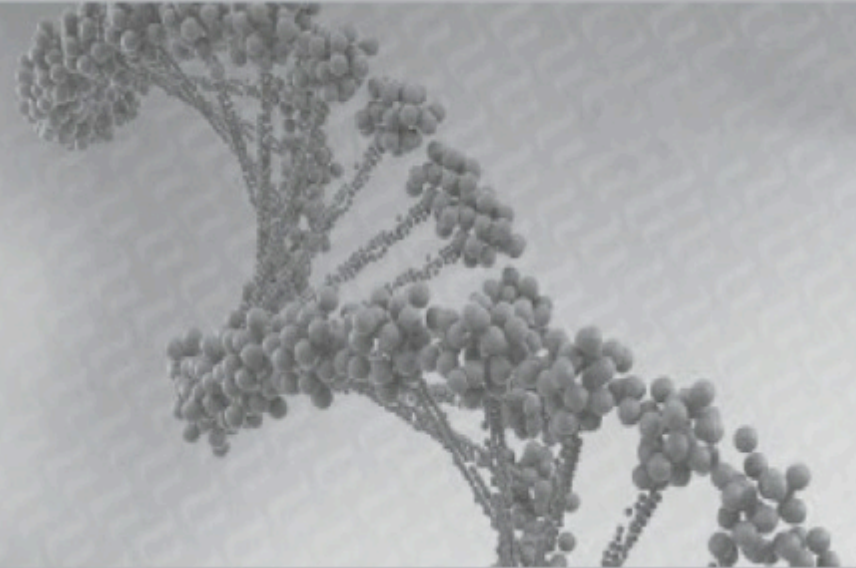




**BENITEC**  
B I O P H A R M A  
silencing genes for life™

# Company Update

November 2013





# 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.



# 2013 Highlights

- ✓ NIH's Recombinant DNA Advisory Committee (RAC) provides positive recommendation on TT-034 trial design for Hepatitis C
- ✓ IND for TT-034 has been completed, an IND # has been assigned - transfer to FDA's electronic document system has begun
- ✓ Agreement with Regen Biopharma brings total out-licensing deals to four in the last two years
- ✓ Licensee Calimmune commences Phase I/IIa clinical trials in HIV
- ✓ \$10.7 million capital raise secures funding for next stage of lead programs
- ✓ 25:1 Share consolidation
- ✓ Market Cap increased to > \$50 Million post the capital raising
- ✓ Expansion of Benitec's Board with appointment of Dr Peter French and Kevin Buchi





# Benitec investment case

- Developing game changing gene silencing technology as a treatment and “single shot cure” for a range of diseases
- Planned to commence Phase I/II clinical trials in two significant diseases:
  - Hepatitis C (TT-034)
  - Drug-resistant lung cancer (Tribetarna™)
- Successful trials should generate significant interest and investment by potential industry partners
- Other companies in the RNAi field have seen a significant valuation uplift (e.g. Alnylam) following positive clinical data

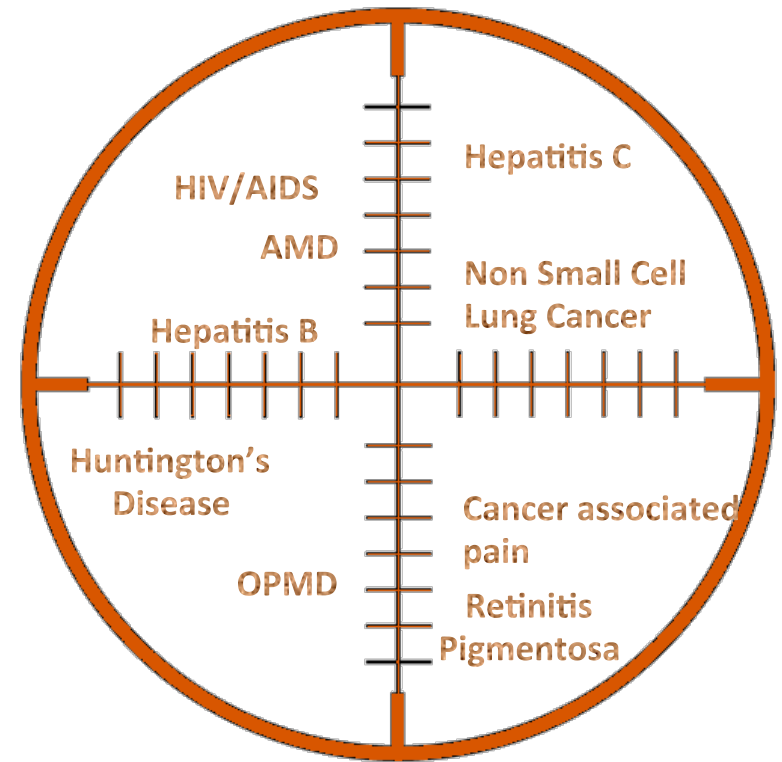
**The commencement of first in-man clinical trials marks a significant turning point for the company**





