



Organovo and UC San Diego Receive \$1.7 Million Grant From National Institutes of Health to Study Liver Disease

July 31, 2017

SAN DIEGO, July 31, 2017 (GLOBE NEWSWIRE) -- Organovo Holdings, Inc. (NASDAQ:ONVO) ("Organovo") today announced it has received a three-year, \$1.7 million grant from the National Institutes of Health ("NIH") to collaboratively study non-alcoholic fatty liver disease ("NAFLD") with researchers at University of California San Diego School of Medicine ("UC San Diego"). Grant payments will be spread over three years as research milestones are successfully completed. The NIH is the largest public funder of biomedical research in the world, investing more than \$32 billion each year in partnership with leading commercial organizations and academic centers to fund cutting-edge breakthroughs and treatments in areas of critical unmet need.

Deteriorating liver function is a growing and serious public health concern, with an estimated 100 million adults in the U.S. afflicted with NAFLD, while up to 20 million more Americans are projected to have non-alcoholic steatohepatitis ("NASH"). Left unchecked, these diseases can progress to cirrhosis and cancer, with NASH being the second leading cause of liver transplants in the U.S. Despite decades of intense research worldwide, the understanding of NAFLD progression and the development of novel therapeutic approaches have been limited by the lack of advanced systems that mimic human liver biology over an extended period of time.

"Traditional preclinical models often fall short in their ability to inform clinical outcomes accurately, largely due to the limited functionality of simple *in vitro* models and species differences," said Dr. Sharon Presnell, chief scientific officer, Organovo. "Our liver tissue has great potential to revolutionize high-value drug profiling and assess the development and progression of complex, multicellular disease processes such as NAFLD."

Organovo's ExVive™ Human Liver Tissue provides a complex, multicellular, reproducible tissue model with robust architecture that retains metabolic competence and liver-specific function over long durations. Advanced 3D bioprinted models have the potential to significantly impact liver disease research by enabling the discovery of new drugs to treat patients, as well as studying the safety of novel therapeutics in real-world populations.

Dr. Presnell continued, "Given the increasing prevalence of fatty liver disease in the U.S. population, advanced 3D liver tissue models that are physiologically relevant and predictive of human liver biology will play a critical role in understanding disease progression and the development of effective treatments. We are thrilled to collaborate with Dr. David Brenner's team at UC San Diego given the expertise they bring to this important work, and we are grateful to the NIH for their leadership in supporting critical research."

"We look forward to working with the Organovo team to advance our translational research capabilities and apply them to find new ways to treat NAFLD," said Dr. David Brenner, vice chancellor of Health Sciences and dean of the School of Medicine at UC San Diego. "Our faculty's ability to build synergies with our scientific partners makes us uniquely suited for this kind of collaboration."

For more information about the NIH, visit www.nih.gov.

About Organovo Holdings, Inc.

Organovo designs and creates functional, three-dimensional human tissues for use in medical research and therapeutic applications. The Company develops 3D human tissue models through internal development and in collaboration with pharmaceutical, academic and other partners.

Organovo's 3D human tissues have the potential to accelerate the drug discovery process, enabling treatments to be developed faster and at lower cost. The Company's ExVive Human Liver and Kidney Tissues are used in toxicology and other preclinical drug testing. The Company also actively conducts early research on specific tissues for therapeutic use in direct surgical applications. In addition to numerous scientific publications, the Company's technology has been featured in *The Wall Street Journal*, *Time Magazine*, *The Economist*, *Forbes*, and numerous other media outlets.

Organovo is changing the shape of life science research and transforming medical care. Learn more at www.organovo.com.

About UC San Diego School of Medicine

UC San Diego School of Medicine, established in 1968, is the region's only medical school. As a top-tier academic medical center, our role is to improve health through innovative research, education and patient care. The School of Medicine is closely tied to the Skaggs School of Pharmacy and Pharmaceutical Sciences and UC San Diego Health, which includes the Hillcrest Medical Center, Jacobs Medical Center, Moores Cancer Center, Sulpizio Cardiovascular Center, Shiley Eye Institute and many other centers, clinics and affiliates throughout Southern California. We have long been at the forefront of translational research, transforming patient care through discovery and innovation leading to new drugs and technologies. Learn more at healthsciences.ucsd.edu.

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. 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 successfully complete the contracts and recognize the revenue represented by the contracts included in its previously reported total contract bookings and secure additional contracted collaborative relationships; 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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