



Therapies for major infectious diseases and related cancers

Australian Life Science Investment Showcase: New York 18.04.2013

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

BioDiem Agenda



Challenges



Company Focus

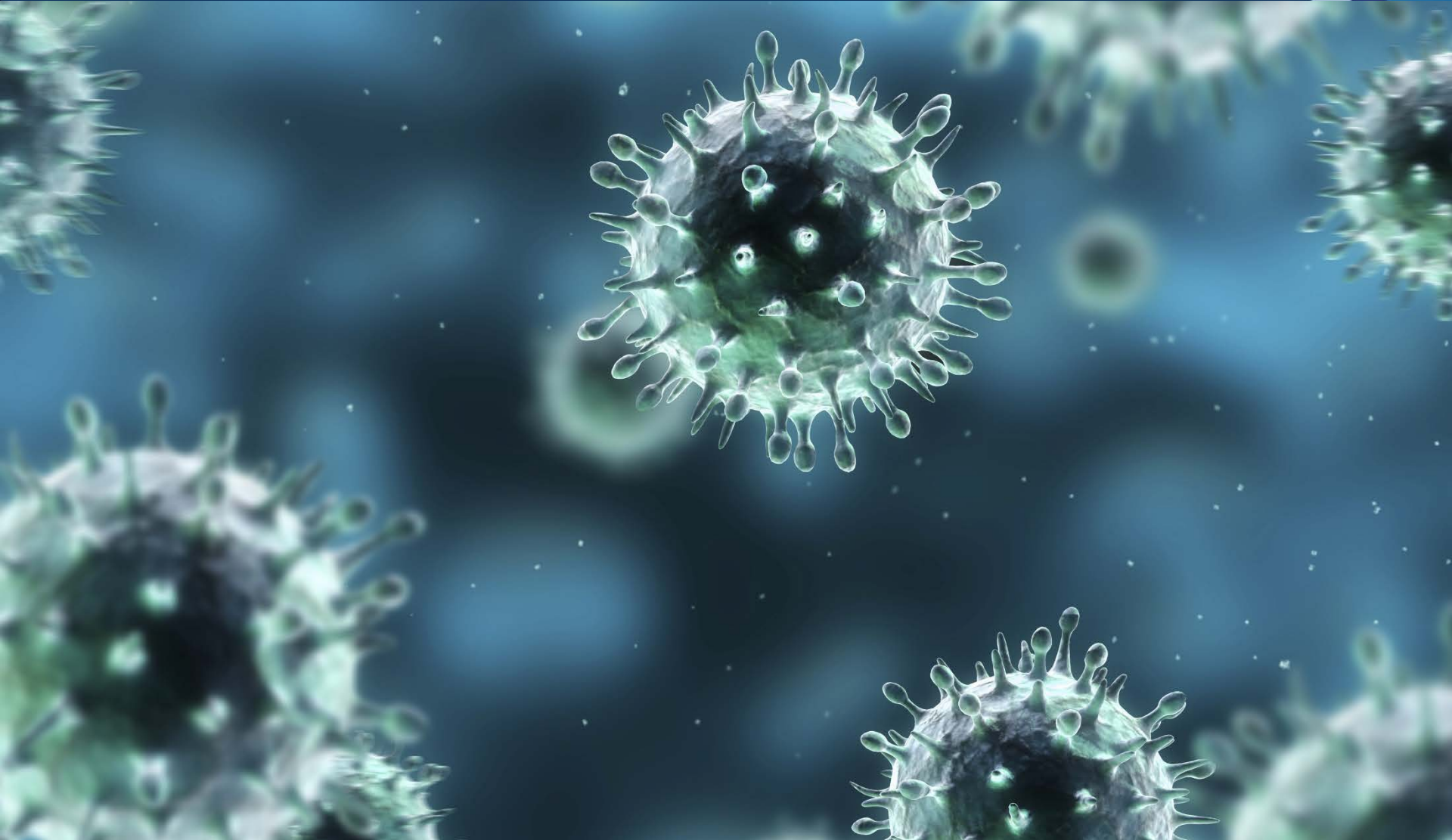


Current Achievements



Future Investment Opportunity

BioDiem Challenges



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



