



## Histogen Announces Online Publication in the Journal of Investigative Dermatology

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### Emricasan Treatment has Therapeutic Effect Against Bacterial Skin Infection in Mice

#### Pipeline Focus on Pan-Caspase and Caspase Selective Inhibitors for Infectious and Inflammatory Diseases

SAN DIEGO, April 20, 2023 (GLOBE NEWSWIRE) -- Histogen Inc. (HSTO), a clinical-stage therapeutics company focused on developing potential first-in-class clinical and preclinical small molecule pan-caspase and caspase selective inhibitors that protect the body's natural process to restore immune function, today announced the online publication of an abstract describing a preclinical study showing that emricasan has therapeutic effect against bacterial skin infections.

In the study, the role of the irreversible pan-caspase inhibitor emricasan alone and in combination with a standard-of-care antibiotic, doxycycline, was examined as potential host-directed immunotherapy against bacterial infections *in vivo*. Mice in four groups; placebo, placebo plus doxycycline, emricasan plus doxycycline, and emricasan alone were treated orally twice daily for 7 days after intradermal injection of the established CA-MRSA strain USA300 LAC:: *lux* of *Staphylococcus aureus* in mice. The results of the study show that: 1) emricasan alone reduced both lesion size and bacterial burden versus placebo ( $p < 0.0001$ ); 2) emricasan alone showed efficacy superior to doxycycline alone in lesion size ( $p = 0.02$ ); and 3) emricasan alone and emricasan plus doxycycline showed comparable efficacy versus placebo in both lesion size and bacterial burden ( $p < 0.0001$ ).

"The data from this study collectively support the use of emricasan as a potential host-directed immunotherapy against MRSA skin infections," stated Steven J. Mento, President and CEO of Histogen. "The fact the emricasan works as good as or better than an antibiotic alone in this preclinical study points to the opportunity to provide emricasan as a viable treatment option for physicians without the risk of generating antibiotic resistance. Following the notice from the FDA related to our recently filed IND that the "Study may Proceed," we look forward to the anticipated initiation of clinical development activities using emricasan for the treatment of acute bacterial skin and skin structure infections (ABSSSI) in the second half of 2023," concluded Dr. Mento.

As announced previously, emricasan improved symptoms in patients infected with COVID-19 potentially employing a similar mechanism of protecting the competence of the immune system. Patients in the placebo arm who completed the study showed either delay or no symptom resolution for the duration of the study.

#### About Emricasan

Emricasan is an orally available pan-caspase inhibitor designed to reduce the activities of human caspases, which are enzymes that mediate inflammation and apoptosis. Emricasan has completed extensive toxicology testing including chronic toxicology and all required carcinogenicity testing. Emricasan has previously been shown to be well tolerated in multiple clinical studies involving approximately 1,000 subjects employing multiple doses ranging from 1 mg to 500 mg orally and has been dosed chronically for up to two years in immunosuppressed patients. Emricasan was tested in a Phase 1 study in mild symptomatic COVID-19 patients to assess safety, tolerability, and preliminary efficacy. Five of five patients who completed treatment with emricasan had a complete resolution of the symptoms most commonly associated with mild COVID-19 by day seven compared to zero of six on placebo. Four of five patients on emricasan compared with one of six patients on placebo were virus negative by day fourteen. The mean antibody index against COVID was 6.98 in emricasan treated patients compared to 5.32 in those receiving placebo at the end of the study on day forty-five.

#### About Histogen Inc.

Histogen Inc. is a clinical-stage therapeutics company focused on developing potential first-in-class clinical and preclinical small molecule pan-caspase and caspase selective inhibitors that protect the body's natural process to restore immune function. Currently, we are developing emricasan for ABSSSI as well evaluating its use for other infectious diseases. Our pipeline also includes novel preclinical product candidates including CTS-2090 and other proprietary caspase inhibitors, which are selective small molecule inhibitors of caspase-1 designed for the treatment of certain inflammatory diseases. For more information, please visit [www.histogen.com](http://www.histogen.com).

#### Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995 and other Federal securities laws. For example, we are using forward-looking statements when we discuss the potential benefits of the preclinical study in mice showing that emricasan has therapeutic effect against bacterial skin infections; the potential benefits of emricasan, if approved; our future operations and our ability to successfully initiate, enroll and complete clinical trials, obtain clinical trial data, and achieve regulatory milestones and related timing, including those related to the initiation of clinical trials for emricasan. We may not actually achieve the plans, carry out the intentions or meet the expectations or projections disclosed in the forward-looking statements and you should not place undue reliance on these forward-looking statements. Because such statements deal with future events and are based on our current expectations, they are subject to various risks and uncertainties and actual results, performance or achievements of Histogen that could differ materially from those described in or implied by the statements in this press release, including: our ability to obtain funding for our operations, including funding necessary to complete further development and any commercialization of our product candidates; including its ability to carry out the development of emricasan and the potential for delays in the timing of regulatory approval and the requirement for additional capital to continue to advance these product candidates, which may not be available on favorable terms or at all; our expectations regarding the operation of our product candidates and related benefits; our beliefs regarding the success, cost and timing of our product candidate development and current and future clinical trials and studies; our beliefs regarding the potential markets for our product candidates; any impact of the COVID-19 pandemic, or responses to the pandemic, on our business, clinical trials or personnel; our beliefs regarding our industry; our ability to attract and retain key personnel; regulatory developments in the United

States and foreign countries, with respect to our product candidates; the impact of any litigation proceedings on our business and market and other conditions. The foregoing review of important factors that could cause actual events to differ from expectations should not be construed as exhaustive and should be read in conjunction with statements that are included herein and elsewhere, including those risks discussed in our filings with the Securities and Exchange Commission. Except as otherwise required by law, Histogen disclaims any intention or obligation to update or revise any forward-looking statements, which speak only as of the date hereof, whether as a result of new information, future events, or circumstances or otherwise.

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