FAZD CENTER
National Center for Foreign Animal and Zoonotic Disease Defense

News from the FAZD Center

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A 'One Health' Approach to Influenza

Task force of leading flu scientists will convene in D.C. to consider lessons learned from H1N1 pandemic

A task force of some of the world's leading influenza experts will meet in Washington, D.C. during early December to consider what we can learn from current efforts to address the H1N1 virus and how we can better utilize and develop science to prevent and manage influenza outbreaks.

The DHS National Center for Foreign Animal and Zoonotic Disease Defense and the NIH Western Regional Center of Excellence for Biodefense and Emerging Infectious Diseases are working together to convene this panel of experts drawn from the diverse backgrounds of public health, medicine, veterinary medicine, epidemiology, virology, and wildlife biology.

In the past, scientists and health officials have tended to look at human and animal diseases separately. Recently, as others have observed, it has become more obvious that many diseases move through the environment, changing forms as they are transmitted among humans and animals. Studying this "animal-human-environment interface," taking a "one health" approach to both animal and human diseases, is key to understanding how some pathogens can go from causing a simple flu season to triggering a global outbreak of a deadly disease (such as the 1918 influenza pandemic that killed an estimated 50 million humans around the world).

In the scientific and health communities there is widening support and use of this "one-health" approach to understanding diseases, but there are still considerable challenges in learning how to actually integrate the diverse scientific disciplines that are involved and to fully understand the implications of how diseases evolve and transform into more dangerous forms at this animal-human-environment interface.

The Task Force on a One Health Approach to Influenza will examine the potential threat to human health posed by the H1N1 virus as a case study in how influenza can be better understood, prevented, and treated by examining how the disease transforms and is transmitted among animals and humans in the environment. The Task Force will identify gaps in current scientific knowledge about these processes and will describe the research and technologies that could be developed to help prevent possible pandemics in the future.

UPR-Ponce students serve internships in Lupiani's laboratory

Two students from the University of Puerto Rico at Ponce interned this summer with **Dr. Blanca Lupiani**, principal investigator with the FAZD Center and assistant professor in the College of Veterinary Medicine and Biomedical Sciences at Texas A&M.

The students are **Jose Martinez** and **Emily Leon**, undergraduates mentored by **Dr. Edu Suarez**, an associate professor of molecular biology at UPR-Ponce. Both plan to enroll in medical school.

The internship program began as part of the U.S. Department of Homeland Security's Summer Research Team Program for Minority Serving Institutions in 2007. This is the third summer that the FAZD Center has hosted students from UPR-Ponce, who worked with Lupiani on the surveillance of avian influenza virus in wild birds. Suarez and her student, **Noried Velazquez**, first worked with Lupiani in the summer of 2007.

Emily Leon and Jose Martinez studied the molecular biology of avian influenza virus and learned how to determine the genetic background of a virus. (Photo by Jean Wulfson, RGS Communications, Texas A&M Univesirty.)

Clarke to make presentations during USAHA/AAVLD annual meeting

The director of the FAZD Center, Dr. Neville P. Clarke, will make presentations during the 2009 joint meeting of the United States Animal Health Association and the American Association of Veterinary Laboratory Diagnosticians.

The event is set for Oct. 8-14 in San Diego.

Clarke's presentations will feature updates on the FAZD Center's leading products from its themes of Biological Systems, Information Analysis Systems and Education and Outreach.

He will address the USAHA's Committee on Animal Health and Emergency Management on Oct. 9, Committee on Diagnostic Laboratory and Veterinary Workforce Development on Oct. 12, and USAHA Foreign and Emerging Diseases Committee and Oct. 13.

AAEA awards Gardner Prize to McCarl

The Agricultural & Applied Economics Association (AAEA) has awarded its Bruce Gardner Memorial Prize for Applied Policy Analysis to **Dr. Bruce A. McCarl,** a FAZD Center principal investigator at Texas A&M University.

McCarl received the award at the association's annual meeting in Milwaukee in late July. The AAEA is a not-for-profit association serving the professional interests of members working in agricultural and broadly related fields of applied economics.

A Regents Professor in Texas A&M's Department of Agricultural Economics, McCarl shared the 2007 Nobel Peace Prize for his work with the Intergovernmental Panel on Climate Change. He belongs to the FAZD Center's Information Analysis Systems thematic team, which generates computer models and epidemiologic/economic analyses to enhance the decision-making process during outbreaks of high consequence zoonotic diseases.

Sandrock hosts 4-part series on best practices for disaster preparedness

A principal investigator from the FAZD Center serves as co-host for a four-part video series that will premiere on University of California Television in October. "Disaster Preparedness for Health Professionals" highlights best practices for preparedness as determined by disaster response experts from throughout California.

Dr. Christian Sandrock, professor in critical care medicine and infectious diseases at UC Davis Medical Center, serves as the program's co-host.

Among his guests is another FAZD Center principal investigator, **Dr. Carol Cardona**, poultry veterinarian and associate professor with UC Davis Cooperative Extension.

The program premieres on UCTV Monday, Oct, 5 at 8 p.m (EDT and PDT) and online at www.uctv.tv/disaster.

Estes co-authors three articles published in peer-reviewed journals

Dr. Mark Estes, a FAZD Center principal investigator, co-authored three scientific articles published in peer-reviewed journals during June and July.

Estes is a member of the FAZD Center's Biological Systems thematic team.

He is director of the Program in Immunology, Institute for Human Infections and Immunity at the University of Texas Medical Branch in Galveston. The articles are:

- "CD4+ T cells provide protection against acute lethal encephalitis caused by Venezuelan equine encephalitis virus," in the June 19 issue of Vaccine.
- "Comparative Antimicrobial Activity of Granulysin against Bacterial Biothreat Agents," in the June 5 issue of the Open Microbiology Journal,
- "Signal regulatory protein alpha (SIRPalpha) cells in the adaptive response to ESAT-6/CFP-10 protein of tuberculous mycobacteria," in the July 29 issue of PloS One.

Powdrill discusses biodefense careers at HLAE orientation

Dr. Tom Powdrill, the FAZD Center's assistant director for external affairs, made a presentation at a student orientation for the Hispanic Leaders in Agriculture and the Environment program at Texas A&M University on Aug. 21.

Powdrill's presentation was designed to raise awareness of career paths available for Hispanic students through the FAZD Center and in biodefense. Among students attending were **Anjelica Peredo** and **Maritza Anguiano**, recipients of Career Development Awards from the FAZD Center to pursue their master of science degrees in Wildlife and Fisheries Sciences. The HLAE porgram is directed by **Dr. Manual Pina.** In addition to Texas A&M's main campus in College Station, the program reaches three Hispanic-serving institutions in the state: Texas A&M-Kingsville, the University of Texas at San Antonio, Texas A&M-Corpus Christi and UT-Pan American. FAZD Center is a supporter of HLAE and provides funding.