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Heat Biologics Presents Poster on its Phase 2 Trial Evaluating HS-410 at ASCO Annual Meeting

Data reinforces clinical and immune response correlation

DURHAM, NC / ACCESSWIRE / June 5, 2017 /Heat Biologics, Inc. ("Heat") (Nasdaq: HTBX), a leader in the development of novel therapies designed to activate a patient's immune system against cancer, announced that it presented a poster from the Phase 2 trial evaluating HS-410 (vesigenurtacel-L) in combination with standard of care, Bacillus Calmette-Guérin (BCG), in the treatment of non-muscle invasive bladder cancer at the 2017 ASCO (American Association of Clinical Oncologists) Annual Meeting in Chicago yesterday.

Study findings suggest that immune response activity, as measured by ELISPOT analysis on peripheral blood lymphocytes drawn from low-dose HS-410 patients over the course of their treatment, demonstrates a substantially better recurrence free survival outcome than BCG alone. In the trial, 100% of the patients who showed a positive ELISPOT immune response to the low-dose therapy remained disease-free after 18 months. This data compares favorably to the 80% disease-free rate in the placebo arm and is consistent with data reported in March for our lung cancer trial where 100% of the patients with positive clinical positive clinical benefit and tumor reduction also showed positive ELISPOT immune response to HS-110.

Jeff Hutchins, Ph.D., Heat's Chief Scientific Officer and Senior Vice President of Preclinical Development, commented, "We are encouraged by the findings of this study as the data continues to mature, which gives us further confidence in the ability of our approach to mount an immune response and protect patients as part of a combination approach in immunotherapy. We look forward to continuing to progress our HS-110 in combination with Bristol-Myers Squibb's checkpoint inhibitor nivolumab in lung cancer."

As previously announced, the Company discontinued its HS-410 program in order to focus on current and future checkpoint and T cell co-stimulator combination programs, including its HS-110 Phase 2 lung cancer program in combination with Bristol-Myers Squibb's checkpoint inhibitor nivolumab in lung cancer.

About Heat Biologics, Inc.

Heat Biologics, Inc. (Nasdaq:HTBX) is an immuno-oncology company developing novel therapies that are designed to activate a patient's immune system against cancer. Heat has generated highly specific T cell-stimulating therapeutic vaccine platform technologies, *ImPACT* and *ComPACT*. These technologies, in combination with other therapies, such as checkpoint inhibitors, are designed to address three distinct but synergistic mechanisms of

action: robust activation of CD8+ "killer" T cells (one of the human immune system's most potent weapons against cancer); reversal of tumor-induced immune suppression; and T cell co-stimulation to further enhance patients' immune response. Currently, Heat is conducting a Phase 2 trial with HS-110 (viagenpumatucel-L) in combination with an anti-PD-1 checkpoint inhibitor to treat patients with non-small cell lung cancer (NSCLC).

Most recently, Heat acquired two T cell costimulators through the acquisition of Pelican Therapeutics, a subsidiary to Heat focused on developing agonists to TNFRSF25, a highly differentiated and potentially best-in-class T cell costimulatory receptor. TNFRSF25 has shown great promise due to its preferential specificity for stimulating the production of "memory" CD8+ T cells, the strongest predictive biomarker of clinical benefit from cancer immunotherapy. T cell costimulatory therapy, when combined with checkpoint inhibitors and other treatments, could significantly improve clinical responses for a broader range of patients. Pelican has conducted extensive preclinical studies and completed humanization of its lead monoclonal antibody, PTX-25.

Heat's wholly-owned subsidiary, Zolovax, Inc., is developing therapeutic and preventative vaccines to treat infectious diseases based on Heat's gp96 vaccine technology, with a current focus on the development of a Zika vaccine in conjunction with the University of Miami.

For more information, please visit www.heatbio.com.

Forward-Looking Statements

This press release includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 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 preliminary data suggesting that immune response activity, as measured by ELISPOT analysis on peripheral blood lymphocytes drawn from low dose HS-410 patients over the course of their treatment, demonstrates a substantially better recurrence free survival outcome than BCG, Heat's confidence in the ability of its approach to mount an immune response and protect patients as part of a combination approach in immunotherapy and Heat's continuing to progress HS-110 in combination with Bristol-Myers Squibb's checkpoint inhibitor nivolumab in lung cancer. These statements are based on management's expectations and assumptions as of the date of this press release and are subject to a number of risks and uncertainties, many of which are difficult to predict that could cause actual results to differ materially from current expectations and assumptions from those set forth or implied by any forward-looking statements, including the ability of Heat's *ImPACT* and *ComPACT* therapies to perform as designed, to demonstrate safety and efficacy, as well as results that are consistent with prior results, the ability to enroll patients and complete the clinical trials on time and achieve desired results and benefits, Heat's ability to obtain regulatory approvals for commercialization of product candidates or to comply with ongoing regulatory requirements, regulatory limitations relating to Heat's ability to promote or commercialize its product candidates for specific indications, acceptance of its product candidates in the marketplace and the successful development, marketing or sale of products, Heat's ability to maintain its license agreements, the continued maintenance and growth of its patent estate, its ability to

establish and maintain collaborations, its ability to obtain or maintain the capital or grants necessary to fund its research and development activities, and its ability to retain its key scientists or management personnel, its ability to successfully integrate Pelican and the other factors described in Heat's most recent annual report on Form 10-K and other filings with the SEC. The information in this release is provided only as of the date of this release and Heat undertakes 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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