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Investor Presentation

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Dr. Jonathan Coates, CSO

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Avexa

Forward-looking Statements

This presentation includes forward-looking statements that are subject to risks and uncertainties. Such statements involve known and unknown risks and important factors that may cause the actual results, performance or achievements of Avexa to be materially different from the statements in this presentation.

Actual results could differ materially depending on factors such as the availability of resources, the results of pre-clinical proof-of-concept studies, the timing and effects of regulatory actions, the strength of competition and the effectiveness of patent protection.

Additional information regarding risks and uncertainties is set out in the Information Memorandum dated 5 July 2004 available from Avexa on request.



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- **Company overview**

- The Shire Deal
- Market Potential
- Development Strategy
- Key Milestones
- Key Personnel
- Summary



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Avexa – Overview

- ASX listed in September 2004
- Focus on significant markets of unmet medical need in infectious diseases
 - HIV, Hep B and antibiotic resistance (all pre-clinical)
- 12 employees
 - Plus 20 external consultants via collaborations
- AUD \$10M in cash
 - Two years funding
 - Dedicated to existing programs
- 3 products in pipeline



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Avexa – Current Product Pipeline

Disease Indication	Research	Lead Compound	Pre-clinical	Phase I	Phase II
Hepatitis B					
	Non nucleoside		Q1 2005	Q4 2005	Q4 2006
HIV					
	HIV integrase		Q1 2006	Q1 2007	
VRI					
	Antibiotic		Q1 2006	Q4 2006	



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Avexa Current Products – Hepatitis B

- Large market potential
 - 350-400 million carriers of hepatitis B worldwide
 - Major causes of liver failure and cancer requiring transplant
 - Market expected to grow to >US\$1B by 2008 (Source: Datamonitor)
- Avexa's project is focused on non-nucleoside compounds
 - target a different step in the replication of HBV to other drugs
- Pre-clinical toxicology results expected in 2nd Qtr 2005
- Aim to be in Phase I clinical trials in 2006



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Avexa Current Products - HIV Integrase

- Avexa has a window of opportunity to develop one of the first HIV integrase inhibitors to reach the market, as:
 - there is no drug currently marketed that is active against HIV integrase; and
 - there is only one HIV integrase inhibitor currently known to be in clinical trials
- A lead series has been chosen
- Aim to be in Phase I clinical trials in 2007



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Avexa Current Products – New Antibiotic

- Vancomycin treats methicillin resistant *Staphylococcus aureus* (MRSA);
 - Vancomycin is generally the last line of defence against drug-resistant bacteria
 - Resistance to vancomycin is becoming more frequent
- Avexa targeting inhibition of bacterial cell wall synthesis
 - Looking to replace vancomycin by targeting vancomycin sensitive and resistant bacteria
- In the next 12 months
 - determine the spectrum of activity
 - progress optimised molecule into animal models



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Avexa – Overview

R&D Collaborations

- Victorian College of Pharmacy
 - HIV & HBV
- Shanghai Institute of Organic Chemistry
 - HIV & VRI
- St Vincent's Institute of Medical Research
 - HIV
- Wollongong University
 - HIV & VRI
- Rega Institute on Integrase (Belgium)
 - HIV



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Avexa – Business Strategy

To build a competitive biotechnology company we must...

- Build a portfolio of early and late stage products
- Advance projects to human clinical trials as fast as possible
- Get a product on the market and generate cashflows



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Avexa – Transformation

- An effective strategy to pursue these objectives and maximise gains from our existing early stage product portfolio is to secure a later stage clinical trial product which complements our existing project pipeline.
- Consistent with this strategy, Avexa has licensed OXARA (SPD754), a Phase II drug from Shire Pharmaceuticals plc.



