



Therapies for major infectious diseases and related cancers

Wholesale Investor Capital Showcase : Sydney 24 September 2013

Julie Phillips, CEO
[www. biodiem.com](http://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

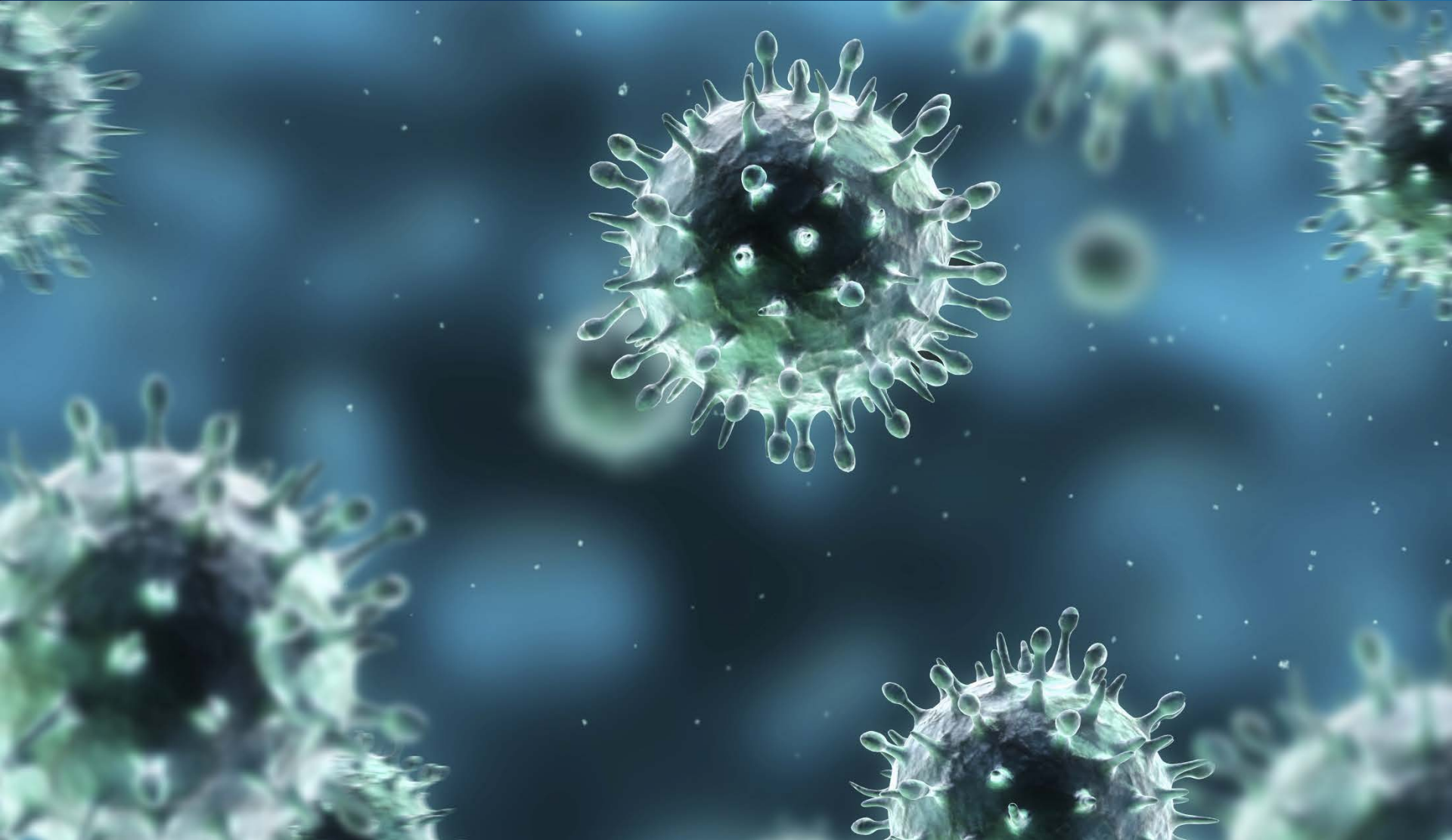
For worldwide diseases eg. hep B, C and D



