# BioDiem

# Therapies for major infectious diseases and related cancers

Wholesale Investor Capital Showcase: Sydney 24 September 2013

Julie Phillips, CEO www. biodiem.com (ASX:BDM)

# BioDiem Agenda

- Challenges
- **Company Focus**
- **©** Current Achievements
- Future Investment Opportunity

# BioDiem Challenges



### **Increasing resistance**

To antibiotics – major concern healthcare systems worldwide



### Hard to treat

Fungal infections, affecting vulnerable patients



### No vaccines available

For worldwide diseases eg. hep B, C and D

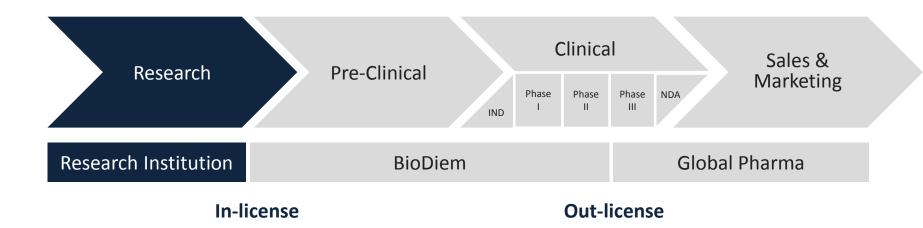


### **Product pipelines diminish**

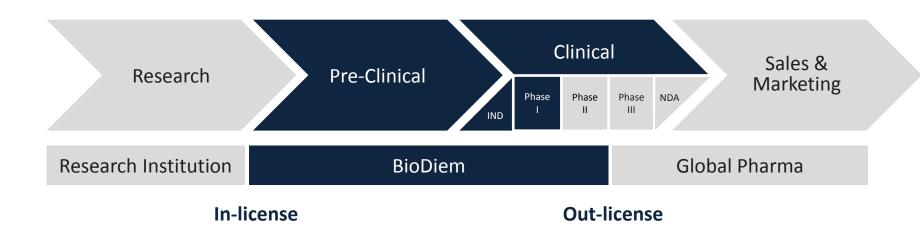
Large Pharma focus on innovation, as product pipelines diminish > acquisition opportunities

# BioDiem Company Focus

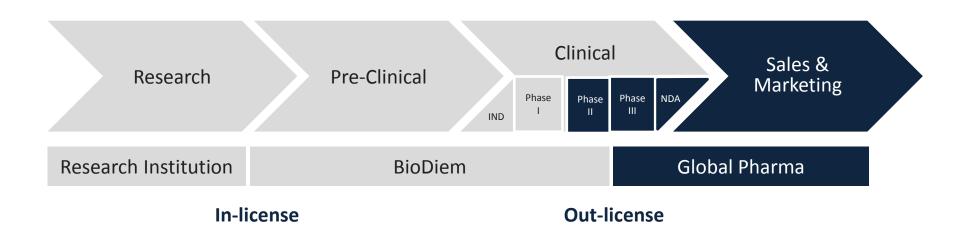
# BioDiem Business Model

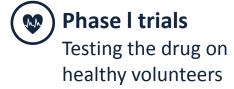


# BioDiem Business Model



### BioDiem Business Model







### **Phase II trials**

Testing the drug on a small number of patients with the disease



### **Phase III trials**

Testing the drug on hundreds/thousands of patients with the disease

# BioDiem Three core development programs





Influenza vaccines (seasonal and pandemic)



LAIV vaccine – licensed in multiple countries

Vaccine development platforms Hepatitis B/D, nasopharyngeal carcinoma, TB



SAVINE technology, LAIV viral vector, flavi and hepatitis virus technologies for novel therapeutic vaccines

Infectious disease therapies
Fungal disease: difficult to treat



BDM-I antimicrobial compound

Bacterial disease: MRSA Parasites: Schistosomiasis

### BioDiem Influenza Vaccines

# Live Attenuated Influenza Virus: LAIV Advantages



**Needle-free nasal delivery** 

No trained personnel and blood/sharps precautions unnecessary



Extensive clinical and market experience > 100m doses

In Russia efficacy and safety in >500,000 adults/140,000 children



**Broader immune response** 

Than seen with inactivated influenza vaccines



**High yields** 

In egg-based or cell-based production (with no reliance on eggs)



