by Dr. Kit Kelly

“I have witnessed her time and again teach through scenarios with students over difficult cases. Her ability to correct misunderstandings and by guiding students with a push of the mind or a well-chosen phrase, so that the student is not left feeling incompetent or foolish, merely that there is still much to learn and that her experience can be greatly beneficial. I know this because I have been the subject of this correction with consideration.

“It was through her that I came into an area of interest within my field regarding a commonly used pharmaceutical with little information known in the veterinary field. Following her leading enthusiasm, I designed and undertook a study into its veterinary properties.

“She has also shared her family with mine. She has included or invited us to participate in many Kansas State functions or Manhattan area activities. In doing so she has made my wife and I to be part of the community, rather than a student or just passing through.”

Excellence in Faculty Mentoring: Dr. David Anderson

- nominated by Dr. Meredyth Jones

“His willingness to ‘endorse’ me as a CE provider has allowed me to discover this as an area of interest for me, pushed me to make myself proficient in the latest methods in the field, and improve my communication and presentation skills.



Dr. Diane Mason pulls up in her Mini Cooper to say hi to fellow mentoring-award recipient Dr. David Anderson.

“He has been very encouraging to me as I have developed my research interests, mentoring me in all aspects of study design, proposal and budget development — I simply could not have asked for a better person with whom to work. On the busiest of days, he takes time to discuss case management, clinic scheduling and any other matter that I feel is important.

“I still remember him calling me during my residency the week prior to taking my ACVIM Certifying Exam to wish me luck as I took the exam. We had never even met at that point and I remain amazed that my exam was even on his radar. He has been the perfect professional mentor for me by his willingness to allow me to find my niche, work in my own way, gently suggesting new approaches and encouraging small steps out of my comfort zone where he feels I have potential.”



**Under the microscope:
Ginger Biesenthal**
Grant Specialist, Dean's Office



Place of birth: Olsburg/Westmoreland Area

Family Information: My husband Fred, and our two children, Cody and Ashley.

Pets: Dogs, Buddy and Lucy

What's a subject you have always wanted to learn more about? I have an interest in textiles/fabric.

What would you like to do before the summers over? I would love to be able to get on the lake with the boat. All of the lakes in the surrounding areas have been flooded and inaccessible almost all summer.

Best investment you have made? Besides the obvious answers such as my children or my house, one of my best investments has been the purchase of my long-arm quilting machine which is where I spend most of my free time when I'm not camping with friends, sewing or boating.

What is your least favorite season? Winter (actually it is the snow and sleet and lack of sun that I don't like).

Meet the new residents



The Veterinary Medical Teaching Hospital welcomes its new residents who arrived in July: Dr. Amy Lomas, small animal medicine; Dr. Brandon Fraser, agricultural practices; Dr. Rachel Moon, diagnostic imaging and radiology; and Dr. Diana Burr, in oncology.

CVM News Ticker



Dr. Nancy Zimmerman, class of 1995, has accepted a position as director of professional marketing at Putney Inc., a pet pharmaceutical company. Dr. Zimmerman will be responsible for the development and delivery of educational resources and medical support to Putney's veterinary customers.

Congratulations to **Dr. Dean Henricks**, class of 1969. He is the new president of the California Veterinary Medical Association.

Dr. Greg Grauer spoke at the AVMA convention in Atlanta on the topics of Azotemia in Small Animals, Proteinuria in Small Animals, Chronic Kidney Disease in Two Cats, Proteinuria, Hypertension and CKD, Hyperthyroidism and the Urinary Tract, NSAIDs in Dogs with Liver & Kidney Disease Acute Kidney Injury Cats, and Calcium and Kidneys.

Congratulations to **Megan Kilgore**, development officer in the Alumni & Development Office. She and her husband Tim have a new son Gage Martin Kilgore, born Aug. 5, 8 pounds, 2 ounces.



The K-State Olathe Innovation Campus is announcing the hire of **Dr. John B. Pascarella** as its associate dean for academic and research programs. Dr. Pascarella, who is currently serving as associate dean of faculty and research programs and a professor of biology at the Allen E. Paul College of Science and Technology at Georgia Southern University, will start his new post Aug. 16.

Dr. James W. Carpenter presented "Efficacy and Pharmacokinetics of Selamectin in the Pet Rabbit" (in collaboration with Drs. Michael Dryden and Butch KuKanich) at the 31st Annual Conference of the Association of Avian Veterinarians /Association of Exotic Mammal Veterinarians on Aug. 2 in San Diego. At the same conference, Dr. Rodney Schnellbacher, Intern in the Zoological Medicine Service, presented "The Effects of Adrenergic Agonists as a Treatment for Isoflurane-induced Hypotension in Hispaniolan Amazon Parrots (*Amazona ventralis*)."