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## Spinodal Ltd.

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**Company name:** Spinodal Ltd.  
**Website:** <https://ngt-healthcare2.com/spinodal>  
**CEO:** Shai Elbaz, PhD  
**Category:** Medical Devices  
**Session:** Engineering the Beating System: Biology Meets Technology

### **TRANSCATHETER MICROFLUIDIC ROBOTIC SHAPING AND NAVIGATION TECHNOLOGY**

#### **Executive Summary / Investment Rational**

Medical procedures that require intrabody navigation depend on precise access to specific anatomical targets, yet current technologies often struggle to provide this accuracy and rely heavily on operator skills. Electrophysiology (EP) ablation and Left Atrial Appendage Occlusion (LAAO) are among the most technically demanding procedures, with outcomes largely determined by the ability to reach the correct cardiac site in the correct orientation for delivering the therapy accurately.

Our platform provides unparallel robotic navigation freedom, versatility and stability at the distal tip of the device.

The addressable market for our first product Spinodal's Intracardiac Omnidirectional Navigation (SICON) will reach \$2.05B in 2030.

To date, we have demonstrated superior capabilities on bench and in-vivo model in performing cardiac ablation.

Spinodal management includes seasoned C-level leaders in startup and corporate environments, backed with academic and engineering excellence. The company is backed by NGT-Health Incubator.

#### **Core Technology**

SICON is based on scalable fabrication of multi-stable tubular microstructures, actuated by a Microfluidic robotic system, allowing 6 degrees of freedom in extending, curving and twisting the distal section of intravascular devices without mechanical stress/forces along the shaft.

SICON is easy-to-master, fine-control maneuverability to overcome navigation, positioning, orientation, stability and efficiency challenges independent of physician skills. SICON has small footprint and is compatible with existing ablation catheters.

#### **Product Profile/Pipeline**

Large Bore Sheaths for single-shot ablation catheters and LAAO procedures is Spinodal's first product-line. Following successful introduction, the technology will be integrated into Ablation catheters and delivery systems for valve replacement procedures. The company is seeking collaboration with Tx device manufacturers (compatibility and/or integration).

#### **Business Strategy**

The company is first targeting technology demonstration in a FIH trial followed by 510(k) approval in the US. Entry of the FIH product to main markets in parallel to collaboration with strategic partners in integrating the technology in their product-lines.

#### **What's Next?**

Spinodal is developing a dual segment 13Fr sheath, compatible with single-shot ablation catheters and of LAAO delivery systems. The company is expanding its mechanical and control systems engineering staff. Company is seeking to outsource its manufacturing activities.

Spinodal is seeking to raise \$7M from strategic, private investment and IIA Seed funding, to complete First-in-Human trial.