

ASX Media Release

Improving Coating Techniques for Orthopaedic Implants

SYDNEY 9<sup>th</sup> August 2021– Allegra Orthopaedics Limited (Allegra) (ASX: AMT) is pleased to announce a new partnership between Swinburne’s ARC Training Centre for Surface Engineering for Advanced Materials (SEAM), RMIT University and Allegra Orthopaedics Ltd. to explore a novel coating manufacturing process to deposit its proprietary bioceramic material onto orthopaedic implants.

The industry-led research project has been awarded \$118,338 by the Innovative Manufacturing Cooperative Research Centre (IMCRC) and Allegra Orthopaedics Ltd. The project will span over 12 months and is led by Swinburne’s Dr Andrew Ang and Allegra Orthopaedics’ Robert Bell, Head of Technology and Innovation.



The manufacturing outcome for Allegra will be a robust coating process that manufactures a new product line of novel bioceramic coated orthopaedic implants. This unique coating can outperform the current hydroxyapatite-coated implants. It allows Allegra to develop a proprietary implant coating process that does not currently exist in the market. This project will catalyse the industry-university collaboration and establish a solid foundation for manufacturing functional bioceramic coatings for Allegra Orthopaedics.

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“This manufacturing system is the first of its kind in Australia and will be made available to Allegra for this project. It will change the way orthopaedic implants are coated”, says Prof. Christopher Berndt, SEAM Director.

“Together with our novel bioceramic material, this manufacturing process-material combination can expand its market within the biomedical industry. It could be licenced to interested coating providers.” says Jenny Swain, CEO of Allegra Orthopaedics Ltd.

This project employs a novel plasma spray process that can create unique hierarchical nano-and micro-scale features that exhibit enhanced biointegration with bone tissue as well as antimicrobial properties. Key R&D activities of this project are:

- Preparation of the bioceramic material as novel feedstock for the new plasma spray process.
- Plasma spraying coatings of the new bioceramic that allow microstructural and chemical control up to nano-scale.
- Coating characterisations and optimization.
- Product evaluation and commercial recommendations.

David Chuter, CEO and Managing Director of IMCRC, adds that the project funded via IMCRC’s activate program is a perfect example of how industry works closely with Australian universities to translate manufacturing research into innovative, commercial solutions with real-world benefits.

“With an ageing population and bone-related diseases on the rise, orthopaedic implants with excellent performance are needed globally. By proactively investing in R&D and exploring new surface coating technology with the help of SEAM and RMIT, Allegra Orthopaedics will not only improve the coating quality and endurance of its medical implants but also significantly enhance the quality of life for many patients who otherwise might require frequent, complicated, and expensive orthopaedic surgeries.”

### In Summary

- Swinburne University of Technology, RMIT and Allegra Orthopaedics Ltd. partner to develop a proprietary coating manufacturing process for orthopaedic implants.
- New coated products are superior to the current market offerings that can build a competitive advantage.

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- The industry-led research project is funded by the Innovative Manufacturing Cooperative Research Centre (IMCRC) and Allegra Orthopaedics Ltd.

Authorised by Jenny Swain, CEO.

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**ABOUT ALLEGRA ORTHOPAEDICS:**

We aim to help bring the freedom and happiness of pain-free movement to people's lives. We achieve this through providing the best possible solutions for patients, from world-wide industry leading orthopaedic products through to Australian innovations. Allegra's principal product, the Active Total Knee, has significantly improved the quality of life for many people and remains a focused product line. Allegra is also the exclusive distributors of Waldemar Link GmbH & Co. KG products in Australia. Link consists of a range of complex lower limb, hip and knee replacements, including oncology solutions. The Link products add to Allegra's well-developed range of products for distribution from international suppliers covering all specialties from foot and ankle to upper limb. The company is pleased to continue to build upon its extensive portfolio of patents. It has strong research relationships with universities, companies and surgeon inventors.

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