

## CelGro® used in Nano Medicine Breakthrough

- Breakthrough study using **CelGro® in combination with silver nanoparticle-coating** published in the medical journal, **Biomedical Materials**
- Study indicated CelGro® with a silver coating can help **avoid infection and further enhance dental bone defect repair**
- Study represents a **nanomedicine breakthrough** in the control of infection in bone defect repair which is highly desired in clinical practice
- Study further validates the **versatility of CelGro®** and the **potential for extension of Orthocell's dental product range**

**Perth, Australia; 27 September 2018:** Regenerative medicine company Orthocell Limited (ASX:OCC, "Orthocell", or the "Company") is pleased to announce the publication of a successful pre-clinical study using CelGro®, Orthocell's collagen medical device, in combination with a silver nanoparticle-coating in the Biomedical Materials medical journal.

**Orthocell Managing Director Paul Anderson said:** "We are very pleased with the study results indicating CelGro®, when coated with silver, has the potential to prevent infection and enhance bone regeneration. This exciting breakthrough underpins the versatility of CelGro® and extends its applications in bone defect repair and infection control."

Dental implants are an effective and rapidly growing treatment for managing missing teeth in patients. The success of dental implants relies on the solid anchorage and integration between the implant and the dental bone. Research suggests up to 60% of patients do not have sufficient bone volume to secure an implant and require a bone defect repair procedure involving a bone substitute and a barrier membrane, such as CelGro®. CelGro® plays a very important role in this procedure, preventing tissue ingrowth and enabling high quality bone repair.

Whilst bone defect repair involving the use of bone graft substitute is common, some procedures are susceptible to infection, which can impede or prevent the healing process. Therefore, a barrier membrane of anti-bacterial and anti-inflammatory material with the ability to guide bone regeneration, is a breakthrough that is highly desired and strongly complements Orthocell's current CelGro® offering.

The study supports that silver-coated CelGro® can be used to guide bone regeneration and exhibits strong anti-bacterial and anti-inflammatory properties. Silver nanoparticles are known to have anti-bacterial and anti-inflammatory properties and results from the study indicate that these benefits are exhibited when coated on collagen membranes.



The study was conducted by the Centre for Orthopaedic Translational Research, within the School of Biomedical Science at the University of Western Australia, in collaboration with RMIT University Melbourne, the University of Norte Dame Fremantle and Lund University Sweden

Orthocell plans to leverage silver nanoparticle technology to broaden the applications of CelGro® to include infection prevention in bone and soft tissue repair. The study underpins the compatibility and versatility of CelGro® platform technology and highlights the potential to extend Orthocell's innovative dental product range.

The article titled '*Fabrication of a silver nanoparticle-coated collagen membrane with anti-bacterial and anti-inflammatory activities*' was published in the Journal of Biomedical Materials Research and is available here for viewing: <https://www.ncbi.nlm.nih.gov/pubmed/30213920>.

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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 TGA-licensed cell therapies Autologous Tenocyte Implantation (Ortho-ATI®) and Autologous Chondrocyte Implantation (Ortho-ACI®), which aim to regenerate damaged tendon and cartilage tissue. The Company's other major product is CelGro®, a collagen medical device which facilitates tissue repair and healing in a variety of orthopaedic, reconstructive and surgical applications. Orthocell recently received European regulatory approval (CE Mark) for CelGro®. The collagen medical device can now be marketed and sold within the European Union for a range of dental bone and soft tissue regeneration procedures and is being readied for first approval in the US.

For more information on Orthocell, please visit [www.orthocell.com.au](http://www.orthocell.com.au) or follow us on Twitter [@OrthocellLtd](https://twitter.com/OrthocellLtd) and LinkedIn [www.linkedin.com/company/orthocell-ltd](http://www.linkedin.com/company/orthocell-ltd)

