Benitec Biopharma Ltd
ABN 64 068 943 662
F6A / 1-15 Barr Street
Balmain NSW 2041 Australia
Tel: +61 (0) 2 9555 6986
Email: info@benitec.com
www.benitec.com

ASX ANNOUNCEMENT

BIOTECH SHOWCASE™ (SF, USA) PRESENTATION

Sydney, Australia, 13 January 2014

Benitec Biopharma Limited (ASX: BLT) is pleased to release a copy of the presentation that Dr Peter French, CEO and Managing Director will deliver at the Biotech Showcase™ in San Francisco this week. Dr French's presentation will occur at 9 am Pacific Time on 15 January 2014.

The Biotech Showcase™ will coincide with the JP Morgan Healthcare Conference in San Francisco, held between 13 – 15 January. The Conference is one of the largest and most informative healthcare investment symposia in the world, which combines global industry leaders, technology creators, potential partners and investors.

Highlights of the presentation include:

- An overview of Benitec's novel gene silencing technology – ddRNAi – a potential treatment and "**single shot cure**" for a range of diseases
- Information about its Phase I/II (a) clinical trials in two significant disease areas:
  - Hepatitis C (TT-034)
  - Drug-resistant lung cancer (Tribetarna™)
- Insights into Benitec's research pipeline into conditions including Hepatitis B, intractable cancer pain and AMD, through both in-house research and licensing arrangements

For further information, *please contact Greg West, Company Secretary via phone +61 (2) 9555 6986 email: gwest@benitec.com or visit www.benitec.com*

About Benitec Biopharma Limited

Benitec Biopharma Limited is an ASX-listed biotechnology company (ASX Code: BLT) based in Sydney, Australia. The company has a pipeline of in-house and partnered therapeutic programs based on its patented gene-silencing technology, ddRNAi. Benitec is developing treatments for chronic and life-threatening human conditions such as Hepatitis C, Hepatitis B, wet age-related macular degeneration, cancer-associated pain, drug resistant lung cancer and oculopharyngeal muscular dystrophy based on this technology. In addition, Benitec has licensed ddRNAi technology to other biopharmaceutical companies who are progressing their programs towards the clinic for applications including HIV/AIDS, retinitis pigmentosa and Huntington's disease. For more information on Benitec refer to the Company's website at www.benitec.com

BENITEC BIOPHARMA
silencing genes for life™

Gene Silencing:
A quiet revolution in healthcare

Dr. Peter French

January 2014

Forward looking statement

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.

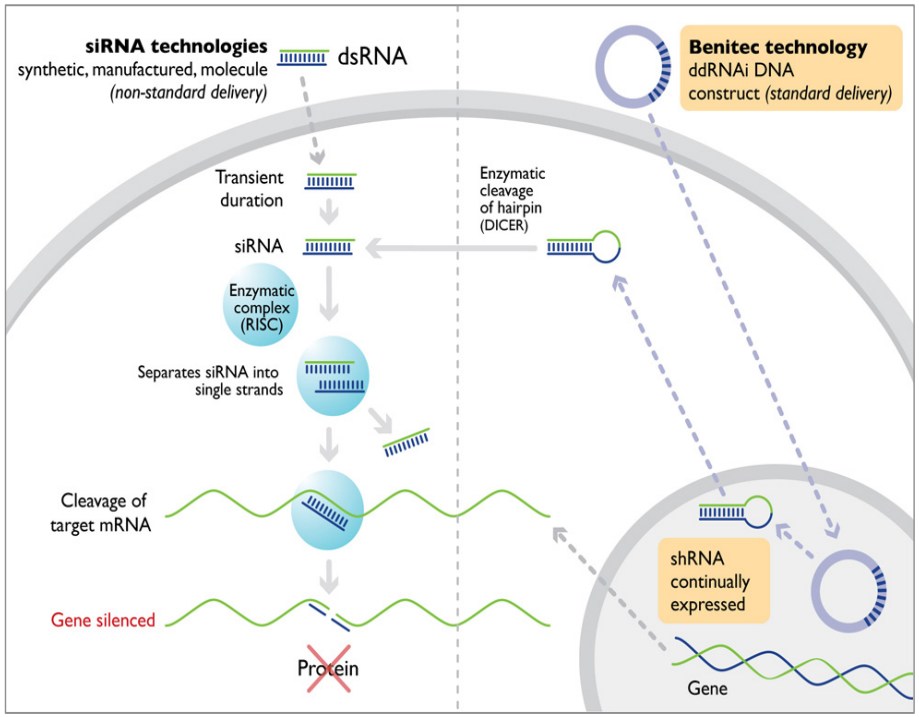
Actual results could differ materially from those anticipated. Reasons may include risks associated with drug development and manufacture, risks inherent in the regulatory processes, delays in clinical trials, risks associated with patent protection, future capital needs or other general risks or factors.

Benitec investment case

- Developing a novel gene silencing technology – ddRNAi – a treatment and "**single shot cure**" for a range of diseases
- Poised to commence Phase I/II (a) clinical trials in two significant diseases:
  - Hepatitis C (TT-034)
  - Drug-resistant lung cancer (Tribetarna™)
- Successful trials will validate the specific disease approach and the broad technology for human health
- Currently earning revenues from a number of licensing deals for Benitec's technology in multiple disease areas
- Other companies in the RNAi field (e.g. Alnylam) have seen a recent significant valuation uplift following positive clinical data

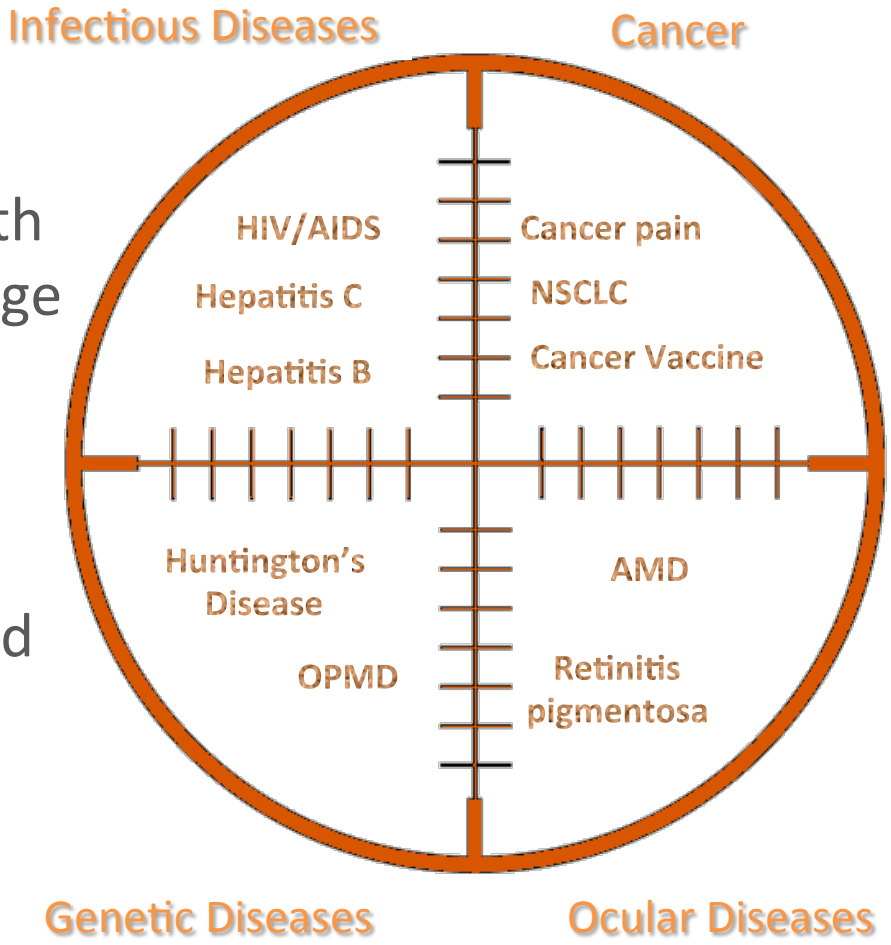
ddRNAi Technology
The next revolution in gene silencing

