October 17, 2018

Immune Pharmaceuticals Announces Positive Preclinical Results in Asthma

A broad anti-inflammatory effect observed

FORT LEE, N.J., Oct. 17, 2018 (GLOBE NEWSWIRE) --Immune Pharmaceuticals, Inc. (OTCQB: IMNP) ("Immune" or the "Company"), a biopharmaceutical company developing novel therapeutic agents for the treatment of immunologic and inflammatory diseases, announced today positive results from a mouse study demonstrating that blockade of eotaxin-1 reduces lung inflammation and has a broader inhibitory effect on inflammatory cells than does blockade of interleukin (IL)-5.

In a mouse model of asthma, a monoclonal antibody to mouse eotaxin-1 reduced inflammatory cells counts in bronchoalveolar lavage (BAL) fluid from mice sensitized to house dust mite (HDM) allergen. Eotaxin-1 blockade had an unexpectedly broad effect on all inflammatory cells, including not only eosinophils, but neutrophils, macrophages and lymphocytes as well. In contrast, a monoclonal antibody to IL-5 produced a decline in eosinophils, but substantial increases in all other inflammatory cells. The HDM mouse asthma model is considered particularly relevant to humans because HDM allergens are a key driver of human asthma

Overall, the anti-eotaxin-1 antibody produced a mean reduction of 22% in inflammatory cells in the BAL fluid, ranging from 17% to 26% across the four classes of inflammatory cells. In contrast, IL-5 blockade reduced inflammatory cell counts by 19% with a 47% reduction in eosinophils but increases in neutrophils, macrophages and lymphocytes ranging from 31% to 77%.

Commenting on these results, Immune's interim Chief Executive Officer, Tony Fiorino, MD, PhD, noted, "I could not be more pleased with these results. The broad anti-inflammatory effect of eotaxin-1 blockade was surprising and is very exciting, particularly when compared with the effects observed for IL-5 blockade. There are three marketed monoclonal antibodies that target the IL-5 pathway, all of which are approved only for severe eosinophilic asthma. These results suggest bertilimumab may have a broader anti-inflammatory effect in human asthma than the IL-5-targeting agents, and additional experiments will aim to further elucidate the utility of eotaxin-1 blockade in asthma. We believe these results would support a human proof-of-concept study upon the availability of clinical supply of bertilimumab, which is currently expected in late 2019 or early 2020."

About Immune Pharmaceuticals, Inc.
Immune Pharmaceuticals Inc. is a biopharmaceutical company developing novel therapeutic agents for the treatment of immunologic and inflammatory diseases. Immune's lead program, bertilimumab, is a first-in-class, human monoclonal antibody that targets

eotaxin-1, a chemokine that plays a role in immune responses and attracts eosinophils to the site of inflammation. By blocking eotaxin-1, bertilimumab may prevent the migration and activation of eosinophils and other cells, thus blocking an important inflammatory pathway active in a variety of allergic and immune diseases. Bertilimumab has shown promising clinical activity in bullous pemphigoid and has been studied in other conditions including allergic rhinitis and ulcerative colitis, and may have application in other diseases, including atopic dermatitis, asthma, and other diseases. Immune is also developing NanoCyclo, a nano-encapsulated formulation of cyclosporin, which is in late stage preclinical development for atopic dermatitis and psoriasis. For more information, please visit www.immunepharma.com and connect with the Company onTwitter, LinkedIn, and Facebook.

Safe Harbor Statements Regarding Forward Looking Statements
The statements in this news release made by representatives of Immune relating to matters that are not historical facts, including without limitation, those regarding future performance or financial results, the timing or potential outcomes of research collaborations or clinical trials, any market that might develop for any of Immune's product candidates and the sufficiency of Immune's cash and other capital resources, Immune's ability to fund its operations, the continued development by Immune of bertilimumab are forward-looking statements that involve risks and uncertainties, including, but not limited to, the likelihood that actual performance or results could materially differ, that future research will prove successful, the likelihood that any product in the research pipeline will receive regulatory approval in the U.S. or abroad, or Immune's ability to fund such efforts with or without partners. Immune undertakes no obligation to update any of these statements. In addition, there can be no assurance that Immune will be able to reduce expenses, capitalize on strategic alternatives, develop its assets, and generate value for shareholders. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as to the date hereof. Accordingly, any forward-looking statements should be read in conjunction with the additional risks and uncertainties detailed in Immune's filings with the Securities and Exchange Commission, including those discussed in Immune's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and periodic reports filed on Form 8-K.

Investor Contact
Investors@immunepharma.com

SOURCE Immune Pharmaceuticals Inc.

Source: Immune Pharmaceuticals, Inc.