



## Investor Presentation

Adelaide, 19th October 2011

Andrew Bray PhD, CEO

Treating conditions of  
the ageing population

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[www.broadvector.com](http://www.broadvector.com)

# Programs & Management

**Broadvector Limited** is an Australian biotechnology company focused on developing less invasive therapies for significant diseases with growing markets:

1. **Aseptic Loosening of Prosthetic Implants** (e.g. hips)  
Phase II Clinical Trial in the Netherlands at LUMC
2. **Early Stage Prostate Cancer**  
Phase I Clinical Trial in Australia at St Vincent's Hospital, Sydney
3. **Vaccine Platform**  
Near term out-licensing opportunity



**Broadvector's Board & Management** have a track record of success in biotech:

Dr Andrew Bray, PhD – *Managing Director & Chief Executive Officer*

Dr Wayne Millen, PhD FRACI – *Non-executive Chairman*

Mr Andrew Smith, BEc – *Non-executive Director*



Mr Malcolm Booth, ACA MBA – *Chief Financial Officer / Company Secretary*

Dr Gerald Both, PhD – *Chief Scientific Officer*

See [www.broadvector.com](http://www.broadvector.com) for biographies

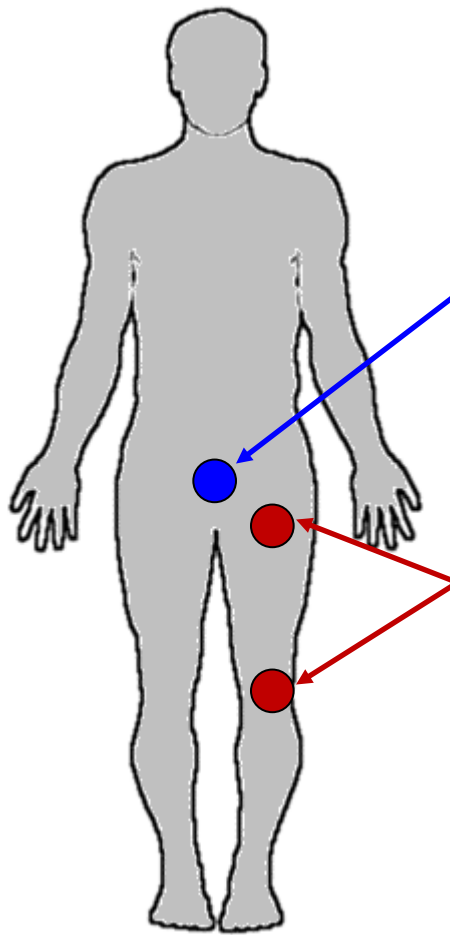


# Pipeline & Commercialization Strategy

Preclinical Development		Clinical Approvals	Clinical Trials		
Early Predin. & Manufacture	Safety & Efficacy in Animals		Phase I	Phase IIa	
		Aseptic Prosthetic Loosening Clinical Program (Hip)			
		Prostate Cancer Clinical Program			
Vector for Vaccine Applications		Out-license		Current Status	
				Status in 2 years from now	

- Current fundraising underway to fund two clinical trials
- Plan to list on ASX or equivalent exchange
- Out-license or partner clinical programs to pharma / biopharma during Phase II
- Expected to occur in ~3 years from now
- Vector to be promoted to vaccine companies over next 2 years

# Corporate Focus: Ageing Population



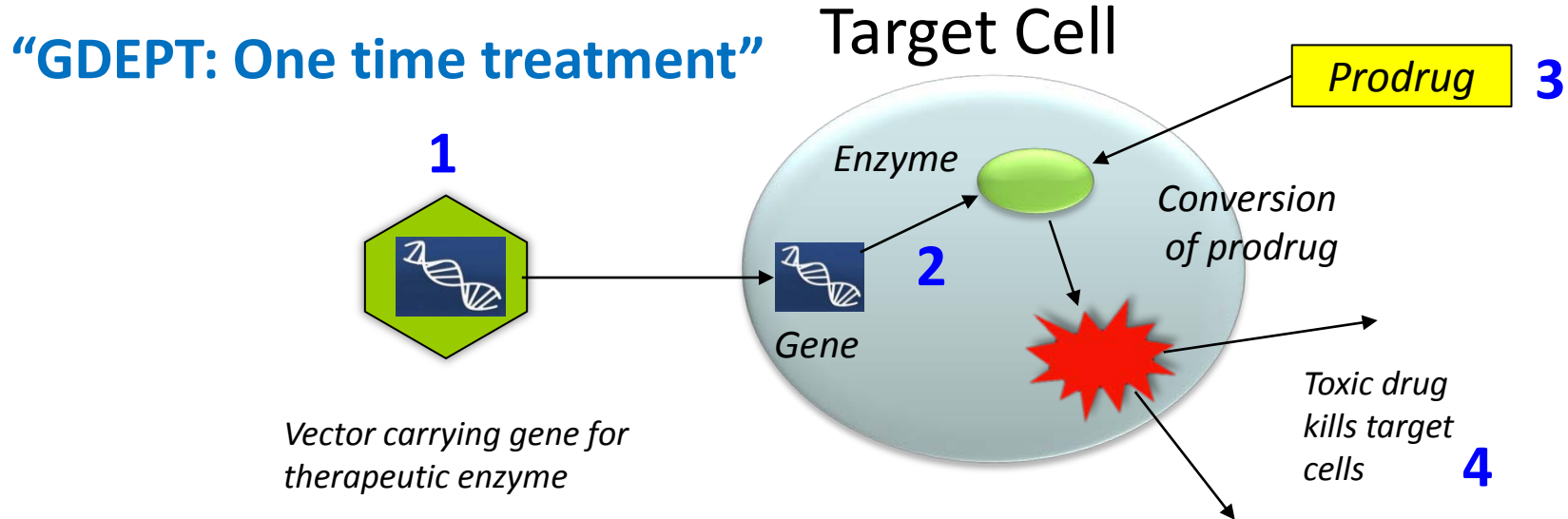
**Early stage  
Prostate  
Cancer  
(Stage II)**  
Men  
Age >55 yr