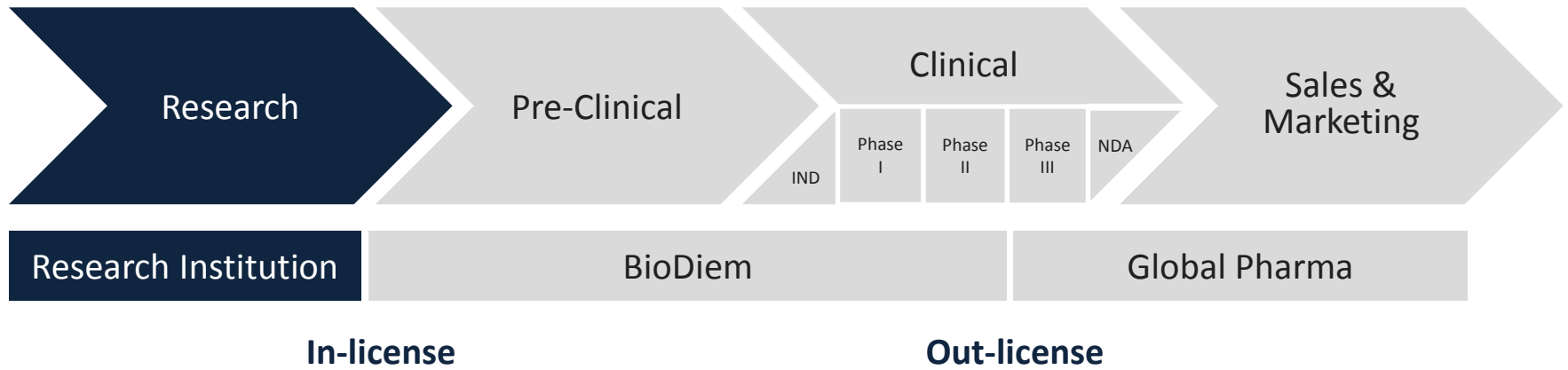
Product pipelines diminish

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

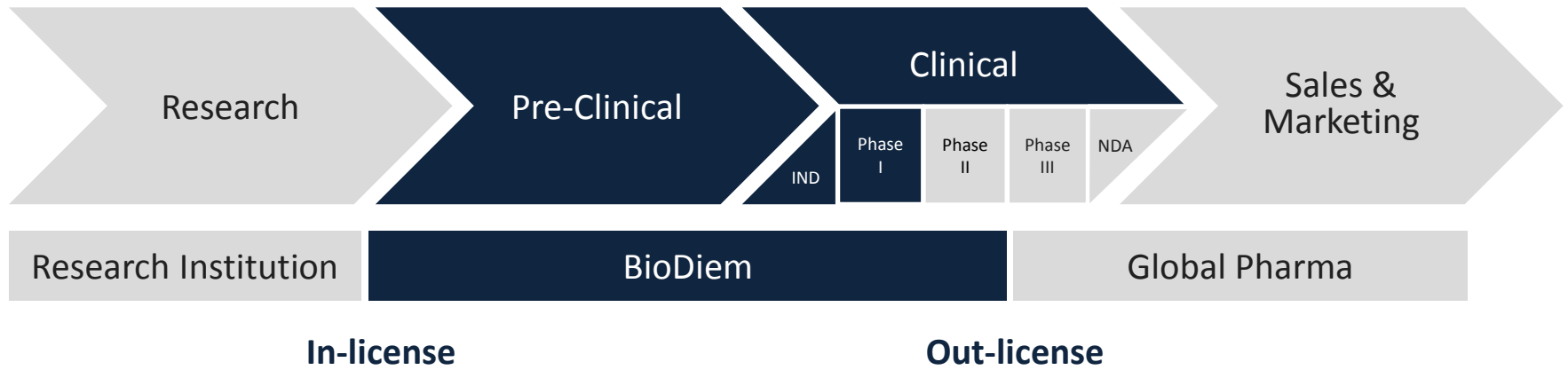
BioDiem Company Focus



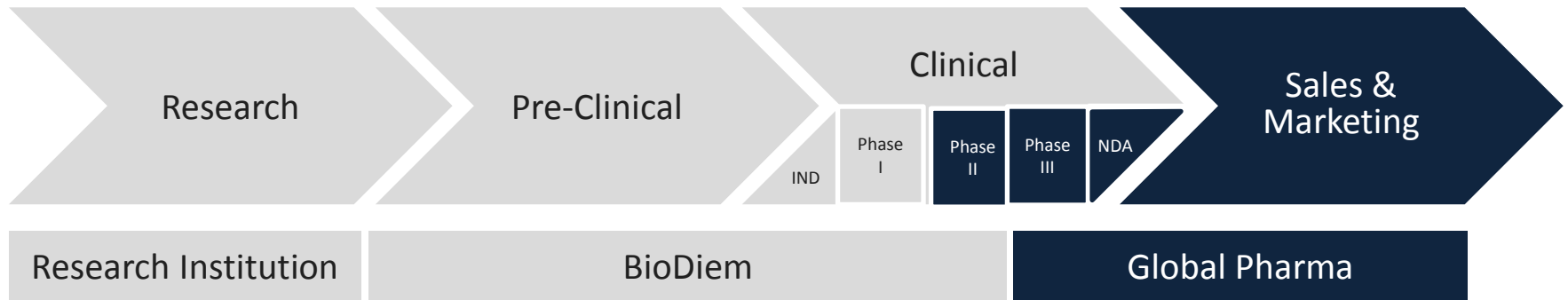
BioDiem Business Model



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

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

Live Attenuated Influenza Virus: LAIV

Product	Disease Targets	Current Partners	Development Status
LAIV Vector (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



BioDiem LAIV Vector & SAVINE

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



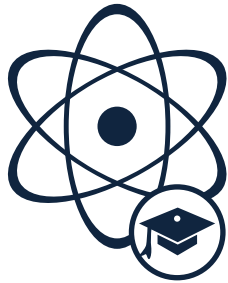
Hepatitis C

Rights licensed from the University of Canberra

R&D program underway

BioDiem Dengue Fever vaccine (therapeutic)

