



Carl Stubbings
Chief Business Officer

GENE SILENCING: A quiet revolution in healthcare

Forward Looking Statements

This presentation contains forward looking statements that involve risks and uncertainties.

Although we believe that the expectations reflected in the forward looking statements are reasonable at this time, Benitec Biopharma can give no assurance that these expectations will prove to be correct.

Actual results could differ materially from those anticipated. Reasons may include risks associated with drug development and manufacture, risks inherent in the regulatory processes, delays in clinical trials, risks associated with patent protection, future capital needs or other general risks or factors.

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Company Financial Snapshot



Key financial details	ASX:BLT OTC: BTEBY
Share Price as at close of trade 16 th September 2014:	AUD \$1.05
Market Capitalisation as at 16 th September 2014:	AUD \$121M
Issued Securities as at 21 st August 2014:	
Ordinary shares	115,218,993
Options	22,695,098
Cash balance at 30 th June 2014:	AUD \$31.3 M

Access to the US OTC Market



ADR Benefits to U.S. Investors:

- ADRs give direct access to our listed equity capital base allowing participation in cross-border market liquidity
- Company disclosure via OTC website
- ADRs are cost-effective
- ADRs are convenient to transact and own
- Quoted in U.S. dollars
- Settle via standard U.S securities settlement process
- Program is administered by a market leading global depository

Benitec Biopharma ADR trading

Symbol	BTEBY
CUSIP	082053208
Ratio	1 ADR : 5 ORDs
Country	Australia
Effective date	May 30, 2014
Underlying SEDOL	6710507
Underlying ISIN	AU000000BLT8
Depository	BNY Mellon

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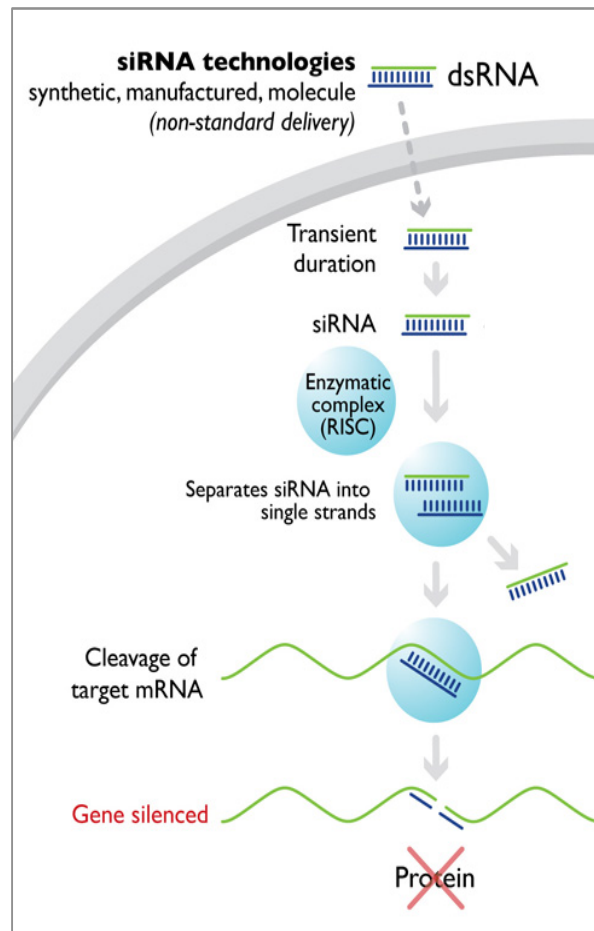
Benitec Investment Case



- Developing a novel gene silencing technology – ddRNAi – a treatment and “single shot cure” for a range of diseases.
- Recently secured \$31.5m in funding from quality US institutions, which will see Hepatitis C (TT-034) trial funded to Phase IIb and progress of other programs in pipeline, and platform development.
- Commenced patient dosing of TT-034 Phase I/IIa clinical trial in Hepatitis C.
- Successful trial results will validate the specific disease approach and the broad technology for human health.
- Pipeline of interesting and “company making” programs – each designed to respond to unmet clinical needs.
- RNAi is a hot space as positive clinical trial data starts to emerge for Benitec’s peers. Partnering activity has been renewed and accelerated as a result.

