

January 4, 2023



CollPlant Announces Successful Pre-Clinical Results in 3D Bioprinted Regenerative Breast Implants Porcine Study and Full Achievement of Objectives

- Study demonstrated progressive stages of tissue regeneration as highlighted by the formation of maturing connective tissue and neovascular networks within the implants
- No indication of adverse reaction was noted
- Promising results support continued development of rhCollagen-based regenerative breast implants as a revolutionary and potentially safer and more natural alternative for aesthetic and reconstructive procedures, including postmastectomy for cancer patients
- rhCollagen-based regenerative breast implants address \$2.5 billion global breast implant market

REHOVOT, Israel, Jan. 4, 2023 /PRNewswire/ -- CollPlant (Nasdaq: CLGN), a regenerative and aesthetics medicine company developing innovative technologies and products for tissue regeneration and organ manufacturing, announced that it has successfully completed a large animal study for its recombinant human collagen (rhCollagen)-based 3D bioprinted regenerative breast implants, addressing the \$2.5 billion global breast implant market. Supported by these promising results, the Company is planning to initiate a follow-up large animal study during 2023 using commercial-size implants to support subsequent human studies and future product commercialization.



The objectives of the study were fully achieved, including the evaluation of the safety and efficacy of the bioprinted breast implants. The histological analysis of the implants demonstrated progressive stages of tissue regeneration after three months, as indicated by the formation of maturing connective tissues and neovascular networks. The development of native tissue was synchronized with the degradation process of the implant, which was consistent with the desired outcome observed during the trial. There was also no indication of adverse reaction noted within the implants and the surrounding tissue.

"We are very enthusiastic with the results of the study and the achievement of its primary objectives, including the clear demonstration of implant replacement by newly grown, native tissue," said Yehiel Tal, CollPlant's Chief Executive Officer. "Our regenerative breast implants have the potential to address the safety challenges associated with silicone implants while providing a more natural looking and feeling aesthetic result. We are now preparing for a follow-up large animal study using implants that mimic existing commercial-size products, helping us advance into human clinical trials and then product commercialization," he added.

CollPlant's bioprinted regenerative implants aim to overcome the challenges of existing breast procedures using silicone implants or autologous fat transfer. According to the U.S. Food and Drug Administration, approximately 350,000 people have reported adverse events involving breast implants between 2009 and 2019. Reports range from autoimmune symptoms to breast implant-associated anaplastic large cell lymphoma (BIA-ALCL). CollPlant's regenerative breast implants are comprised of the Company's proprietary plant-derived rhCollagen, an ideal building block for regenerative medicine implants attributed to better bio-functionality, superior homogeneity, and improved safety. The printed implant is designed to degrade over time while promoting natural tissue regeneration and integration with host tissue. 3D bioprinting technology enables scalable production of highly precise and repeatable constructs which can be customized to the individual anatomy of patients.

In the product development process, CollPlant uses modeling tools that enable an optimal design of the implant in terms of geometry, materials, physical properties, and biological environment. The modeling takes into consideration the internal anatomy of the breast tissue and the implant environment post-implantation. The implant testing is rigorous and includes static and dynamic loading in order to mimic breast tissue behavior under different conditions and comply with the most stringent safety requirements. The implants are designed to withstand physiological loads and to provide what CollPlant believes is a safer, more natural, and long-lasting alternative to current breast reconstruction and augmentation procedures.

About CollPlant

CollPlant is a regenerative and aesthetic medicine company focused on 3D bioprinting of tissues and organs, and medical aesthetics. The Company's products are based on its rhCollagen (recombinant human collagen) produced with CollPlant's proprietary plant based genetic engineering technology. These products address indications for the diverse fields of tissue repair, aesthetics, and organ manufacturing, and are ushering in a new era in regenerative and aesthetic medicine.

In 2021 CollPlant entered into a development and global commercialization agreement for dermal and soft tissue fillers with Allergan, an AbbVie company, the global leader in the dermal filler market. For more information about CollPlant, visit <http://www.collplant.com>

Safe Harbor Statements

This press release may include forward-looking statements. Forward-looking statements may include, but are not limited to, statements relating to CollPlant's objectives plans and strategies, as well as statements, other than historical facts, that address activities, events or developments that CollPlant intends, expects, projects, believes or anticipates will or may occur in the future. These statements are often characterized by terminology such as "believes," "hopes," "may," "anticipates," "should," "intends," "plans," "will," "expects," "estimates," "projects," "positioned," "strategy" and similar expressions and are based on assumptions and assessments made in light of management's experience and perception of historical trends, current conditions, expected future developments and other factors believed to be appropriate. Forward-looking statements are not guarantees of future performance and are subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statements. Many factors could cause CollPlant's actual activities or results to differ materially from the activities and results anticipated in forward-looking statements, including, but not limited to, the following: the Company's history of significant losses, its ability to continue as a going concern, and its need to raise additional capital and its inability to obtain additional capital on acceptable terms, or at all; the impact of the COVID-19 pandemic; the Company's expectations regarding the timing and cost of commencing clinical trials with respect to tissues and organs which are based on its rhCollagen based BioInk and products for medical aesthetics; the Company's ability to obtain favorable pre-clinical and clinical trial results; regulatory action with respect to rhCollagen based BioInk and medical aesthetics products including but not limited to acceptance of an application for marketing authorization review and approval of such application, and, if approved, the scope of the approved indication and labeling; commercial success and market acceptance of the Company's rhCollagen based products in 3D Bioprinting and medical aesthetics; the Company's ability to establish sales and marketing capabilities or enter into agreements with third parties and its reliance on third

party distributors and resellers; the Company's ability to establish and maintain strategic partnerships and other corporate collaborations; the Company's reliance on third parties to conduct some or all aspects of its product manufacturing; the scope of protection the Company is able to establish and maintain for intellectual property rights and the Company's ability to operate its business without infringing the intellectual property rights of others; the overall global economic environment; the impact of competition and new technologies; general market, political, and economic conditions in the countries in which the Company operates; projected capital expenditures and liquidity; changes in the Company's strategy; and litigation and regulatory proceedings. More detailed information about the risks and uncertainties affecting CollPlant is contained under the heading "Risk Factors" included in CollPlant's most recent annual report on Form 20-F filed with the SEC, and in other filings that CollPlant has made and may make with the SEC in the future. The forward-looking statements contained in this press release are made as of the date of this press release and reflect CollPlant's current views with respect to future events, and CollPlant does not undertake and specifically disclaims any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

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