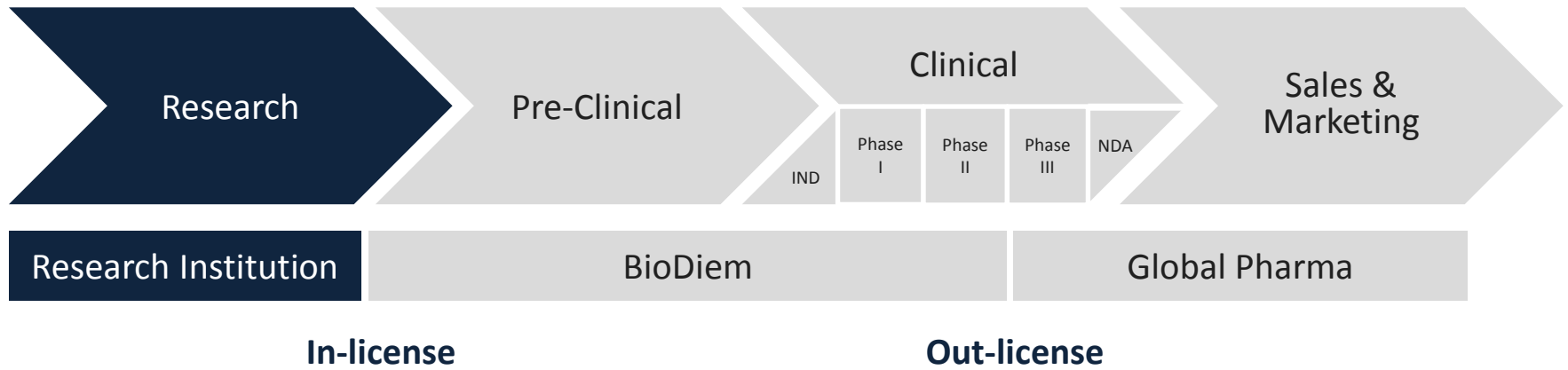
Product pipelines diminish

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

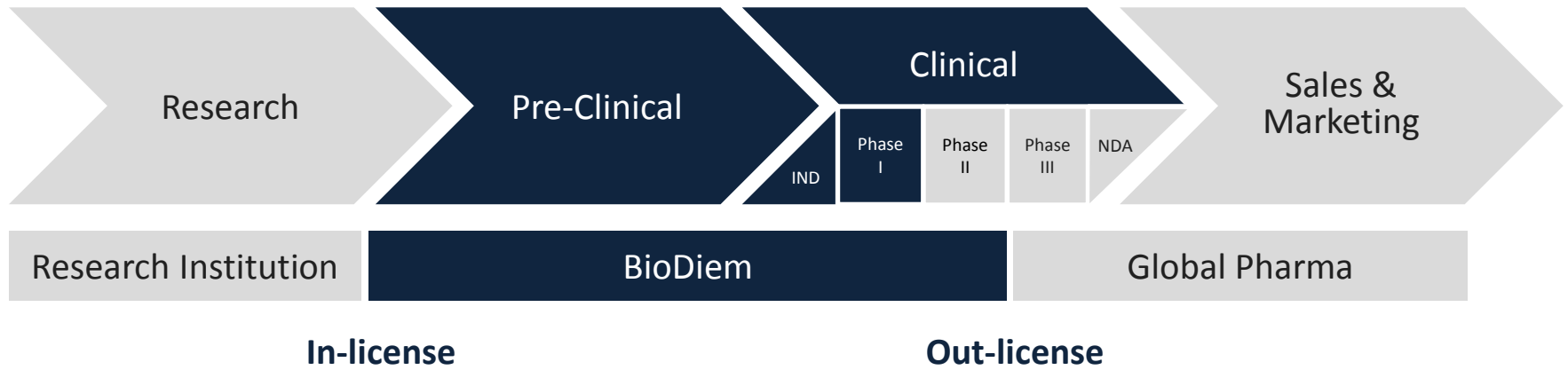
BioDiem Company Focus



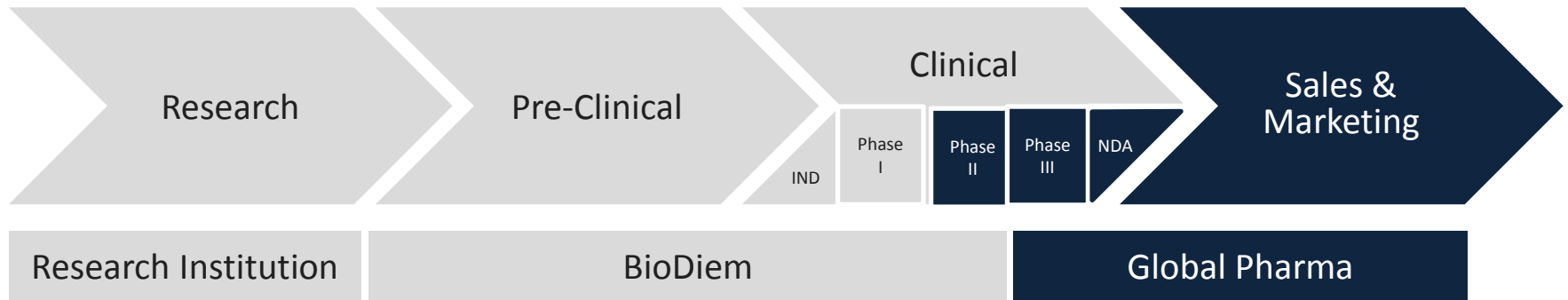
BioDiem Business Model



BioDiem Business Model



BioDiem Business Model



In-license

Out-license



Phase I trials

Testing the drug on healthy volunteers



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



Target



Core Technology

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
Bacterial disease: MRSA
Parasites: Schistosomiasis



BDM-I antimicrobial compound

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

Live Attenuated Influenza Virus: LAIV