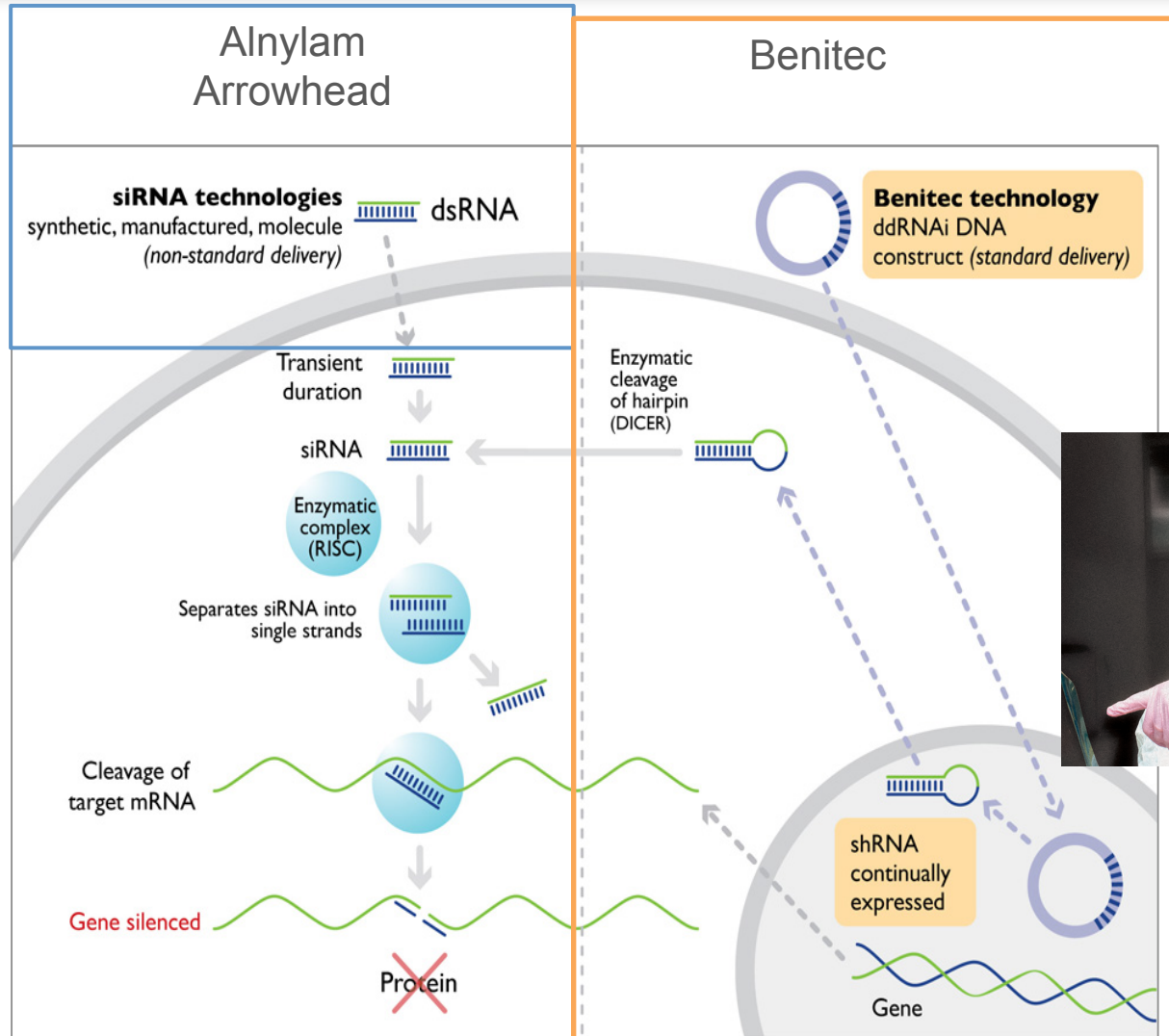
RNAi

The Next Revolution in Medicine



RNAi

The Next Revolution in Medicine



ddRNAi Technology

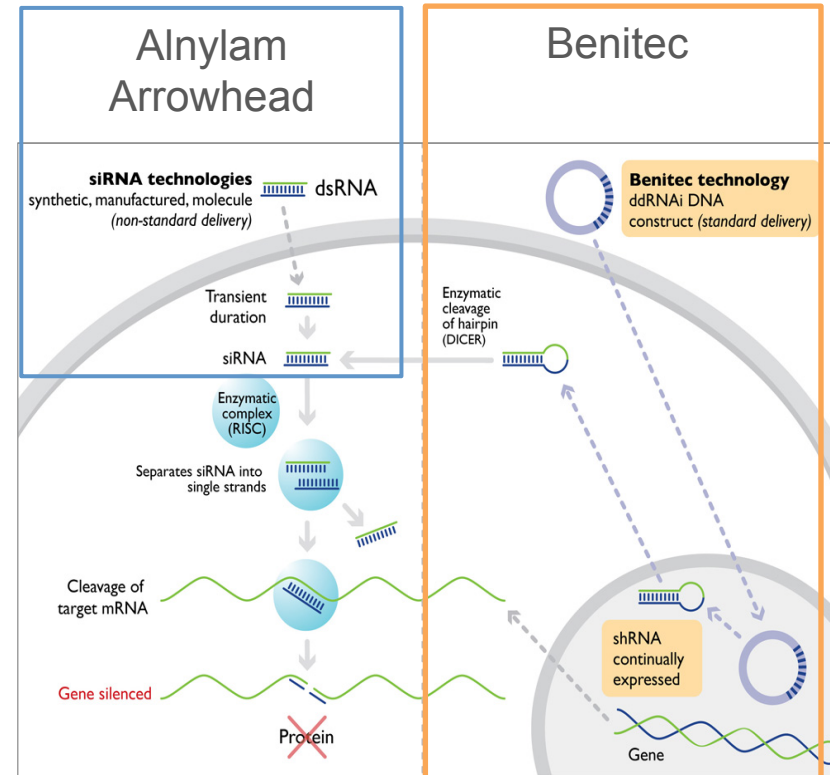
The Next Revolution in Gene Silencing

A specific and long lasting method for turning off disease-associated genes.

ddRNAi technology utilises the power and specificity of RNAi while avoiding many of its problems:

