**Osseointegration Anniversary and the Development of Robotic Prostheses**

**New South Wales, Australia** – Osseointegration International acknowledges the advance in robotic prostheses as 2023 marks the 40th anniversary of the recognition of osseointegration as a viable procedure, initially in dental surgery and subsequently implanting a titanium rod directly into bone, providing a secure attachment point for prosthetic limbs.

Professor Munjed Al-Muderis, the founder of Osseointegration International and the leading osseointegration surgeon comments on the rise of these devices: “*Motorised prostheses are becoming readily available and cheaper to make, especially with the development of more robust motors and lighter batteries that last longer*.”

Osseointegration surgery and the subsequent care and recovery involve a multidisciplinary approach and the key to that is the correct prosthesis. Robotic prostheses are designed to closely mimic the movement and capabilities of a natural limb. Equipped with advanced sensors that can detect the user's movement and intentions for natural and intuitive control, these devices feature a powerful motor system that can generate a wide range of motions, providing amputees with the ability to perform a variety of everyday tasks that were previously challenging or impossible. Another of the key benefits of the robotic prosthesis is its adaptability. It can be customised to fit the unique needs and preferences of each user. The device can also be adjusted to fit different types of amputations and residual limbs and configured to respond to different control signals, allowing amputees to choose the control method that works best for them.

Professor Al-Muderis is optimistic about the future of robotic limbs: “*We’ll see the development of ever more natural robotic limbs that are highly responsive and more intelligent allowing improved levels of functionality and safety for the user. These robotic prostheses not only provide the motor power for movement but also allow sensory feedback to the patient so the amputees regain the ability to feel the ground (for lower limb) and the ability to feel objects and adjust pressure of grips (for upper limb). For example, a person with a robotic arm can hold an egg without crushing it.*”

As we celebrate the 40th anniversary of osseointegration, we anticipate continued advancements and innovations not only in the procedure and the implant but the all-important prosthesis.