BioLife Solutions CryoStor® Cell Freeze Media Highlighted in Mayo Clinic/MD Anderson Journal Article on Preservation of Patient-Derived Xenografts for Cancer Research

Published in Springer Nature Journal Laboratory Investigation; Superior Performance Over Traditional "Home Brew" Cryopreservation Formula

BOTHELL, Wash., March 13, 2018 /PRNewswire/ -- BioLife Solutions, Inc. (NASDAQ: BLFS) ("BioLife"), the leading developer, manufacturer and marketer of proprietary clinical grade cell and tissue hypothermic storage and cryopreservation freeze media, today announced that the performance of its proprietary, cGMP CryoStor cell freeze media was reported in the journal Laboratory Investigation.

In multiple comparisons of preservation efficacy of patient-derived xenograft (PDX) tumors, CryoStor was superior to a traditional DMSO-containing home-brew freeze media cocktail. Key quantitative performance dimensions included the primary outcome of reanimation engraftment efficiency (REE) and secondary outcomes of time to tumor formation (TTF), time to harvest (TTH), and potential loss of unique PDX lines.

Drug developers strive to increase efficiency in identifying promising therapeutic candidates, and in disqualifying poor candidates. Pre-clinical anti-cancer drug development models that do not reflect the complexity and heterogeneity of human tumors may negatively impact the clinical efficacy of those novel pharmaceutical candidates. The gap between pre-clinical models and human cancer profiles may increase the research costs before identification of failed anti-cancer agents and further testing is discontinued, as well as potentially increasing the development time of successful anti-cancer candidates. PDX tumor models are being cited as a new tool for improved correlation to human tumors.

The results of this study illustrate the benefits of using CryoStor over home-brew freeze media;

- Reanimation engraftment: CryoStor 82% vs. home-brew 39%
- Time to tumor formation: CryoStor 24 days vs. home-brew 54 days
- Time to harvest: CryoStor 64 days vs. home-brew 89 days
- Potential loss of unique PDX lines: CryoStor 9% vs. home-brew 35%

Aby J. Mathew, PhD, Senior Vice President and Chief Technology Officer, remarked, "Cryopreservation offers the benefit of patient tumor storage for long-term time management, and maintenance of irreplaceable primary patient samples. Any cell and tissue model for investigation has the potential for cell damage and cell death when cryopreserved, and sub-optimal biopreservation methods can exacerbate the damage to cells and tissues. Recognition of optimized biopreservation methods is an important step in the overall drug development process. The results of this study reinforce our long-time message in support of biopreservation best practices, which has led to the unparalleled use of CryoStor and HypoThermosol® cGMP biopreservation media in 275+ customer regenerative medicine applications and 325+ literature citations. We look forward to enabling ongoing biopreservation optimization within the drug discovery, biobanking, and regenerative medicine markets with our optimized biopreservation media platforms."

The article can be accessed here:
https://www.nature.com/articles/s41374-018-0042-7

About BioLife Solutions

BioLife Solutions is the leading developer, manufacturer and supplier of proprietary clinical grade cell and tissuehypothermic storage and cryopreservation freeze media for cells and tissues. Our proprietary HypoThermosol® and CryoStor® platform of solutions are highly valued in the regenerative medicine, biobanking and drug discovery markets. Our biopreservation media products are serum-free and protein-free, fully defined, and are formulated to reduce preservation-induced cell damage and death; offering commercial companies and clinical researchers significant improvement in shelf life and post-preservation viability and function.

For more information please visit www.biolifesolutions.com, and follow BioLife on Twitter.

Cautions Regarding Forward Looking Statements

Except for historical information contained herein, this press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact are statements that

could be deemed forward-looking statements. These statements are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and assumptions that could cause actual results to differ materially from those described in the forward-looking statements, including among other things, uncertainty regarding market adoption of products; uncertainty regarding third party market projections; market volatility; competition; litigation; and those other factors described in our risk factors set forth in our filings with the Securities and Exchange Commission from time to time, including our Annual Report on Form 10-K and Quarterly Reports on Form 10-Q. We undertake no obligation to update the forward-looking statements contained herein or to reflect events or circumstances occurring after the date hereof, other than as may be required by applicable law.

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