

**Investment Brief for  
Novel Drug Combination to Reduce  
Blood Pressure in Older People**

**NSW  
AREA HEALTH  
SERVICES**

**Office of Commercialisation**

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# ***Novel Drug Combination to Reduce Blood Pressure in Older People***

## ***Summary***

There are a growing number of people over 65 years with raised systolic blood pressure that is notoriously unresponsive to conventional treatment. This treatment reduces their systolic blood pressure by a unique combination of drugs which individually are well known to have no appreciable toxicity. The combination has been successfully trialled in a small sample of the target population.

## ***Market***

In the USA alone, this treatment would reduce the risk of heart attack and stroke for 16 million people in the over 65 age group with systolic hypertension.

## ***Benefit***

This treatment meets an unmet need for a significant patient population in the over 65 age group.

## ***The Opportunity***

This is a combination drug which combines at least one angiotensin II inhibitor with at least one nitric oxide donor. The synergistic antihypertensive combination is for the treatment of systolic hypertension in older people (over 65 years) and/or patients with isolated systolic hypertension (ISH). The new treatment, aimed specifically at the +60 age group, requires a large, appropriately selected clinical trial to provide proof of concept. The inventor, Gordon Stokes, is an international expert in hypertension.

## ***Value Proposition***

There are a growing number of people over 65 years with raised systolic blood pressure that is notoriously unresponsive to conventional treatment. This puts them at much greater risk

of heart attack and stroke. This treatment reduces their systolic blood pressure by a unique combination of drugs which individually are well known to have no appreciable toxicity. Its synergistic combination provides greater efficacy than any known conventional therapy for this condition in older people.

### ***Potential Market Applications of the Technology***

22 million people over 65 in the US suffer from systolic hypertension and there are approximately 1 million in Canada. Because the failure rate of conventional treatment is as high as 75% as people become older, the real target market are those 16 million who fail conventional treatment consisting of the current antihypertensives.

### ***Competitors***

Older people have the poorest rates of achieving blood pressure control and there is nothing on the market as effective as this new drug at treating those with isolated systolic hypertension and endothelial dysfunction. Nitrates have not been used in the chronic treatment of hypertension before and it needs to be demonstrated that nitrate tolerance can be overcome. BiDil, a nitric oxide combination drug developed by Nitromed Inc was successfully used to treat Afro-Americans for heart failure in the A-HeFT trial, showing a 43% improvement in survival. This result provides evidence that nitric oxide based drugs have real potential.

### ***Sustainable Advantage***

The failure rate of conventional treatment for systolic hypertension as people become older can be as high as 75%. This invention provides an effective treatment that has been shown to work in controlled trials in a small number of older people with chronic systolic hypertension, for as long as 5 years to date. The therapy is specific and selective in regard to correcting the basic defect causing systolic hypertension, and supplying the appropriate blend of systolic versus diastolic blood pressure decrease.

### ***Status of Intellectual Property***

Patent Applications have been made in the US 19/ 255, 447 and Canada, and the US application is undergoing Examination. The patents are owned by Northern Sydney Area Health Service (now called Northern Sydney and Central Coast Area Health Service) and are entitled 'Composition and Method of Treating Hypertension', inventor Gordon Stokes. A combination series of drugs combining at least one angiotensin II inhibitor and at least one nitric oxide donor for the treatment of systolic hypertension in older people (+60 years) and/or patients with isolated systolic hypertension.