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TISSIUM Announces Clinical Results of COAPTIUM® CONNECT System for Atraumatic Sutureless Nerve Repair

Paris, France, Cambridge, USA, April 2nd, 2025 - TISSIUM, a privately-owned medtech company developing biomorphic programmable polymers for tissue reconstruction, is proud to unveil clinical data which were presented at the IFSSH Congress in Washington, D.C. on March 27, 2025, demonstrating the potential of its COAPTIUM® CONNECT System, an innovative atraumatic sutureless solution for peripheral nerve repair.

Peripheral nerve injuries pose a significant burden, often resulting in impaired nerve function, reduced dexterity, and decreased quality of life. Traditional microsurgical repair with sutures, while effective, presents challenges such as inconsistent functional recovery and the potential for additional nerve trauma. The need for disruptive technologies in nerve repair is clear—TISSIUM's COAPTIUM® CONNECT System offers an innovative atraumatic sutureless method for coaptation of severed nerves.

Study Overview & Key Findings

A prospective, single-arm study was conducted in patients with digital nerve injuries to assess the COAPTIUM® CONNECT System. The trial enrolled 12 patients, of whom 10 completed the entire 1-year follow-up duration.

- 100% procedural success was achieved, defined as successful atraumatic sutureless coaptation using the polymer-assisted coaptation device ;
- All patients regained full flexion and extension of the injured digit ;
- All patients reported no pain (VAS pain score) at 12 months ;
- No study device-related complications were reported for the complete 12-month follow-up ;
- No neuromas occurred.

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TISSIUM would like to thank our study investigators Professor Randy Bindra, MD at the Gold Coast University Hospital and Dr. Michael Wagels at the Princess Alexandra Hospital and their study teams for their commitment to atraumatic treatment of digital nerve injuries.

The COAPTIUM® CONNECT System has been designed for atraumatic sutureless consistent nerve repair. It leverages TISSIUM's unique biopolymer platform and is comprised of a bioresorbable light-activated surgical polymer and a protective coaptation chamber.

When asked about his experience in this study, Dr. Randy Bindra, Professor of Orthopedic Surgery and principal trial investigator at the Gold Coast University Hospital and Griffith University School of Medicine said "In my 30 years of experience of repairing nerves, this is one product where the clinical trial results have surpassed my expectation. All patients were pain free and had excellent outcomes."

"I am optimistic this new technology can bring us a step closer to better nerve repair outcomes in the future. Removing the need for sutures will allow improved regeneration of the nerve, benefiting the patient long term," said Dr. Michael Wagels, Director of the Australian Centre for Complex Integrated Surgical Solutions, Department of Plastic and Reconstructive Surgery, Princess Alexandra Hospital.

The COAPTIUM® CONNECT System represents a meaningful advancement in nerve surgery, offering an innovative atraumatic sutureless method for coaptation of severed nerves. By eliminating the need for microsutures, this technology streamlines nerve repair while preserving nerve integrity and function.

TISSIUM remains committed to advancing innovation in tissue reconstruction and is actively exploring the expansion of the COAPTIUM® platform for broader applications in nerve repair.

The COAPTIUM® CONNECT System is not approved or cleared by the U.S. FDA or other regulatory authorities.

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About TISSIUM

TISSIUM, a privately-owned MedTech company based in Paris, France and Cambridge, USA, is dedicated to the development and commercialization of products derived from its unique proprietary family of fully biosynthetic, biomorphic, and programmable polymers platform. The company's products will address multiple unmet clinical needs, including atraumatic tissue repair and tissue reconstruction.

Currently, the Company has a pipeline of seven products across three verticals, including atraumatic sutureless nerve repair, atraumatic hernia repair and cardiovascular sealants. Each product is designed to enhance the tissue reconstruction process in a unique way. In addition, the company develops complementary delivery and activation devices for enhanced performance and usability of its products.

TISSIUM's technology is based on world-class research and intellectual property from the laboratories of Professor Robert Langer (MIT) and Professor Jeffrey M. Karp (Brigham and Women's Hospital), who co-founded the company in 2013.

For more information, please visit: www.TISSIUM.com and follow us on LinkedIn: TISSIUM.

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