
Aortic Wrap

Business Opportunity

Every year over 300,000 individuals in the developed world die of heart failure. The fundamental basis for heart failure in the elderly is systolic hypertension due to aortic stiffening.

Researchers at the University of New South Wales (UNSW) have developed a simple, passive surgical device that has the potential to reduce by almost half the death toll for heart failure in the elderly.

The Market

Heart failure is a complex clinical condition with multiple causes and symptoms and is primarily managed by drug therapy. Market drivers include:

- Incidence of heart failure is rising as the population ages.
- Heart failure affects 3 to 5% of people over 65 years.
- Approximately 5 million Americans have experienced heart failure and an estimated 400,000 new cases are diagnosed annually.
- The annual healthcare cost of heart failure is estimated at US\$30 b in the USA and £625 m in the UK.
- The subset of patients in the USA predicted to benefit from the device was estimated at 177,000 in 2005 and up to 656,000 patients in 2008.



Aortic Wrap Device

The Technology

The aortic wrap is an implantable device, consisting of a synthetic, elastic material that is wrapped around the ascending aorta or other dilated blood vessel. The device acts to reduce stiffness and resistance, reverse vessel dilatation and increase effective elasticity of the vessel. The effect is to reduce pressure and reduce the load on the heart.

Benefits of the aortic wrap include:

- passive device that can be size adjusted
- made from cost-effective material
- can be used as a prophylactic in patients undergoing cardiac surgery
- implantation involves simple, key-hole surgery
- can be used to treat patients refractory to cardiac drugs.
- has strong support of cardiac clinicians

The patent has entered National Phase in several countries.

The Management/Scientific Team

There is a diverse group of researchers that offer strong commercial research and clinical expertise in co-ordinating materials testing, modelling studies and *in vivo* experimentation, clinical impact and involvement in clinical trials, cardiothoracic surgical expertise.

Investment Opportunity

The simplicity of the device combined with competitive pricing (thousands of dollars compared to hundreds of thousands) makes the aortic wrap an attractive opportunity.

NSi is seeking either a partnership with a medical device company or a venture capital investment to take the project through to product development and commercialisation.

Further Information:

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