# One Weapon: Many possible targets

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





# Benitec Biopharma: Pipeline



Indication	Partners/Collaborators	Discovery	Pre-clinical	Clinical	
Hepatitis C				<i>Acquired from Tacere/Pfizer</i>	
Non Small Cell Lung Cancer *	University of New South Wales				
Cancer associated pain	Stanford University				
Hepatitis B	Biomics Biotechnologies				
OPMD**	Royal Holloway, University of London				
AMD***				<i>Acquired from Tacere</i>	
Retinitis Pigmentosa	Genable			<i>Out-licensed</i>	
HIV/AIDS	Calimmune				<i>Out-licensed</i>
Huntington's Disease	uniQure			<i>Out-licensed</i>	

*\*and other chemotherapy-resistant cancers*

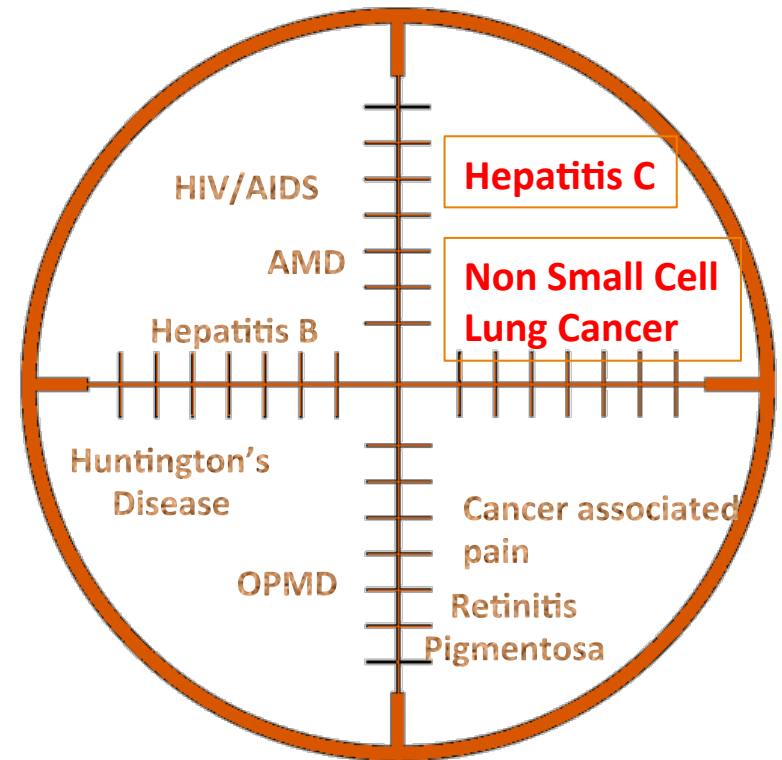
*\*\*Oculopharyngeal Muscular Dystrophy, an orphan disease*

