BioVaxys Developing DPX to be the Carrier of Choice for mRNA Vaccines, a market projected to grow to USD$48,000,000,000 by 2030*

VANCOUVER, BC, Jan. 16, 2025 /CNW/ -- BioVaxys Technology Corp. (CSE: BIOV) (FRA: 5LB) (OTCQB: BVAXF) ("BioVaxys" or the "Company") highlights the potential for its DPX™ non-systemic immune educating platform to address the inherent limitations of lipid nanoparticles ("LNPs") for packaging and delivering mRNA and other polynucleotides. Continued development of DPX-mRNA formulations is one of the Company's objectives, with BioVaxys pursuing collaborations with companies and academic institutions that possess pipelines of promising tumor and virus-specific polynucleotide antigens.

BioVaxys' DPX™ technology ("DPX") is a patented delivery platform that can incorporate a range of bioactive molecules, such as mRNA/polynucleotides, peptides/proteins, virus-like particles, and small molecules, to produce targeted, long-lasting immune responses enabled by various formulated components. The DPX platform facilitates antigen delivery to regional lymph nodes and has been demonstrated to induce robust and durable T cell and B cell responses in pre-clinical and clinical studies for both cancer and infectious disease.

Data from proof-of-concept studies of DPX-mRNA formulations conducted in collaboration with leading RNA technology company Etherna and PCI Biotech demonstrate that DPX provides enhanced *in vitro* and *in vivo* stability of packaged mRNA, attracts a therapeutically unique subset of Antigen Presenting Cells (APCs) to the injection site for targeted uptake of mRNA by the immune system, and that immunization with DPX containing mRNA induces specific immune responses towards encoded antigens.

mRNA vaccines have emerged as a major scientific breakthrough in the development of immuno-therapeutics and have become the foundation for many new vaccine programs as the Covid pandemic accelerated the development of mRNA vaccines. The genetic sequence in mRNA vaccines instructs host cells to produce proteins to elicit immunological responses and prepare the immune system to fight infections or cancer cells.

During the pandemic, mRNA vaccines were proven to be highly effective, with billions of doses administered worldwide. However, their rapid development has led to challenges, particularly concerning relatively strong adverse reactions, including severe ones. Adverse reactions associated with current mRNA vaccines are primarily attributed to the LNPs that carry the mRNA. LNPs possess immunostimulatory properties and can spill out of the injection site, leading to systemic inflammatory responses. While these adverse reactions may be considered acceptable for a limited number of doses during a pandemic, a safer platform that allows multiple doses over a lifetime is desirable for the extension of mRNA vaccine applications to other applications.

For instance, mRNA that is packaged using LNP- based vaccine delivery systems enters cells through endocytosis and faces several limitations and challenges such as systemic delivery leading to rapid degradation by nucleases, macrophage phagocytosis removal, and renal filtration clearance. Due to their relatively short half-life, LNPs can show instability under *in vivo* conditions. Endosomal escape and removal through macrophages of lipid nanoparticles is possible without proper cellular uptake. Their instability and degradation affect their storage, delivery, and overall efficiency, compared with prior studies demonstrating that DPX™ recruits and activates unique subsets of antigen presenting cells ("APCs") to drive immunogenicity of antigens, exhibiting superior immune activation compared to aqueous and emulsion-based antigen delivery systems. The studies with Etherna and PCI Biotech demonstrated a preliminary, non-optimized, mRNA formulated in DPX with shelf-life integrity maintained for over the 14 days of the study, with mRNA formulated in DPX demonstrated to be stable for up to 14 days *in vivo*. It was also seen that DPX attracts a unique subset of antigen presenting cells (APCs) to site of injection for targeted uptake of mRNA, with immunization with DPX containing mRNA inducing a specific immune response towards encoded antigens.

BioVaxys President and Chief Operating Officer Kenneth Kovan says "The DPX platform is essentially a 'pipeline from a product' and will play a significant commercial role for the Company as an enabling technology for delivering nucleic acids and other antigens. DPX is ideal for mRNA delivery, as it remains localized and does not spill out from the injection site and has superior stability than LNPs. With better manufacturing economics than LNPs, it is generating interest from potential partners in the mRNA vaccine field."

BioVaxys has several issued patents related to DPX-mRNA formulations.

[*] *mRNA Vaccine Market Size And Forecast*, Verified Market 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', 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.

Investors are encouraged to read BioVaxys continuous disclosure documents and audited annual consolidated financial statements which are available on SEDAR at www.sedar.com.

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