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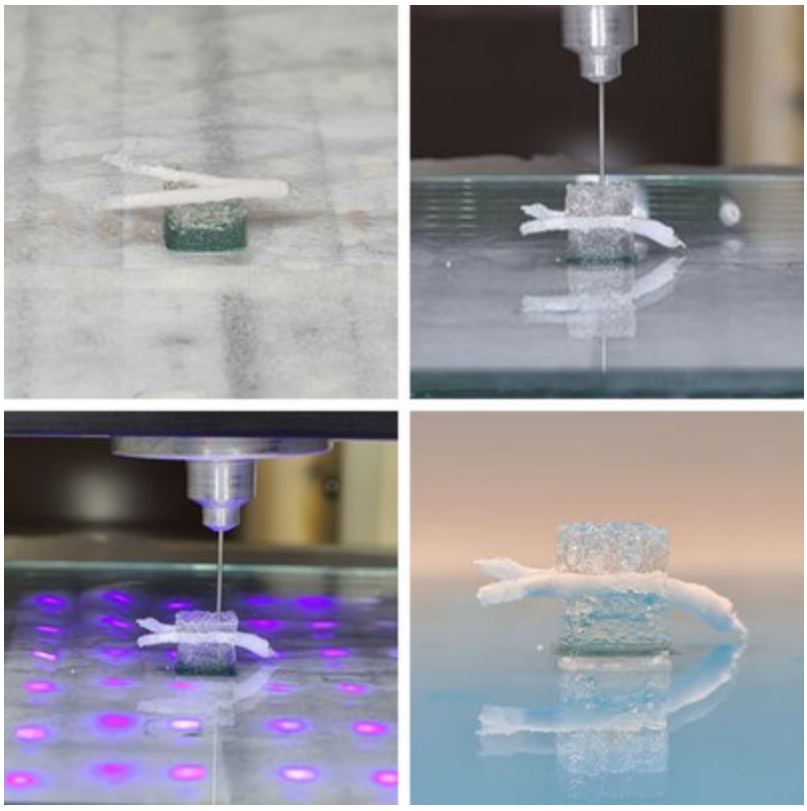
CollPlant's rhCollagen BioInk Used by Technion Researchers to Develop 3D Bioprinted Vascularized Tissue Constructs

REHOVOT, Israel, Oct. 11, 2021 /PRNewswire/ -- CollPlant Biotechnologies (Nasdaq: CLGN), a regenerative and aesthetics medicine company developing innovative technologies and products for tissue regeneration and organ manufacturing, today announced that its recombinant human collagen (rhCollagen)-based bioink was used successfully by researchers from Israel's Technion Institute of Technology to create a 3D bioprinted implantable tissue containing a network of blood vessels capable of supplying blood to the implanted tissue.



"We are excited with the impressive and innovative work of our collaborators at the Technion," said Yehiel Tal, CollPlant's CEO. "The combination of rhCollagen-based bioink and patient's own cells has the potential to create patient-specific tissues that are suitable for transplantation and eliminate the risk of implant rejection. The results of this study further substantiate the vast potential of rhCollagen-based bioinks for use in 3D bioprinting applications including in-vitro 3D models and regenerative medicine," added Mr. Tal.

Professor Shulamit Levenberg from the Biomedical Engineering Department at the Technion stated: "The ability to create vascularized tissue constructs using human collagen from modified plants rather than animal collagen is a very promising step towards development of fully lab-grown implantable tissues."

Engineered tissues require incorporating a vascular network to support transport of oxygen, nutrients and waste, without which cells cannot survive. In a study recently published in Advanced Materials, a team of researchers led by Professor Shulamit Levenberg who specializes in tissue engineering, used CollPlant's rhCollagen-based bioink to 3D print an artificial tissue with a functional, hierarchical blood vessel network. Following transplantation into a rat, blood was able to successfully flow through the transplanted tissue via the blood vessel network and support the long term survival and function of cells within the scaffold.

As the fundamental building block in human tissues, Type I collagen provides multiple biological signals, including mechanical and chemical signals mediating cell binding and interactions with other extracellular matrix molecules and growth factors. In contrast to previous studies where collagen from animals has been used to form scaffolds, the researchers at the Technion used CollPlant's rhcollagen-based BioInk owing to its unique physical properties, outstanding biological functionality and excellent compatibility with photopolymerization 3D printing.

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 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.

At the beginning of 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. Later in 2021, CollPlant entered into a strategic co-development agreement with 3D Systems for a 3D bioprinted regenerative soft tissue matrix for use in breast reconstruction procedures in combination with an implant.

For more information, 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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