Rights licensed from the Australian National University



Technology
licensed



Vaccine effect
demonstration



Publication
pending



Extension into other
mosquito-borne
disease targets

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

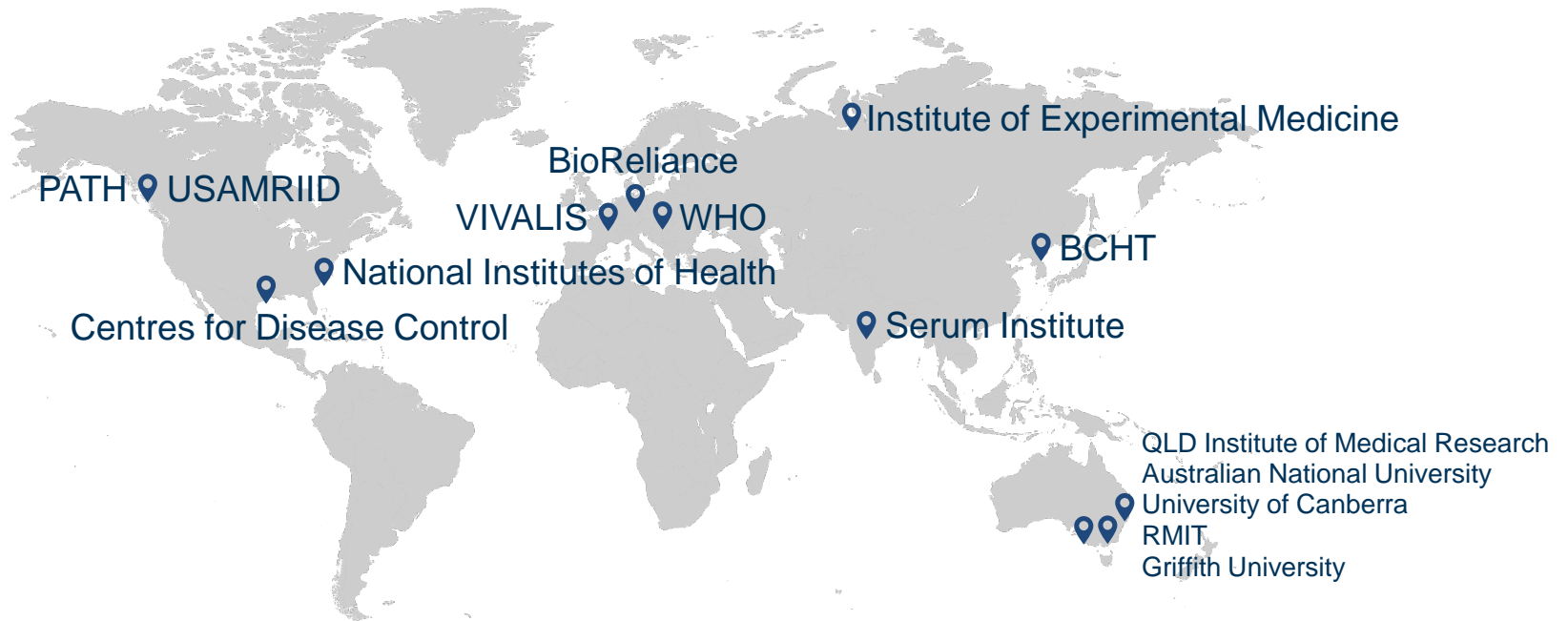
Product	Disease Targets	Current Partners	Development Status
BDM-I (Antimicrobial)	Tuberculosis	US government backed research institutions	Entered <i>in vivo</i> testing in 2013
	Fungal infections	US government backed research institutions	Entered <i>in vivo</i> testing in 2013
	Parasitic diseases (schistosomiasis,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