- **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**



One Weapon: Many possible targets

- A novel **platform technology** with the potential to treat a wide range of chronic and life-threatening diseases
- **Pipeline** incorporates infectious diseases, cancer, pain, ocular and orphan genetic diseases



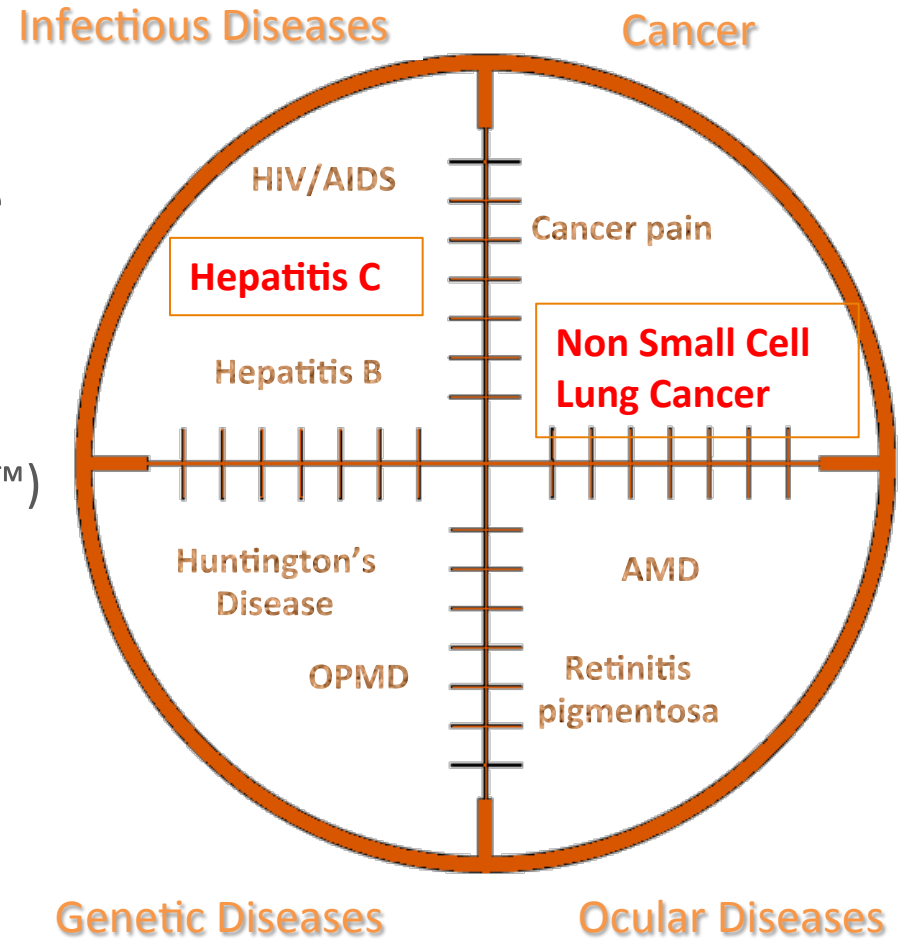
Benitec Biopharma: Pipeline

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

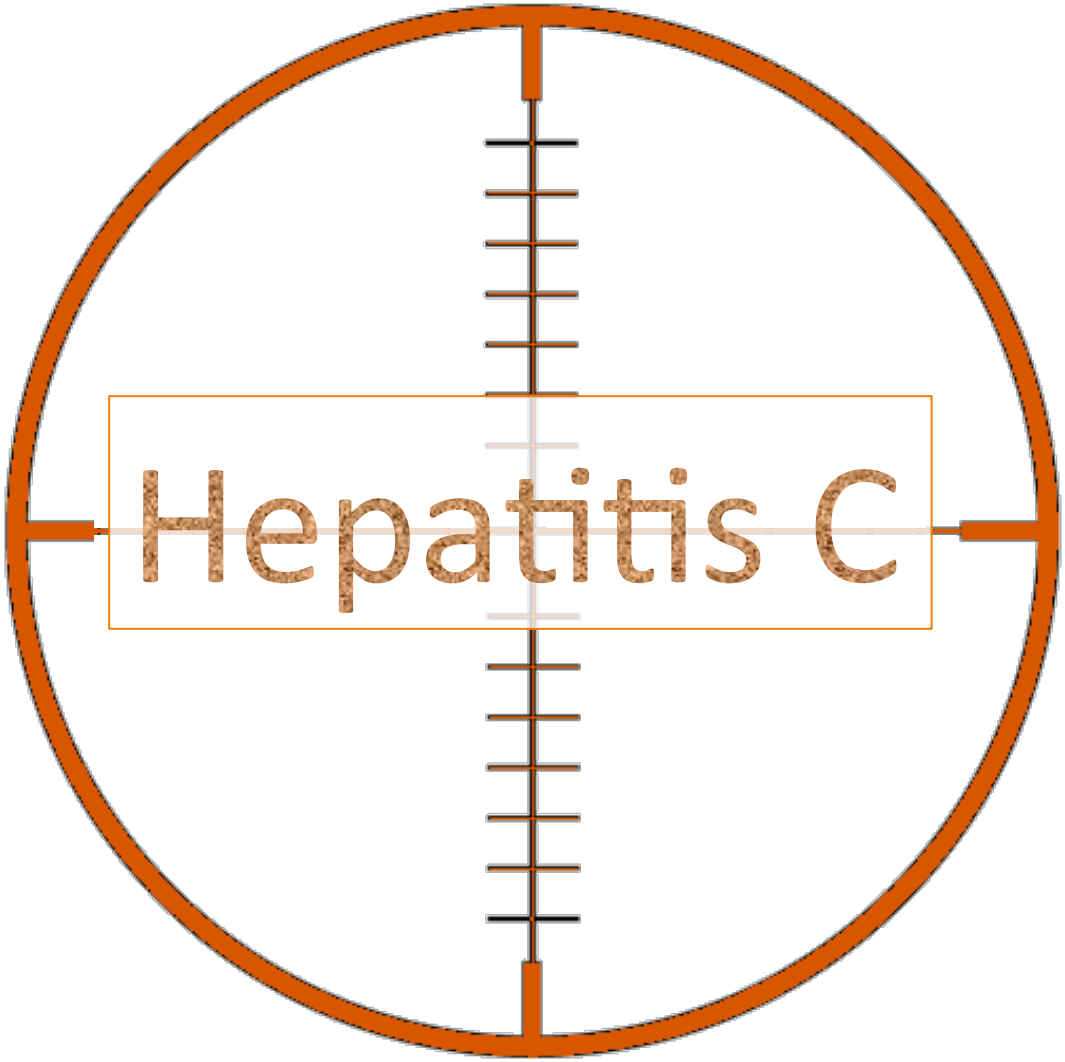
**and other chemotherapy-resistant cancers*
***Age-Related Macular Degeneration*
****Oculopharyngeal Muscular Dystrophy, an orphan disease*

