MabVax Therapeutics And Memorial Sloan-Kettering Cancer Center Report on Potential Use of Dual-Labeled Antibody To Detect and Guide Surgical Removal of Pancreatic Cancer

SAN DIEGO, Nov. 19, 2014 /PRNewswire/ -- MabVax Therapeutics Holdings, Inc. (OTCQB: MBVX) a clinical stage oncology drug development company in conjunction with the Department of Radiology at Memorial Sloan-Kettering Cancer Center (MSKCC) presented results on the use of MabVax's lead antibody development candidate, HuMab 5B1, as the targeting vehicle carrying two different imaging agents intended to significantly improve the imaging of pancreatic tumors and facilitate more effective cancer resections. The results were presented at the World Molecular Imaging Congress in Seoul, South Korea by Jacob Houghton, Ph.D. and Jason Lewis, Ph.D. of MSKCC. The HuMab 5B1 antibody was conjugated individually to a near-infrared fluorescent agent (NIRF) for optical imaging and desferrioxamine (DFO), a chelate used to radiolabel with Zirconium-89 (^{89}Zr) for PET imaging. Each singly labeled construct performed well in illuminating the targeted tumors. Additionally, a dual-labeled construct was prepared to incorporate the advantages of both modalities into a single construct. The dual-labeled HuMab 5B1 yielded high-resolution PET images of the targeted cancer and its metastases prior to resection while the fluorescent label significantly enhanced the imaging of the tumor and definition of tumor margins during resection in multiple murine models of pancreatic cancer. The imaging agent developed in this study showed exceptional potential as a tool to aid in the diagnosis, staging, and resection of pancreatic cancer.

J. David Hansen, President and CEO of the Company, stated, "With five-year survival rates in pancreatic cancer of only 5% and more than half of all patients initially diagnosed already having metastatic disease, the difficulties in identifying distant metastases that often go undetected as well as problems defining tumor margins during resection are both major concerns that affect outcomes for pancreatic cancer patients. This study showed favorable results for the dual labeled antibody in detecting human pancreatic cancer cells in the animal model."

This study was conducted using human pancreatic cancer cell lines implanted orthotopically into the pancreas of mice. Both the PET and NIRF imaging revealed high uptake in the cancer cells that increased over time. Negligible background signal was observed. After serial PET images were completed, image-guided removal of the implanted tumors was facilitated by the fluorescent label bound to the antibody.

Recently MabVax nominated its HuMab 5B1 antibody as a clinical candidate for the diagnosis and treatment of pancreatic and colon cancer. The fully human antibody, recovered from patients undergoing cancer vaccine treatment at Memorial Sloan-Kettering Cancer Center, has entered GMP manufacturing to produce clinical trial supplies for a planned Phase 1 program to begin in the second half of 2015. The development plan calls for dual Phase 1 clinical trials. One program will be aimed at demonstrating the utility of the radiolabeled antibody as a novel PET imaging agent for the diagnosis and management of pancreatic cancer. The second program will determine the safety and potential utility of the full-length antibody as a treatment for the same cancer. The dual-labeled antibody will be considered as a follow-on development program to enhance the initial PET only imaging product.

About HuMab 5B1

The HuMab 5B1 has demonstrated high specificity, affinity, and lack of cross-reactivity with similar antigens. The antibody has also shown potent cancer cell killing capacity and efficacy in animal models of pancreatic, colon, and small cell lung cancer. Ongoing toxicology results continue to demonstrate an acceptable profile in acute and repeat dose studies in animals. The antibody, when radiolabeled to create a novel PET imaging agent, has demonstrated high image resolution of tumors in established animal models. The company believes that the HuMab 5B1 antibody met all of the Company's criteria for moving the product forward as a clinical development candidate.

About MabVax

MabVax Therapeutics Holdings, Inc. is a clinical stage biotechnology company focused on the development of vaccine and antibody based therapies to address unmet medical needs in the treatment of cancer. MabVax has discovered a pipeline of human monoclonal antibody products based on the protective immune responses generated by patients who have been immunized against targeted cancers with the Company's proprietary vaccines. MabVax has the exclusive license to the therapeutic vaccines from Memorial Sloan Kettering Cancer Center. MabVax has two cancer vaccines targeting recurrent sarcoma and ovarian cancer in proof of concept Phase II multi-center clinical trials, and a vaccine targeting neuroblastoma ready for Phase II clinical development.

Additional information about the Company is available at www.mabvax.com.

Forward Looking Statements

This press release contains "forward-looking statements" regarding matters that are not historical facts, including statements relating to the Company's development pipeline and stock symbol. We have no assurance that all of the product development pipeline will be fully developed by the Company. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Words such as "anticipates," "plans," "expects," "intends," "will," "potential," "hope" and similar expressions are intended to identify forward-looking statements. These forward-looking statements are based upon current expectations of the Company and involve assumptions that may never materialize or may prove to be incorrect. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of various risks and uncertainties. Detailed information regarding factors that may cause actual results to differ materially from the results expressed or implied by statements in this press release relating to the Company may be found in the Company's periodic filings with the Securities and Exchange Commission, including the factors described in the section entitled "Risk Factors" in its annual report on Form 10-K for the fiscal year ended December 31, 2013 and in the Proxy Statement dated July 25, 2014, as amended and supplemented from time to time and in our quarterly report on Form 10-Q for June 30, 2014. The parties do not undertake any obligation to update forward-looking statements contained in this press release.

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