

SmartThaw Presentation Given at Cryo2016

CPSI researchers present a scientific poster on the *SmartThaw* cell thawing system.

July 29, 2016

OWEGO, NY -- CPSI Biotech scientists just returned from presenting at the Society for Cryobiology Annual Meeting (Cryo2016) in Ottawa, CA (July 24-27). CPSI's involvement included a scientific poster presentation and demonstration of CPSI's new SmartThaw device designed to improve the thawing process of frozen cell and tissue products.

This scientific study on *SmartThaw*[™] conducted by a team of researchers from CPSI and led by Dr. Kristi Snyder (Director of Operations and Principal Scientist) and Kimberly Santucci (Research Scientist). "*SmartThaw*[™] System is a new device for controlled and rapid dry thawing of cryopreserved (frozen) samples and products. This study demonstrated that sample thawing with SmartThaw[™] improves processing of frozen products while also providing equivalent, and in several cases, improved sample viability post-thaw" stated Ms. Santucci. Speaking to the technology, Dr. Snyder stated "We introduced the prototype system this spring and have been collecting end-user feedback and input for final design and performance focus. These insights have aided in the final design engineering which is now in process. As a result of these ongoing activities, we are targeting commercial launch in late Q3 2016."

The poster titled "Assessment of SmartThaw[™]: A novel dry thawing system for cryopreserved cell products" focused on the improved processing and outcome that can be obtained using SmartThaw. The poster highlighted studies conducted on CHO, PC-3, human endothelial, and mesenchymal stem cells. Providing insight into the data presented, both Snyder and Santucci stated "*SmartThaw*[™] is designed to provide a viable alternative to water baths offering a clean, dry and documentable process while delivering equivalent or better cell recovery. The data presented illustrated the improved processing and outcome delivered by *SmartThaw*[™]. One interesting finding is that using the controlled thaw process delivered by *SmartThaw*[™] in systems such as CHO cells, we are able to obtain an improvement in post-thaw cell recovery compared to traditional water bath thawing. These benefits are achieved in cell samples frozen in various volumes and storage containers (cryovials and 25ml freeze bags)."

Commenting on the process and technology, Dr. John M. Baust (President of CPSI) stated "The thawing process has a critical impact on sample quality. Today sample thawing in a warm (37°C) water bath is standard. There are a number of issues associated with this which are often overlooked, including sterility, consistency, controllability, documentation and variability in outcome. As an active researcher, I have experienced firsthand the impact these issues have on overall outcome. Given this, we have developed *SmartThaw*[™] to (1) improve cell product development and production, (2) reduce sample loss, (3) increase sample quality and utility, (4) improve efficiency and (5) enable monitoring and standardization, increasing accuracy and repeatability, thereby filling an unmet need and enabling high through-put, consistent, controlled and safe thawing of frozen samples."

SmartThaw[™] is currently slated for commercial launch in late Q3 2016. When asked about the upcoming launch, Dr. Snyder stated “As cryopreservation is an enabling tool for many research and clinical areas, the demand for devices and processes to improve handling and distribution continues to grow. We believe that *SmartThaw*[™] will provide a vital link in improving cryopreserved cell handling. Reception of the final system design and the pending launch was highly positive and we already have a number of clients positioned for the first round of shipments.” Dr. Baust further stated “In 2014, over \$400 million was spent on cryopreservation equipment in the United States and it is estimated that the global market will approach \$800 million in 2016. It is our belief that *SmartThaw*[™] has tremendous potential and will have a significant impact on the industry.”

The poster can be viewed on CPSI’s website in the News section. More information on *SmartThaw*[™] or any of CPSI’s other technologies is available on CPSI’s website www.cpsibiotech.com.

About CPSI Biotech - CPSI Biotech, a private, integrative bio/medtech greenhouse company, develops and designs life science research products and cryo-medical devices for applications in cancer, cardiovascular disease treatments and cell therapy bioprocessing. Ongoing R&D and business development activities continue to produce innovative technologies, devices and intellectual property for commercialization, licensing or sales in support of diverse clinical and research applications. By leveraging the innovation, flexibility and R&D strengths of CPSI in combination with the development, commercialization, manufacturing and clinical expertise of partnering organizations, rapid and efficient product development is attainable.

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With the exception of the historical information contained in this release, this release contains materials and statements related to future business, financial performance, future events and/or developments involving CPSI which constitute forward-looking statements. The matters described herein contain forward-looking statements that involve risk and uncertainties that may individually or mutually impact the matters herein described, including but not limited to, CPSI’s ability to develop and market new products, to retain and attract key employees, to obtain regulatory clearances and approvals for its products, to effectively react to other risks and uncertainties, such as fluctuation of quarterly financial results, contract and grants acquisition, reliance on third party manufacturers and suppliers, litigation or other proceedings, economic, competitive, governmental impacts, whether pending patents will be granted or defensible, validity of intellectual property and patents, the ability to license patents, the ability to commercialize developmental products, competition from existing and new products and procedures and CPSI’s ability to raise the capital that is required to accomplish the foregoing.

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