BioVaxys' DPX Exhibits Superior Immune System Activation Compared to Aqueous and Emulsion-Based Antigen Delivery Systems

Study Results Position Company to Target Segments of $270B+ Multi-Billion Dollar Drug Delivery Systems Market[1]

VANCOUVER, BC, Oct. 31, 2024 /CNW/ -- BioVaxys Technology Corp. (CSE: BIOV) (FRA: 5LB) (OTCQB: BVAXF) ("BioVaxys" or the "Company") highlights studies showing that its novel immune educating delivery platform, DPX™, recruits and activates unique subsets of antigen presenting cells ("APCs") to drive immunogenicity of antigens, and exhibits superior immune activation compared to aqueous and emulsion-based antigen delivery systems.

With cancer vaccines, the successful eradication of tumors relies on the persistent delivery of antigenic APCs to prime potent, antigen specific, cytotoxic T cells. Current peptide antigen delivery methods include using either water-based formulations which provide short exposure of peptides to immune cells, or oil-in-water emulsions that provide longer peptide exposure but that can elicit dysfunctional T cell phenotypes. In contrast, BioVaxys' DPX technology is a non-aqueous, lipid-in-oil, immune-educating therapeutic delivery platform that keeps the antigen cargo at the site of injection, ensuring that uptake of the DPX-encapsulated cargo is an active process driven by the APCs across time.

In a study done in collaboration with Dalhousie University of Halifax, Nova Scotia, DPX was compared to aqueous and emulsion-based formulations to evaluate the dynamics of immune cell recruitment to the site of injection, antigen consumption, and trafficking by immune cells. Immune cell composition and antigen uptake at the injection site were assessed by multi-parameter flow cytometry and confocal microscopy using model peptide antigens administered in mice. Antigen-specific immune responses were assessed by interferon-gamma (IFN-γ)-based Enzyme-Linked Immunospot (ELISpot) assay to measure IFN-γ, the presence of which plays a crucial role in activating the immune system. The ELISpot assay is a sensitive method for measuring the number of cells that produce cytokines or antibodies in response to an antigen.

"BioVaxys is at the forefront of a significant shift in the drug delivery landscape," James Passin, CEO of BioVaxys, stated, "These groundbreaking study results validate our strategic position in an important segment of the multi-billion drug delivery market. DPX not only outperforms current antigen delivery solutions but also demonstrate inherent immune-activating properties, opening up significant revenue potential across multiple market segments."

The study results showed that aqueous formulations were poorly able to retain lymphocytes at the injection site and consequently did not elicit a detectable IFN-γ ELISpot response. Both DPX and the oil emulsion were superior in recruiting APCs to the injection site and inducing antigen-specific immune responses, and with significant increases in immune cell infiltration detected as early as 2 days post DPX injection. However, a significant difference between DPX and oil emulsion was that antigen presentation driven by the DPX platform resulted in activation of more critical markers of T cell subsets than emulsion. An additional and highly significant finding is that recruitment and activation of these T cell subsets by DPX was evident regardless of whether an antigen was contained as cargo in DPX, indicating that DPX on its own has immune system activating properties.

Kenneth Kovan, President and Chief Operating Officer at BioVaxys, stated "We know that compared to DPX remaining at the injection site, emulsion-based and aqueous formulations leach cargo into surrounding tissues. These findings further highlight the quantitative, qualitative, and temporal differences in immune cell recruitment by DPX and two common delivery platforms and show the character of the immune response triggered by the DPX platform via activation of T cell subsets with intrinsically higher capacity for antigen uptake, presentation, and activation."

BioVaxys is planning to present additional data in early December on the unique characteristics of DPX

[1]*Drug Delivery Devices Market Size, Share & Trends Analysis Report By Application (Oncology, Infectious Diseases), By Route Of Administration (Oral, Transdermal, Injectable), By End-use, By Region, And Segment Forecasts, 2024 – 2030*, Grand View Research

About BioVaxys Technology Corp.