No adjuvant required

# BioDiem Flu vaccines

### **Live Attenuated Influenza Virus: LAIV**

Product	Disease Targets	Current Partners	Development Status
LAIV	Influenza – Seasonal & Pandemic	WHO SII (India) BCHT (China) IEM (Russia)	Marketed with license revenues \$A1.3m FY2012 Phase II (cell-based technology) Seeking growth & out-licensing in more markets
(Influenza)	Avian (Bird) Flu	IEM/WHO	Clinical trials completed in Thailand and Russia

# BioDiem Vaccine development platforms

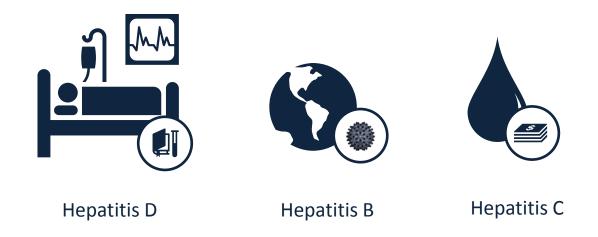
### Opportunity to target multiple infectious diseases and related cancers





Disease Targets	Vaccine development	Nasopharyngeal carcinoma (NPC), tuberculosis (TB)
Current Partners	VIVALIS	In-house
Development Status	First stage of development project completed	Seeking partner for more advanced data in animals

# BioDiem Hepatitis Vaccine (therapeutic)



Rights licensed from the University of Canberra

R&D program underway



# BioDiem BDM-I antimicrobial disease targets

BDM-I currently in development as treatment against

- 'superbugs' such as antibiotic-resistant bacteria incl. TB, and others
- hard-to-treat fungal infections

Product	Disease Targets	Current Partners	Development Status
	Bacterial infections (tuberculosis, others)	US government backed research institutions	Entered in vivo testing in 2013
BDM-I (Antimicrobial)	Fungal infections	US government backed research institutions	Entered in vivo testing in 2013
	Parasitic diseases (schistosomiasis, others)	QIMR program	Entered in vivo testing in 2013



# Expanding Global Partnerships and Alliances

### Global partnering & commercialisation network



### BioDiem Current Achievements

### **Vaccine Development Pipeline**

	Research	Preclinical	Phase I	Phase II	Phase III	Marketed
Influenza vaccines		Cell based prod	uction			
(Seasonal & Pandemic)	Egg based production					
		alth Organisation for patitute of India and Cha			eveloping Country p	rivate markets
<b>LAIV</b> Viral Vector platform						
Hepatitis D PLATFORM (Hepatitis D/Hepatitis B therapeutic vaccine)	<b></b>					
Flavivirus PLATFORM (Dengue fever, West Nile, Murray River encephalitis)						
SAVINE antigen technology (Tuberculosis, NPC)						

### BioDiem Current Achievements cont'd

### **BDM-I Development Pipeline**

	Research	Preclinical	Phase I	Phase II	Phase III	On market
Bacterial targets (Biological warfare agents, MSRA, tuberculosis, other)		<b>-</b>				
Fungal targets (Difficult to treat fungi, incl. Scedosporium, Pneumocystis & Candida spp.)						
Parasitic targets (schistosomiasis, other)						

### BioDiem Future Investment Opportunity

Vaccine market US\$52b by 2016

Antifungals market, US\$12.2 billion by 2016 Global antibacterials market, US\$46 billion by 2017 Anti-infectives market market,
US\$103 billion
by 2015

### BioDiem BioDiem Limited

As at 20 Sep 2013 (\$AUD)				
Market Cap	\$5.7 M			
52 week range	\$0.03 - \$0.10			
Cash as of 30 Jun 13	\$1.2M			
Shares	142.1m			
Shareholders	910			
Listed Options	24.6m			

AGM on 8 Oct 2013 contains resolution to delist from ASX

**Hugh Morgan AC** 



Chairman

**Julie Phillips** 



CEO

### **Prof Larisa Rudenko**



Non-executive Director

**Prof Arthur Li** 



Non-executive Director

### **Don Brooks**



Non-executive Director

### BioDiem Next 12 months



Additional license revenues



Clinical trial results



Vector program



Results from expanded studies



Hepatitis vaccine progress



Expand sales and use of LAIV in new territories



BDM-I testing in animal models



Completion of BDM-E out-licensing or sale

# BioDiem

# Therapies for major infectious diseases and related cancers

Wholesale Investor Capital Showcase: Sydney 24 September 2013

Julie Phillips, CEO www. biodiem.com (ASX:BDM)