

Food borne zoonotic diseases- A global perspective

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Abstract

Zoonotic diseases or zoonoses are naturally transmitted between vertebrate animals and humans through various modes of transmission, food being the major one. They are caused by a number of pathogens including bacteria, virus, fungi and parasites, which are transmitted to humans through the food chain. Such diseases can be endemic or epidemic, and currently account for approximately 60–70% of recent emerging infectious disease events. As indicated by WHO, the most virulent food-borne pathogens are *Campylobacter*, *Escherichia coli*, *Salmonella*, *Yersinia*, *Listeria* and *Shigella*. These pathogens may cause illness ranging from mild/ moderate self-limiting gastroenteritis to invasive and dreadful diseases. The emerging and potential food borne zoonotic pathogens are a matter of concern worldwide due to serious public health threats. The situation is worsened due to emergence of antibiotic resistance in zoonotic microbes, which is a major cause of treatment failure and disease aggravation. Almost all the countries worldwide are facing the public health concerns due to food borne zoonotic diseases, but only few countries have surveillance programs. Recent explosive outbreaks, high fatalities and epidemic potential of highly pathogenic zoonotic infections warrant for their prevention and control. Besides, looking into the genetics and genomics of food borne pathogens using genome sequencing tools and technologies, can revolutionize the epidemiology of food borne diseases. The genetic aspects of pathogens guiding its pathogenicity and virulence are the key to zoonosis; deciphering such events can lead to a greater understanding of occurrence and emergence of these diseases.

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Speaker Biography:

Dr. Abhilasha Shourie is Ph.D in Plant Biotechnology and has 14 years of experience in academia and research. She has published 29 research papers in peer reviewed journals of national & international repute and has written three books. She is recipient of Dr. APJ Abdul Kalam Teaching Excellence Award and is presently working on agriculture based start-up