*\*\*\*Age-Related Macular Degeneration*



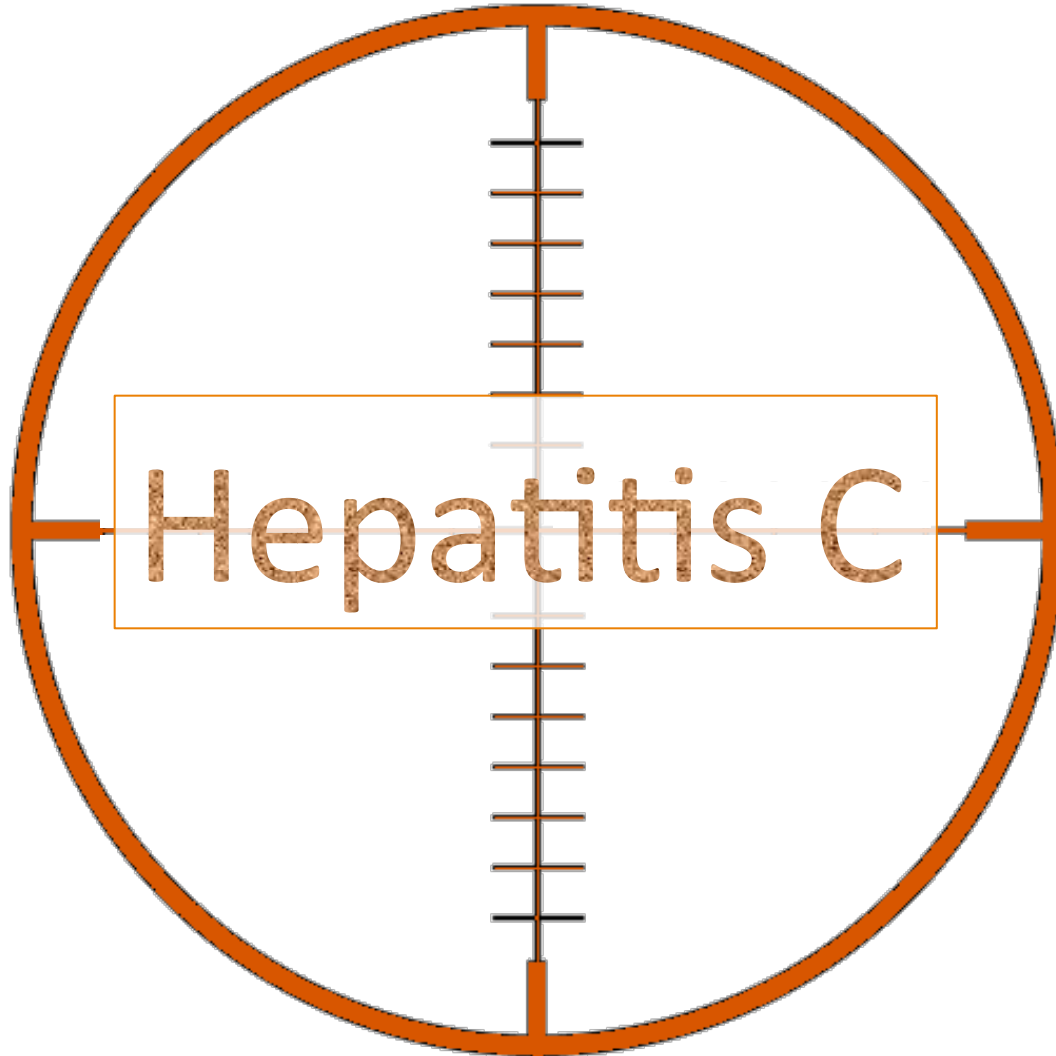
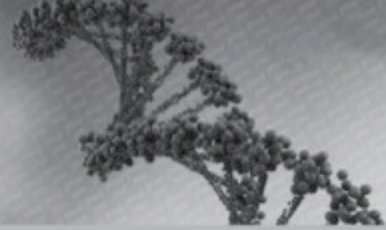
# One Weapon: Many possible targets

- 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™)





