



Reducing the risk of exotic animal diseases to human health and economic stability

Dr. Neville P. Clarke, Director

# Special Report: Advancements, Achievements and Recognition

## DHS renews Center's core grant for 2 years, with initial 1-year funding at \$5 million

The core renewal grant was received from DHS and began on Oct. 1, 2007. The grant is for two years with initial one year funding at \$5 million. There remains a reasonable chance that Congress will approve another \$1 million and the Center is receiving an additional amount of about \$1 million in special grants from DHS University Programs. We will continue the initial grant under a no-cost time extension over the next six months. Thus, the Center is operating at a substantially higher level of total DHS funding in the fourth year compared to the first three years, when funding was at \$6 million per year.

## FAZD Center, NCFPD asked to prioritize critical food, agriculture assets at state level

The National Center for Food Protection and Defense (NCFPD) and the FAZD Center were asked to develop a more quantitative systems approach for state level emergency responders and industry to assess the relative priority of their food and agriculture assets as a means of determining the allocation of DHS resources for prevention and emergency response to outbreaks of disease or other emergencies. The preliminary methods have been very well received and accepted by both governmental and private sector review groups at the national level and the methods will be put to practice in January 2008.

## Study evaluates risk assessment models' utility for foreign animal, zoonotic diseases

DHS has provided special funding to the NCFPD and FAZD Center for a study to compare and evaluate the various models now used for risk assessment and to explore their utility for foreign animal and zoonotic disease. This study, which is being initiated now, involves comparison of existing models and identification of gaps in both data and modeling ability. This study will provide an important next step in organiz-



Mosquitoes can transmit Rift Valley Fever to humans as well as to sheep, goats and other livestock.

## Pharmaceutical company expresses interest in commercial RVF vaccine

A major pharmaceutical manufacturer has approached the University of Texas Medical Branch – a partner in the FAZD Center – to support the development of a commercial vaccine for Rift Valley fever using the MP-12 antigen which is also being considered for development of a human vaccine. The FAZD Center has supported the development of an animal vaccine at UTMB for three years. This is a major step towards successful technology transfer for a product that can either become part of the national veterinary stockpile or be commercialized for international use. If the decision to proceed is taken, the initial development cycle would require about one year.

ing the existing array of related models for estimating the impact of either intentional or unintentional introduction of animal disease in the U.S.

## Special funding allocated to build interstate transportation model of cattle and swine

Most epidemiologic models assume disease is spread by direct or indirect contact at local levels and they do not take into account the long distance movement of animals across the country that occurs in commerce. The DHS has provided special funding to the NCFPD and the FAZD Center

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to acquire the data and to build a national transportation model that will be input to multiple epidemiologic modeling efforts. The initial effort will focus on beef, dairy, and swine, but we are planning follow on efforts for other commodities. This will provide for the first time a quantitative estimate of what is probably one of the most important factors in the spread of foreign animal or zoonotic disease through the interstate movement of large numbers of animals over long distances.

## Center assesses epidemiologic and economic impact of RVF introduction

FAZD Center scientists provided an assessment of the national epidemiologic and economic impact of various scenarios of an outbreak of Rift Valley fever in the U.S. for the biennial White House Biothreat Risk Assessment conducted by the DHS National Biological Threat Characterization Center. A vector borne human and animal disease, Rift Valley fever is an emerging threat and is one of the select agents for bioterrorism. An outbreak in the U.S. would have its largest impact in areas where mosquitoes reside with livestock and wildlife.

## Detailed review of Information Analysis Systems receives positive reactions

A detailed review of the models, databases, and results from the IAS theme received very positive reactions from the Director of the DHS S&T Chemical and Biological Defense Division and the USDA APHIS. With the recent reorganization of the Directorate of Science and Technology, and the mandate to align Center programs with the divisions, this was a very important step towards strengthening relationships with Center customers both in DHS and USDA.



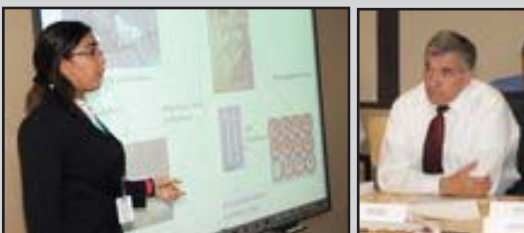
## DHS selects FAZD Center to study lessons from UK FMD outbreak

At the request of the Office of Health Affairs, DHS, the FAZD Center provided ongoing chronological reviews of the events associated with the recent outbreak and containment of foot and mouth disease in the U.K. over the period from August through October 2007. A follow on study is planned to develop lessons learned from the outbreak and its management with respect to applications relevant to the U.S.

## DHS completes positive review of procedures at the University of Texas Medical Branch

The DHS Compliance Office completed a two day review of the research, biosafety, animal use, and select agent procedures for research being done at UTMB in their collaboration with the FAZD Center. UTMB operates an existing BL-4 research facility and has under construction the new NIH funded Galveston National Laboratory. UTMB also provides training for governmental and university research workers and others who will work in high containment facilities. The results of this review were very positive and DHS states the intent to use the procedures at UTMB as models for other institutions.

## FAZD Center students make presentations, win contests and receive internships



Graduate student Noried M. DeJesus-Velazquez makes her presentation on avian influenza H5N1 to DHS S&T Under Secretary Jay M. Cohen.

Noried M. DeJesus-Velazquez, a FAZD Center student participating in the 2007 DHS Minority Serving Institutions Summer Research Team Program, was chosen to make a presentation to S&T Under Secretary Jay M. Cohen. She also received honors for a poster presentation at the 2007 Annual Biomedical Research Conference for Minority Students. Texas A&M University graduate student Vinayak Brahmakshatriya won first place in the student poster contest held during the first DHS University Network Summit on Research and Education. He was among seven FAZD Center students who presented posters. Two other Texas A&M graduate students received internships in the homeland security sector. Amy Pohl interned at NORTHCOM in Colorado Springs to study education and research topics that are important to the Surgeon General and NORTHCOM. Lindsay Holmstrom interned with Lawrence Livermore National Laboratory in California where she participated in the development of a model for animal disease impact assessment. Across the FAZD Center, about 100 students and post doctoral fellows are involved in research, education, and outreach activities.