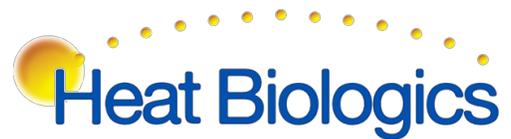


August 13, 2020



Heat Biologic's COVID-19 Vaccine Demonstrates Robust T Cell Driven Immune Response to SARS-CoV-2 in Preclinical Studies

T cell driven immune response achieved with just a single dose

Potential to be used in combination with other COVID-19 vaccine approaches

DURHAM, NC / ACCESSWIRE / August 13, 2020/ Heat Biologics, Inc. ("Heat") (NASDAQ:HTBX), a clinical-stage biopharmaceutical company focused on developing first-in-class therapies to modulate the immune system, including multiple oncology product candidates and a novel COVID-19 vaccine, today reported preclinical data for Heat's gp96-based COVID-19. The data, generated at the University of Miami Miller School of Medicine, shows robust T cell mediated immune response directed against the spike protein of SARS-CoV-2.

Heat Biologics' COVID-19 vaccine induced the expansion of both "killer" CD8+ T cells that destroy virus infected cells, as well as "helper" CD4+ T cells that assist in producing highly specific antibodies. Both T cell subsets were shown to release cytokines that amplify the anti-viral immune response and, upon vaccination, memory CD8+ T cells migrated to the lungs and airways-the tissue-specific site of interest for SARS-CoV-2 infection. These lung and airway tissue resident memory CD8+ T cells are crucial in mounting an effective response to respiratory viruses.

Natasa Strbo, MD, DSc, Assistant Professor of Microbiology and Immunology at the University of Miami Miller School of Medicine and co-developer of Heat's gp96 platform, commented, "We are highly encouraged by the animal data generated around the COVID-19 vaccine and we look forward to publishing the full details of this study in the coming weeks. Specifically, we noted several important immune responses generated by the vaccine against SARS-CoV-2 after a single injection, including SARS-CoV-2 specific CD8+ and CD4+ T cells in the lungs and airways."

Jeff Wolf, Chief Executive Officer of Heat Biologics, commented, "We are encouraged by the progress being made by other companies developing vaccines against COVID-19. However, unlike most of these approaches that drive primarily an antibody response, our COVID-19 vaccine is designed to drive predominantly T cell immunity along with antibody responses and innate immunity. As a result, we believe our vaccine has the potential to be used as either a standalone vaccine, or in combination with these other approaches to enhance efficacy. I appreciate the tremendous support of Dr. Strbo and her team at the University of Miami, as well as the team at Heat who have worked around the clock given the urgency of

the pandemic. We look forward to providing further updates as soon as possible."

About Heat Biologics, Inc.

Heat Biologics is a biopharmaceutical company focused on developing first-in-class therapies to modulate the immune system. The company's gp96 platform is designed to activate immune responses against cancer or pathogenic antigens. The Company has multiple product candidates in development leveraging the gp96 platform, including HS-110, which has completed enrollment in its Phase 2 trial, HS-130 in Phase 1, and a COVID-19 vaccine program in preclinical development. In addition, Heat is also developing a pipeline of proprietary immunomodulatory antibodies, including PTX-35 which is enrolling in a Phase 1 trial.

For more information, please visit: www.heatbio.com, and also follow us on [Twitter](#).

Forward Looking Statement

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, expectation, and assumptions and include statements such as publishing the full details of this study in the coming weeks, the COVID-19 vaccine platform driving predominantly T cell immunity along with antibody responses and innate immunity, the vaccine being used as either a standalone vaccine, or in combination with these other approaches to enhance efficacy, and providing further updates as soon as possible. These statements are subject to a number of risks and uncertainties, many of which are difficult to predict, including the ability of Heat's vaccine platform to provide protection against COVID-19, the ability of Heat's 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, especially in light of COVID-19, 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, its ability to continue to maintain its listing on the Nasdaq Capital Market and its ability to retain its key scientists or management personnel, and the other factors described in Heat's most recent annual report on Form 10-K filed with the SEC, and other subsequent 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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