BioVaxys Technology Corp. (www.biovaxys.com) is a clinical-stage biopharmaceutical company dedicated to improving patient lives with novel immunotherapies based on its DPX™ immune-educating technology platform and its HapTenix© "neoantigen" tumor cell construct platform, for treating cancers, infectious disease, antigen desensitization for food allergy, and other immunological diseases. Through a differentiated mechanism of action, the DPX™ platform delivers instruction to the immune system to generate a specific, robust, and persistent immune response. The Company's clinical stage pipeline includes maveropepimut-S (MVP-S), based on the DPX™ platform, and is in Phase IIB clinical development for advanced Relapsed-Refractory Diffuse Large B Cell Lymphoma (DLBCL) and platinum resistant Ovarian Cancer. MVP-S delivers antigenic peptides from survivin, a well-recognized cancer antigen commonly overexpressed in advanced cancers, and also delivers an innate immune activator and a universal CD4 T cell helper peptide. MVP-S has been well tolerated and has demonstrated defined clinical benefit in multiple cancer indications as well as the activation of a targeted and sustained, survivin-specific anti-tumor immune response. BioVaxys is also developing DPX™+SurMAGE, a dual-targeted immunotherapy combining antigenic peptides for both the survivin and MAGE-A9 cancer proteins to elicit immune responses to these two distinct cancer antigens simultaneously, DPX™-RSV for Respiratory Syncytial Virus, DPX+rPA for peanut allergy prophylaxis, and BVX-0918, a personalized immunotherapeutic vaccine using its proprietary HapTenix© "neoantigen" tumor cell construct platform for refractive late-stage ovarian cancer. BioVaxys common shares are listed on the CSE under the stock symbol "BIOV" and trade on the Frankfurt Bourse (FRA: 5LB) and in the US (OTCQB: BVAXF). For more information, visit www.biovaxys.com and connect with us on X and LinkedIn.

ON BEHALF OF THE BOARD

Signed "James Passin"

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Cautionary Statements Regarding Forward Looking Information

This press release includes certain "forward-looking information" and "forward-looking statements" (collectively "forward-looking statements") within the meaning of applicable Canadian and United States securities legislation including the United States Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical fact, included herein, without limitation, statements relating the future operating or financial performance of the Company, are forward looking statements. Forward-looking statements are frequently, but not always, identified by words such as "expects", "anticipates", "believes", "intends", "estimates", "potential", "possible", and similar expressions, or statements that events, conditions, or results "will", "may", "could", or "should" occur or be achieved. There can be no assurance that such statements will prove to be accurate, and actual results and future events could differ materially from those expressed or implied in such forward-looking statements.

These forward-looking statements reflect the beliefs, opinions and projections on the date the statements are made and are based upon a number of assumptions and estimates, primarily the assumption that BioVaxys will be successful in developing and testing vaccines, that, while considered reasonable by the Company, are inherently subject to significant business, economic, competitive, political and social uncertainties and contingencies including, primarily but without limitation, the risk that BioVaxys' vaccines will not prove to be effective and/ or will not receive the required regulatory approvals. With regards to BioVaxys' business, there are a number of risks that could affect the development of its biotechnology products, including, without limitation, the need for additional capital to fund clinical

trials, its lack of operating history, uncertainty about whether its products will complete the long, complex and expensive clinical trial and regulatory approval process for approval of new drugs necessary for marketing approval, uncertainty about whether its autologous cell vaccine immunotherapy can be developed to produce safe and effective products and, if so, whether its vaccine products will be commercially accepted and profitable, the expenses, delays and uncertainties and complications typically encountered by development stage biopharmaceutical businesses, financial and development obligations under license arrangements in order to protect its rights to its products and technologies, obtaining and protecting new intellectual property rights and avoiding infringement to third parties and their dependence on manufacturing by third parties.

The Company does not assume any obligation to update the forward-looking statements of beliefs, opinions, projections, or other factors, should they change, except as required by law.

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