

# 2011

# World Vet & Student Inspiration Award Honorees

## *Advocating for human and animal health*

BY SALLY SILVERMAN

**O**n Wednesday, September 14, 2011, Penn Vet celebrated the World Leadership in Animal Health and Student Inspiration Award winners at the Annenberg Center for Performing Arts on Penn's campus.

This year's World Vet honoree was Ilaria Capua, DVM, PhD, director of the OIE/FAO and National Reference Laboratory for Avian Influenza and Newcastle Disease at the OIE Collaborating Centre for Diseases at the Human-Animal Interface and of the Research and Development Unit at the Istituto Zooprofilattico Sperimentale delle Venezie, in Legnaro, Italy.

The Student Inspiration honoree was Jonathan Lustgarten, PhD, a third-year Penn Vet student. The awards program has been established with a major gift from the Vernon and Shirley Hill Foundation.

### **Ilaria Capua, DVM, PhD**



Dr. Capua's expertise as virologist, epidemiologist and communicator uniquely positions her as a worldwide leader in the field of avian influenza. She has used that position to foster a closer working relationship between the animal and human health professions.

"Working with our public health counterpart is exciting, and is a win-win effort," said Dr. Capua.

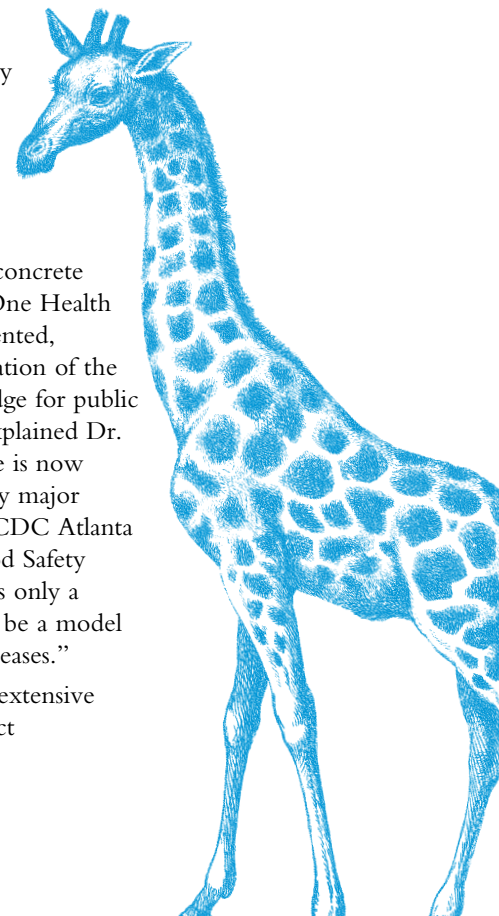
Since 1995, Dr. Capua has been involved with the European Commission through working groups related to viral diseases of animals, and, since 2003, on issues related to influenza pandemic preparedness. In 2005 she was nominated as Chairman of OFFLU, the OIE/FAO (World

Organization for Animal Health/Food and Agriculture Organization of the United Nations) network on animal influenza that offers veterinary expertise and crisis management support to developing countries.

In 2006, she refused to deposit the genetic sequence of the first African strain of H5N1 into a private database to which only 15 laboratories had access, preferring to deposit it into publically available GenBank®, the NIH genetic sequence database. This ignited an international debate on data sharing, which resulted in the launch of the Global Initiative on Sharing All Influenza Data (GISAID), endorsed by 70 medical and veterinary virologists and six Nobel laureates. Dr. Capua's vision to share avian influenza virus sequences to allow a better understanding of animal and human influenza infections using a transdisciplinary approach has become a core part of the global influenza preparedness strategy.

"The 'One Flu' initiative represents a concrete example of how the One Health vision can be implemented, resulting in an acceleration of the generation of knowledge for public and animal health," explained Dr. Capua. "This initiative is now being taken forward by major organizations such as CDC Atlanta and the European Food Safety Authority (EFSA). It is only a starting point as it can be a model for other emerging diseases."

Dr. Capua has had extensive experience in the direct



## A special thanks to the 2011 committees...

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- Dr. Mo Salman, *Colorado State University*
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### 2011 Student Inspiration Awards Committee

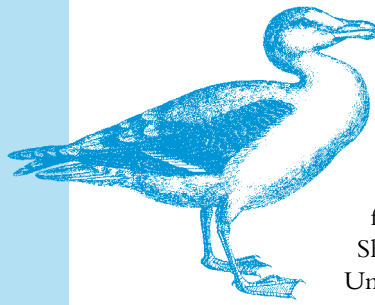
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management of several avian influenza and Newcastle disease epidemics and in 2000 developed the DIVA (Differentiating Infected from Vaccinated Animals) vaccination strategy. This innovative strategy enabled the continuation of trade while combating avian influenza by vaccination. As a result, avian influenza was eradicated from Italy at that time.