# Target Focus: Hepatitis C

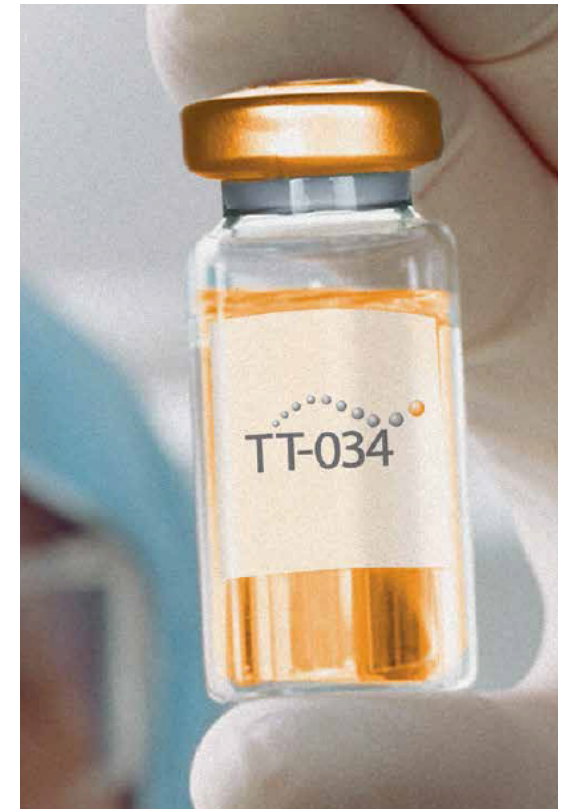




# Lead program (TT-034): Hepatitis C Therapeutic



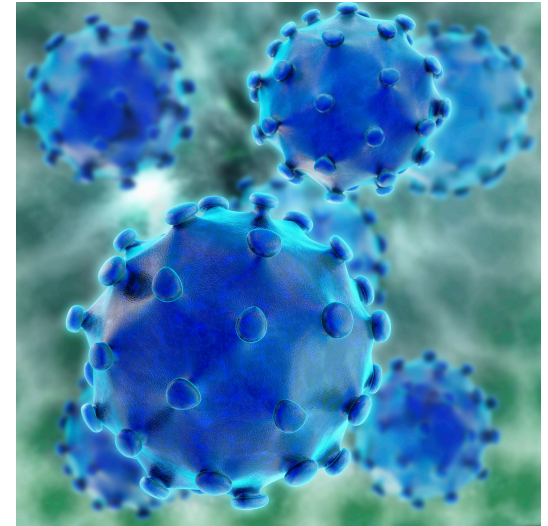
- A “molecular monotherapy” intended to treat and cure HCV infection with a single injection
- Many advantages over existing treatments:
  - ‘One shot cure’ eliminates patient compliance issues making it more attractive to payors (reimburseurs)
  - Design prevents formation of drug resistant mutants
- Key milestones:
  - Comprehensive pre-clinical safety and efficacy data generated by Pfizer/Tacere
  - NIH Recombinant DNA Advisory Committee (RAC) favourable review of clinical protocol
  - IND completed November 2013, IND # 15821 assigned
  - Phase I/IIa trial planned for early 2014





# TT-034's Place in the HCV Market

- Even with promising new drugs coming onto the market, HCV will remain a “Problem Not Solved”.
- As a “single shot cure,” TT-034 will supersede small molecule cocktails
  - Superior compliance, side effect profile and efficacy



