

## Marshfield Food Safety Shows Increased Accuracy in Salmonella Strain Typing with PathoGenetix RESOLUTION System

*An independent evaluation of PathoGenetix's rapid bacterial strain typing technology by contract testing lab Marshfield Food Safety found greater ease-of-use and increased accuracy in Salmonella strain typing with the RESOLUTION Microbial Genotyping System compared to current identification methods.*

**WOBURN, MASS (March 26, 2014)** – PathoGenetix, Inc., developer of an automated system for rapid bacterial strain typing, announced today that Marshfield Food Safety, LLC, a full service microbiology and chemistry contract testing laboratory, has completed an independent evaluation of the RESOLUTION™ Microbial Genotyping System. The three-week evaluation tested the speed, utility and ease-of-use of the RESOLUTION instrument, assays and database for food industry applications. The System isolates and analyzes microbial DNA directly from enriched food and clinical samples, without a pure culture isolate, to strain type target bacteria in just five hours even when multiple serovars are present.

In all, Marshfield tested 77 *Salmonella* isolates sourced from its internal collection of “tough-to-type” strains, as well as several naturally contaminated food samples. Marshfield compared the molecular serotyping capability of the RESOLUTION System to traditional serological analysis, as well as used the strain typing capability of the RESOLUTION System to determine the relatedness of the isolates. Marshfield Food Safety CEO, Roy Radcliff, PhD, and his technical team conducted the evaluation at their core laboratory in Marshfield, Wisconsin.

The Marshfield team found both an improved ease-of-use and specificity of strain and serotype identification over other identification systems currently in use at Marshfield. Marshfield also reported that the RESOLUTION System was successful in identifying *Salmonella* isolates that they had not been able to accurately type previously using traditional serotyping methods.

“The RESOLUTION System could become a very powerful tool for the food industry,” Dr. Radcliff said. “The ease of use is great for the workflow in the laboratory. The robustness and the ability of the instrument to identify multiple strains in a sample or to identify strains from a secondary enrichment rather than a pure isolate make it very appealing.” In addition, Radcliff noted the tremendous value for Marshfield’s food industry customers in the System’s ability to re-analyze sample data as new strain patterns are added to the RESOLUTION database.

Marshfield provides full service microbiology and chemistry testing and food safety risk management services to clients along the food chain from farm to table. In addition to conducting laboratory services for national food producers in its corporate laboratory, Marshfield also designs and staffs onsite quality and safety testing laboratories for food producers around the U.S.

“The speed at which the RESOLUTION System can confirm and identify pathogens in screen-test positive samples will enable food producers to react much more quickly and proactively than with current confirm/ID methods,” said John Czajka, PhD, Vice President of Business Development for PathoGenetix. “This will help producers reduce product loss due to continued contamination and to minimize or eliminate future contamination events, thereby maintaining product quality and ultimately preserving brand value.”

The RESOLUTION Microbial Genotyping System is the first commercial application of PathoGenetix’s proprietary Genome Sequence Scanning™ (GSS™) technology, and has been developed for food safety testing in the food industry and in public health foodborne illness outbreak investigations. The RESOLUTION System provides confirmation of food pathogens in enriched samples taken from presumptive positive screening tests, and identifies the molecular serotype and strain type information of the target bacteria in just five hours.

The bacterial strain information provided by the RESOLUTION System is comparable to pulsed field gel electrophoresis (PFGE), the current gold standard for pathogen typing in foodborne illness outbreak investigation and response. Unlike PFGE, however, GSS is culture independent, and fully automated from sample preparation to final report. As a result, the RESOLUTION System has the potential to greatly reduce the time, complexity and skill-level required to identify foodborne pathogens in both food industry testing and public health outbreak investigations.

In February, PathoGenetix also delivered an early commercial version of the RESOLUTION System to the U.S. Food and Drug Administration (FDA). The FDA is leasing the RESOLUTION System as part of a three-year collaborative agreement to evaluate the rapid bacterial identification technology for use in FDA foodborne illness outbreak investigation and response.

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#### **About PathoGenetix™, Inc.**

PathoGenetix, Inc., is a commercial-stage developer of an automated system for rapid bacterial identification from complex samples. PathoGenetix is a venture-backed company that has received more than \$50 million in technology development funding from the Department of Homeland Security. The company's core Genome Sequence Scanning™ (GSS™) technology isolates and analyzes DNA directly from an enriched biological sample—without the need for a cultured isolate—and provides results in just five hours, days faster than current methods. GSS has broad applicability in food safety, industrial microbiology, public health and research. The first commercial GSS system will be available in 2014 for use in food safety testing and foodborne illness outbreak investigations. Learn more at [www.pathogenetix.com](http://www.pathogenetix.com).

#### **About Marshfield Food Safety, LLC**

Marshfield Food Safety (MFS), LLC is a full-service microbiological and chemistry laboratory with eleven A2LA accredited locations in North America. MFS provides qualitative and quantitative analysis for food safety testing. Routine analyses utilize AOAC and USDA approved methods. MFS works with renowned food companies to help them ensure they are producing the safest product they can. MFS, in conjunction with the associated human and veterinary laboratories, has potential to improve food safety every step along the food chain. Learn more at [www.marshfieldfoodsafetyllc.com](http://www.marshfieldfoodsafetyllc.com).