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Avexa – New Product Pipeline

Disease Indication	Research	Lead Compound	Pre-clinical	Phase I	Phase II	Phase III
HIV Hepatitis B HIV VRI HIV	OXARA - SPD754 - NRTI					Q1 2006
	Non nucleoside		Q1 2005	Q4 2005	Q4 2006	
	HIV integrase		Q1 2006	Q1 2007		
	Antibiotic		Q1 2006	Q4 2006		
	SPD756 – backup compound (option)					



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Who is Shire?

Shire is:

- a global specialty pharmaceutical company
- market cap around US\$5 billion
- worldwide sales US\$590 million

Shire has:

- reduced its R&D spend, hence Avexa collaboration makes sense
- closed its anti-viral operations
- a product focus on gastrointestinal, renal disease & CNS



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Avexa – License Terms

- SPD754 is a nucleoside reverse transcriptase inhibitor
- Inhibits replication of the HIV virus – similar to other NRTIs on the market (ie 3TC)
- Avexa:
 - pays NO upfront or milestones to Shire
 - licensed back North American marketing rights to Shire for royalty
 - retains rest of the world marketing rights
 - reciprocal royalty paid by each party
 - responsible for Phase II & Phase III trials
 - able to sub-license all or some rights
 - has option over HIV backup compound (completed Phase I clinical trials)



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Avexa – License Terms

- Shire to make AUD\$2M investment into Avexa
 - Initial investment escrowed – effectively 2 years
 - Shire has option to acquire additional 4 million shares in 3 years
 - Subject to shareholder approval
- Working in collaboration with Shire
 - Joint Development committee
 - Avexa to access Shire's regulatory team
 - Co-develop global marketing strategy
 - Post marketing trials 50/50 cost share



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Why Shire chose Avexa?

- Looking to out-license anti-viral program
 - Closed down anti-infectives R&D program in North America
 - No longer has anti-viral drug development capabilities
- Shire confident in Avexa's ability:
 - Matthew Emmens, Chief Executive of Shire:
“Avexa is an ideal partner for the product, having the skills and expertise to take this program forward and see it through to registration and approval in a timely manner.”
(ASX announcement: 18 January 2005)
- Existing strong multi-level relationships between Avexa and Shire
- Negotiated a mutually beneficial relationship



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Why in-license SPD754?

- Economical way to acquire a later stage product into the Avexa portfolio at no upfront or milestone cost
- Expected significant revenue stream for Avexa in 2009
 - versus 6 to 8 years from existing portfolio
 - utilise sales proceeds to self fund existing programs
- Expected medium term increase in shareholder value
 - Phase IIb trial results in next 12-18 months
 - Creates a platform to build longer term sustainable shareholder value
- Can develop SPD754 with 3 additional staff – cost effective



