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Orgenesis and ExcellaBio Announce Breakthrough Manufacturing Process for Bioxomes™, Proprietary Synthetic Exosomes/Extracellular Vesicles (EV)

Patented process results in uniform, scalable production and ability to deliver cell cargo similar to natural exosomes/EVs

GERMANTOWN, Md., March 31, 2020 (GLOBE NEWSWIRE) -- **Orgenesis Inc. (NASDAQ: ORGS)** ("Orgenesis" or the "Company"), a pioneering, global biotech company committed to lowering costs, accelerating commercialization, and transforming the delivery of cell and gene therapies (CGTs), today announced that it has developed a breakthrough and patented manufacturing process for Bioxomes™, through its collaboration and licensing agreement with ExcellaBio Ltd.

Exosomes, or extracellular vesicles (EVs), are small vesicles that transfer DNA, RNA, and proteins to other cells, thereby altering the function of the targeted cells. Exosomes are believed to provide the same therapeutic benefit of cells without the risks and difficulties of administering entire cells to patients.

Together, Orgenesis and ExcellaBio have developed Bioxomes, which are synthetic exosomes/EVs. Until now, exosome/EV production has been based on conventional ultracentrifugation or ultrafiltration. These are both complex and costly techniques. Bioxomes are engineered and produced through a patented method as membrane nanoparticles isolated from cell cultures of various sources. Orgenesis and ExcellaBio have now demonstrated the optimization and scale up of Bioxomes™, while generating consistent and repeatable results, including uniform particles sizes.

These Bioxomes have demonstrated the ability to fuse with cell membranes and deliver an intracellular cargo, in a similar manner to natural exosomes. Bioxomes can be sourced effectively from various cell cultures. These include mesenchymal stem cells, immortalized cells, immune cells and epithelial cells. When loaded with predesignated genetic material, proteins, signaling molecules and drugs, Bioxomes can carry selected therapeutic cargo inside the target cells, mimicking the natural membrane fusion capacity of EVs.

Vered Caplan, CEO of Orgenesis, said, "Orgenesis and ExcellaBio developing this new process represents a true breakthrough in the field of cell and gene therapy. It provides the ability to produce robust yields in only a few steps. We believe this process may unlock the potential for large-scale production of Bioxomes for a variety of therapeutic applications based on the natural intracellular trafficking abilities of exosomes/ EVs. In particular, we are aiming to develop promising new therapies, where we can deliver intracellular antiviral payloads, among dozens of other potential cell and gene therapies."

About Orgenesis

Orgenesis is a pioneering global biotech company which is unlocking the full potential of personalized therapies and closed processing systems through its Cell & Gene Therapy Biotech Platform, with the ultimate aim of providing life changing treatments at the Point of Care to large numbers of patients at low cost. The Platform consists of: (a) **POCare Therapeutics**, a pipeline of licensed cell and gene therapies (CGTs), and proprietary scientific knowhow; (b) **POCare Technologies**, a suite of proprietary and in-licensed technologies which are engineered to create customized processing systems for affordable point of care therapies; and (c) **POCare Network**, a collaborative, international ecosystem of leading research institutes and hospitals committed to clinical development and supply of CGTs at the point of care. By combining science, technologies and a collaborative network, Orgenesis is able to identify the most promising new therapies and provide a pathway for them to reach patients more quickly, more efficiently and at scale, thereby unlocking the power of cell and gene therapy for all. Additional information is available at: www.orgenesis.com.

Notice Regarding Forward-Looking Statements

This press release contains forward-looking statements which are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities and Exchange Act of 1934, as amended. These forward-looking statements involve substantial uncertainties and risks and are based upon our current expectations, estimates and projections and reflect our beliefs and assumptions based upon information available to us at the date of this release. We caution readers that forward-looking statements are predictions based on our current expectations about future events. These forward-looking statements are not guarantees of future performance and are subject to risks, uncertainties and assumptions that are difficult to predict. Our actual results, performance or achievements could differ materially from those expressed or implied by the forward-looking statements as a result of a number of factors, including, but not limited to, our reliance on, and our ability to grow, our point-of-care cell therapy platform, our ability to effectively use the net proceeds from the sale of Masthercell, our ability to achieve and maintain overall profitability, the development of our POCare strategy, the sufficiency of working capital to realize our business plans, the development of our transdifferentiation technology as therapeutic treatment for diabetes which could, if successful, be a cure for Type 1 Diabetes; our technology not functioning as expected; our ability to retain key employees; our ability to satisfy the rigorous regulatory requirements for new procedures; our competitors developing better or cheaper alternatives to our products and the risks and uncertainties discussed under the heading "RISK FACTORS" in Item 1A of our Annual Report on Form 10-K for the fiscal year ended December 31 2019, and in our other filings with the Securities and Exchange Commission. We undertake no obligation to revise or update any forward-looking statement for any reason.

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