Product	Disease Targets	Current Partners	Development Status
LAIV (Influenza)	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
	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



LAIV Vector
(Vaccine delivery)



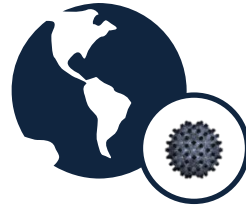
SAVINE
(Custom vaccines)

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)



Hepatitis D



Hepatitis B



Hepatitis C

Rights licensed from the University of Canberra

R&D program underway

BioDiem Infectious disease therapies



BioDiem BDM-I antimicrobial disease targets

BDM-I currently in development as treatment against

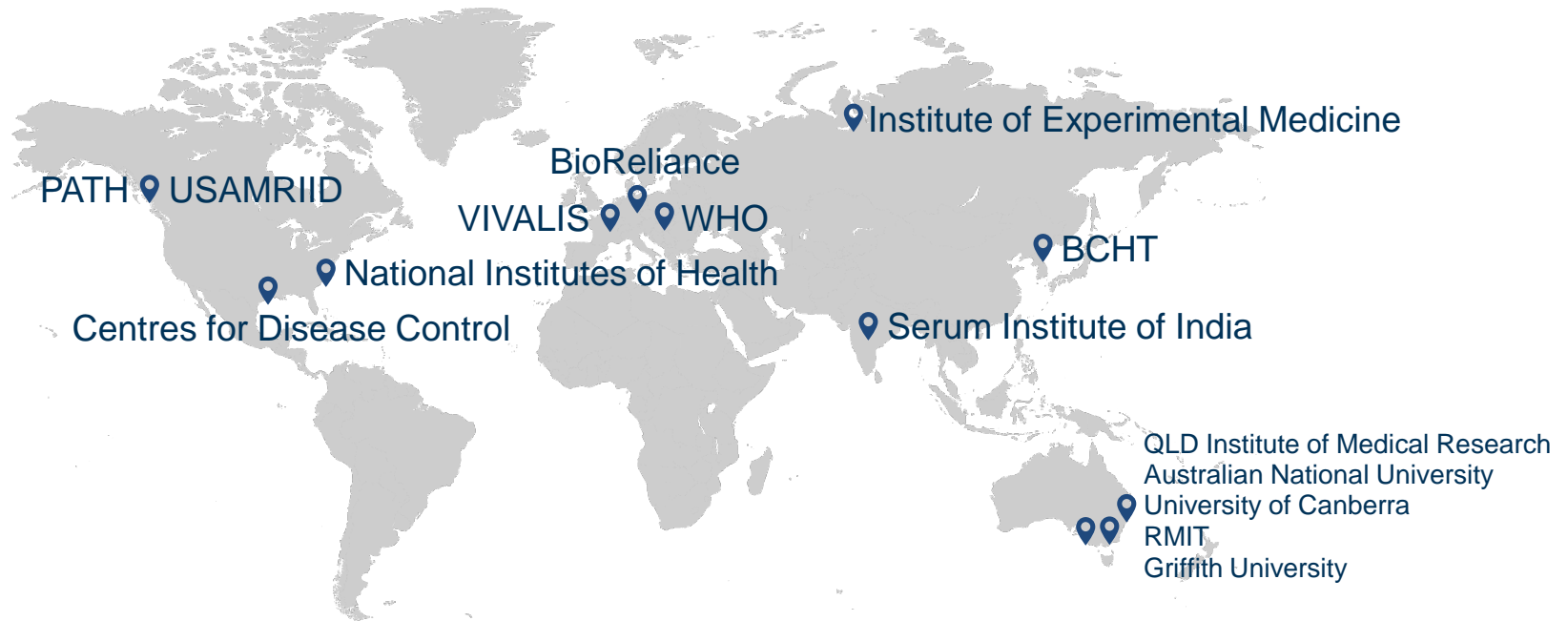
- 'superbugs' such as antibiotic-resistant bacteria incl. TB, and others
- **hard-to-treat fungal** infections

