MabVax Therapeutics HuMab 5B1 Antibody Featured in Five Presentations at the World Molecular Imaging Congress

SAN DIEGO, Oct. 21, 2015 /PRNewswire/ -- MabVax Therapeutics Holdings, Inc. (OTCQB: MBVX) a clinical-stage oncology drug development company announces its antibody, HuMab 5B1 was featured in five separate presentations at the recently held World Molecular Imaging Congress (WMIC) in September. The presentations were made by investigators from the Department of Radiology at Memorial Sloan Kettering Cancer Center (MSK) describing the novel use of MabVax's lead antibody as a PET imaging agent and a radioimmunotherapy agent targeting pancreatic cancer.

Following is a summary of the key points from the presentations;

- Jacob Houghton, Ph.D. presented data demonstrating that the HuMab 5B1 antibody based PET imaging agent could be useful even in the context of shed antigen. Most pancreatic cancer patients shed an antigen called CA 19-9, which is a validated biomarker for pancreatic cancer. This same target is overexpressed on the surface of pancreatic cancer cells in more than 80% of patients and is the target for the HuMab 5B1 antibody. In animal models of pancreatic cancer, the experiments examined adding small amounts of HuMab 5B1 antibody not labeled with radiotracer to "soak up" excess circulating antigen. By varying the amount of unlabeled antibody and the time before injection of the HuMab 5B1 PET agent, Dr. Houghton was able to determine the variables required to optimize PET images. However, regardless of time of administration or amount of non-radiotracer antibody administered, images consistently illuminated the cancer.

- Ryan Lanning, M.D., Ph.D. presented the results of experiments using the HuMab 5B1 antibody as a radioimmunotherapy agent against pancreatic cancer. Dr. Lanning conjugated the HuMab 5B1 antibody to two different and commonly used radiometals in radioimmunotherapy and tested them in animal models of pancreatic cancer. He varied the dose administered as well as examined the impact of combining the 5B1 radioimmunotherapy agent with chemotherapy. Both the radioimmunotherapy conjugates demonstrated significant tumor toxicity and excellent tumor localization potentially minimizing toxic adverse effects. Subsequent to administration of the radioimmunotherapy agent, follow-on administration of the HuMab 5B1 PET product continued to demonstrate sustained tumor selectivity allowing for administration of additional antibody based therapeutic or diagnostic agents.

- Jan-Philip Meyer, Ph.D. and Jacob Houghton, Ph.D. each presented research using pretargeting as an effective way to combine the favorable pharmacokinetic properties of radiolabeled small molecules with short half-lives with the affinity and specificity of the HuMab 5B1 antibody. Using different linking technologies and different radiotracers each investigator reported very good PET images with very
favorable tumor-to-background activity ratios. The objective of both sets of experiments was to demonstrate methods that could be used to reduce the exposure of patients to excess radiation when undergoing PET imaging. Both investigators were able to achieve that objective even in the presence of shed antigen.

- Dalya Abdel-Atti presented research showing that using a HuMab 5B1 based PET imaging agent produced high-quality images in a pancreatic cancer murine organoid model even in the presence of shed antigen. A central drawback of many animal models of disease is that they aren't always predictive of the results obtained in actual patients. The murine organoid model is a newly developed model that more faithfully replicates metastatic pancreatic cancer in patients. The investigators at MSK believe that this is the first time PET imaging has been successfully performed in a murine organoid model of pancreatic cancer.

David Hansen, CEO of MabVax commented "These investigators need to be commended for the pioneering work they presented and the important steps forward they have made in building capabilities to diagnose and treat a very difficult cancer. MabVax is grateful to Jason S. Lewis, Ph.D. and his team for their pioneering work done with our HuMab 5B1 antibody. All of these results are helpful steps forward in advancing the collective knowledge of this devastating cancer and provide valuable insights for MabVax as we continue to develop HuMab 5B1 as both a therapeutic and diagnostic product."

About HuMab 5B1

The fully human antibody HuMab 5B1 was recovered from patients undergoing cancer vaccine treatment at Memorial Sloan Kettering Cancer Center. 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 cancers. Ongoing toxicology results continue to demonstrate an acceptable profile in acute and repeat dose studies in animals. MabVax plans to initiate two complementary Phase I clinical trials in the first quarter of 2016. One clinical trial is aimed at determining the safety and potential utility of HuMab 5B1 as a therapeutic agent in subjects with metastatic pancreatic cancer. The second clinical trial is aimed at demonstrating the utility of $^{89}$Zr-HuMab 5B1, the Company's radio-labeled HuMab 5B1 antibody, as a next-generation PET imaging agent for the diagnosis, staging, and management of pancreatic cancer.

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 plans to initiate two Phase I clinical trials in with its lead fully human antibody candidate HuMab 5B1 as a therapeutic treatment and next-generation PET imaging agent for metastatic pancreatic cancer. 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 upcoming presentations expected to be made by researchers at Memorial Sloan Kettering Cancer Center related to the use of HuMab 5B1. We have no assurance that all of the product development opportunities related to current research studies of HuMab 5B1 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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