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CollPlant, Tel Aviv University and Sheba Medical Center Join Forces to Co-Develop rhCollagen-Based 3D Bioprinted Human Intestine Model for Drug Discovery and Personalized Treatment of Ulcerative Colitis

- **Agreement to accelerate development of a 'Gut-on-a-Chip' tissue model to improve therapeutic choice and outcome of ulcerative colitis patients**
- **CollPlant to fund development and receive exclusive license to manufacture and commercialize human intestine tissue model**
- **Intestine model highlights vast application possibilities for rhCollagen and CollPlant's strategic expansion into personalized medicine, an emerging approach for disease treatment**

REHOVOT, Israel, Nov. 15, 2022 /PRNewswire/ -- **CollPlant** (NASDAQ: CLGN), a regenerative and aesthetic medicine company developing innovative human collagen-based technologies and products, together with Ramot, the Technology Transfer Company of Tel Aviv University and Sheba Medical Center, a hospital ranked by Newsweek magazine as one of the Top 10 world best hospitals for the 4th consecutive year (2019-2022), today announced entering into a license and research agreement to co-develop a 'Gut-on-a-Chip' tissue model for drug discovery and high throughput screening of drugs. The model is intended to be used in personal medicine applications for the treatment of ulcerative colitis, an inflammatory bowel disease affecting millions of individuals worldwide. The in-vitro intestine-on-chip platform combines CollPlant's human recombinant collagen (rhCollagen) with other proprietary biomaterials and human cells. Designed to emulate the human intestine tissue, the 3D bioprinted model will allow medical professionals to identify drug targets and personalized therapeutic responses that can lead to improved patient outcomes.



The collaboration draws upon CollPlant's expertise in high precision 3D bioprinting and collagen-based bioinks for scalable and reproducible biofabrication of human tissues, with Tel Aviv University's 'smart' Organ-on-a-Chip platform and Sheba Medical Center's capabilities in advanced treatment screening. The co-development is led by Dr. Ben Maoz from Tel Aviv University, who completed his post-doctoral fellowship under the supervision of Prof. Don Ingber and Prof. Kit Parker at the Wyss Institute at Harvard University, Dr. Yael Haberman from the Pediatric Gastroenterology unit of Sheba Medical Center, and CollPlant's team of scientists and engineers. Under the terms of the agreement, CollPlant will fund the development of the intestine model and receive an exclusive manufacturing and commercial license and Tel Aviv University and Sheba will receive sales royalties from CollPlant.

"We are excited to embark on this important collaboration with Tel Aviv University and Sheba Medical Center for what will represent CollPlant's strategic expansion into personalized medicine. These acclaimed institutes are ideal partners to accelerate the development of representative models of the human intestine," said Yehiel Tal, CollPlant's Chief Executive Officer. "Current models of inflammatory bowel diseases such as colitis do not accurately mimic the intestine tissue structure with the induced disease, and consequently have limited applicability in predicting therapeutic response. We believe the 3D bioprinted human intestine chip has the potential to accelerate new drug development, reduce costs, support development of personalized, highly effective treatments for ulcerative colitis and significantly reduce or eliminate the need for animal testing."

Keren Primor Cohen, the CEO of Ramot at The Tel Aviv University, stated: "I am highly looking forward to our collaboration with CollPlant and Sheba Medical Center, and we are very proud of the innovative technology of Dr. Ben Maoz and his research team. This reusable, modular organ-on-a-chip platform allows co-culturing and overcomes scientific data collection and imaging challenges posed by other in-market alternatives, that pushes the industry another step forward in the direction of personalized treatment".

Dr. Yael Haberman (MD, PhD) at Sheba Medical Center, stated: "I am very much looking forward to our collaboration with CollPlant and Tel Aviv University, where we aim to generate a complex model system that will mimic gut epithelial barrier functions and will enable preclinical testing and screening of different interventions."

Ulcerative colitis is characterized by chronic inflammation and a relapsing and remitting clinical course that requires lifelong treatment. Patients respond differently or fail to respond to therapies, resulting in exposure of patients to unjustified drugs and delay of the institution of effective treatment.

More information can be found on <https://collplant.com/products/gut-on-a-chip-2/>

About Sheba Medical Center:

The largest and most comprehensive medical center in the Middle East, Sheba Medical Center, Tel Hashomer is generating global impact through its medical care, research and healthcare transformation. Sheba's City of Health boasts an acute-care hospital, rehabilitation hospital, research and innovation hubs, medical simulation center and center for disaster response on one comprehensive campus in the center of Israel. A university teaching hospital affiliated with the Sackler School of Medicine at Tel-Aviv University, Sheba is shaping the future of healthcare, educating the next generation of care providers. Sheba serves as a true hospital without borders, welcoming patients and healthcare professionals from all over the world and consistently providing the highest-level medical care to all in need. Sheba has been ranked a Top 10 hospital in the world by Newsweek 4 years in a row (2019, 2020, 2021, 2022).

About Ramot and Tel Aviv University:

Ramot is the technology transfer company of Tel Aviv University, one of Israel's foremost research and teaching universities. It is one of the major hubs that has contributed to Israel's global reputation as the "Startup Nation." Founded in 1956, Tel Aviv University is located in Israel's cultural, financial and industrial center. Rooted in both academic and corporate arenas, Ramot is uniquely positioned to cultivate the special relationships between these two compelling worlds, creating win-win connections that support fertile, groundbreaking research while providing companies with discoveries that give them a crucial competitive edge.

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.

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 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 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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