One Weapon: Many possible targets

- Benitec has prioritised programs based on market opportunity, solid proof of concept data and potential to maximise the unique advantages of ddRNAi:
  - Hepatitis C (TT-034)
  - Drug-resistant lung cancer (Tribetarna™)
  - AMD



Target Focus: Hepatitis C



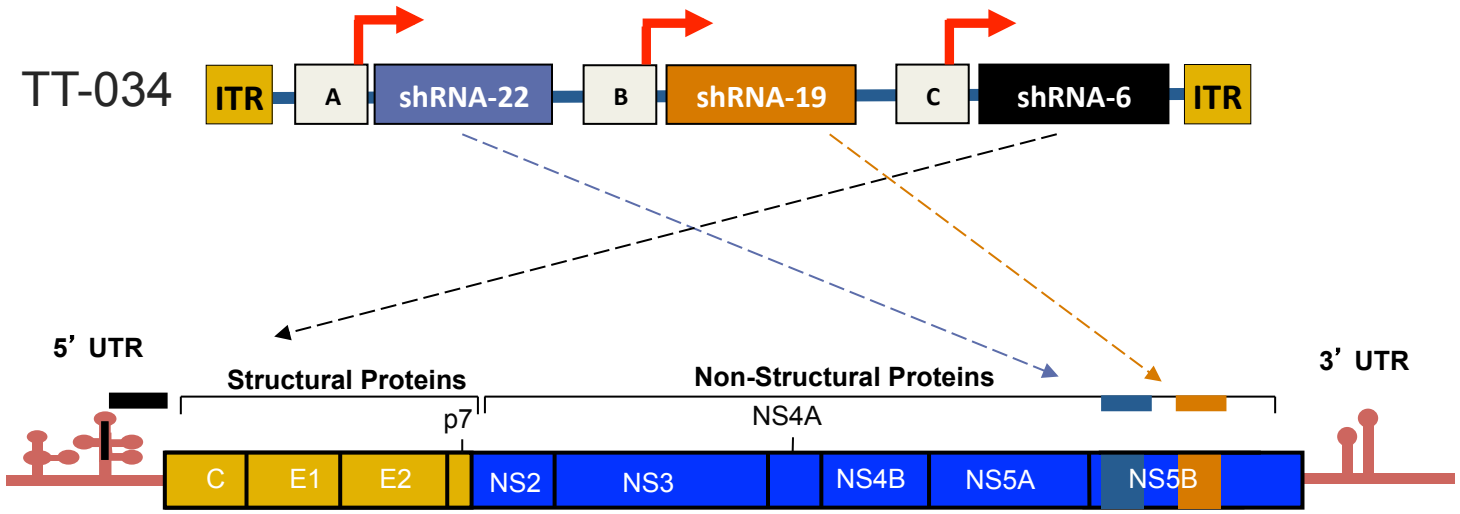
TT-034: Many Attributes of an "Ideal" Therapy for HCV

- **TT-034 is an RNAi therapeutic that is intended as a "one-shot-cure"**
  - Recombinant AAV genome delivered via an AAV8 vector (high liver tropism)
  - Continuously produces pool of shRNAs for over 180 days
  - shRNA targets three separate, well conserved regions of HCV RNA genome
  - Capability for near complete hepatocyte transduction

- **Goal is to achieve complete elimination of virus or SVR with a single infusion**
  - Eliminates long treatments and patient compliance issues
  - Very low toxicity in animal studies
  - Potential for combination with small molecules therapies

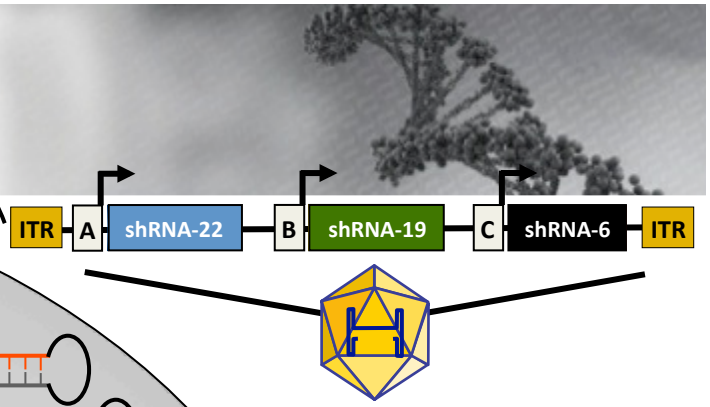
- **However, once administered no ability to withdraw therapy**

