FOR IMMEDIATE RELEASE

40 Years Since Osseointegration Recognised

New South Wales, Australia – This year marks the 40th anniversary of osseointegration, a medical breakthrough that has transformed the field of dental and orthopaedic surgery. At the Toronto Conference in 1983, the scientific community recognized Dr. Per-Ingvar Brånemark's research on osseointegration as a viable treatment for dental practice, which later paved the way for orthopaedic applications.

Dr. Richard Brånemark, building on his father's studies, discovered in the 1980s that placing a titanium screw into a rabbit's bone created a stable and permanent load-bearing bond, which inspired the development of osseointegrated prostheses for amputees. In 1990, he successfully performed the world's first long-term osseointegration for a human amputee using the Osseointegrated Prostheses for the Rehabilitation of Amputees (OPRA) - a titanium screw that threads into the skeletal residuum at an initial surgery, to which a transcutaneous prosthesis is attached at a second surgery.

Although the use of osseointegration for amputees was promising, the two-step procedure required a long rehabilitation period of up to a year and had limitations, which resulted in some failures. Then, Prof. Munjed Al-Muderis, an Australian-based surgeon, advanced the technique by designing a high tensile strength titanium implant with a plasma-sprayed surface as an intramedullary prosthesis, inserted into the residual bone of an amputee, to which an external prosthesis attaches directly. This new approach allowed most patients to undergo a one-stage procedure, significantly reducing the first phase of rehabilitation.

Since the first implant, over 2,000 patients have undergone Osseointegration surgeries, and Osseointegration International has over 1,200 successful cases worldwide, making this team the most experienced in the world and this procedure the most clinically validated.

Recent studies show that osseointegration offers several benefits compared to socket-based prostheses, which are the standard of care for amputees. Patients with osseointegration exhibit higher satisfaction rates, better quality of life, increased walking ability, and speed. However, most healthcare providers argue that traditional techniques are less expensive and provide patients with adequate functionality.

As we celebrate the 40th anniversary of osseointegration, we reflect on the significant impact it has had on thousands of patients' lives worldwide. This milestone reminds us of the importance of continued research and development to refine the technique and make it more accessible to patients.

Looking forward to the next 40 years and beyond, we anticipate continued advancements and innovations that this technique will bring to the field of orthopaedics.