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Contact: Haley Tomlinson
Institute for Food Safety and Health
708 563 8278
htomlin2@iit.edu

IFSH Receives FDA Acceptance of Pressure Enhanced Sterilization Process for Commercial Production of Multi-Component Shelf-Stable Foods

(Chicago, IL) July 12, 2015 – Illinois Institute of Technology's Institute for Food Safety and Health (IIT IFSH) announced today that the U.S. Food and Drug Administration (FDA) has accepted an IFSH process filing for applying a Pressure Enhanced Sterilization (PES) processing technology for the commercial production of complex particulate-bearing shelf-stable low acid foods.

"IFSH is actively engaged in researching high pressure processing and other novel food processing technologies for food safety applications," said Robert Brackett, Ph.D., vice president of Illinois Institute of Technology, and IFSH director. "The IFSH led High Pressure Research Consortium (HPRC) with member companies including Ameriqual, Avure Technologies, Michael Foods, PepsiCo, Print Pack, the U.S. Army Natick Soldier Research, Development and Engineering Center, and the National Aeronautics and Space Administration (NASA), is a good example of how cutting-edge research can be conducted to validate and commercialize new technologies for the food industry," said Brackett.

"The PES process is a significant advancement that enhances the previous 2009 FDA acceptance of the Pressure Assisted Thermal Sterilization (PATS) filing. In the PES filing, we have used a more robust version of high-pressure equipment provided by Avure, and developed a unique system to ensure even temperature distribution and stability during pressurization," said Jason Wan, Ph.D., IFSH associate director and project director of the HPRC. "We have achieved commercial sterility of a more complex particulate-bearing low acid food using processing conditions of time and temperature that are lower than those used for a conventional thermal sterilization process. The PES process effectively maximizes the retention of quality and nutritional attributes of food," said Wan.
The process filing was led by Larry Keener, Ph.D., IFSH’s process authority and president of Seattle-based International Product Safety Consultants. “Achieving regulatory acceptance of the PES process was based on long standing, scientific principles of process validation, and fine tuning the parameters of high pressure in combination with heat for the control of dangerous *Clostridium botulinum* spores in ambient-stable low acid foods,” said Keener.

The food industry needs new technologies for the production of premium quality and nutritious foods that maintain food safety and shelf-life. The development and FDA acceptance of this PES process is a major breakthrough in the innovative food processing arena, and will facilitate the commercialization and adoption of the high pressure processing technology for low acid foods.

**Illinois Institute of Technology's (IIT) Institute for Food Safety and Health (IFSH)** is a one-of-a-kind applied food research institute that provides stakeholders in government, industry and academia the opportunity to develop and exchange knowledge and expertise to address key issues in food safety, food defense and nutrition. Powered by a singular combination of in-depth food science expertise and state-of-the-art research capabilities, IIT IFSH's collaborative research model helps stakeholders define and design innovative and practical approaches to solving real-world challenges in food industry operations. Located at IIT's Moffett Campus in Bedford Park, IL, IFSH is also home to the FDA CFSAN Division of Food Processing Science and Technology. **For more, visit www.iit.edu/ifsh**