**Aseptic  
Loosening of  
Orthopaedic  
Implants**  
(hip & knee  
replacements)  
Women > Men  
Age >65 yr

- Most common cancer in Western men affecting 1 in 6 men over a lifetime
- >70% diagnosed at early stage
- Prostatectomy & Radiation therapy have serious quality-of-life side effects
- Need for low intervention treatment
- Potential US \$1 billion peak sales p.a.

- Globally >1 million hip replacements p.a.
- Approx 10% of prosthetic hips develop aseptic loosening by year 10
- Pain & loss of mobility
- Revision surgery only current treatment
- Many patients cannot be treated
- Unmet clinical need (Orphan potential)
- Potential US \$1 billion peak sales p.a.

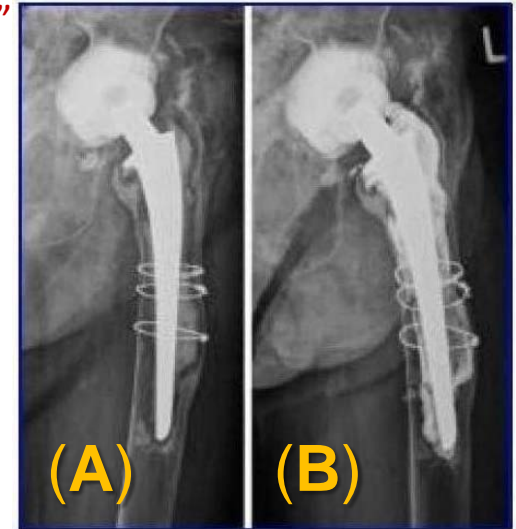
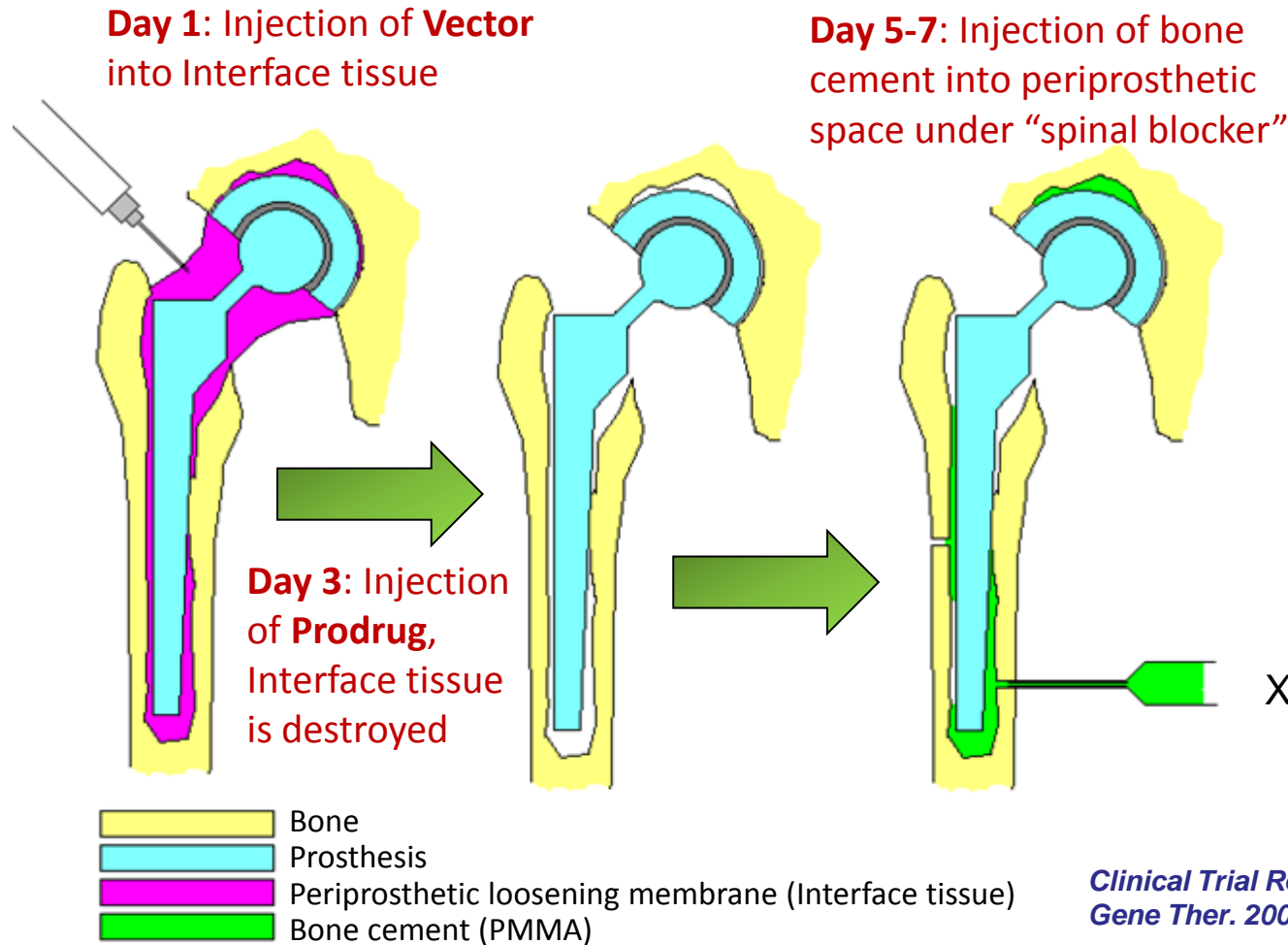
# Gene Directed Enzyme Prodrug Therapy