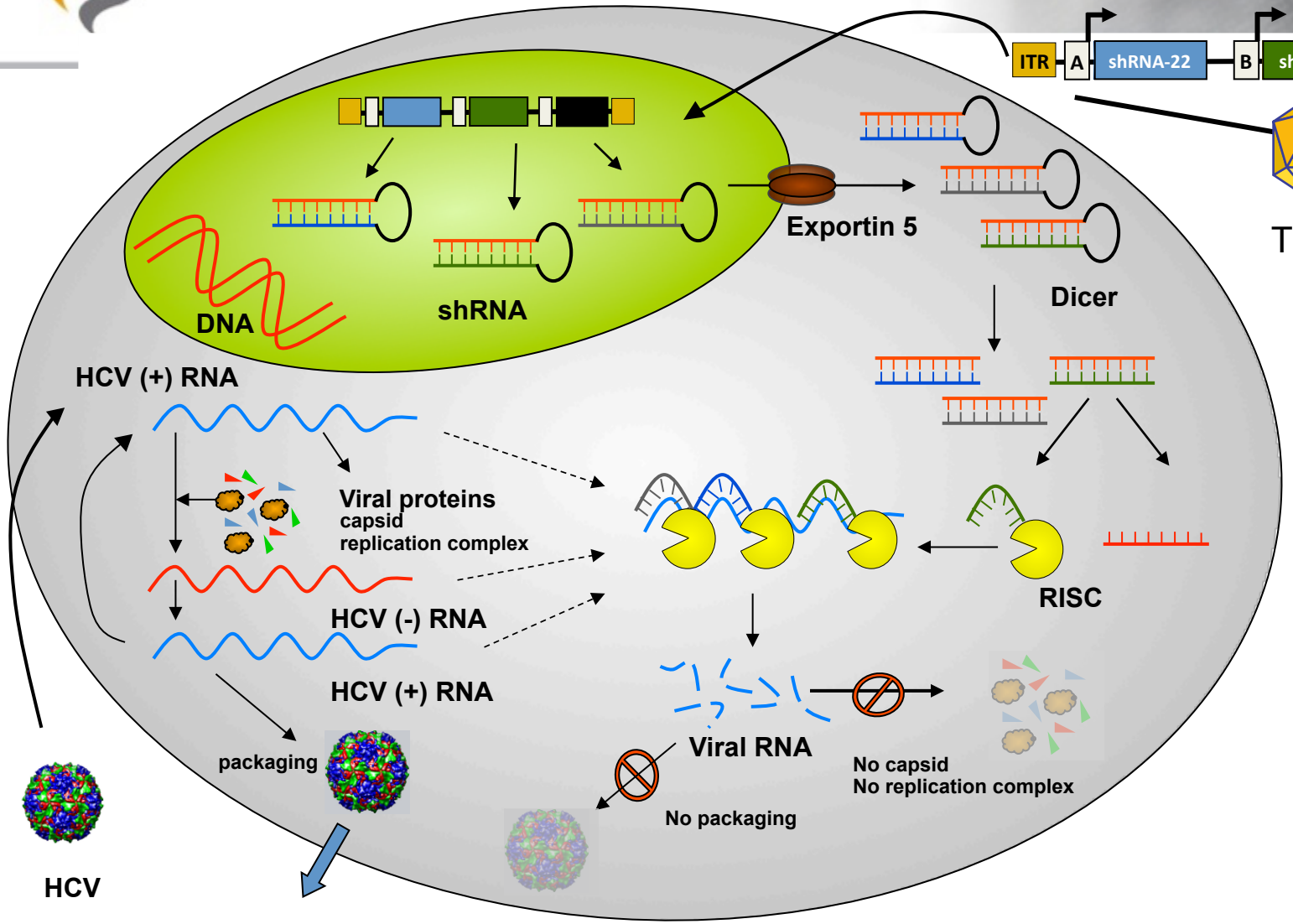
Expression Cassette - TT-034



- Three independently transcribed RNAi elements target three separate, well-conserved regions of the HCV genome; **helps prevent the generation of viral escape mutants**
- Combination drug in one therapeutic entity provides broad patient applicability, while maintaining specificity

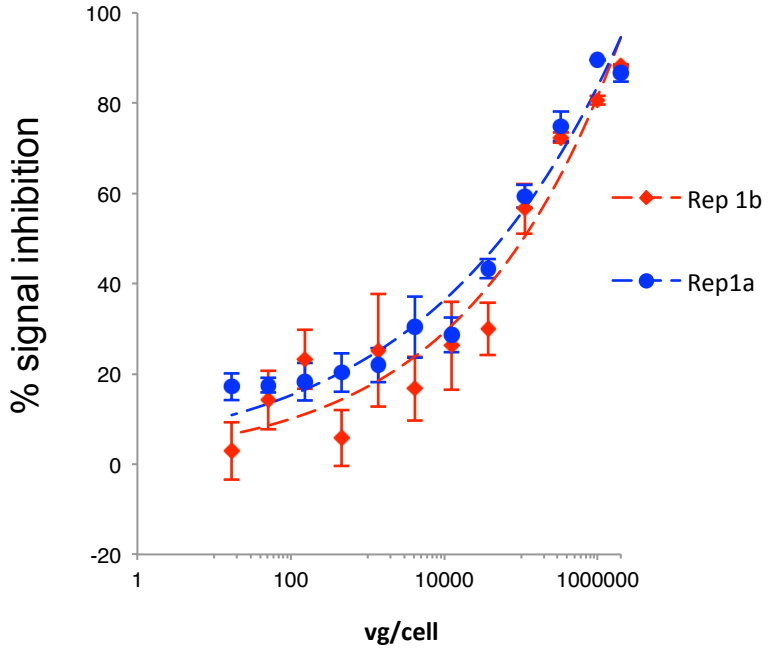
MOA of TT-034 Against HCV



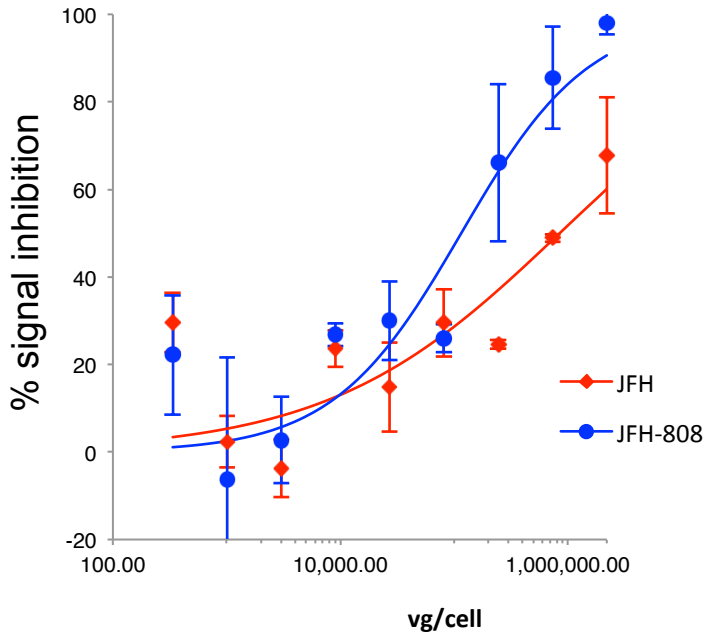


TT-034 Activity Against HCV Genotype 1a and 1b

HCV replicon
(representative data)



