



Differentiating Multiplex Assay for Listeria

The bacteria that cause listeriosis (*Listeria monocytogenes*) are responsible for 500 deaths in 2,500 cases that occur annually. While listeriosis cases are relatively rare, 85%-90% require hospitalization and 20%-30% result in death. *Listeria* bacteria are not necessarily pathogenic and current tests can not distinguish pathogenic from non-pathogenic strains.

Researchers at Colorado State University have recently created a multiplex single nucleotide polymorphism (SNP) genotyping assay to distinguish between pathogenic and non-pathogenic *L. monocytogenes* strains. The assay detects truncated variants of internalin A (inlA), a protein essential for entry into cells. A significant proportion of *L. monocytogenes* isolated from food products carry these truncations, confounding the detection and elucidation of pathogenic bacteria. During a listeriosis outbreak it becomes crucial to rapidly identify the source of pathogenic bacteria. This technology rapidly distinguishes pathogenic and non-pathogenic strains.

ID: CSURF 08-073

Patent Information

Provisional Patent Application
Filed

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Related Technologies

CSURF 08-073

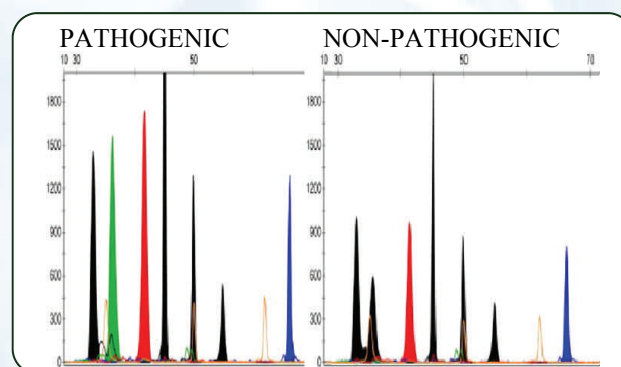
Publications

Appl Environ Microbiol. 2008
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2008 Oct 3.

Appl Environ Microbiol. 2008
Nov;74(21):6570-83. Epub
2008 Sep 12.

Features and Benefits

- Distinguishes between pathogenic and non-pathogenic *L. monocytogenes* bacteria.
- Could speed the identification of the source of a listeriosis outbreak by eliminating false positives.
- Assay is both rapid and adaptable to high-throughput screening.



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