Dr. Jonathan Epstein

The Human Hand and Disease Emergence: Why Ebola, Nipah and SARS Outbreaks Are Our Fault

Today we are experiencing an unprecedented rate of emerging infectious disease around the world. The majority of these plagues, such as bird flu, SARS and Ebola virus, can be traced back to animal reservoirs – particularly wildlife species. It is not that wildlife are suddenly generating zoonotic pathogens, but rather, it is humans that are manipulating environments (e.g., deforestation, agricultural expansion, urbanization) such that there is more and more interaction among free-ranging wildlife, domestic animals and us. This creates new opportunities for what used to be exclusively animal viruses to jump into new hosts, where the consequences can be disastrous. Using modern-day examples, Dr. Jonathan Epstein, Associate Vice President at EcoHealth Alliance, will explore some of the environmental changes that have led to the emergence of zoonotic pathogens, and examine our ability to monitor diseases that appear to be on the verge of becoming the next global pandemic.

Dr. Jonathan Epstein received his DVM and MPH from The Tufts Cummings School of Veterinary Medicine and Tufts School of Medicine’s Graduate Programs in Public Health. His research interests include the ecology of zoonotic viruses such as Nipah virus, Ebola and SARS; zoonotic disease emergence at the human-animal interface; viral discovery; pathogen discovery; and trade as a mechanism for pathogen pollution. His work led to the discovery of bats as the natural reservoir for SARS. He is currently studying the ecology of Nipah virus in Bangladesh. Dr. Epstein is also the Asia Regional Coordinator for the U.S. Agency for International Development’s Emerging Pandemic Threats Program, a global initiative to identify potentially pandemic viruses in wildlife before they emerge in human populations.