BioDiem

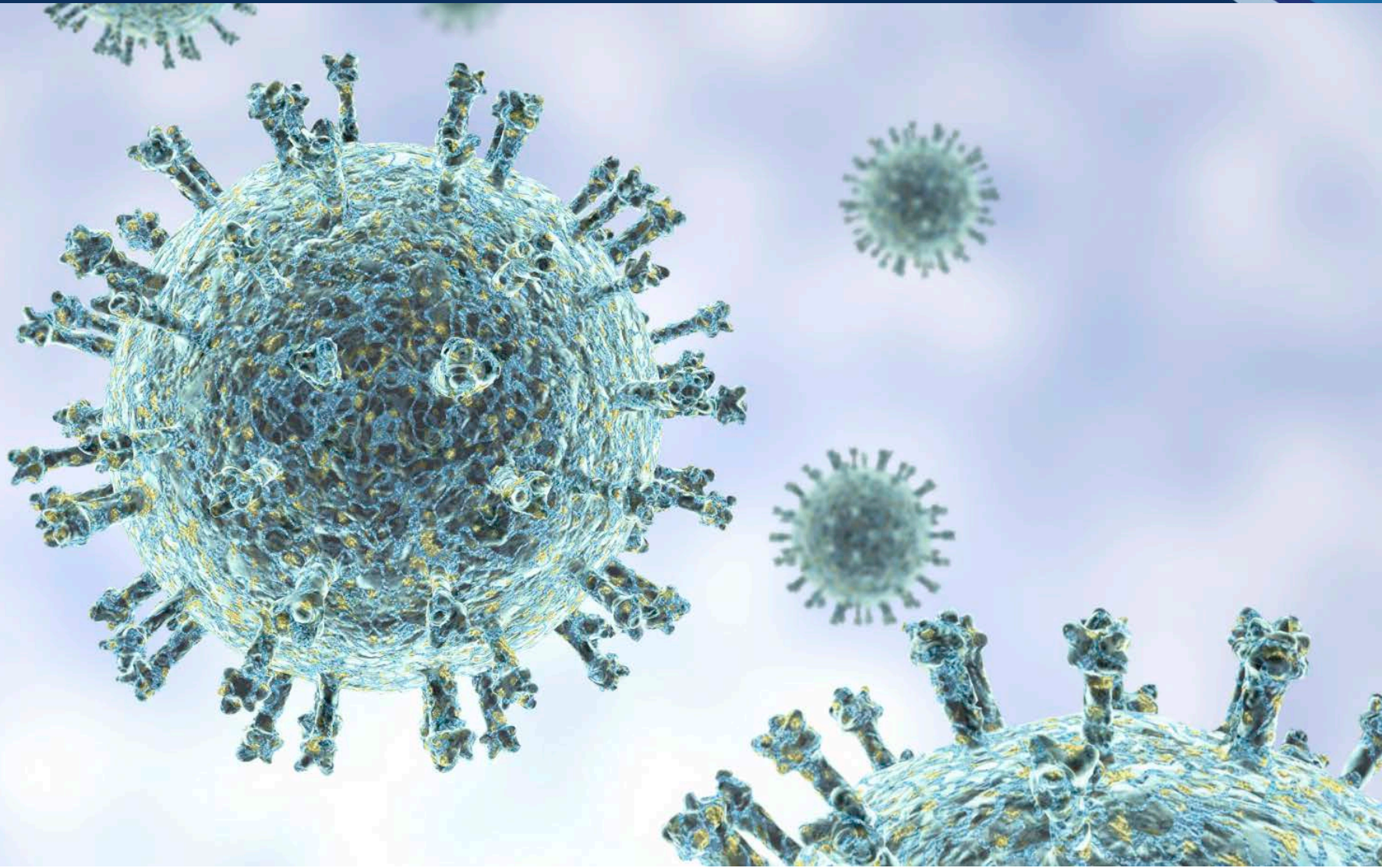
Expanding Global Partnerships and Alliances



