



**UNSW**  
SYDNEY



## Disruptive Tech for the Engineering and Manufacture of Materials and Devices with Smart Properties

**Enabling the design and advanced manufacture of smart materials and devices using patented disruptive technologies that emulate the intrinsic mechanical gradients of natural tissues, like bones and trees.**

### Competitive advantage

- World-first patented technology to recursively weave textiles with mechanical gradients and patterns emulating nature's own
- Unique patent technology to engineer and manufacture composites comprising engineered textiles and smart matrix

### Impact

- Addresses the current shortcomings of implantables including surgical meshes, stents and surgical reconstruction implants
- Enables novel drug delivery strategies for combination devices, dressings and implants

### Successful outcomes

- Preclinical testing underway for implants and wearables

### Capabilities and facilities

- Prototyping and tech innovation facility at partner start-up in NSW

### Our partners

- TissuTex Pty. Ltd., NSW Australia
- Food and Drug Administration, USA
- National Institutes of Health, USA
- Cleveland Clinic, USA
- Case Western Reserve University, USA
- Stanford University School of Medicine and D School, USA
- University of Lund, Sweden
- Ludwig Maximilians University, Germany
- Christopher Columbus Foundation - US Chamber of Commerce
- Wallace Coulter Foundation, USA
- AO Research and Development Institute, Switzerland

### More Information

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