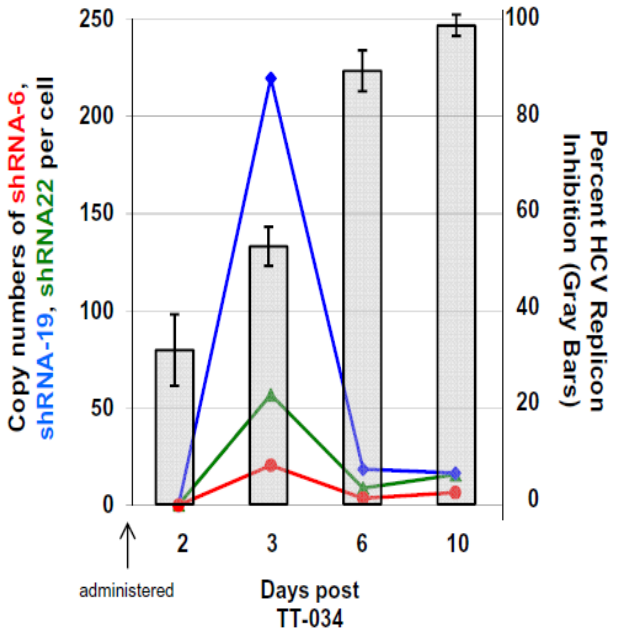
HCVcc
(representative data)



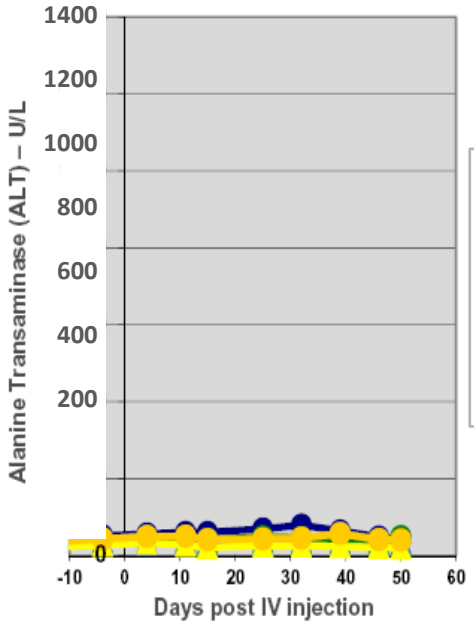
TT-034: Pre-clinical efficacy and safety

- Clinically relevant doses of TT-034 produce sustained levels of HCV inhibition without toxicity

Quantities of shRNA/cell required for HCV Replicon Inhibition



Assessment of liver toxicity in cynomolgus monkeys



shRNA/cell in cynomolgus monkey livers at day 50

	shRNA-6	shRNA-22	shRNA-19
$1.25x10^{11}$ vg/kg	18	66	9
$1.25x10^{11}$ vg/kg			
$1.25x10^{12}$ vg/kg	782	1223	196
$1.25x10^{12}$ vg/kg			
$6.25x10^{12}$ vg/kg	8350	6090	1463
$6.25x10^{12}$ vg/kg			

Avg. from dose cohort

Phase I/II Study Design

- Open label, single-dose, dose escalation study in 14 HCV genotype 1 patients
- 5 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

- DSMB review after first patient in each cohort and between cohorts
- Extensive safety monitoring during 24 weeks observation
- **Trial sites:**
  - Duke Clinical Research Unit, North Carolina (Dr Keyur Patel)
  - University of California, San Diego (Dr David Wyles)

TT-034 Trial
Endpoints Through Week 24

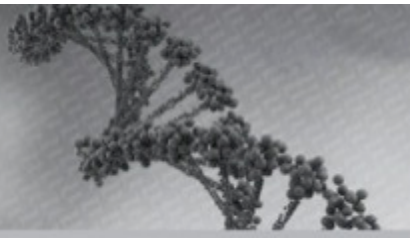
➢ **Primary Endpoints (Safety)**:

- Incidence of treatment-emergent adverse events
- Changes in clinical and laboratory parameters

➢ **Secondary Endpoints (Efficacy, PK, and PD)**:

- Sustained reduction in HCV viral load
- Assessment of viral vector DNA levels in liver biopsy
- Assessment of shRNA expression in liver biopsy
- shRNA expression levels in exosomes in serum
- Blood vector DNA levels in serum

Assessments During the 24 Week Observation Period



- PE
- Weight and vital signs
- Cytokines
- ESR, CRP, and complement C3/C4
- ECG
- Liver enzymes and liver function
- Clinical lab tests
- Troponin I&T
- Morning fasting serum cortisol
- nAb to AAV8
- IFNγ-ELISpot to AAV8
- Viral vector in body fluids
- HCV viral load
- HCV target site sequencing
- Liver biopsy (day 21) to assess DNA transduction, shRNA expression and histopathology
- Blood shRNA level (exosomes)
- Serum pregnancy test
- Ultrasound of the liver
- Alpha-fetoprotein

Hepatitis C
Phase I/IIa Clinical Trial

- **US-based open-label dose-escalation Phase I/IIa trial**
  - Regulatory activity:
    - ✓ All required safety and toxicology studies have been conducted
    - ✓ Protocol completed and successfully reviewed by NIH RAC June 2013
    - ✓ US FDA IND filed December 6, 2013
- **Trial sites**
  - Duke Clinical Research Unit, North Carolina (Dr Keyur Patel)
  - University of California, San Diego (Dr David Wyles)
- **Design**
  - Efficacy and safety study
  - Patients who have failed current standard of care for HCV
  - Interim reads
- GMP clinical product has been manufactured, filled and finished