Global partnering & commercialisation network









BioDiem Current Achievements



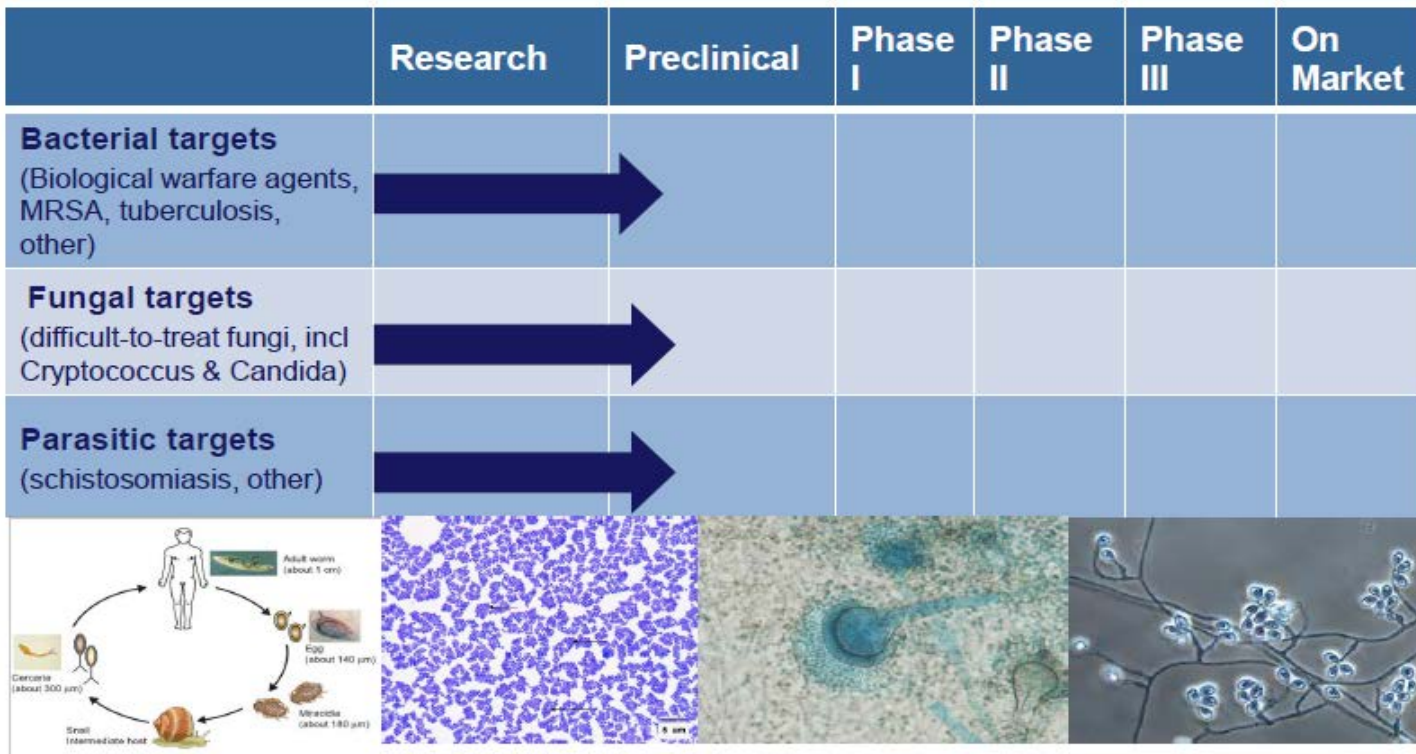
BioDiem License & Pipeline Portfolio

Vaccine Development Pipeline

	Research	Preclinical	Phase I	Phase II	Phase III	Marketed
Influenza vaccines (Seasonal and Pandemic)	Cell based production 					
	Egg based production 					
Licensed to World Health Organisation for public markets in Developing Countries Licensed to Serum Institute of India and Changchun BCHO 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)						

BioDiem Pipeline Portfolio

BDMI-I Development Pipeline



BioDiem Partnership Portfolio

Expanding Global Partnership Network



WHO



National Institutes
of Health

National Institutes
of Health (USA)



A catalyst for global health

PATH (Program for
Appropriate Technology
in Health)



CENTERS FOR DISEASE
CONTROL AND PREVENTION

Centres for Disease Control
and Prevention (US)



Changchun BCHT
Biotech Co, China
(BCHT)

Vivalis

VIVALIS
(now Valneva)



Serum Institute of
India (SII)



IEM
(St Petersburg,
Russia)



US Army Research Institute of
Infectious Diseases (USAMRIID)



Queensland Institute of
Medical research (QIMR)