- Specific delivery to target cells
- Fewer side effects
- Lasting benefits –dsRNA generated continuously for the life of the cell
- Multiple therapy in a single molecule - can be engineered to silence a specific gene, multiple sites on a gene or multiple genes

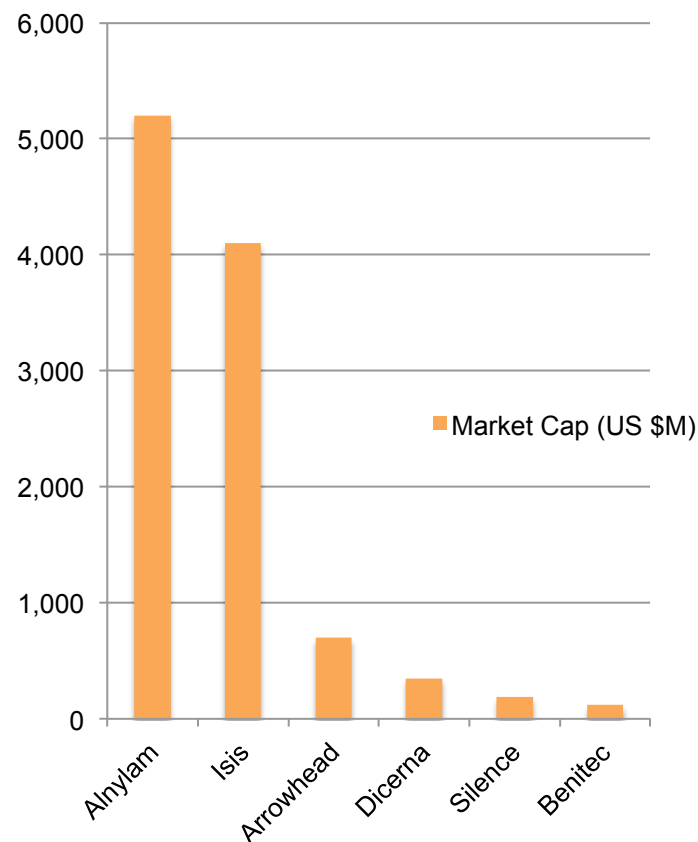
Protected by a dominant, global patent estate - over 100 patents covering ddRNAi and specific disease targets.



