

## **ARE THERE NEW EMERGING PATHOGENS? WHAT DO SCIENTISTS KNOW - WHAT SHOULD CONSUMERS KNOW?**

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Throughout the history of mankind, foodborne public health threats have emerged and re-emerged and will continue to do so. These threats include emerging bacteria, vira, prions, anti-microbial resistance, toxins and more recently bio-terrorism.

Some foodborne pathogens are considered emerging because they are newly discovered (e.g. Nipah virus) or because their role of food in their transmission has been recognised only recently (e.g. *Listeria monocytogenes*). In some cases, previously harmless microorganisms change into pathogenic variants (e.g. enteropathogenic *Escherichia coli* serotype O157:H7). Other foodborne diseases have been recognised for many years, but are considered emerging because they have recently become more common due to changes in food production systems or consumer habits (e.g. *Salmonella* and *Campylobacter*). Other reasons for the emergence or re-emergence of new foodborne disease threats include increase in international travel and trade, microbial adaptation as well as human demographics and behaviour.

Scientists may identify emerging pathogens through surveillance programmes. Traditionally, surveillance of human disease, and tracing back to the sources of infection, serves as indicator of the emergence of new foodborne disease threats. In the future we should strive towards developing systems, which detect emerging public health risks before they cause actual damage to human health. This is not an easy task, but proactive monitoring in the farm-to-fork chain and systematic evaluation of the data by interdisciplinary and inter-sector groups can facilitate the early recognition and targeted response to potential foodborne disease threats.

Scientists know that new foodborne disease threats emerge all the time, so there is a continued need for active surveillance in the farm-to-fork chain, focused research and maintenance of capacity to respond promptly to potential new threats. Consumers should be aware that new foodborne disease threats can emerge at any time. Even with the best control programme in place, the consumers are not protected against hitherto unrecognised risks. Therefore, consumers should always apply the basic rules for safe food handling, and use their political influence to demand adequate food safety assurance systems even in periods of relative calm.