

April 9, 2014



Heat Biologics, Inc. Presents Proprietary Allogeneic Cell Line Antigen Screening Algorithm and Systematic Analysis of Combination Tumor Immunotherapy Preclinical Data at the 105th Annual Meeting of the American Association for Cancer Research

CHAPEL HILL, NC -- (Marketwired) -- 04/09/14 -- [Heat Biologics, Inc.](#) ("Heat Biologics", "Heat" or the "Company") (NASDAQ: HTBX), a clinical stage biopharmaceutical company focused on the development of novel cancer immunotherapies, announced today that the Company presented results of two preclinical [ImPACT Therapy](#) based research studies at the [105th Annual Meeting of the American Association for Cancer Research](#) (AACR) being held April 5-9, 2014 in San Diego.

Taylor H. Schreiber, Ph.D., Vice President of Research and Development at Heat Biologics, presented the results of the Company's translational research project entitled "*Allogeneic Cell Based Vaccine Development by Shared Antigen Screening*". The study conducted by Vadim V. Deyev, M.D., Ph.D., Neal Schilling, Ph.D., and Dr. Schreiber highlights the proprietary algorithm used by Heat to screen patient samples and allogeneic cell lines for expression of shared antigens that may be predictive of both immune and clinical responses in patients. Key findings presented included shared antigen screening data from hepatocellular carcinoma, multiple myeloma, glioblastoma, bladder carcinoma, triple negative breast cancer and mesothelioma. The data demonstrate that a variety of shared antigens exist for every tumor analyzed in the study and led to the identification of candidate cell lines with strong antigen sharing with patient samples.

Jeff Wolf, Heat's Chief Executive Officer commented, "Individualized cell line identification in histologically diverse tumor types is the cornerstone of Heat's proprietary [ImPACT Therapy](#) development program. The shared antigen screening process will allow us to systematically profile and prioritize additional cell line candidates to fuel a robust immunotherapy pipeline by identifying additional targets, beyond lung and bladder cancers, across a wide variety of different cancers."

Dr. Schreiber also presented an expanded data set from Heat's preclinical study on "*Comparative Combination Cancer Immunotherapy with Vaccination and TNFRSF Stimulation*" conducted by Dr. Schreiber, Neal Schilling, Ph.D., Vadim V. Deyev, M.D., Ph.D., and Eckhard R. Podack, M.D., Ph.D. Initial data from the study presented in early

March 2014 demonstrated the first systematic comparison of anti-tumor vaccination with Heat's heat shock protein gp96-Ig platform given alone or in combination with direct T cell costimulation via OX40, 4-1BB, GITR and TNFRSF25. The data presented at AACR includes a systematic analysis of the T cell response observed with both checkpoint inhibitors targeting PD-L1, CTLA-4 and LAG-3 as well as T cell costimulators targeting OX40, TNFRSF25, 4-1BB and GITR both alone and in combination with vaccination. These data suggest synergy between these three modalities of immuno-oncology compounds with distinct but complementary activities toward expanding tumor antigen-specific T cells and leading to tumor control and rejection.

"The results of the combination immunotherapy study indicate that specific combinations of vaccination, checkpoint inhibition and T cell costimulation are preferred over other combinations as well as over monotherapy with any single agent," said Dr. Schreiber. "Over 30 combinations are possible with checkpoint inhibitors and T cell costimulators already in clinical development. This comparative data will enable Heat to select the most efficacious combination therapy to bring forward into patients in subsequent clinical trials."

About Heat Biologics, Inc.

Heat Biologics, Inc. is a clinical-stage biopharmaceutical company focused on developing its novel, "off-the-shelf" *ImPACT* therapeutic vaccines to combat a wide range of cancers. Our *ImPACT* Therapy is designed to deliver live, genetically-modified, irradiated human cells which are reprogrammed to "pump out" a broad spectrum of cancer-associated antigens together with a potent immune adjuvant called "gp96" to educate and activate a cancer patient's immune system to recognize and kill cancerous cells. Heat will be entering Phase 2 trials with its [HS-110](#) against non-small cell lung cancer and is conducting Phase 1/2 clinical trials with its [HS-410](#) against bladder cancer. For more information, please visit www.heatbio.com.

Forward Looking Statements

This press release includes forward-looking statements on our current expectations and projections about future events. In some cases forward-looking statements can be identified by terminology such as "may," "should," "potential," "continue," "expects," "anticipates," "intends," "plans," "believes," "estimates," and similar expressions. These statements are based upon current beliefs, expectations and assumptions and include statements regarding the potential for Heat's *ImPACT* Therapy. These statements are subject to a number of risks and uncertainties, many of which are difficult to predict, including the ability for Heat's *ImPACT* Therapy to perform as designed and Heat's ability to achieve its development and commercialization strategies. The information in this release is provided only as of the date of this release, and we undertake no obligation to update any forward-looking statements contained in this release based on new information, future events, or otherwise, except as required by law.

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