Armata Pharmaceuticals Announces \$15 Million Award from the U.S. Department of Defense (DoD) for Development of Bacteriophage Therapy to Treat S. aureus Bacteremia Infections

Non-dilutive funding to be used to advance the company's second phage-based therapeutic candidate in a Phase 1b/2 clinical study

MARINA DEL REY, Calif., June 17, 2020 /<u>PRNewswire</u>/ -- Armata Pharmaceuticals, Inc. (NYSE American: ARMP) ("Armata" or the "Company"), a biotechnology company focused on precisely targeted bacteriophage therapeutics for antibiotic-resistant and difficult-to-treat bacterial infections, today announced that it has received a \$15 million award for a three year program from the U.S. DoD through the Medical Technology Enterprise Consortium (MTEC) with funding from the Defense Health Agency and Joint Warfighter Medical Research Program. Armata will use the award to partially fund a Phase 1b/2, randomized, double-blind, placebocontrolled, dose escalation clinical study of Armata's therapeutic phage-based candidate, AP-SA02, for the treatment of complicated *Staphylococcus aureus* bacteremia infections.

"Today, I am pleased to announce that we have achieved our goal of receiving non-dilutive funding to support clinical development of our optimized phage candidate, AP-SA02, as a promising potential treatment for *S. aureus* bacteremia. We are excited to have exceeded the amount of funding we had originally targeted, which enables us to robustly examine the potential efficacy of our optimized phage candidate," stated Todd R. Patrick, Chief Executive Officer of Armata Pharmaceuticals. "This funding from the DoD validates the potential of phagebased therapeutics and helps us move AP-SA02 into clinical development while continuing to carefully manage our financial position. Drug-resistant *S. aureus* bacteremia infections carry mortality rates as high as 40%, reflecting the urgent need for novel and improved treatment options."

Mr. Patrick added, "This award from the DoD facilitates what will be our second clinical program in our development pipeline, enabling Armata to advance phage therapy in two distinct indications: our lead program, AP-PA02, will explore inhaled phage therapy in cystic fibrosis patients with *Pseudomonas aeruginosa* lung infections and is partially funded by the US Cystic Fibrosis Foundation, and AP-SA02, which will test intravenous phage therapy in *S. aureus* bacteremia and is partially funded by the DoD."

Thomas Dunn, Acting Program Manager Naval Advanced Medical Development, stated "Antibiotic resistance is a global challenge and has become more prevalent in recent years, threatening the lives of both warfighters and civilians. There is an imminent need for alternative therapies to help protect the population. Using Armata's targeted phage cocktail to treat *Staphylococcus aureus* bacteremia that are non-responsive to standard of care is a novel method that can potentially greatly reduce the number of these complicated, drug-resistant infections and help span the ever-growing bacteria / antibiotic resistance gap."

The primary objectives of the Phase 1b/2 bacteremia study will be to evaluate the safety and tolerability of AP-SA02 as an adjunct to best available antibiotic therapy, and to determine the appropriate dose or doses for future clinical trials of efficacy. Because of the impact of COVID-19 on the Company's development programs, Armata does not believe the clinical trial will initiate prior to mid-2021. The clinical trial of AP-PA02 targeting *Pseudomonas aeruginosa* is on target to enroll later this year.

About Bacteremia

Bacteremia is a bacterial infection of the bloodstream. A common diagnosis, the Centers for Disease Control and Prevention (CDC) estimates that up to 1.7 million people in the United States develop bacteremia each year. *S. aureus* is the most commonly identified pathogen in both hospital- and community-acquired blood stream infections. Annually in the United States there are approximately 200,000 hospitalizations for *S. aureus* bacteremia (SAB). Despite conventional antibiotics, mortality in SAB results in death of up to 40% of all cases and 57% of patients over the age of 85. Patients with comorbidities such as alcoholism, malignancy, diabetes, end-stage renal disease requiring hemodialysis, and immunosuppression are at even higher risk for death when SAB develops. Age-adjusted mortality assessments show that SAB mortality is higher than that of AIDS, tuberculosis, or viral hepatitis, and comparable to mortality rates for breast or prostate cancer. Outcomes are even poorer for SAB due to methicillin-resistant *S. aureus* (MRSA), classified as a serious threat to global health by the CDC and a high priority threat by the World Health Organization, with higher rates of complications and increased mortality as compared to methicillin-susceptible *S. aureus* (MSSA). Average hospital costs to patients with nosocomial SAB ranges between \$40,000 (MSSA) and \$114,000 (MRSA). Treatment failures are common in SAB, with highest rates due to MRSA. These failures can be attributed in part to poor penetration of some

