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Recent Peer-Reviewed Publication on Oragenics, Inc.'s Lantibiotic Antimicrobial Compound Identifies Alternative Mechanism of Action

TAMPA, Fla.--(BUSINESS WIRE)-- Oragenics, Inc. (NYSE American: OGEN), a leader in the development of new antibiotics against infectious diseases and effective treatments for oral mucositis ("OM"), today announces the publication of a collaborative study investigating an additional mechanism of action of the company's lantibiotic compounds, which shows the formation of water permeating pores across bacterial cell membranes. This novel mechanism of action is believed to cause disruption of the bacterial membranes and contribute to our compounds' antimicrobial mechanism of action. The study was published in the recent issue of *Physical Chemistry Chemical Physics* and results from our recent collaboration with researchers from Florida International University (FIU).

"Our lantibiotics were previously believed not to form functional pores and only rely on binding to, and abduction of, Lipid II for antimicrobial efficacy. This published study provides further insight into the dual mode of action of compounds in our pipeline, and may contribute to the unique efficacy profile that is observed for these compounds," stated Alan Joslyn, Ph.D., president and CEO of Oragenics, Inc. "There remains a dire need for new approaches to fighting antibiotic-resistant infections, and this study into our lantibiotic program opens up new avenues to create lantibiotics homologs that can address an unmet clinical need."

Dr. Yuk-Ching Tse-Dinh, director of FIU's Biomolecular Sciences Institute and Translational Molecular Discoveries, commented, "We are thrilled to see a first publication resulting from this recent collaboration of Oragenics with Dr. Prem Chapagain and Dr. Bernard Gerstman at FIU. This collaboration will continue to advance both basic and translational knowledge relevant for finding much needed new antibiotics for superbugs. A major goal of the Translational Molecular Discoveries, an emerging preeminent program at FIU, is to engage in research collaborations with industry so that the scientific discoveries made at FIU can impact disease treatment."

The full study can be accessed via

<https://pubs.rsc.org/en/content/articlelanding/2019/cp/c9cp01558b#!divAbstract>

About Lantibiotics

Lantibiotics are a class of antibiotic compounds with novel mechanism of action, prized for their ability to overcome antibiotic-resistant infections. With resistant strains on the rise,

particularly healthcare-acquired infections (HAI), the need for these potent lantibiotic agents is critical. Oragenics is pursuing the commercial-scale production of a lantibiotic for use as an antimicrobial.

About Oragenics, Inc.

We are focused on becoming a leader in novel antibiotics against infectious disease and on developing effective treatments for oral mucositis. Oragenics, Inc. has established two exclusive worldwide channel collaborations with Intrexon Corporation and its subsidiaries. The collaborations allow Oragenics to accelerate the development of much needed new antibiotics that can work against resistant strains of bacteria and the development of biotherapeutics for oral mucositis and other diseases and conditions of the oral cavity, throat, and esophagus.

For more information about Oragenics, please visit www.oragenics.com.

Safe Harbor Statement: Under the Private Securities Litigation Reform Act of 1995: This release includes forward-looking statements that reflect management's current views with respect to future events and performance. These forward-looking statements are based on management's beliefs and assumptions and information currently available. The words "believe," "expect," "anticipate," "intend," "estimate," "project" and similar expressions that do not relate solely to historical matters identify forward-looking statements. Investors should be cautious in relying on forward-looking statements because they are subject to a variety of risks, uncertainties, and other factors that could cause actual results to differ materially from those expressed in any such forward-looking statements. These factors include, but are not limited to, risks and uncertainties described in our filings with the U.S. Securities and Exchange Commission. Oragenics assumes no responsibility to update any forward-looking statements contained in this press release or with respect to the matters described herein.

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