COUNTY OF SAN LUIS OBISPO
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IN THIS ISSUE

SEOUL VIRUS

Currently California has avoided yet another outbreak of what might be considered an exotic virus: Seoul virus. The Centers for Disease Control and Prevention (CDC) is helping public health officials in 15 states with an investigation into cases of a hantavirus-like illness associated with contact with pet rats. Infected rodents have been identified from Alabama, Arkansas, Colorado, Illinois, Indiana Michigan, Minnesota, Missouri, South Carolina, Tennessee, Utah, and Wisconsin. When first reported ill individuals reported purchasing rats from animal suppliers in Wisconsin and Illinois.

Seoul virus is a member of the Hantavirus family and is carried in the wild by Norway rats. Virus is shed by the rodents but they do not become ill. Presently 17 individuals have been diagnosed with the disease. Eleven states have reported Seoul virus in humans or pet rats; 15 states report facilities under investigation.

While rats may not deserve to be categorized as exotic pets, rodents obtained as pets are known to serve as unrecognized hosts to a number of unusual microbial agents that subsequently infect their human owners. Among such agents that have been thus reported are: prairie dogs (tularemia, monkeypox), hedgehogs and chinchillas (salmonellosis, ringworm) and the Gambian giant rat (monkeypox). Seoul virus can now be added to the array of infecting agents for which rodent pets serve as a vector.

NEW VACCINES NEEDED FOR NEW DISEASES

Leading a list of promising vaccine trials is Ebola virus, which gained notoriety for the 2014-2016 Western African outbreak. Other such deadly viruses on the list include Marburg, Crimean Congo Hemorrhagic Fever, Middle East Respiratory Syndrome coronavirus (MERS-CoV), Severe Acute Respiratory Syndrome coronavirus (SARS-CoV), Chikungunya, Lassa Fever, Nipah, and Rift Valley Fever.

Lessons from the emergence and impact of Zika virus in early 2015 demonstrates that rare viruses are not always relegated to forests or jungles, and are not easily predicted. A new virus may capitalize on human travel and commerce, gain access to new populations, and find required vectors or new modes of transmission anywhere in the world. There are no readily evident distinguishing characteristics of the Zika virus among scores of similar rare viruses that have been discovered, reported and catalogued, particularly in the flavivirus family.

Public Health authorities world-wide are challenged as never before to prepare for such unforeseen events. To address this problem, research experts at the University of Oslo have posited a strategy for defending against possible future infections, by working diligently and proactively on vaccine development for viruses that are largely unknown by the public, but which are all too well known among virologists and infectious disease experts (NEJM. Feb 16, 2017.)