tissues by antibiotics, slow onset of bactericidal effects, emerging resistance patterns, and biofilm formation. While biofilms can render traditional antibiotics ineffective, phages may have the ability to penetrate the biofilm allowing rapid and efficient infection of the host and amplification at the site of infection. Daptomycin (approved in 2005; based on clinical cure rates of <50%) and vancomycin are the only two antibiotics with label indications in the United States for the treatment of SAB, and the emergence of drug-resistant *S. aureus* isolates, including to these two standard of care drugs, represents a major threat in terms of increasing morbidity, mortality and health care utilization.

About Armata Pharmaceuticals, Inc.

Armata is a clinical-stage biotechnology company focused on the development of precisely targeted bacteriophage therapeutics for the treatment of antibiotic-resistant infections using its proprietary bacteriophage-based technology. Armata is developing and advancing a broad pipeline of natural and synthetic phage candidates, including clinical candidates for *Pseudomonas aeruginosa, Staphylococcus aureus*, and other pathogens. In addition, in collaboration with Merck, known as MSD outside of the United States and Canada, Armata is developing proprietary synthetic phage candidates to target an undisclosed infectious disease agent. Armata is committed to advancing phage with drug development expertise that spans bench to clinic including in-house phage specific GMP manufacturing.

Forward Looking Statements

This communication contains "forward-looking" statements, including, without limitation, statements related to Armata's ability to meet expected milestones, expand its pipeline, and pursue additional potential partnerships. the expected use of proceeds from the recent \$15 million grant, Armata's ability to be a leader in the development of phage-based therapeutics, statements related to the timing and results of clinical trials, including the anticipated initiation of clinical trials of AP-PA02 and AP-SA02, expected impact of the COVID-19 pandemic on the Company's operations, Armata's ability to develop new products based on bacteriophages and synthetic phages, the timing and ability of Armata to obtain non-dilutive funding on acceptable terms, if at all, Armata's expectations for performance of Armata's therapeutic candidates based on Armata's recent nonclinical work, and Armata's ability to continue to screen pathogens against Armata's proprietary phage library to identify additional high-quality bacteriophage product candidates and expand the pipeline. Any statements contained in this communication that are not statements of historical fact may be deemed to be forward-looking statements. These forward-looking statements are based upon Armata's current expectations. Forward-looking statements involve risks and uncertainties. Armata's actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of these risks and uncertainties, which include, without limitation, risks related to the ability of Armata's lead clinical candidates, AP-PA02 and AP-SA02, to be more effective than previous candidates; Armata's ability to expedite development of AP-PA02: Armata's ability to advance its preclinical and clinical programs and the uncertain and timeconsuming regulatory approval process; Armata's ability to develop products based on bacteriophages and synthetic phages to kill bacterial pathogens; Armata's expected market opportunity for its products; Armata's ability to sufficiently fund its operations as expected, including obtaining additional funding as needed; and any delays or adverse events within, or outside of, Armata's control, caused by the recent outbreak of COVID-19. Additional risks and uncertainties relating to Armata and its business can be found under the caption "Risk Factors" and elsewhere in Armata's filings and reports with the SEC, including in Armata's Annual Report on Form 10-K, filed with the SEC on March 19, 2020, and in its subsequent filings with the SEC. Armata expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in Armata's expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based.

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