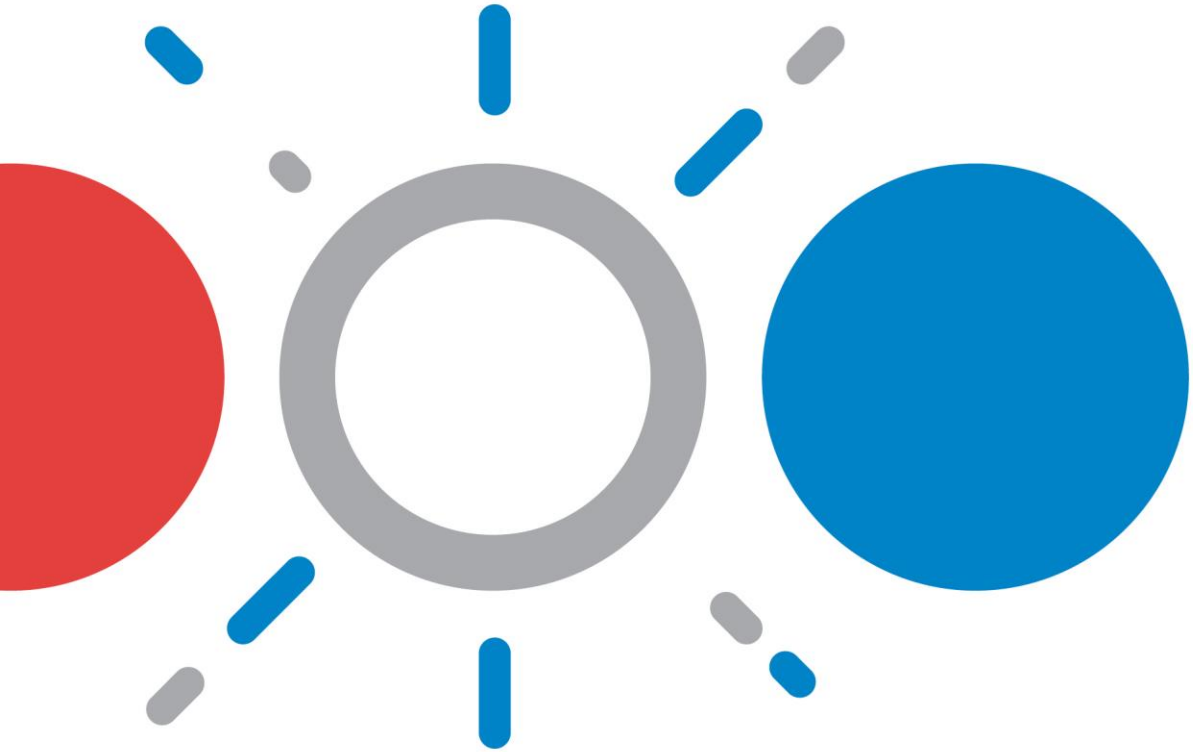


Recce

Targeting Superbugs

September 2017

Dr Graham Melrose, Executive Chairman
James Graham, Executive Director

Corporate summary

Recce is a drug discovery and development business commercialising a new class of synthetic antibiotics to address the global health challenge of antibiotic resistant superbugs

- Recce is focused on commercialising a promising new class of synthetic antibiotics to target superbugs
- Head Office in Sydney with office in the United States (Washington)
- New manufacturing facility in Sydney with R&D in Perth, Western Australia
- Successful oversubscribed listing on ASX in January 2016
- Current focus is Investigational New Drug submission to US FDA
- Overuse of antibiotics has led to antibiotic resistant bacteria in humans and animals (superbugs)
- Antibiotic resistance is now acknowledged as an urgent and major world health issue