Value proposition

Company	Technology	Stage	Market Cap (US \$M)
Alnylam	siRNA	Phase II	5,200
Isis	Antisense	Phase II/ III	4,100
Arrowhead	siRNA	Phase I	700
Dicerna	siRNA	Pre-clinical	350
Silence	siRNA	Pre-clinical	187
Benitec	ddRNAi	Phase I/ IIa	120

Market Cap of Comparator Gene Silencing Companies (US \$M)



In-house Programs

Focus	Indication	Partners / Collaborators	Discovery	Pre-clinical	Clinical
Infectious Disease	Hepatitis C		▶		
	Hepatitis B	Biomics Biotechnology (JV)	▶		
Cancer	Non Small Cell* Lung Cancer	University of New South Wales (RC)	▶		
	Cancer Associated Pain	Stanford University (RC)	▶		
Ocular Disease	AMD**		▶		
Genetic Disease	OPMD***	Royal Holloway London University (RC)	▶		

Hepatitis C clinical trial progress



TT-034 is an RNAi therapeutic that is intended as a “one-shot-cure”.

Goal is to achieve complete and sustained elimination of virus with a single infusion.

US-based open-label dose-escalation Phase I/IIa trial underway

- Protocol reviewed and approved by NIH RAC with unanimous panel support
- FDA released IND January 12, 2014
- Patient dosing commenced May 29, 2014
- **DSMB recommends study continue with no modification**
- Next patient dosing delayed due to patients falling outside of clinical criteria but screening is in progress

Trial sites

- Duke Clinical Research Unit, North Carolina - currently dosing & continuing to screen additional patients
- University of California, San Diego – currently screening patients
- Additional trial sites being brought on to accelerate patient recruitment

Phase I/IIa Dose Cohorts

Cohort	Dose (vg/kg)	Dose escalation step (log 10)	Total No subjects	Dosing scheme for subjects	Observation period per subject and between cohorts before dose escalation
1	4.00×10^{10}	Starting dose	2	Sequential (1+1)	6 week
2	1.25×10^{11}	0.5	3	Sequential and parallel (1+2)	6 week
3	4.00×10^{11}	0.5	3	Sequential and parallel (1+2)	6 week
4	1.25×10^{12}	0.5	3	Sequential and parallel (1+2)	10 weeks
5	4.00×10^{12}	0.5	3	Sequential and parallel (1+2)	10 weeks

TT-034 Clinical



- Clinical demonstration of a “game changer” for treatment of HCV - As a “single shot cure,” TT-034 would compete with small molecule cocktails:
 - Compliance, side effect profile, efficacy, cost effectiveness
- Provides a validation of Benitec’s other pipeline programs – for safety, efficacy
- Will provide clinical data and leverage for partnering discussions

Hepatitis B Update



- A replica of TT-034 approach. 350 million people infected worldwide, major unmet medical need – substantial interest from big pharma
- Strategy to leverage success of RNAi therapies utilising long term benefit of ddRNAi
- Expanded collaboration with Biomics
 - Sequence validation – homology search completed
 - Optimisation of construct in progress
 - Animal model of HBV identified

Drug Resistant Lung Cancer: Tribetarna™ Update

- **Tribetarna Proof of Principle established:**
 - A single injection of Tribetarna™ effectively silences the β III tubulin gene
 - Tribetarna™ significantly enhances survival in a preclinical model of lung cancer in combination with chemotherapy
- **A Phase I/IIa clinical trial of Tribetarna™ in conjunction with cisplatin is being prepared**
 - Undertaken prep-preIND meeting with US FDA
 - Manufacture of GLP Product for reg/tox studies underway
 - European CRO appointed – CTG CRO



With clinical success in lung cancer, this approach can be developed to target other cancers that express high β III tubulin (breast, ovarian & gastric)

