

# Press Release

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# 3D Systems Announces Regenerative Tissue Program to Deliver Breakthrough Personalized Solutions for Surgical Reconstruction

- Launching bioprinted human tissue platform for non-organ applications leveraging expertise gained in solid organ development
- Initial focus on development, commercialization of soft tissue applications enabling disruptive autologous reconstruction solutions, utilizing company's VSP® surgical planning solutions and experience in patient-specific medical implants
- First product under development targets patient-specific regenerative breast tissue (RBT™)

## ROCK HILL, South Carolina, February 16, 2023 – Today, 3D Systems (NYSE:DDD)

introduced its Regenerative Tissue Program intended to provide an unparalleled solution for surgical procedures requiring reconstruction. 3D Systems has established this program as a result of the significant progress achieved in developing next-generation bioprinting solutions for 3D-printed solid organs. Through the combination of bioprinting technology, biocompatible 3D printing materials, and patient-derived cells, the company is constructing vascularized, patient-specific living human tissues.

"The level of innovation we've been able to unlock with our solutions for regenerative medicine is allowing us to deliver an unmatched level of complexity and precision," said Dr. Jeffrey Graves, president and CEO, 3D Systems. "We're proud of the progress we're making in the development of bioprinting solutions for human organs including lung, liver, and kidney. With this as the foundation, combined with the expertise gained through years of experience in the

manufacturing of personalized medical implants, we have quickly moved into the development of patient-specific human tissues that can dramatically alter how patient care is delivered."

Through the power of advanced 3D modeling, novel bioinks, and high-speed high-resolution 3D bioprinters, 3D Systems is developing an acellular biointegrative scaffold to regenerate adipose tissue. This scaffold can be combined with intraoperative cellularization (i.e., fat grafting) with adipose cells harvested from the patient during surgery. This results in a regenerative scaffold that mimics the patient's anatomy and physiology to help deliver improved surgical outcomes—addressing the clinical need for a long-term reconstructive solution for soft tissue applications.

The company will leverage its VSP® surgical planning solutions to plan and design these patient-specific scaffolds to help improve surgical outcomes and elevate the patient experience. As a pioneer in personalized healthcare solutions, 3D Systems has worked with surgeons, including reconstructive plastic surgeons, for over a decade to plan more than 150,000 patient-specific cases, and manufacture more than two million implants and instruments for 100+ CE-marked and FDA-cleared devices. Leveraging VSP for its tissue program, 3D Systems' biomedical engineers will be able to collaborate with surgeons — beginning with the patient's digital data — to design and manufacture biointegrative scaffolds to match the patient's anatomy.

# A Patient-specific Reconstructive Solution for Breast Cancer Survivors

According to the <u>World Health Organization</u>, 2.3 million women were diagnosed with breast cancer globally in 2020, and the five-year survival post-diagnosis has increased to more than 90% in high-income countries. With the increased survival rate, there is a growing need for long-term regenerative solutions for breast reconstruction. Current options for reconstruction after mastectomy include implant-based reconstruction (i.e., inserting a silicone/saline implant) and autologous flaps (i.e., harvesting live tissue from the patient). Both are prone to post-surgical complications and often require additional procedures.

Over the past 12 months, 3D Systems has conducted in-depth research that is guiding its efforts into building a platform for tissue regeneration. This includes completing multiple large animal studies demonstrating a proof-of-concept for biointegrative scaffolds for adipose tissue regeneration. In particular, the company is investigating host-mediated engraftment of a passively-implanted angiogenic scaffold to explore the ability to grow new blood vessels. Additionally, they have demonstrated the ability for direct vascular connection of an anastomosed (i.e., connecting directly to the vasculature) scaffold. The scaffolds are

constructed at the human scale from a family of biocompatible materials with tunable material properties which the company believes will be able to address and personalize human breast-size tissue reconstructions.

"Through the Regenerative Tissue Program, we now have a unique, vertically integrated technology platform that enables us to produce detailed hydrogel scaffolds for multiple soft tissue applications," said Katie Weimer, vice president, regenerative medicine, 3D Systems. "Our ability to 3D print high resolution and large volume biointegrative, vascularized tissue sets us apart and opens tremendous opportunities in providing a unique solution to breast reconstruction surgeons and patients. I'm inspired by the potential of RBT as our first tissue application, and believe this work will be expanded into future applications such as lumpectomies, breast augmentation, and facial implants."

#### **Forward-Looking Statements**

Certain statements made in this release that are not statements of historical or current facts are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the company to be materially different from historical results or from any future results or projections expressed or implied by such forward-looking statements. In many cases, forward-looking statements can be identified by terms such as "believes," "belief," "expects," "may," "will," "estimates," "intends," "anticipates" or "plans" or the negative of these terms or other comparable terminology. Forward-looking statements are based upon management's beliefs, assumptions, and current expectations and may include comments as to the company's beliefs and expectations as to future events and trends affecting its business and are necessarily subject to uncertainties, many of which are outside the control of the company. The factors described under the headings "Forward-Looking Statements" and "Risk Factors" in the company's periodic filings with the Securities and Exchange Commission, as well as other factors, could cause actual results to differ materially from those reflected or predicted in forward-looking statements. Although management believes that the expectations reflected in the forward-looking statements are reasonable, forward-looking statements are not, and should not be relied upon as a guarantee of future performance or results, nor will they necessarily prove to be accurate indications of the times at which such performance or results will be achieved. The forward-looking statements included are made only as of the date of the statement. 3D Systems undertakes no obligation to update or revise any forward-looking statements made by management or on its behalf, whether as a result of future developments, subsequent events or circumstances or otherwise, except as required by law.

## **About 3D Systems**

More than 35 years ago, 3D Systems brought the innovation of 3D printing to the manufacturing industry. Today, as the leading additive manufacturing solutions partner, we bring innovation, performance, and reliability to every interaction - empowering our customers to create products and business models never before possible. Thanks to our unique offering of hardware, software, materials, and services, each application-specific solution is powered by the expertise of our application engineers who collaborate with customers to transform how they deliver their products and services. 3D Systems' solutions address a variety of advanced applications in healthcare and industrial markets such as medical and dental, aerospace & defense, automotive, and durable goods. More information on the company is available at www.3dsystems.com.