- ◆ Step 1: Harmless Vector used to carry Gene to target tissue
- ◆ Step 2: “Therapeutic Enzyme” produced from Gene in target cell
- ◆ Step 3: “Prodrug” introduced to target tissue
- ◆ Step 4: Prodrug converted into active drug which kills target cells

See [www.broadvector.com](http://www.broadvector.com) for technology animation

# GDEPT Therapy for Aseptic Prosthetic Loosening: a Low Intervention Strategy



X-Ray before (A) & after (B)  
gene therapy & *in situ*  
repair to stabilize implant

*Clinical Trial Refs: de Poorter et al, Human Gene Ther. 2008, 19, 83-95 & 19, 1029-1038*



# Aseptic Loosening of Prosthetic Implants

- ◆ Annual incidence is growing; in 2009 ~130,000 new hip cases worldwide.
- ◆ Orphan designation application, entry to larger market.
- ◆ 12 subject Phase I trial in hips (LUMC) gave safety & preliminary efficacy outcomes.
- ◆ Phase II trial planned for LUMC, Netherlands.
- ◆ Four other clinical trials successfully completed in Europe (>100 patients in total).
- ◆ Strong patent position. Exclusive worldwide licenses. Patent assignment from Vectura.
- ◆ Also applicable to prosthetic knee implants.

## Sources of IP

Vectura Group plc (UK)

Cancer Research Technologies Ltd (CRT) (UK)

Crucell BV (Netherlands)

Leiden University Medical Centre (LUMC)  
(Netherlands)



LEIDS UNIVERSITAIR MEDISCH CENTRUM



# Prostate Cancer Summary

- ◆ Potential first-line treatment for Stage II prostate cancer (where tumour is confined to prostate).
- ◆ Designed to eliminate prostate cancer without surgery and with minimal side effects (impotence, urinary incontinence).
- ◆ 18-21 subject Phase I clinical trial at St Vincent's Hospital Sydney, Australia.
- ◆ Clinical trial approved by Australian Regulator TGA (CTX route).
- ◆ Opportunities beyond prostate cancer (Out-licensing).
- ◆ Strong patent position. CSIRO patent families (5) assigned to Broadvector.
- ◆ Vector controlled by Broadvector.

## Sources of IP











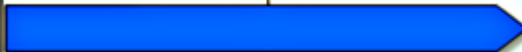
CSIRO (Australia)

PNP Therapeutics Inc (USA)





# Milestones & Use of Funds

Milestone Events	Year 1	Year 2
<b>Prostate Cancer</b>		
Assignment of IP from CSIRO *		
Phase I clinical trial (18-21 subjects)		
Interim clinical trial report		
Develop Phase I/IIa protocol		
<b>Aseptic Loosening</b>		
Assignment of IP from Vectura *		
Secure orphan drug designation (EMA)		
Manufacture clinical trial materials		
Regulatory approval		
Phase IIa clinical trial		
<b>Other</b>		
Pursue vaccine licensing opportunities		
Develop patent portfolio		

\* Assignment to Broadvector completed: 5 patent families from CSIRO;  
1 patent family from Vectura (jointly owned with LUMC)