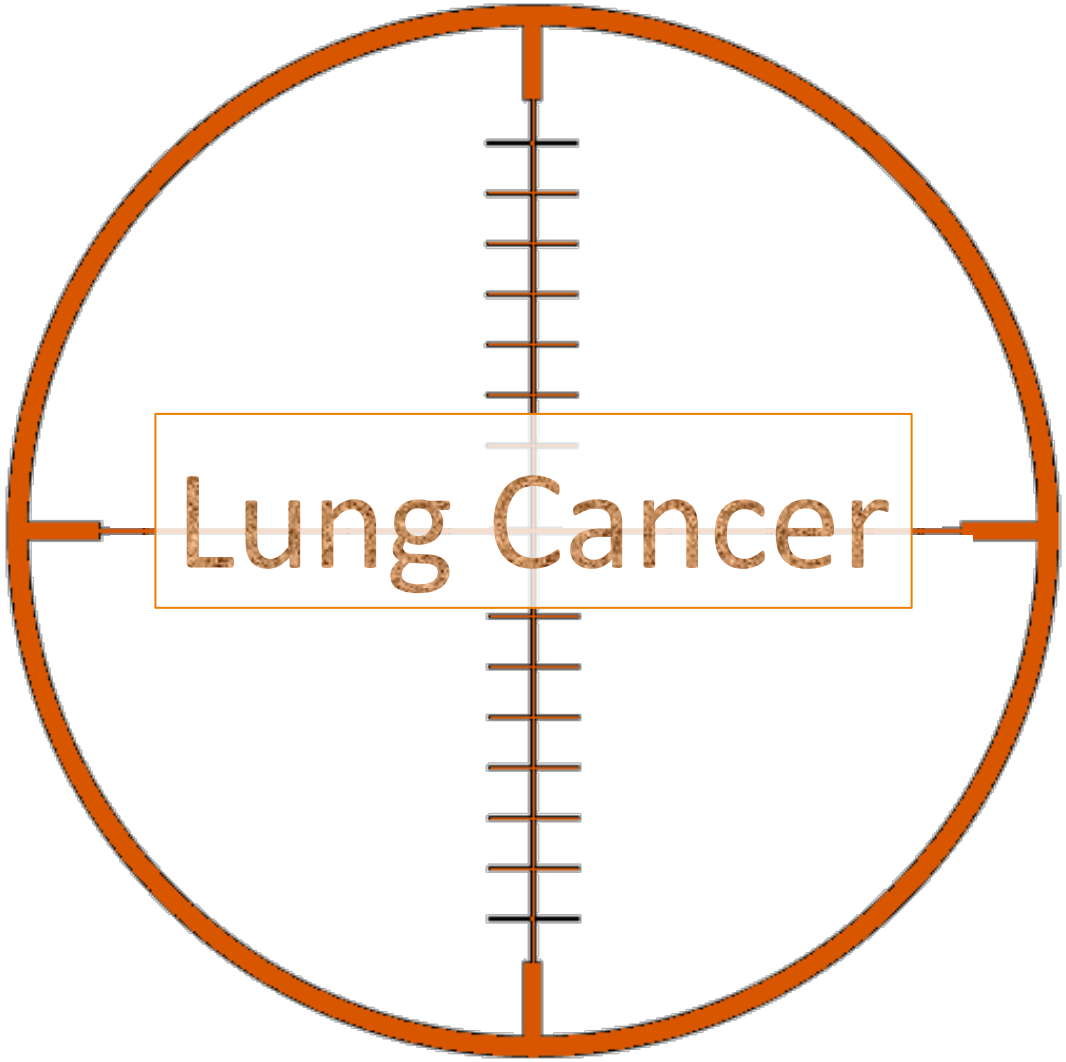
TT-034's Place in the HCV Market

- Even with promising new drugs coming onto the market, HCV will remain a "Problem Not Solved"
- **TT-034 is a "Disruptive Technology" in a market that will remain very large**
- As a "single shot cure," TT-034 will supersede small molecule cocktails
  - Superior compliance, side effect profile and efficacy
  - **TT-034 will be competitively priced and offer significant clinical and compliance advantages**

TT-034:
2013 Clinical Trial Implications

- Clinical success with TT-034 (efficacy and safety) should be a significant value inflection milestone for Benitec
- **Moves Benitec from a pre-clinical to a clinical stage company**
- Clinical demonstration of a “game changer” for treatment of HCV
- Stimulates collaboration, partnering, licensing or acquisition interest
- Positive implications for Benitec’s other pipeline programs

Target focus: drug resistant lung cancer



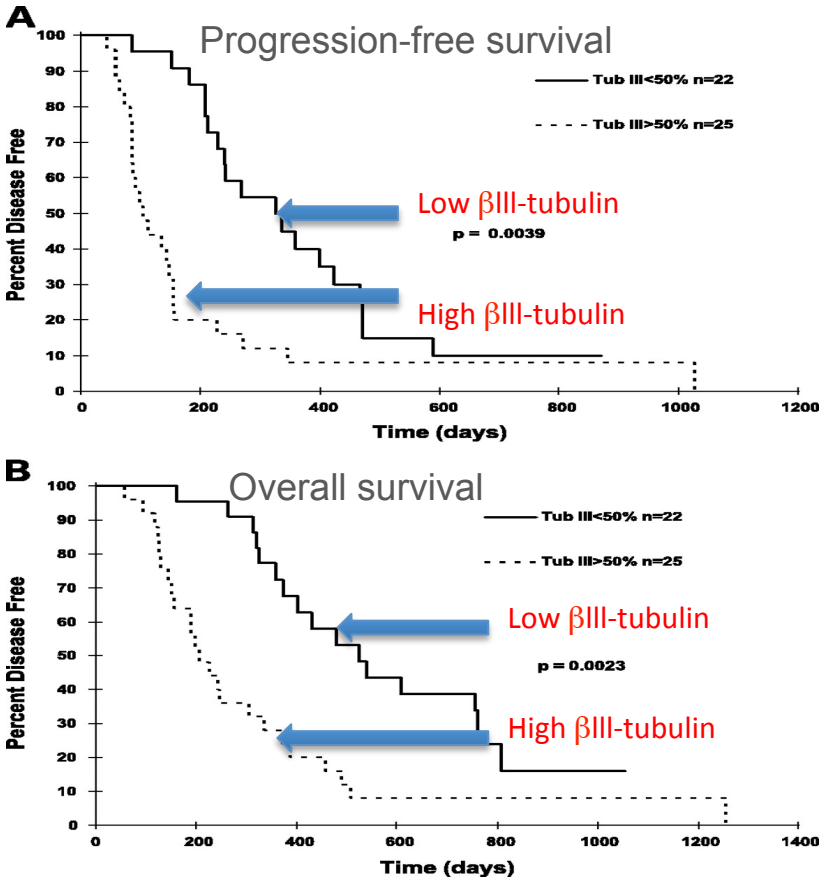
Target: *βIII-tubulin gene*

Resistance to chemotherapy drugs is strongly associated with over-expression of βIII-tubulin, (encoded by the *TUBB3* gene) which appears to act as a tumour pro-survival factor (Kavallaris *et al*., 2010).

Patients with high levels of βIII-tubulin show significantly decreased survival.

Inhibition of *TUBB3* by RNAi can restore chemo sensitivity.

Target patent application and companion diagnostic assay IP licensed from UNSW.



