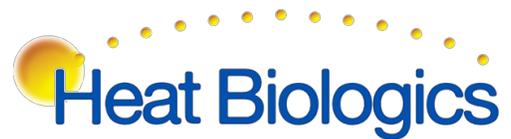


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Heat Biologics Reports Progress on COVID-19 Efforts and Timeline of Anticipated Q2 2020 Milestones

DURHAM, NC / ACCESSWIRE / April 29, 2020 /Heat Biologics, Inc. ("Heat") (NASDAQ:HTBX), a clinical-stage biopharmaceutical company specializing in the development of novel therapeutic and prophylactic vaccines, including one for coronavirus COVID-19 caused by SARS-CoV-2 infection, reported that it continues to advance its COVID-19 vaccine program and provided an outline of its strategy as well as anticipated Q2 2020 milestones for this program.

Heat's gp96 COVID-19 vaccine program is focused on providing prophylactic protection to elderly patients and those with underlying health conditions, the very group of patients with an increased risk of complications and death from COVID-19 infection.

New data suggest that both T-cell (cellular immunity) and antibody (humoral immunity) are required for effective prophylactic protection against COVID-19. Heat's vaccine is being designed to clear virus infected cells by promoting long-term cellular immunity, which is essential for preventing the spread of re-infection in susceptible individuals such as the elderly and other high-risk patients with relevant comorbidities.

Unlike most conventional vaccines that predominantly drive a humoral response, Heat's COVID-19 vaccine platform drives a prominent cellular immune response via CD8+ T cells, in addition to a humoral immune response via a neutralizing IgG antibody. Notably, it was observed that 30% of confirmed COVID-19 patients in China failed to develop high titers of neutralizing antibodies after COVID-19 infection, suggesting a requirement for cellular immunity for recovery. Heat's COVID-19 vaccine targets the Spike or S protein, and expresses gp96 and OX40L, a T cell co-stimulator. OX40L co-stimulation expands CD4+ helper T cells that promote B-cell differentiation and IgG/IgA antibody class switching.

Anticipated Q2 2020 milestones include:

- Completion of development of a cell-based vaccine expressing gp96-Ig, OX40L-Ig and SARS-CoV-2 protein S
- Generation of proof-of-concept data demonstrating vaccine immunogenicity in relevant preclinical models:
 - SARS-CoV-2 protein S specific CD8+ T cells in blood and lungs
 - SARS-CoV-2 protein S specific antibodies in serum
- Submission of grant applications to fund and accelerate COVID-19 vaccine development

Jeff Wolf, Chief Executive Officer of Heat, commented, "We are making progress advancing

our COVID-19 vaccine program and remain encouraged by the potential of our platform to provide broad cellular and humoral protection against COVID-19, as well as possible future mutations or other coronaviruses. Specifically, along with our University of Miami collaborators, we are finalizing completion of the vaccine and plan to commence preclinical testing this quarter. These studies will measure the antiviral immune response elicited by SARS-CoV-2 specific antigens in the context of potent immune activators, gp96 and OX40L, in both the blood and lungs of preclinical models. We expect to report our preliminary data shortly thereafter."

Mr. Wolf continued, "While we are currently funding vaccine development and preclinical studies, we do not expect to use significant corporate resources to advance our COVID-19 vaccine program. We are applying for several large grants to support clinical development of this program and are engaged in collaboration discussions, which we believe may provide attractive and non-dilutive pathways to help accelerate development of our COVID-19 vaccine."

Heat's gp96 platform has previously undergone rigorous testing in numerous National Institutes of Health (NIH) and U.S. Department of Defense (DOD)-funded mice and primate trials as a vaccine against SIV/HIV, malaria, zika and other infectious diseases. These trials have demonstrated gp96 is a powerful platform with demonstrated antiviral activity in the lungs, as evidenced by a potent immune response and effectiveness in the induction of mucosal immunity in several infectious disease models.

About Heat Biologics, Inc.

Heat Biologics is a biopharmaceutical company developing immunotherapies designed to activate a patient's immune system against cancer and other diseases using its proprietary gp96 platform to activate CD8+ "Killer" T-cells. Heat has completed enrollment in its Phase 2 clinical trial for advanced non-small cell lung cancer with its gp96-based HS-110 therapeutic vaccine. HS-110 is the company's first biologic product candidate in a series of proprietary immunotherapies designed to stimulate a patient's own T-cells. Heat Biologics has also launched a program in collaboration with the University of Miami to develop a vaccine designed to protect against the COVID-19 Coronavirus. Heat has numerous other pre-clinical programs at various stages of development. For more information, please visit www.heatbio.com.

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 Heat continuing to advance its COVID-19 vaccine program, completion of development of a cell-based vaccine expressing gp96-Ig, OX40L-Ig and SARS-CoV-2 protein S during Q2 2020, generation of proof of concept data demonstrating vaccine immunogenicity in relevant preclinical models during Q2 2020, submission of grant applications to fund and accelerate COVID-19 vaccine development during Q2 2020, the potential of the platform to provide broad cellular and humoral protection against COVID-19, as well as possible future mutations or other

coronaviruses, plans to commence preclinical testing this quarter and the expected reporting of preliminary data shortly thereafter, and grant funding and collaborations providing attractive and non-dilutive pathways to help accelerate development of our COVID-19 vaccine. These statements are subject to a number of risks and uncertainties, many of which are difficult to predict, including the ability of Heat to complete the development of a cell-based vaccine expressing gp96-Ig, OX40L-Ig and SARS-CoV-2 protein S during Q2 2020, generate proof-of-concept demonstrating vaccine immunogenicity in relevant preclinical models during Q2 2020, submit grant applications to fund and accelerate COVID-19 vaccine development during Q2 2020, commence preclinical testing this quarter and report preliminary data shortly thereafter, the potential of the platform to provide broad cellular and humoral protection against COVID-19, as well as possible future mutations or other coronaviruses, 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, 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 for the year ended December 31, 2019 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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