**TT-034 is a “Disruptive Technology” in a market that will remain very large**



# TT-034: 2013 Clinical Trial Implications

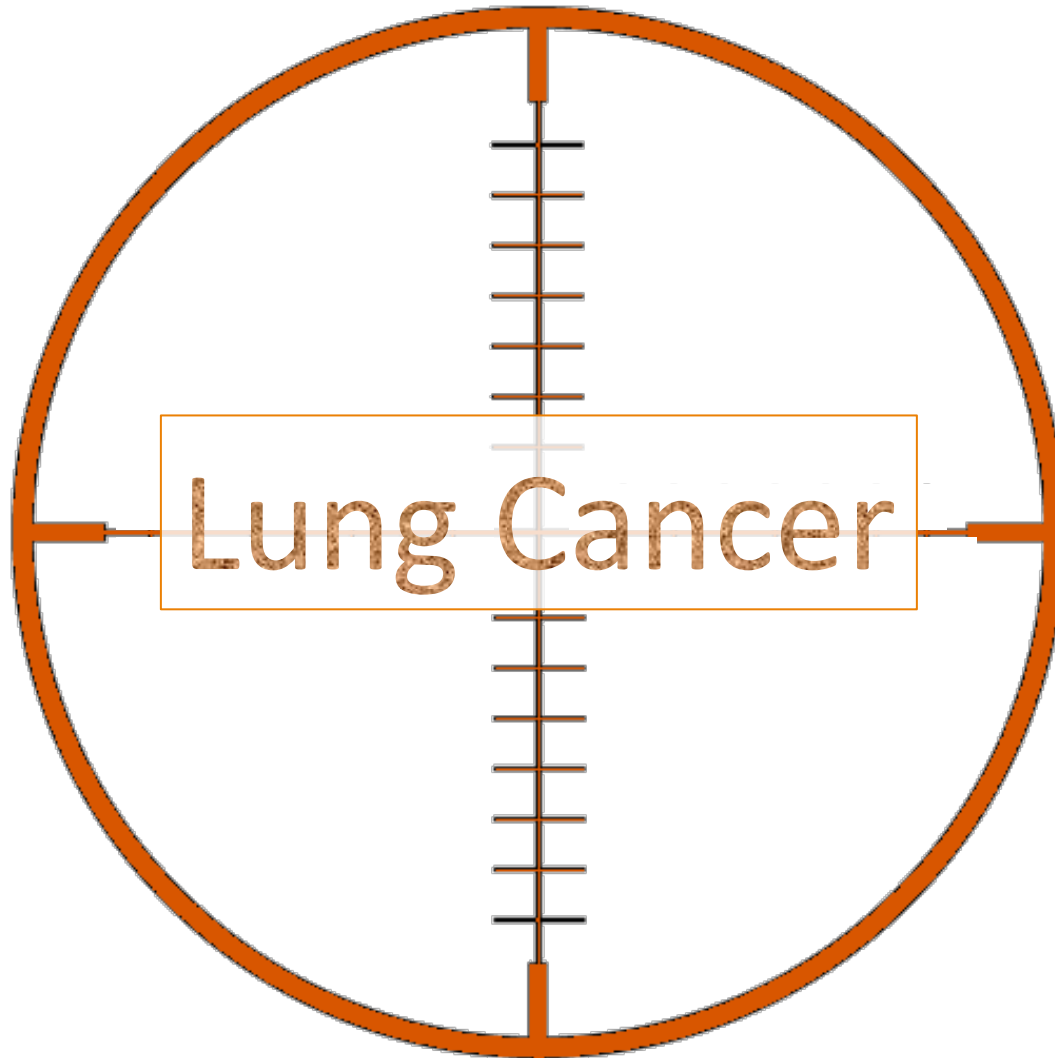


- Clinical success with TT-034 (efficacy and safety) should be a significant value inflection milestone for Benitec
- Clinical demonstration of a “game changer” for treatment of HCV
- Stimulates collaboration, partnering, licensing or acquisition interest
- Positive implications for Benitec’s other pipeline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

**Moves Benitec from a pre-clinical to a clinical stage company**



# Target focus: drug resistant lung cancer







# Target: $\beta$ III-tubulin gene

- Non-small Cell Lung Cancer (NSCLC) accounts for 80% of lung cancers, and lung cancer is the highest-ranking cancer for incidence and mortality worldwide. The global market for NSCLC therapies is estimated to be US\$13.3 billion by 2015.
- Resistance to chemotherapy drugs is strongly associated with over-expression of  $\beta$ III-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  $\beta$ III-tubulin show significantly decreased survival.
- Inhibition of *TUBB3* by RNAi can restore chemo sensitivity.
- Companion diagnostic assay

**With clinical success in lung cancer, this approach can be developed to target other cancers that express high  $\beta$ III tubulin (breast, ovarian, gastric<sup>1</sup>)**