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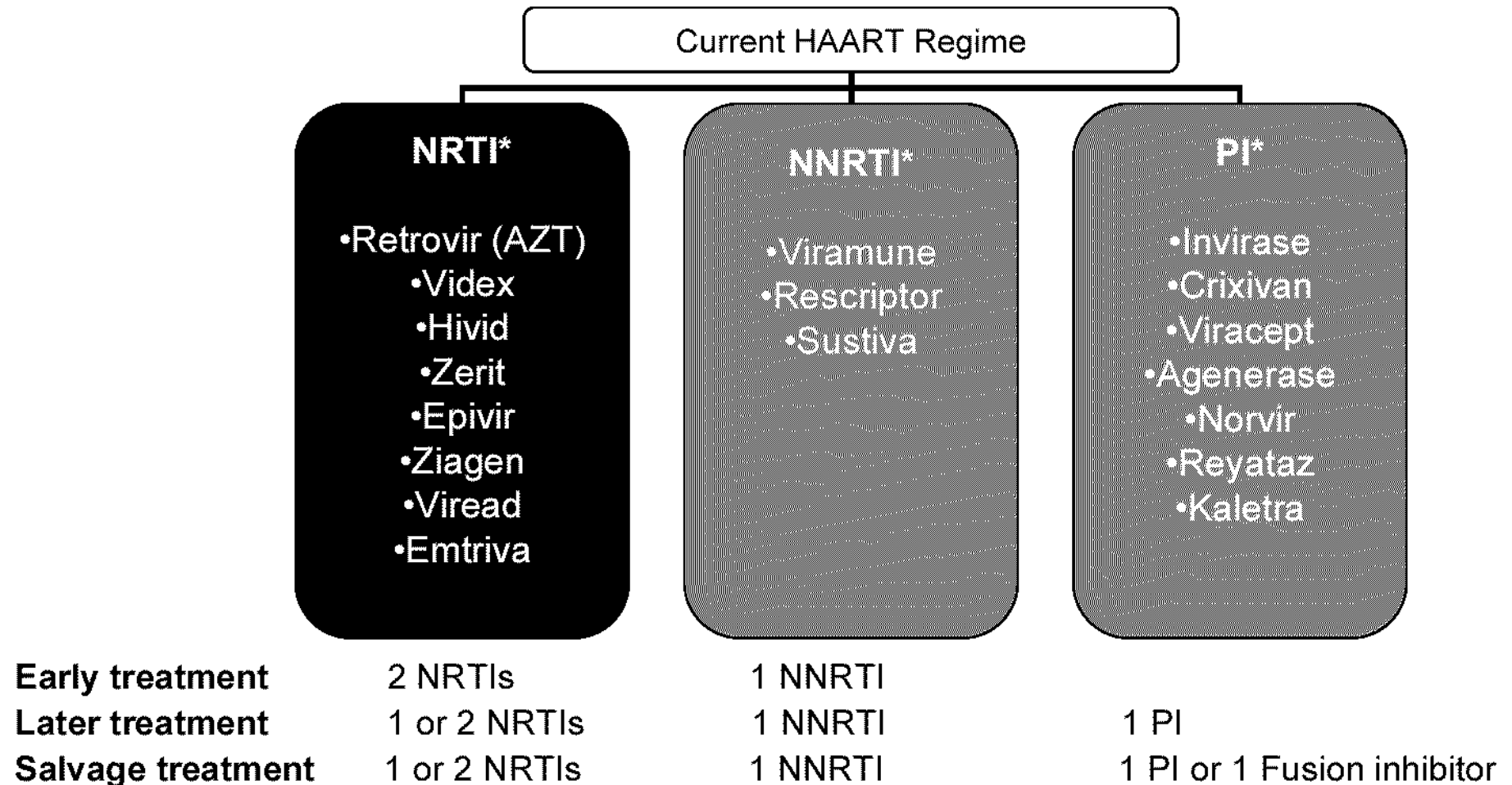
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The HIV Market

- Current >US\$6bn market for HIV drugs suggest large market potential
 - >50% of sales is from NRTIs
 - HIV treatment market forecast to grow to US\$12.2 billion by 2012 (Source: Datamonitor)
- Western World (US & Europe)
 - ~ 950,000 HIV patients with around 30% receiving treatment
 - 64,000 new HIV infections per year
 - People living longer due to HIV therapies (HAART)
- Ongoing need for new drugs
 - Side effects
 - Resistance – approximately 50% of treated patients



HIV – Current treatment



* NNRTI = Non-nucleoside RTI; PI = Protease inhibitor



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SPD754 Phase IIa Studies Complete

- Proof of Concept Trial in 63 HIV-infected individuals
 - Patients had never taken any drug therapy to treat HIV (ie treatment naïve)
 - Treated with SPD754 for 10 days
 - 200 mg, 400 mg, 600 mg, 800 mg, 1200mg
 - Results:
 - Reduction in plasma viral loads (-1.18 to -1.65 log) on day 11 - equivalent or greater than that of other NRTIs
 - No adverse effects reported
 - Reduction in viral load was statistically significant
- Positive clinical result and now need to differentiate product