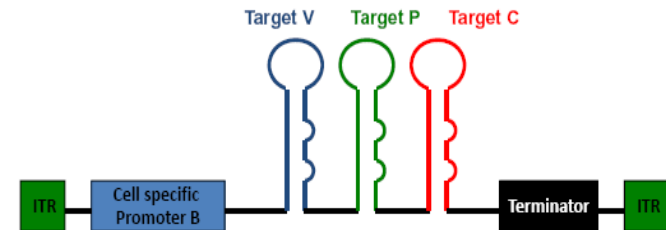
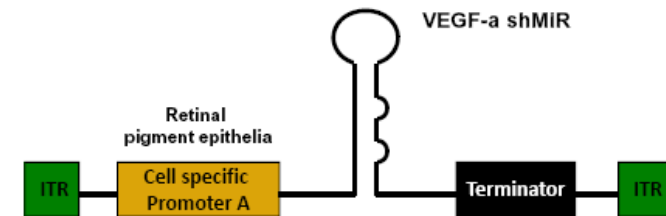
AMD Update

Age-related macular degeneration (AMD) – A single injection of a ddRNAi construct to replace current standard of care (monthly injections into the eyeball).

- Advanced negotiations for a suitable vector for delivery of ddRNAi therapy
- Research collaborator identified – primate model validation



Constructs designed and tested:



Sub-licensed Programs

Focus	Indication	Partners/Collaborators	Discovery	Pre-clinical	Clinical
Infectious Disease	HIV/AIDS	Licensed to Calimmune			
Cancer	Cancer Vaccines	Licensed to Regen BioPharma			
Ocular Disease	Retinitis Pigmentosa	Licensed to Genable			
Genetic Disease	Huntington's Disease	Licensed to uniQure			

CALIMMUNE

engineering immunity

- **Developing a ddRNAi-based ex vivo treatment for HIV/AIDS**
- **Currently conducting a Phase I/II clinical trial**
- **12 HIV-positive participants infused with their own T cells and hematopoietic stem cells, which have been modified to silence the HIV receptor CCR5, and so prevent HIV fusion.**
- **The procedure is designed to prevent the virus from entering and damaging protected cells.**
- **The first patients have been dosed and on reviewing the safety data the DSMB have approved the next cohort dosing. Data from this study are expected in 2015.**

In-house and sub-licensed Programs

Focus	Indication	Licensees/Collaborators	Discovery	Pre-clinical	Clinical
Infectious Disease	Hepatitis C				
	HIV/AIDS	Licensed to Calimmune			
	Hepatitis B	Biomics Biotechnology (JV)			
Cancer	Non Small Cell* Lung Cancer	University of New South Wales (RC)			
	Cancer Associated Pain	Stanford University (RC)			
	Cancer Vaccines	Licensed to Regen BioPharma			
Ocular Disease	AMD**				
	Retinitis Pigmentosa	Licensed to Genable			
Genetic Disease	OPMD***	Royal Holloway London University (RC)			
	Huntington's Disease	Licensed to uniQure			

RC = research collaboration
JV = joint venture

**and other chemotherapy-resistant cancers*

***Age-Related Macular Degeneration*

****Oculopharyngeal Muscular Dystrophy, an orphan disease*

Commercially-focused Management and Board



MANAGEMENT

MD and CEO: Peter French, MBA, PhD
CSIRO, St Vincent's, Cryosite founder

CSO: Michael Graham, PhD
Inventor of ddRNAi technology
CSIRO, Benitec founder

CBO: Carl Stubbings, BSc
Panbio, Quest Diagnostics, Focus Diagnostics

SVP R&D: David Suhy, PhD
Tacere Therapeutics, Avocel, Antara
Biosciences, PPD Discovery

CFO: Greg West, CA
Price Waterhouse, Bankers Trust, Deutsche
Bank, NZI

BOARD

Chairman:

Peter Francis, LLB, Grad Dip.
(Intellectual Property)
Partner at Francis Abourizk Lightowlers

Directors:

John Chiplin, PhD
Polynoma, Arana, ITI Life Science Fund

Iain Ross, BSc, CH.D.
Silence Therapeutics, Tissue Therapies,
Ark Therapeutics

Kevin Buchi
Cephalon, Teva, Mesoblast, Tetralogic

Summary



- Developing Nobel Prize-winning technology – RNAi
- “Single shot cure” for a range of diseases.
- Over 100 patents and patent applications
- Extensive pipeline of “company making” programs
- Clinical stage – HCV and HIV/AIDS programs poised to validate the technology for other diseases
- Well funded - over \$30M from 10 US institutional investors in Feb 2014
- Internationally credible and experienced Board and Management

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