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**Internationally recognized expert on avian diseases comes to UGA;
Mundt hopes to develop “custom-made” avian vaccines**

*Newest GRA Eminent Scholar to Use Reverse Genetics to Create
Cheaper and Safer Avian Vaccines*

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ATHENS, Ga., August 24, 2006 – A worldwide search for a researcher to help lead the state’s avian vaccine development efforts has brought German scientist Egbert Mundt to the University of Georgia (UGA). Mundt, one of the world’s foremost experts in poultry vaccines, is UGA’s latest Georgia Research Alliance Eminent Scholar and its first Caswell Eidson Chair in Poultry Medicine.

Mundt holds eight patents, including one for a system that uses a technique known as reverse genetics to tailor make vaccines by manipulating the virus that causes infectious bursal disease – a costly ailment to the poultry industry. In addition, Mundt has provided a key element of a new diagnostic test for avian influenza that is cheaper and safer than traditional methods.

“We were obviously looking for somebody who is a tremendous scientist,” said professor John Glisson, head of the department of population health at the UGA College of Veterinary Medicine. “But we were also looking for someone who, by their nature, wanted to interact with private industry and bring research to the marketplace. We have clearly found what we were looking for in Dr. Mundt.”

Mundt comes to UGA from the Federal Research Institute for Animal Health, Friedrich-Loeffler-Institut, the German equivalent of the United States’ Plum Island Animal Disease Center. His lab at UGA’s Poultry Diagnostic and Research Center is across the street from one of Georgia’s proposed sites for the National Bio and Agro- Defense Facility (NBAF), which would conduct research that aims to protect against and respond to threats from bio- and agro- terrorism.

The researcher’s lab is also near the USDA’s Richard B. Russell Agricultural Research Center, UGA’s Animal Health Research Center and animal health company Merial, which has its vaccine development facilities in Athens.

Mundt said the ability to work in a hub of infectious disease research attracted him to Georgia. He said the same topic is often viewed differently by scientists in different fields, and science thrives where talented researchers with diverse backgrounds can bounce ideas off each other and with industry.

“What I’ve experienced is that one very important thing for researchers to do is to talk, to communicate,” he said. “Without communication you do not improve your results.”

The Georgia Poultry Federation has been a leader in the fundraising effort that brought Mundt to UGA. Funding for Mundt’s endowed professorship includes \$1.5 million donated by several companies and individuals, including Merial, Intervet, Aviagen and Hiram Lasher of Millsboro, Del., a pioneer in the poultry vaccine industry. The endowed professorship is named in honor of Caswell Eidson, a faculty member in the UGA College of Veterinary Medicine for more than 20 years.

“Dr. Mundt’s recruitment to Georgia is a significant accomplishment for our state,” said Georgia Poultry Federation President Abit Massey. “His substantial expertise in poultry research is a great boost for the poultry industry, which is the largest segment of agriculture and agribusiness in Georgia. We are excited about this opportunity for industry collaboration and assistance.”

The Georgia Research Alliance (GRA), a public-private partnership between Georgia universities, industry and state government, donated an additional \$750,000.

“The arrival of Dr. Mundt will provide valuable expertise to the state’s poultry industry and to one of the nation’s leading research universities,” said GRA president and CEO C. Michael Cassidy. “His research will have direct impacts on the development of vaccines that can be marketed by Georgia’s vaccine industry. We welcome him as the newest GRA Eminent Scholar.”

One of the main viral diseases Mundt has worked with is infectious bursal disease (IBDV). The virus suppresses the immune system of birds, and is often an underlying cause of respiratory and digestive problems in poultry.

Since 1996, his application of a technique known as reverse genetics has allowed him and other research groups to investigate the fundamental mechanisms of how the virus replicates. Based on this knowledge, Mundt created a vaccine candidate that induced protection against several different strains of IBDV at once. The vaccine is currently under development by a European pharmaceutical company and has the potential to save the poultry industry millions of dollars every year.

Mundt said the strength of reverse genetics is that it gives researchers the ability to custom-make vaccines. Traditional methods of vaccine development often involve taking a live virus and, through successive generations, selecting a weakened strain that provokes an immune response but doesn’t sicken. This process, known as attenuation, is time consuming, imprecise and subject to the whims of nature.

Reverse genetics, on the other hand, allows researchers to precisely manipulate a virus so that it will be less dangerous, provoke a stronger immune response or be easier to mass produce for a vaccine.

“It’s tailor-making vaccines,” Mundt said. “You decide what the properties of the virus are.”

One of the most pressing viral avian diseases Mundt’s research will focus on is avian influenza. Mundt is a former coordinator of a European Union avian influenza research group and already has developed a diagnostic test that is coming on the market in Europe this year. Whereas the traditional test uses inactivated influenza virus to check for antibodies that bind to the virus in a serum sample, Mundt’s technique inexpensively mass produces a specific protein that is used to check for the antibodies. The technique is safer because it does not involve inactivating a live virus and instead uses a protein that cannot cause illness.

Mundt jokes that he “can’t say no” to research opportunities, and has other active lines of investigation. He is working to understand better the complex interaction between cells and viruses that allow a virus to invade – or not invade – a cell. It is too early to tell where that line of research will lead, but Mundt said he aims to use the results from this basic research to search for ways to disrupt the infection process.

“My term for this is applied-basic research,” he said. “I’m a veterinarian who became a molecular virologist, but I still have this desire as a veterinarian to apply my results.”

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About GRA

A model public-private partnership between Georgia universities, business and state government, the Georgia Research Alliance helps build Georgia’s technology-rich economy in three major ways: through attracting Eminent Scholars to Georgia’s research universities; through improving laboratories and equipment at these research universities; and through converting research into products, services and jobs that drive the economy. To learn more about GRA, visit www.gra.org.