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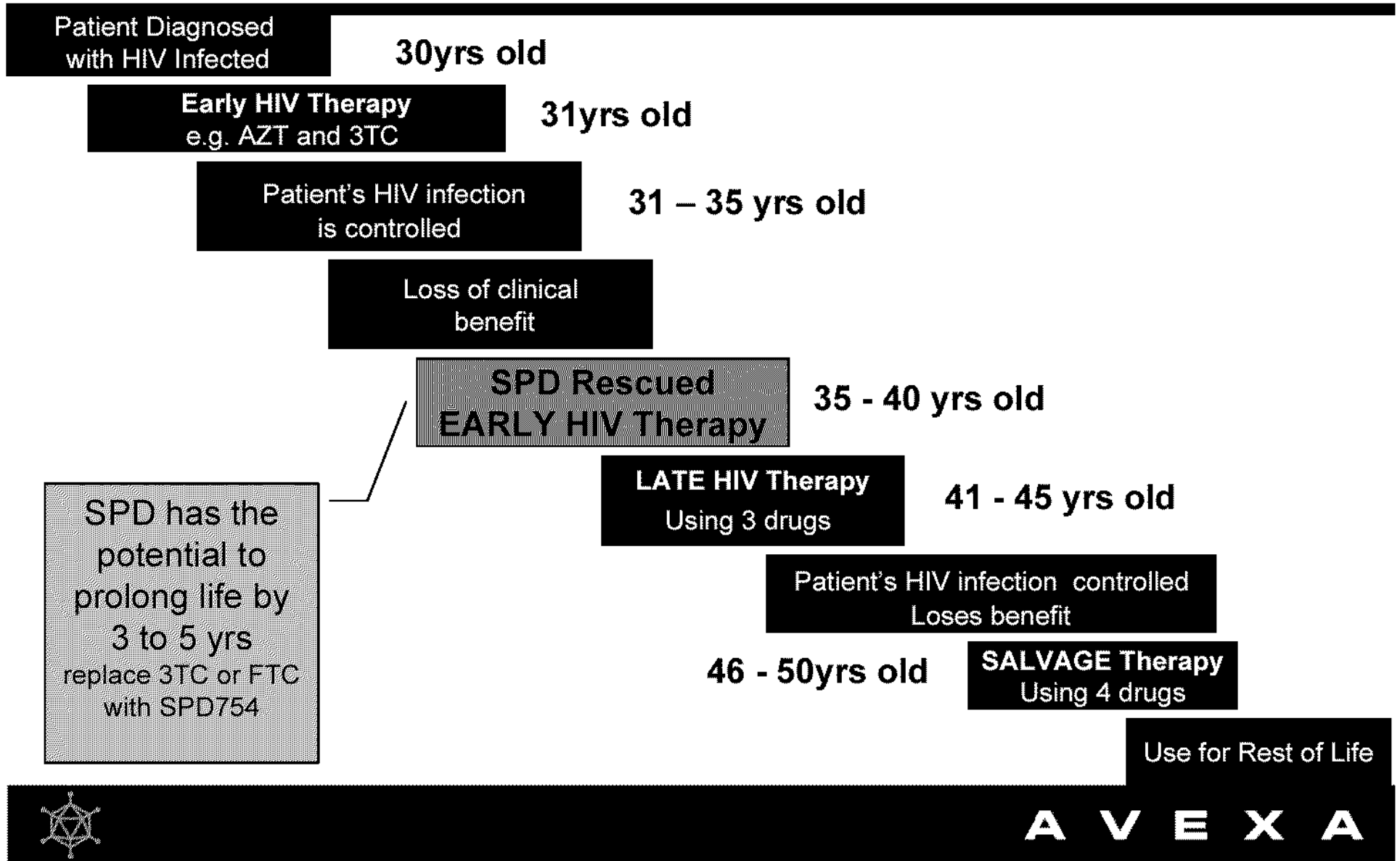
Avexa – planned SPD754 trials