Investment summary

Major shareholders

1.	G. & O. Melrose*	38.5%
2.	D. Foord	5.8%
3.	J. Graham*	4.6%
4.	M. Aarons	3.7%
5.	M. Dilizia*	3.7%
6.	State One	3.2%
7.	F. Graham	1.4%
8.	Querion Pty Ltd	1.3%
9.	Golden Rivers Mining	1.1%
10.	Danville Holdings Pty Ltd	1.1%

* Held by Executive Directors

Snapshot

ASX code:	**RCE**
Shares on issue:	**78.8 million**
Share price:	**14.0 cents**
Market cap (approx.)	**$11.0 million**
Escrowed shares:	**42.8 million**
Cash and deposits: 30 June 2017	**$1.1 million**
Trading range: 52 week	**14.0 – 37.0 cents**
Average daily volume 52 week	**70,484**

Natural antibiotics vs synthetic antibiotics

- Founded on pioneering work of former J&J Australia Executive Director and Chief Research Executive Dr. Graham Melrose
- Commercial antibiotics are naturally derived – superbugs have been forming for millennia – and will continue to do so
- RECCE® 327 is a man-made synthetic compound

Contain natural antibiotics

Synthetic antibiotics

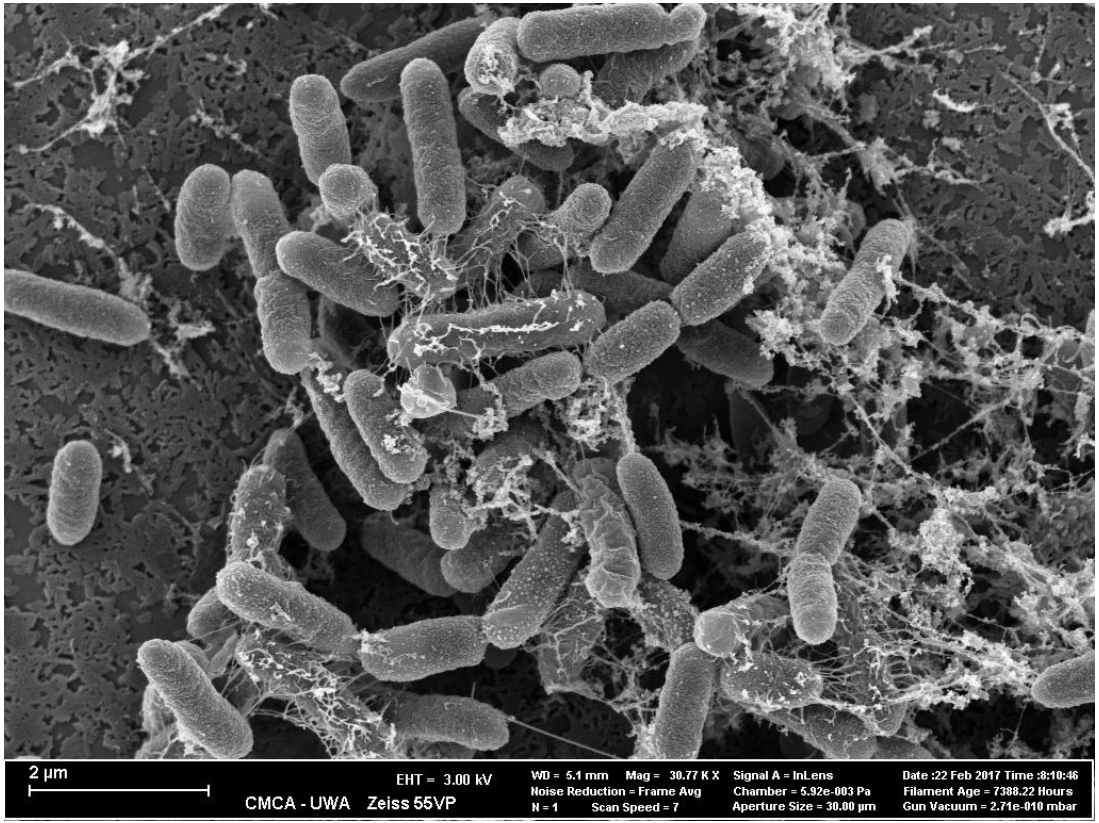
Recce synthetic antibiotic and patent portfolio