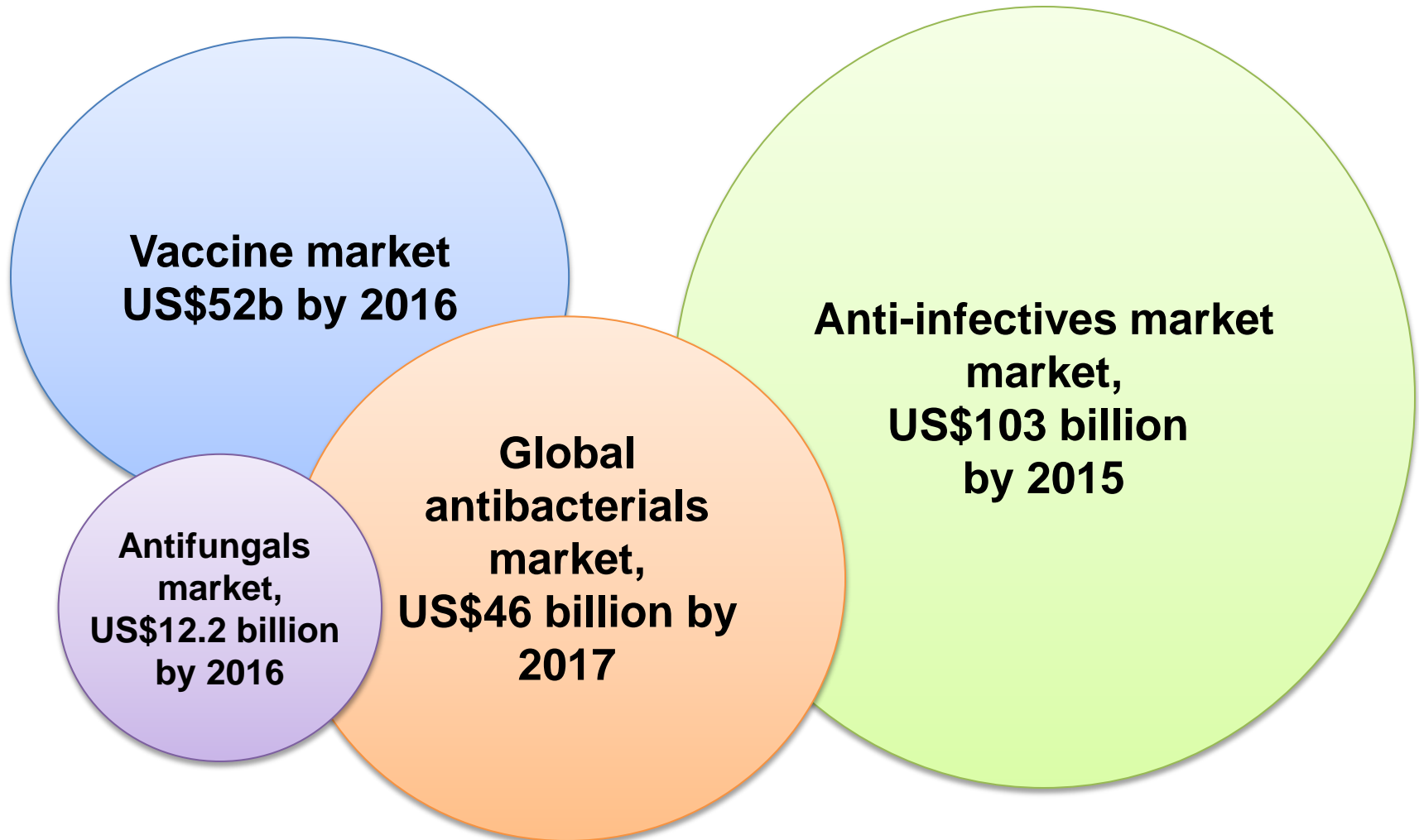
UNIVERSITY OF
CANBERRA
AUSTRALIA'S CAPITAL UNIVERSITY

University of
Canberra, Australia

BioDiem Future Investment Opportunity



BioDiem Market Size Potential



As at 31 March 2013

Market Cap	\$5.12 M
52 week range	\$0.036 – \$0.09
Cash as of 31-12-12	\$2,324, 909
Shares	142,105,934
Shareholders	919
Listed Options	24,638, 574

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



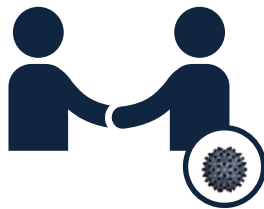
Clinical
trial results



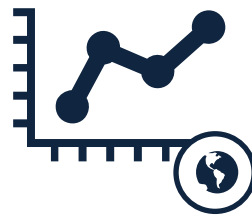
Vector program



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



Therapies for major infectious diseases and related cancers

Australian Life Science Investment Showcase: New York 18.04.2013

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