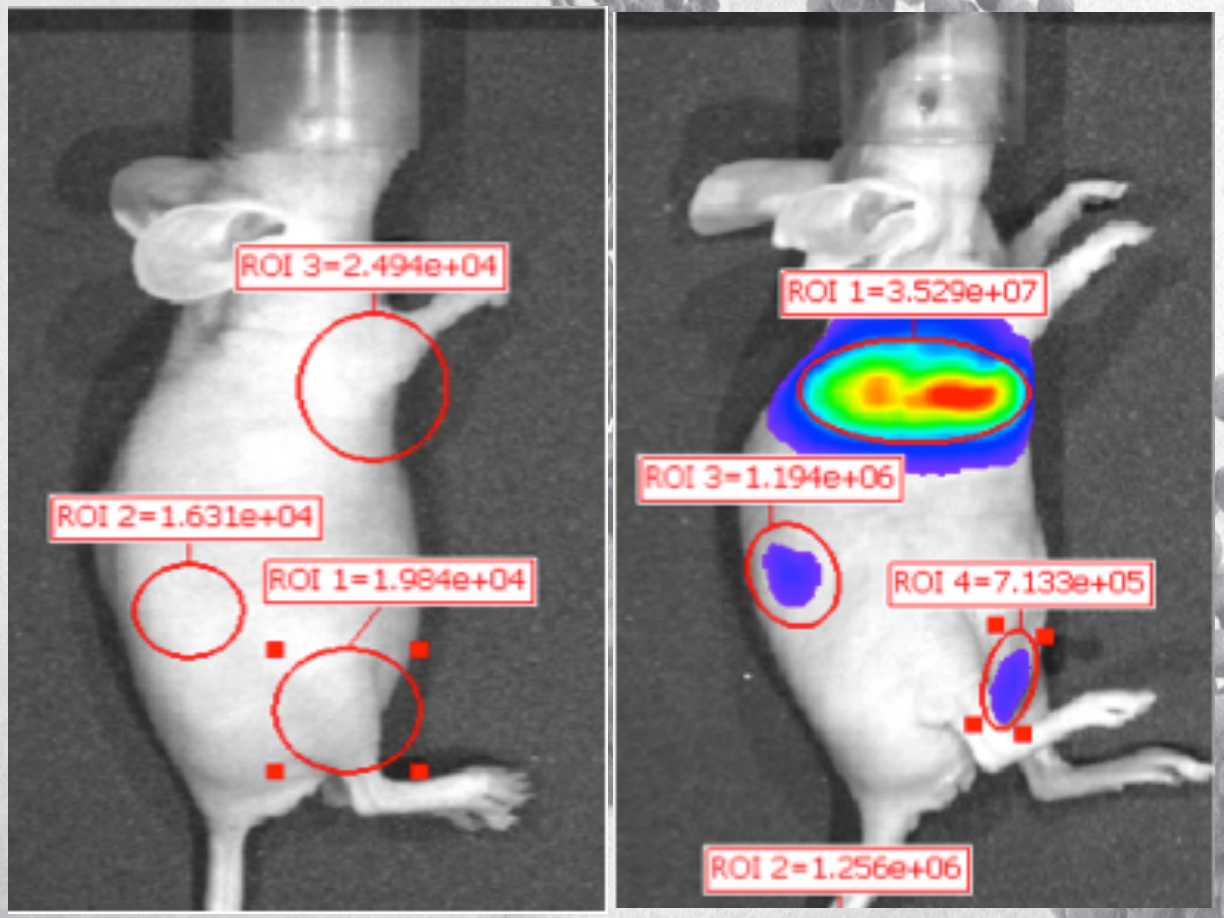
BENITEC BIOPHARMA
silencing genes for life™

Benitec Biopharma Ltd
ABN 64 068 943 662
F6A / 1 – 15 Barr Street
Balmain NSW 2041 Australia
Tel: +61 (0) 2 9555 6986
Email: info@benitec.com
www.benitec.com

Tribetarna™

Jet-PEI-based complexes can deliver DNA constructs to tumours with very high efficiency

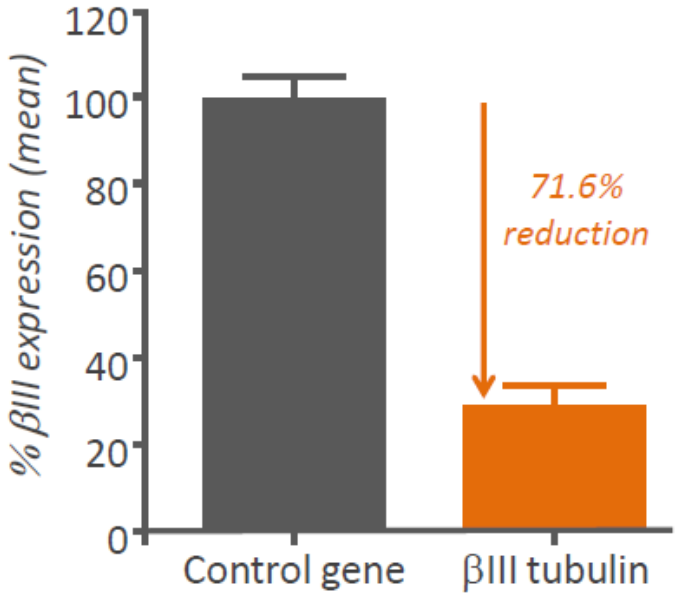
Jet-PEI nanoparticles efficiently deliver plasmid constructs to tumours *in vivo*. Mice were injected i.v. with Jet-PEI complexed with a luciferase-expressing plasmid (pGL4.50; Promega). Animals were imaged (Xenogen) 24 hrs after injection. Strong *luc* activity is apparent in tumour-bearing animals (right) but not control animals (left). Quantification of *luc* activity indicates 1,000-fold higher enzyme activity in tumours compared to non-involved tissues (data not shown).



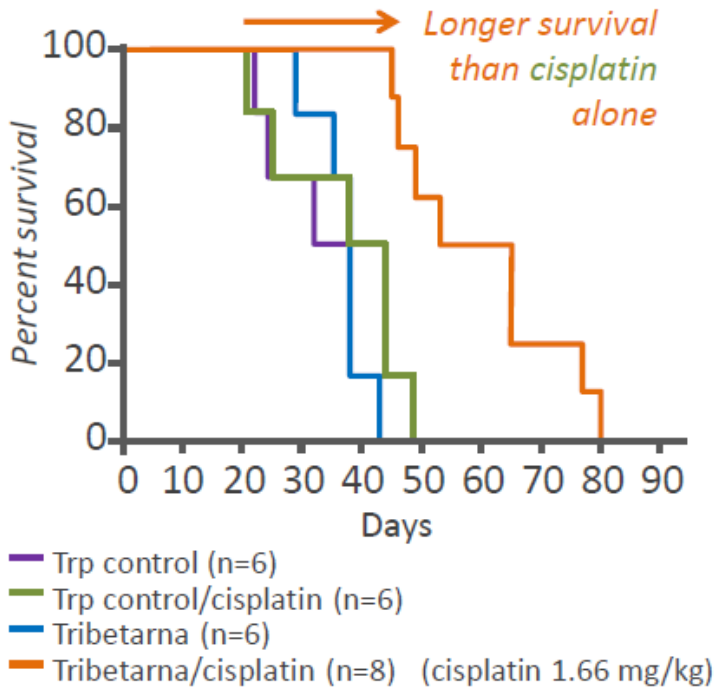
Drug resistant lung cancer:
Tribetarna™

Proof-of-principle is established:

A single injection of Tribetarna effectively silences the βIII tubulin gene in vivo and in vitro



Tribetarna™ significantly enhances survival in a preclinical model of lung cancer in combination with chemotherapy



Tribetarna™ - **Next Steps**

A Phase I/IIa clinical trial of Tribetarna™ in conjunction with cisplatin is planned

Benitec is committed to conducting a Phase I/IIa clinical trial of Tribetarna™ in combination with cisplatin in patients with advanced NSCLC in Europe in late 2014.