- Planning to do a ~ 60 patient Phase IIb study
 - Two doses plus placebo for 21 days
 - Aimed at targeting M184V (3TC generated mutant HIV virus patents)
 - Positions SPD754 as 1st line 2nd regimen therapy
 - Looking for $> 0.6 \text{ Log}_{10}$ drop in viral load in M184Vs
- If successful in Phase IIb enter Phase III
 - US Bureau of Economics 2003 paper shows that all of the 29 HIV drugs that have entered Phase III have made it to market
- These data suggest a high chance of success once Phase III clinical trials entered



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SPD754 – Market position



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Avexa - Major milestones for 2005

1st Q

- Announced VRI *in vitro* screening results
- Commence Phase IIb trial with OXARA (SPD754)

2nd Q

- Complete animal proof of concept with HBV compound

4th Q

- Commence animal studies with HIV integrase inhibitor
- Commence Phase I clinical trials with HBV compound
- Commence animal studies with VRI anti-bacterial compound



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Avexa - Major milestones for 2006

1st Q

- Obtain results of Phase IIb for OXARA

3rd Q

- Commence Phase III trials for OXARA

4th Q

- Commence Phase I/II clinical trials with HIV integrase inhibitor
- Complete Phase I with HBV compound
- Commence Phase II with HBV compound
- Complete toxicology for VRI lead compound
- Commence Phase I with VRI lead compound



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Avexa – Product Pipeline in 2009

Disease Indication	Research	Lead Cmpd	Pre-clinical	Phase I	Phase II	Phase III	Market
HIV	OXARA SPD754 - NRTI						
Hep B	Non- nucleoside					2010	
HIV	HIV integrase					2010	\$\$\$ 2012
VRI	Antibiotic					2010	2012
							Revenues used to advance other Avexa projects



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Avexa – Senior Management

- **Dr Jonathan Coates (CSO)**
 - Ex Glaxo & GlaxoWellcome
 - Discoverer of lamivudine (3TC), Zeffix/Epivir, US\$B drug
 - Worked on Relenza, head several virology projects at Glaxo
 - >25 years in drug discovery & development
- **Dr Susan Cox (Head of Virology)**
 - Ex Glaxo, Astra & Medivir
 - Assoc. Prof. at Karolinska Institutet (Home of Nobel prize)
 - Development of foscarnet for CMV in HIV
 - > 16 years in drug development
- **Dr John Deadman (Head of Chemistry)**
 - Ex-Trigen
 - 3 projects into clinical trials
 - >15 years in drug discovery



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Avexa - Board

Board

- Dr. Hugh Niall (non-Ex Chairman)
- Ms. Helen Cameron (non Ex-Dir)
- Dr. Julian Chick (CEO & MD)

SAB

- Professor David Cooper (Chair)
- Mr Mark Sullivan
- Professor Roy Jackson
- Dr Eric Gowans



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ASX valuations of Phase II Projects

Company	Code/ Exchange	Number of Products	Market Capitalisation (\$ M)
Avexa	AVX/ASX	•1 Phase II •1 pre-clinical	A\$20
Pharmaxis	PXS/ASX	•2 in Phase II •1 in Phase III	A\$90
Progen Industries	PGL/ASX	•1 in Phase II •1 in Phase I	A\$155
Metabolic Pharmaceuticals	MBP/ASX	•1 in Phase II •1 pre-clinical	A\$279
Idenix	IDIX/Nasdaq	•1 in Phase III •1 in Phase II •1 in Phase I	US\$812



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Summary

- Existing programs progressing on track
- In-licensed later stage product
 - Increased probability of reaching the market
 - Instant increase in company value
 - Decreased risk for shareholder
 - Validation of company skills & capabilities in anti-virals
- Late stage product complements existing projects
 - Revenue will enable Avexa to retain more value from current projects
- Looking to grow an anti-infectives company
 - Marketed product with revenue stream



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www.avexa.com.au

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Dr Lisa Springer
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