

# Immune Pharmaceuticals Announces Publication of New Data on Eotaxin-1 in IBD; Patient Enrollment in Phase II UC Trial Continues

NEW YORK, Feb. 24, 2016 /PRNewswire/ -- Immune Pharmaceuticals Inc. (NASDAQ: IMNP), "Immune", a clinical-stage biopharmaceutical company, announces publication of new data on the role of eotaxin-1 in Ulcerative Colitis (UC) and Crohn's Disease (CD). The article, published in *Digestive Disease Science*<sup>1</sup>, presents results of an observational clinical study intended to characterize serum and intestinal wall eotaxin-1 levels in inflammatory bowel disease (IBD) patients, and explores the effect of targeting eotaxin-1 by specific antibodies in an animal IBD model. These studies were conducted under the oversight of Professor Goldin, Chairman of the Digestive Diseases Institute at Shaare Zedek Medical Center of the Hebrew University School of Medicine in Jerusalem, and supported in part by an unrestricted grant from Immune.

Professor Goldin, the principal investigator for the study, stated: "The observational clinical study shows that tissue eotaxin-1 correlates with disease severity in both UC and CD. Additionally, the classic DSS-mouse IBD model demonstrated that administration of anti-eotaxin-1 resulted in improvement in the inflammation and disease course of these mice. Professor Goldin continued "We believe that the results obtained in the clinical study support the role of eotaxin-1 as a target in IBD, a therapeutic area in which over half of patients fail to sustain remission. A first-in-class alternative to currently available therapies will offer a new treatment option.

"There is room for improvement in treatment of IBD and maintenance of response," said Dr. Monica Luchi, Immune's Chief Medical Officer and EVP Global Drug Development. "Immune's goal is to focus on improving patient outcomes in this devastating illness. With bertilimumab, our eotaxin-1 inhibitor, patients who would be likely to respond based on eotaxin levels could be selected for treatment through precision medicine, either as first line biologic or in non-responders to current biologic standard of care. Our Phase 2a clinical study in Ulcerative Colitis continues to enroll, and we hope to have patient data by the end of 2016."

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<sup>1</sup> Adar, T., Shteingart, S., Ben-Ya'acov, A., Bar-Gill Shitrit, A., Livovsky D. M., Shmorak, S., Mahamid, M., Melamud, B., Vernea, F. and Goldin E. (2016) The Importance of Intestinal Eotaxin-1 in Inflammatory Bowel Disease: New Insights and Possible Therapeutic Implications. *Digestive Disease Science*; Online Publication, 13 February 2016 (DOI 10.1007/S10620-016-4047-z).

Bertilimumab phase 2a double blind placebo controlled trial plans to enroll 42 patients with moderate to severe UC and high tissue eotaxin-1 levels. Immune filed a patent in 2013 for anti-eotaxin-1 monoclonal antibodies for the treatment of UC and CD.

### **About Immune Pharmaceuticals:**

Immune Pharmaceuticals (NASDAQ: IMNP) applies a personalized approach to treating and developing novel, highly targeted antibody therapeutics to improve the lives of patients with inflammatory diseases and cancer. Immune's oncology pipeline includes Ceplene®, Azixa® and Crolibulin® as well as bispecific antibodies and nanotherapeutics, including NanomAbs. Immune's lead product candidate, bertilimumab, is in phase II clinical development for moderate-to-severe ulcerative colitis as well as for bullous pemphigoid, an orphan autoimmune dermatological condition. Other indications being considered for development include atopic dermatitis, Crohn's disease, severe asthma and NASH (an inflammatory liver disease). Immune recently expanded its portfolio in immuno-dermatology with topical nano-formulated cyclosporine-A for the treatment of psoriasis and atopic dermatitis. Immune's non-core pipeline includes AmiKet™, a late clinical stage drug candidate for the treatment of neuropathic pain. For more information, visit Immune's website at [www.immunepharmaceuticals.com](http://www.immunepharmaceuticals.com), the content of which is not a part of this press release.

### **Forward-Looking Statements**

This news release and any oral statements made with respect to the information contained in this news release contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. You are urged to consider statements that include the words "may," "will," "would," "could," "should," "believes," "estimates," "projects," "potential," "expects," "plans," "anticipates," "intends," "continues," "forecast," "designed," "goal" or the negative of those words or other comparable words to be uncertain and forward-looking. Such forward-looking statements include statements that express plans, anticipation, intent, contingency, goals, targets, future development and are otherwise not statements of historical fact. These statements are based on our current expectations and are subject to risks and uncertainties that could cause actual

results or developments to be materially different from historical results or from any future results expressed or implied by such forward-looking statements. Factors that may cause actual results or developments to differ materially include, but not limited to: the risks associated with the adequacy of our existing cash resources and our ability to continue as a going concern; the risks associated with our ability to continue to meet our obligations under our existing debt agreements; the risk that clinical trials for bertilimumab or AmiKet will not be successful; the risk that bertilimumab, AmiKet or compounds arising from our NanomAbs program will not receive regulatory approval or achieve significant commercial success; the risk that we will not be able to find a partner to help conduct the Phase III trials for AmiKet on attractive terms, on a timely basis or at all; the risk that our other product candidates that appeared promising in early research and clinical trials do not demonstrate safety and/or efficacy in larger-scale or later-stage clinical trials; the risk that we will not obtain approval to market any of our product candidates; the risks associated with dependence upon key personnel; the risks associated with reliance on collaborative partners and others for further clinical trials, development, manufacturing and commercialization of our product candidates; the cost, delays and uncertainties associated with our scientific research, product development, clinical trials and regulatory approval process; our history of operating losses since our inception; the highly competitive nature of our business; risks associated with litigation; and risks associated with our ability to protect our intellectual property. These factors and other material risks are more fully discussed in our periodic reports, including our reports on Forms 8-K, 10-Q and 10-K and other filings with the U.S. Securities and Exchange Commission. You are urged to carefully review and consider the disclosures found in our filings, which are available at [www.sec.gov](http://www.sec.gov) or at [www.immunepharmaceuticals.com](http://www.immunepharmaceuticals.com). You are cautioned not to place undue reliance on any forward-looking statements, any of which could turn out to be wrong due to inaccurate assumptions, unknown risks or uncertainties or other risk factors. We expressly disclaim any obligation to publicly update any forward looking statements contained herein, whether as a result of new information, future events or otherwise, except as required by law.

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