CelGro® Facilitates Lymphatic Vessel Regeneration

- **Breakthrough tissue engineering** combining CelGro® with lymphatic and blood vessel cells to create functional lymphatic tissue **published in PNAS**
- **Substantial advance in the fabrication of implantable lymphatic grafts** which could have significant implications for a novel and effective surgical treatment of lymphedema
- **Further validates CelGro® as the ideal collagen scaffold** that can be used on its own or in combination with cells to fabricate complex tissue grafts to replace damaged tissue or augment repair of defects
- **Collaboration between Professor Shulamit Levenberg at the Israel Institute of Technology and Orthocell's Professor Minghao Zheng at the Perron Institute and the University of Western Australia**

Perth, Australia; 02 August 2021: Regenerative medicine company Orthocell Limited (ASX:OCC, "Orthocell", or the "Company") is pleased to announce the publication of a breakthrough tissue engineering study ("study") combining CelGro® with lymphatic and blood vessel cells to create functional lymphatic tissue. The findings represent a substantial advance in the *ex vivo* fabrication of implantable lymphatic grafts and their use in novel surgical treatments for patients suffering from Lymphedema.

The novel study was published in Proceedings of the National Academy of Sciences of the United States of America ("PNAS"), a highly regarded peer-reviewed scientific journal. The publication follows a successful collaboration between Professor Shulamit Levenberg at the Israel Institute of Technology and Orthocell's inventor and Chief Scientific Officer, Professor Minghao Zheng at the Perron Institute and the University of Western Australia. The publication may be viewed here: insert link.

Orthocell Chief Scientific Officer, Professor Minghao Zheng, said: "Lymphedema is a common and debilitating complication of breast cancer treatments with suboptimal patient outcomes. This study provides a new understanding of the role of CelGro® in fabrication of tissue grafts for lymphatic vessel regeneration, which could have significant implications for a novel and effective surgical treatment of lymphedema."

Damage to lymphatic vessels often occurs following cancer treatment (surgical or radiation therapy) resulting in localised tissue swelling, or 'lymphedema'. Lymphedema leads to significant disfiguration, pain and discomfort, as well as a decreased range of motion, thereby impeding daily function and quality of life. Patients are also at risk of serious and potentially life-threatening deep skin infections. **Lymphoedema is a widespread complication affecting 1 in every 5 patients following breast cancer treatmentError! Bookmark not defined.**. There are no curative treatment options for lymphedema and common non-surgical interventions provide less than optimal outcomes.

The study's objective was to engineer a functional lymphatic tissue graft and evaluate its potential to integrate with the target host tissue. To fabricate the lymphatic graft, researchers cultured lymphatic and blood vessel cells on CelGro® scaffolds and subjected them to mechanical loads and stretching to simulate real life use and movement situations. The engineered graft was surgically implanted in a mouse and assessed 7 days post implant. Results showed the graft integrated with the host lymphatic vessel and most importantly, showed characteristics of native tissue.

Orthocell Managing Director, Paul Anderson, said: "This is exciting research that opens up potential for novel treatments addressing significant unmet medical needs in women's health and we will explore these development options alongside our nerve repair applications. CelGro® continues to impress and this further validates the very valuable CelGro® platform technology addressing multiple medical needs."

Release authorised by Paul Anderson, Managing Director, Orthocell Ltd.

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About Orthocell Limited

Orthocell is a regenerative medicine company focused on regenerating mobility for patients by developing products for the repair of a variety of soft tissue injuries. Orthocell's portfolio of products include CelGro®, a collagen medical device which facilitates tissue repair and healing in a variety of dental, nerve and orthopaedic, reconstructive applications. Orthocell recently received FDA 510(k) approval for Striate+, the first application of the CelGro® platform for dental GBR applications. Striate+ is also approved in Australia (ARTG) and Europe (CE Mark) for the same. The Company's other major products are the cell therapies Autologous Tenocyte Implantation (Ortho-ATI®) and Autologous Chondrocyte Implantation (Ortho-ACI®), which aim to regenerate damaged tendon and cartilage tissue respectively. Orthocell is moving forward with Ortho-ATI® clinical studies designed to assist in the US (FDA) approval process and has completed its pre-IND meetings with the FDA.

For more information on Orthocell, please visit www.orthocell.com.au or follow us on Twitter **@Orthocellltd** and LinkedIn www.linkedin.com/company/orthocell-ltd

Forward Looking Statement

Any statements in this press release about future expectations, plans and prospects for the Company, the Company's strategy, future operations, and other statements containing the words "anticipate," "believe," "estimate, "expect," "intend," "may," "plan," "predict," "project," "target, "potential," "will," "would," "could," "should," "continue," and similar expressions, constitute forward-looking statements. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: the Company's ability to successfully develop its product candidates and timely complete its planned clinical programs and the Company's ability to obtain marketing approvals for is product candidates. In addition, the forward-looking statements included in this press release represent the Company's views as of the date hereof. The Company anticipates that subsequent events and developments will cause the Company's views to change. However, while the Company may elect to update these forward-looking statements at some point in the future, the Company specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date hereof