Dr. Capua's contributions to global health are evident in a review of her most recent professional assignments: Senior Policy Advisor to the Director NCZVED, CDC; Member of the Scientific and Technical Advisory Group to World Health Organization's Global Influenza Program; Member of the European Technology Platform for Global Animal Health; and many, many more.

Dr. Capua has authored more than 300 publications since 1990. Most of her research and writings have focused on viral disease of animals and those of zoonotic importance. Dr. Capua has extensive experience in managing projects funded by international organizations and agencies such as the European Commission, FAO and the OIE. She is currently involved in several international efforts bringing together medical and veterinary virologists.

Dr. Capua is director of the OIE/FAO and National Reference Laboratory for Avian Influenza and Newcastle Disease at the OIE Collaborating Centre for Diseases at the Human-Animal Interface and of the Research and Development Unit at the Istituto Zooprofilattico Sperimentale delle Venezie, in Legnaro, Italy. The Institute hosts the National, FAO and OIE Reference Laboratory



for avian influenza and Newcastle disease and the OIE Collaborating Center for Diseases at the Human-Animal Interface.

In 1989, Dr. Capua graduated in veterinary medicine, with honors, from the University of Perugia.

She continued her education at Pisa University, where she obtained her postgraduate qualification as a specialist in Animal Health and Hygiene in 1991. In 2007 she earned her PhD from the University of Padova.

"I am flattered to receive the Penn Vet World Leadership in Animal Health Award, and am particularly proud to be the first woman to receive it," said Dr. Capua. "To me this recognition confirms that you need to direct your work where your heart tells you to go, and that a spark of common sense blended with a sense of ethical responsibility can change the rules of the game at very high levels."

## Jonathan L. Lustgarten, PhD



"I certainly have a different background from most of my fellow veterinary students in terms of overall interests," said Jonathan Lustgarten, PhD, member of the Penn Vet Class of 2013 and winner of this year's Student Inspiration Award.

The New Jersey native has known since he was five years old that he wanted to be a veterinarian.

"In college I developed an interest in computational biology, which tries to model life on a computer," said Dr. Lustgarten. "I knew that once I finished veterinary school I would want to get right to work, applying the knowledge I gained there, so I chose to pursue my other academic interests first."

Dr. Lustgarten earned a bachelor of science degree from Carnegie Mellon University in computational biology with a minor in chemistry. He earned both his master of bioinformatics and PhD in biomedical informatics from the University of Pittsburgh School of Medicine.

His academic interests, based in advanced technological modeling and analysis, may seem a long way from examining room or stall-side care, but it is Dr. Lustgarten's dreams of a unique veterinary application that will connect his interest in technology with the education from Penn Vet.

Dr. Lustgarten's Student Inspiration Award-winning proposal outlines his vision to develop a state-of-the-art, easily deployable veterinary health record system that will assist vets and staff in the care of animals during disaster

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relief around the country. The system, dubbed The Rehabilitation and Emergency COmputerized Veterinary Records (RECOVER) system, will utilize an easy-to-use interface, real-time data entry, and an animal monitoring component that will improve workflow, and have the capability to connect on-the-ground responders with caretakers based elsewhere, outside of the disaster zone. The project is the perfect marriage of Dr. Lustgarten's solid background in innovative technology and growing expertise in veterinary medicine.

The idea for RECOVER was borne from a conversation that Dr. Lustgarten had with Erica Miller, DVM, staff veterinarian for Tri-State Bird Rescue in Delaware. Talking about disaster recovery, Dr. Lustgarten became aware of the tremendous task of in-taking wildlife, treating the animals and then releasing them back into the wild.

"There are thousands of sheets of paper generated per day, making a command control view across various rescue sites difficult, and the management of and understanding following a disaster challenging," said Dr. Lustgarten. "It seemed to me a great opportunity to test out some of the methods that human medicine is using in an environment where there is no prior system, taking advantage of the capabilities of smart phones, tablets and technology."

In addition to the value such a system would offer for record keeping and sharing of information about patients, it can also be used in the field, in real time, to monitor infectious outbreaks.

"This is a first attempt to address the needs of veterinarians at disasters, to have real time information that is correct, and for rescue shelter managers to handle intake/release of animals and supplies at the same time," he said.

The data gathered would also make available a vast amount of information for researchers worldwide.

"My aspiration is to bring veterinary medicine forward from where it is now by incorporating advanced technology," said Dr. Lustgarten. "Human information for translational science can then be incorporated."

As a caveat, Dr. Lustgarten adds that there are many steps before that can actually happen, but he is dedicated to seeing this initiative through.

"This can go almost anywhere," said Dr. Lustgarten. "My goal is that anything that I do lasts beyond me. The nice part is that if I do it right in veterinary medicine, then I have the evidence I need to apply it to human medicine. That's a linear step." ■

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