Product	Disease Targets	Current Partners	Development Status
BDM-I (Antimicrobial)	Bacterial infections (tuberculosis, others)	US government backed research institutions	Entered <i>in vivo</i> testing in 2013
	Fungal infections	US government backed research institutions	Entered <i>in vivo</i> testing in 2013
	Parasitic diseases (schistosomiasis, others)	QIMR program	Entered <i>in vivo</i> 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 (Seasonal & Pandemic)	Cell based production					
	Egg based production					
	Licensed to World Health Organisation for public market in Developing Countries Licensed to Serum Institute of India and Changchun BHT Biotech Co. for certain Developing Country private markets					
LAIV Viral Vector platform	→					
Hepatitis D PLATFORM (Hepatitis D/Hepatitis B therapeutic vaccine)	→					
Flavivirus PLATFORM (Dengue fever, West Nile, Murray River encephalitis)	→					
SAVINE antigen technology (Tuberculosis, NPC)	→					

BDM-I Development Pipeline

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

The graphic features a dark blue header with white text. Below the header, four overlapping circles of different colors (light blue, purple, orange, and light green) contain text about market projections. The circles are arranged in a cluster, with the light green circle being the largest and positioned on the right side.

BioDiem Future Investment Opportunity

**Vaccine market
US\$52b by 2016**

**Antifungals
market,
US\$12.2 billion
by 2016**

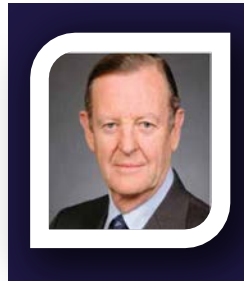
**Global
antibacterials
market,
US\$46 billion by
2017**

**Anti-infectives market
market,
US\$103 billion
by 2015**

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

Hugh Morgan AC



Chairman

Julie Phillips



CEO

Prof Larisa Rudenko



Non-executive Director

Prof Arthur Li



Non-executive Director

Don Brooks



Non-executive Director

AGM on 8 Oct 2013 contains resolution to delist from ASX

BioDiem Next 12 months



Additional
license revenues



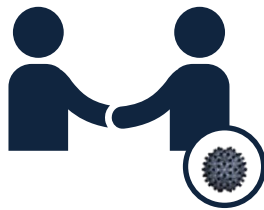
Clinical
trial results



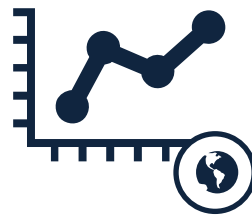
Vector program



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



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