- Recce has synthesized and patented a new class of man-made synthetic antibiotics
- Demonstrated safety and efficacy in a range of pre-clinical tests against common drug resistant bacteria
- Positive activity against a broad range of multi-drug resistant Gram-negative and Gram-positive bacterial infections
- RECCE® 327 is our leading synthetic antibiotic candidate in pre-clinical development
- Extensive pre-clinical studies have demonstrated positive *in vitro* (in the lab) and *in vivo* (in animals)
- Data show RECCE® 327 has significant *in vivo* anti-infective properties against *S. aureus* and *E. coli*

Patent portfolio covers all key geographies, manufacturing and modes of use

	Filed	Status	Expiry
Patent Family 1	Australia	**Granted**	2028
	USA	**Granted**	2029
	Europe	**Granted**	2028
	Germany	**Granted**	2028
	Spain	**Granted**	2028
	France	**Granted**	2029
	United Kingdom	**Granted**	2028
	Italy	**Granted**	2028
	Sweden	**Granted**	2028
	Japan	**Granted**	2028
	China	**Granted**	2028
Patent Family 2	All PCT Countries	*Pending*	2034
Patent Family 3		*Pending*	2034

RECCE® 327 – how it works

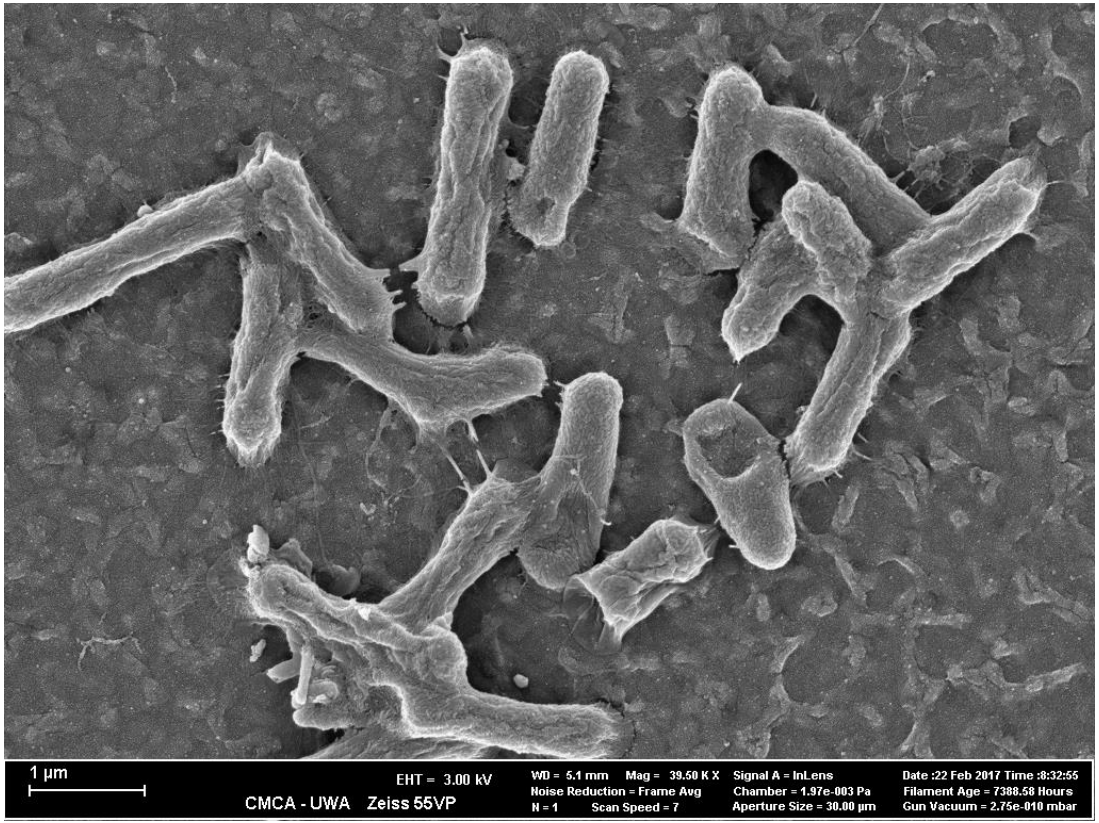


00:00 minutes

Before application of RECCE® 327, the *E.coli* bacteria cells are healthy, smooth and intact.

This is a high-definition electron microscope image generated in February 2017 by Dr Peta Clode and Lyn Kirilak of the Centre for Microscopy, Characterisation and Analysis, University of Western Australia. It was taken to demonstrate RECCE® 327's unique mechanism of action.

RECCE® 327 – how it works



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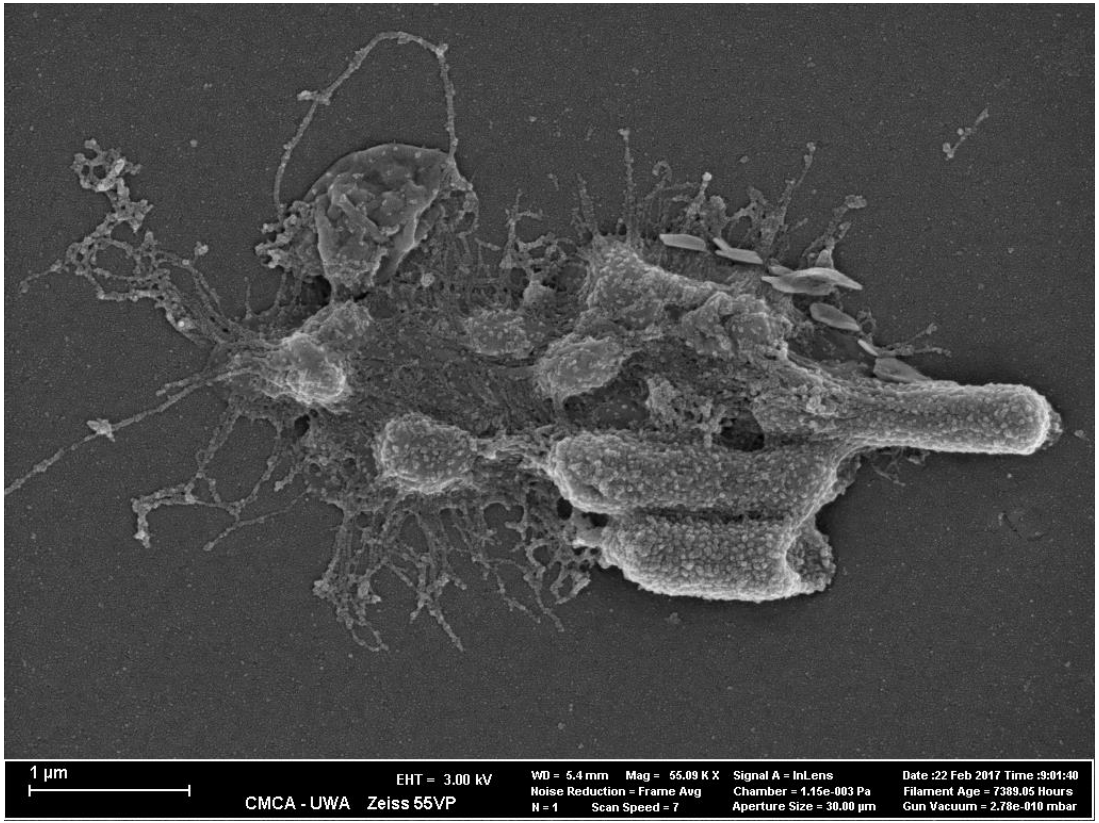
After application of RECCE® 327, the *E.coli* bacteria cell membrane begins to weaken and is disrupted.

