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Molecular approaches for the detection of food borne pathogenic bacteria and their toxins

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Foodborne pathogens comprise microorganisms such as viruses, bacteria and parasites that can be transmitted by food and affect public health worldwide. The most common bacteria involved in foodborne illnesses are *Campylobacter jejuni, Clostridium perfringens, Salmonella spp, Escherichia coli O157:H7, Staphylococcus spp, treptococcus spp, Listeria monocytogenes, Yersinia enterocolitica, Bacillus cereus etc*. Conventional methods like cultures are almost labour intensive, time consuming and costly. Hence, molecular techniques have been developed for rapid, sensitive and specific identification of these bacteria and their toxins. The methods used such as PCR, Loop mediated Isothermal amplification technique (LAMP), Molecular beacon, aptamer based techniques, Aptamer-PCR, DNA microarray also named DNA chip or biochip, Immunological techniques like ELISA, recombinant antibodies etc are being developed for rapid detection of food borne pathogens.

Biography

H K Manonmani working as Principal Scientist at CSIR-Central Food Technological Research Institute, India. Her experience includes various programs, contributions and participation in different countries for diverse fields of study. Her research interests reflect in her wide range of publications in various national and international journals.

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