Organovo Presents Data on Modeling Liver Disease Using 3D Bioprinted Human Liver Tissue at The International Liver Congress™

April 12, 2018

SAN DIEGO, April 12, 2018 (GLOBE NEWSWIRE) -- Organovo Holdings, Inc. (NASDAQ:ONVO) ("Organovo") today presented data on modeling non-alcoholic fatty liver disease ("NAFLD") using its 3D bioprinted human liver tissues. This data was presented at The International Liver Congress™ by Dwayne Carter, Tissue Applications, at Organovo.

Organovo has continued to develop its NAFLD disease model and can now demonstrate a progressive accumulation of fat over time, creating a window of disease progression onto which candidate drugs targeted at fat accumulation and disposition can be applied. In addition, the Company has established that the NAFLD disease phenotype can be generated from multiple donor origin cells, and that the inherent variability between donors is reflected in the NAFLD model as variable susceptibility to tissue damage by NAFLD-promoting agents. These new data provide strong support for the application of the NAFLD model to high-value drug profiling, including the possible creation of patient or population-specific model variants.

NAFLD is a chronic liver disease that often progresses into nonalcoholic steatohepatitis ("NASH"), and is characterized by lipid accumulation, inflammation, oxidative stress and fibrosis. NAFLD is now recognized as one of the most common causes of chronic liver disease, with an estimated prevalence of 25% worldwide, and is projected to become the leading cause of liver transplant by 2025. The study of NAFLD has historically used traditional cell and small animal models, which are time consuming to generate and do not mimic the complexity and multi-factorial nature of human liver disease. Furthermore, current 2D cell culture models lack relevant liver cell types, do not accurately display diseased phenotypes and have limited utility due to rapid loss of cell viability and function.

Organovo's 3D bioprinted human liver tissues function for at least four weeks and are comprised of a complex multicellular architecture that more closely emulates human biology and disease. The Company's tissue systems have the potential to facilitate breakthrough translational research from target discovery to high-value drug profiling, enabling better understanding of disease processes, discovery of novel therapeutics, biomarkers, and the safety assessment of drugs in a disease-relevant background.

"By anchoring our work in liver disease, we're addressing growing markets that align with major therapeutic research areas in the biopharma industry," said Paul Gallant, general manager, Organovo. "Our ability to create a dynamic tissue system that mimics the key aspects of NASH and relevant liver disease phenotypes has the potential to support our customers in their drug discovery workflow as they make critical decisions on which programs to move forward."

The Company's poster is as follows:

Title:	**Modeling NAFLD Using 3D Bioprinted Human Liver Tissue**
Date:	Thursday, April 12, 9:00am CET (Paris)
Poster:	THU-503

About Organovo Holdings, Inc.
Organovo is developing and commercializing a platform technology to produce and study living tissues that emulate key aspects of human biology and disease for use in drug discovery, clinical development, and therapeutic applications. The Company develops tissue systems through internal research programs and in collaboration with pharmaceutical, academic and other partners. Organovo's living tissues have the potential to transform the drug discovery process, enabling treatments to be developed more effectively and with greater relevance to performance in human trials and commercialization. The Company's ExVive™ Liver and Kidney Tissues are used in disease modeling for NASH and fibrosis, high-value drug profiling, target and marker discovery/validation, and other drug testing. The Company is also advancing a preclinical program to develop its NovoTissues® liver therapeutic tissues for critical unmet medical needs, including certain life-threatening pediatric diseases. The Company has received orphan designation for its potential treatment of alpha-1-antityrpsin deficiency, its lead indication within the category of inborn errors of metabolism. Organovo is changing the shape of life science research and transforming medical care. Learn more at www.organovo.com.

Forward-Looking Statements
Any statements contained in this press release that do not describe historical facts constitute forward-looking statements as that term is defined in the Private Securities Litigation Reform Act of 1995. Any forward-looking statements contained herein are based on current expectations, but are subject to a number of risks and uncertainties. Forward-looking statements include, but are not limited to, statements regarding the potential for one or more customer's electing to move toward framework agreements involving annual budgets, revenue commitments, and/or dedicated research plans, the expected costs, timing and operational benefits of the Company's restructuring plan, the financial impact of the Company's restructuring plan on its future operating costs and financial results, and statements regarding the potential benefits and therapeutic uses of the Company's therapeutic liver tissue. The factors that could cause the Company's actual future results to differ materially from current expectations include, but are not limited to, risks and uncertainties relating to the Company's ability to develop, market and sell products and services based on its technology; the expected benefits and efficacy of the Company's products, services and technology; the Company's ability to successfully complete studies and provide the technical information required to support market acceptance of its products, services and technology, on a timely basis or at all; the Company's business, research, product development, regulatory approval, marketing and distribution plans and strategies, including its use of third party distributors; the Company's ability to recognize deferred revenue; the final results of the Company's preclinical studies may be different from the Company's studies or interim preclinical data results and may not support further clinical development of its therapeutic tissues; the Company may not successfully complete the required preclinical and clinical trials required to obtain regulatory approval for its therapeutic tissues on a timely basis or at all; and the Company's ability to meet its fiscal year 2018 outlook. These and other factors are identified and described in more detail in the Company's filings with the SEC, including its Annual Report on Form 10-K filed with the SEC on June 7, 2017. You should not place undue reliance on these

forward-looking statements, which speak only as of the date that they were made. These cautionary statements should be considered with any written or oral forward-looking statements that the Company may issue in the future. Except as required by applicable law, including the securities laws of the United States, the Company does not intend to update any of the forward-looking statements to conform these statements to reflect actual results, later events or circumstances or to reflect the occurrence of unanticipated events.

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