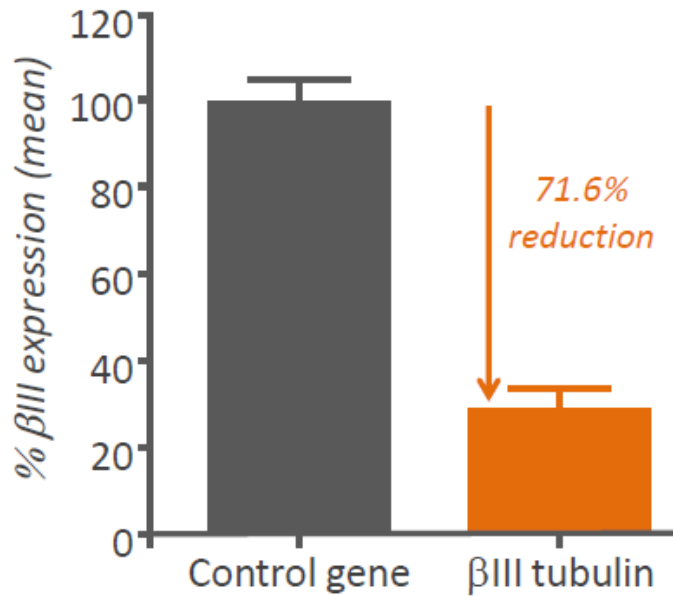


# Drug resistant lung cancer: Tribetarna™

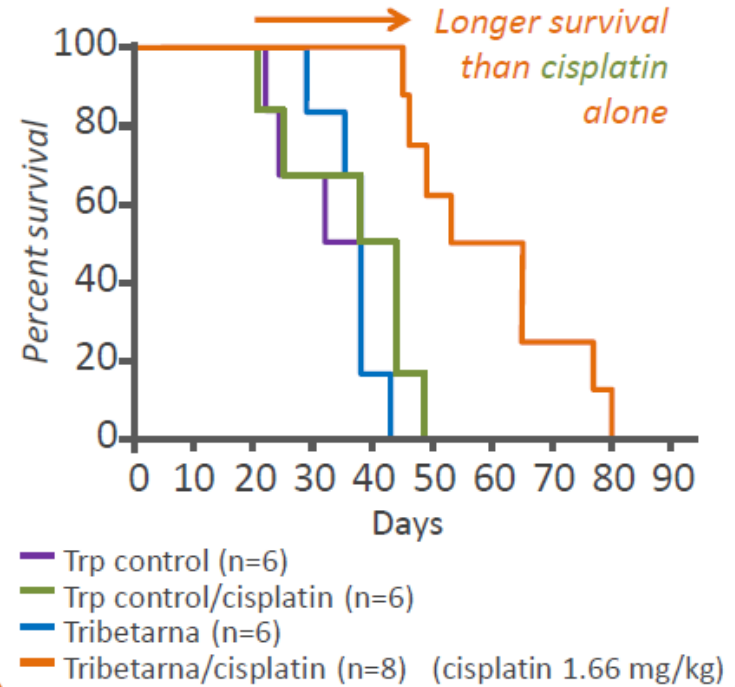


Proof-of-principle is established:

*A single injection of Tribetarna effectively silences the  $\beta$ III 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.





# Big pharma are doing big deals in Benitec's program areas



Companies	Condition	Stage	Deal	When
Gilead/ Pharmasset	Hep C	Phase II	Gilead acquired Pharmasset for <b>\$10.8billion</b>	Nov 2011
Bristol-Myers/ Inhibitex	Hep C	Phase II	Bristol-Myers paid <b>\$2.5 billion</b> to acquire Inhibitex, which was developing BMS-986094	Jan 2012
Enanta/ Novartis	Hep C	Phase I	\$35 million up front, as much as \$404 million more on clinical, regulatory, and commercial milestones	March 2012
Gilead/ GlobelImmune	Hep B	Phase Ia	Undisclosed upfront payment plus additional milestone payments and potentially, royalties	Oct 2011
Xenon/ Genentech	Pain	Phase II	A\$646 million deal – undisclosed upfronts and milestones	Jan 2012
Avila/ Clovis	Non small cell lung cancer	Pre clinical	Unspecified upfront and regulatory and sales milestones to \$209 million	May 2010



# Focus on value creation and revenue generation



## Value creation – in-house 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

## Revenue generation and validation – out-licensed programs

- 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



# Benitec Biopharma: Financial Profile



Key Financials	ASX:BLT
Price per share at 12 <sup>th</sup> November 2013	AUD .600
Market capitalisation at 12 <sup>th</sup> November 2013	AUD 51.00 million
Issued equity: ordinary shares at 12 <sup>th</sup> November 2013	83,960,907
Options on issue at 12 <sup>th</sup> November 2013	19,797,734
Cash balance at 30 June 2013	AUD 1.58 million
Capital Raised since June 30 2013	AUD 10.7 million
Monthly burn rate	AUD 231,000





# Upcoming milestones and value driving events



- Hepatitis C first-in-man Phase I/IIa trial likely to commence early in 2014 - pending acceptance of IND
- 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 and Genable licensed programs
- Progress on other pipeline programs as resources allow



**The commencement of first in-man clinical trials marks a significant turning point for the Company – Benitec moves from a preclinical company to a clinical company**