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## Public health risks of animal prions

Prion diseases are a family of fatal transmissible neurodegenerative diseases that require the cellular prion protein for both prion agent replication and prion pathogenesis. Prions affect humans and many mammals. Common prion diseases include Creutzfeldt-Jakob disease (CJD) in humans, bovine spongiform encephalopathy (BSE or mad cow disease) in cattle, scrapie in sheep and goats and chronic wasting disease (CWD) in cervids (mule deer, white-tailed deer, American elk, moose, and reindeer). Huge efforts have been undertaken in many laboratories around the world to understand the public health risks posed by prions from animals ever since BSE was found in 1990's to cause variant CJD (vCJD) in humans. A lot of progress has been made but many questions remain. The existence of multiple prion strains in one animal species and the discovery that these prion strains may have different zoonotic potentials add to the challenges. The author will attempt to summarize the history and the current understanding on prion zoonosis with an emphasis on BSE and CWD.

## **Biography**

Qingzhong Kong has completed his PhD at the University of Massachusetts at Amherst and postdoctoral studies at Yale University. He is currently an Associate Professor of Pathology, Neurology and Regenerative Medicine, Associate Director, National Prion Disease Pathology Surveillance Center, Case Western Reserve University School of Medicine. He has published over 50 original research papers in reputable journals (including Science Translational Medicine, Journal of Clinical Investigations, PNAS, Cell Reports, and Plant Cells) and has been serving as an Editorial Board Member on multiple scientific journals.

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**Notes:**