Patients will receive up to 4 cycles of Tribetarna™ + cisplatin and tumor growth and survival will be assessed.

To achieve this, preclinical safety and toxicity studies will be conducted in H2, 2014.

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

Other Programs

Hepatitis B – a replica of TT-034 approach. 350 million infected worldwide

AMD – A single injection to replace monthly injections. A $20 Billion p.a. market

Genetic diseases (OPMD, Huntington's, Retinitis pigmentosa) – No other viable approach.

Intractable cancer pain – A single intrathecal injection to provide long lasting pain relief.

Focus on value creation and revenue generation

Value creation – in-house programs	Revenue generation and validation – out-licensed programs
• Priority focus on advancing in-house programs to the clinic • Positive safety and efficacy data provides near term value inflection point • Will assess licensing or exit strategies at an optimal point to maximise shareholder returns	• Out-licensing or JV enables further development in additional applications • Provides additional opportunities for validation and revenue generation from up-front, milestone and licence fees • Benitec's know-how and unique technology provides opportunity for pharma to enhance many existing development programs

Commercially-focused Management and Board

Management

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

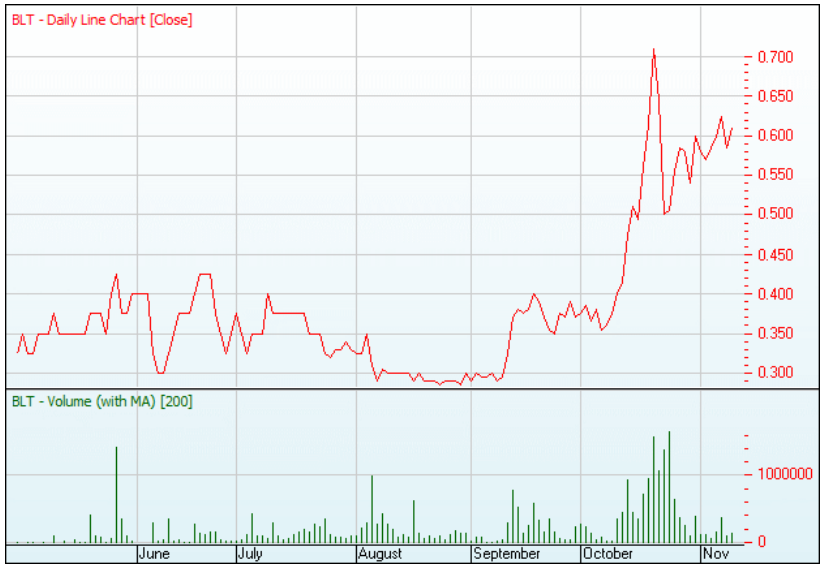
- **Peter Francis, LLB, Grad Dip. (Intellectual Property)**
  - Partner at Francis Abourizk Lightowlers

Directors:

- **Mel Bridges, BAppSc, FAICD**
  - Tissue Therapies, Alchemia, Pacific Diagnostics, PanBio
- **John Chiplin, PhD**
  - Polynoma, Arana, ITI Life Science Fund
- **Iain Ross, BSc, CH.D.**
  - Sandoz, Fisons, Roche, Celltech, Silence Therapeutics, Tissue Therapies, Ark Therapeutics
- **Kevin Buchi**
  - TetraLogic, Cephalon, Teva, Stemline Therapeutics, Forward Pharma,Pharmaceuticals, Celator Pharmaceuticals, Mesoblast

2013 Highlights

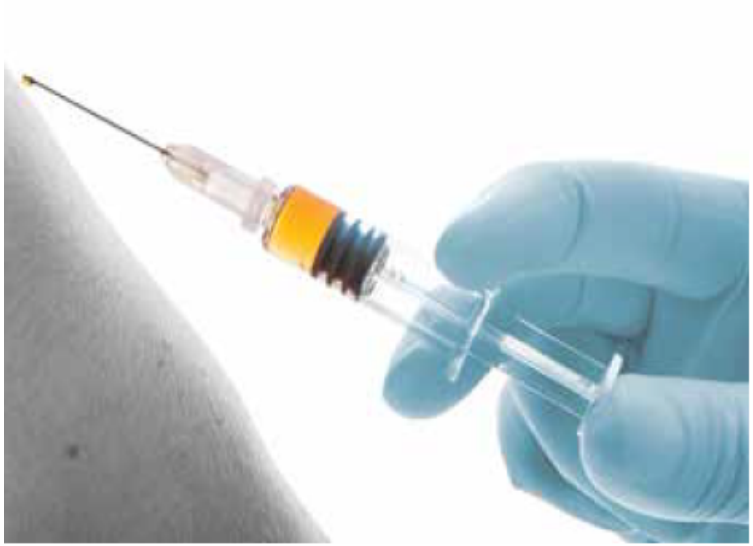
- ✓ NIH's Recombinant DNA Advisory Committee (RAC) provides unanimous approval of TT-034 trial design for Hepatitis C
- ✓ Agreement with Regen Biopharma brings total out-licensing deals to four in the last two years
- ✓ June: Licensee Calimmune commenced Phase I/IIa clinical trials in HIV
- ✓ July: $10.7 million capital raise secures funding for next stage of lead programs
- ✓ Aug: 25:1 Share consolidation



- ✓ Nov: Market Cap increased to > $50 Million post the capital raising
- ✓ Nov: Expansion of Benitec's Board with appointment of Dr Peter French and Kevin Buchi
- ✓ Dec: IND for TT-034 filed

Upcoming milestones and value driving events

- **Hepatitis C** first-in-man Phase I/IIa trial to commence in Jan 2014
- Advancement **of lung cancer** program
  - Toxicology studies to be undertaken in 2014
  - Phase I/IIa clinical trial aimed to commence in late 2014
- Progress on Calimmune's **HIV/AIDS** clinical trial
- Additional licensing agreements for other disease areas
- Progress on other pipeline programs as resources allow



Contact Information

Dr Peter French
Managing Director & Chief Executive Officer
Benitec Biopharma Ltd.
Phone: +61 (0)412 457 595
E-mail: pfrench@benitec.com
www.benitec.com