

**Investment Brief for  
Integrated System for Precision Ablation  
of Tissue**

**NSW  
AREA HEALTH  
SERVICES**

**Office of Commercialisation**

***For further information under a Confidential Disclosure Agreement, please contact the following OoC team member in Australia***

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# 1. Integrated System for Precision Ablation of Tissue

## Summary

A group of patented technologies which substantially improve radiofrequency (RF) ablation procedures. Technology has been developed by a group of leading interventional cardiologists/electrophysiologists.

### 1.1 Intramural Needle Tipped RF Ablation Device

#### Summary

Describes an intramural needle tipped catheter for RF ablation so that good-sized intramural or sub-epicardial lesions can be created by endocardial catheter techniques.

### 1.2 Intraoperative Endocardial and Epicardial Ablation Probe

#### Summary

Describes an elongate, malleable ablation probe and body consisting of a number of longitudinally spaced electrodes separated from one another by insulating material. These electrodes are substantially flat.

## The Technology

Over many years our clinical research team has developed various components for an integrated system for RF ablation of tissue. We hold patents for 4 distinct components necessary for effective RF ablation of cardiac tissue as well as other tissue. With a main focus in treatment of atrial fibrillation (AF), our RF ablation patents cover a system for simultaneous unipolar multi-electrode ablation using an “RF splitter” which individually adjusts power according to the temperature at each electrode, multipolar transmural needles for intramural ablation at surgery for a wide variety of arrhythmias and creation of long lesions with our malleable intraoperative endocardial and epicardial ablation probe using flat electrodes for better tissue contact. We also hold patents on a catheter intramural needle delivery system for intramural RF ablation.

## Applications

This system can be applied for electro surgery, particularly Radio-Frequency (RF) ablation in Cardiology/Cardiac surgery and General surgery.

## Market

Since 1989, radiofrequency (RF) ablation procedures have increased dramatically. The market for ablation continues to expand, as indicated by the more than 2-fold increase in hospitalizations for atrial fibrillation over the last decade. Today, over 100,000 RF ablation procedures are performed annually in the US alone.

In 2003, more than 154.7 million electrocardiography, endovascular, non-invasive diagnostic imaging, and near patient in vitro testing procedures were performed in the US to diagnose cardiovascular diseases/disorders. These procedures generated approximately \$3.6 billion in corresponding product sales, with non-invasive diagnostic imaging systems

sales accounting for 45.8% of the total, imaging contrast agents and biopharmaceuticals sales for 21.9%, transcatheter diagnostic systems sales for 17.4%, near patient in vitro testing products sales for 7.9%, and electrocardiography systems sales for 7.0%. Growing at a compound annual rate of 8.0%, sales of these products are expected to reach an estimated \$4.8 billion in the year 2007.

## IP Position

Sydney West Area Health Service (SWAHS) holds National Phase patents in Australia and the US for the “RF Splitter”; Australia, US, and Europe for both the Multipolar Transmural Probe and the Intraoperative Endocardial and Epicardial Ablation Probe; and a PCT for the catheter Needle-Tipped Surgical Device.

## Commercialisation

SWAHS is seeking a partner to license our technology for the manufacture, distribution, and sale of any of the RF ablation components. The licensee may fast-track regulatory approvals through clinical trials at Westmead Hospital with our clinical professionals. The potential licensee may also be able to combine their existing products with SWAHS patents and exploit access the RF-ablation market in the US.

## Contact

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