RECCE® 327 – how it works



180 minutes

E. coli bacteria cells (10e6 cfu/ml) having their outer membrane weakened – and finally collapsing from treatment with RECCE® 327 (1000 ppm).

RECCE® 327 – Demonstrated efficacy and safety

Efficacy

- Multiple tests demonstrate efficacy against Staph (G +ve) and E.coli (G –ve), including superbug forms
- Rate and MIC/MKC data demonstrate high potency & broad spectrum activity against a range of bacteria
- *In vivo* (mice) study against Influenza virus

Safety

- Multiple studies of toxicity in small and large animals species
- Multiple tests of mutagenicity (cancer) are clear

What does this all mean? Over 30 pre-clinical studies to date favourably indicate RECCE® 327:

- Does not cause healthy cells to mutate (cancer)
- Destroys Gram positive and Gram negative bacteria - broad spectrum
- Acts against bacteria in both normal and mutated superbug forms – with the same ease
- Contains a patented polymeric structure, intentionally designed to overcome the traditional challenges of bacterial mutation/resistance (superbugs)
- Is suited to administration against sepsis by intra-venous drip
- Has a wide and safe therapeutic dosing window

Market Landscape – new antibiotic developers

Motif Bio plc (NASDAQ: MTFB) (AIM:MTFB.LN)

- AIM listed April 2015 raising $5m ($20m Mcap)
- 165% first year capital gain on AIM
- Duel listed on NASDAQ 18 months later, peak market cap of $304m
- Now Phase 3 MRSA (Gram +) only

RedX Pharma plc (LON: REDX)

- Anti-cancer and re-purposing of existing antibiotics – ALL pre-clinical
- AIM Listed March 2017 raised $20m; before apparent forced $56m anti-cancer sale
- April 2017 announced US$1m in CARBX grants
- **Market cap at listing $91m**

Auspherix Ltd

- Urinary tract infection treatment focus
- Brandon Capital (Australia) / Touchstone Innovations (AIM:IVO) – over $13m invested to date
- Aspiration for clinical trials early 2019

RECCE® 327 – Advantages over competitors

Advantages unique to RECCE® antibiotics

- Broad spectrum activity - avoids time-consuming diagnosis / guess work - immediate treatment possible
- Active against superbug forms of bacteria – previously untreatable now treatable – kills all superbugs
- Does not lose efficacy with repeated use – unique mechanism of action – doesn't lose strength
- New synthetic with NO superbugs against it
- Whole new class of antibiotic
- Meets the criteria of World Health Organization (WHO) and other international organizations
- Eligible for international awards and extended patent/market monopolies – potential 10 year addition
- First drug designed specifically for the treatment of sepsis

Corporate advantages unique to Recce

- **Extraordinary economy of production** in only a few steps - little more than 1 hour to produce
- **Production method very easily varied to produce different antibiotics** for specific purposes
- **Many variants to the Recce technology opens the opportunities and securities of alternative uses** e.g. *H. Pylori*, *E. coli*, veterinary and antiseptic markets; all huge markets and positive results already achieved - not a one product company

Sepsis – our first clinical target

- Sepsis is a life threatening inflammatory response to infection that has spread in the body
- In the US, + 750,000 cases of severe sepsis are recorded every year
- 215,000 deaths from sepsis are recorded in the US every year
- Sepsis is the single most expensive condition treated in US hospitals
- Leading cause of death in intensive care units and top 10 cause of mortality worldwide

- Two per cent of hospitalisations are for sepsis but they make up 17 per cent of in hospital deaths
- Care is improving but the incidence of severe sepsis is increasing rapidly
- High incidence means the potential market for effective treatments is sizeable
- Represents a significant pharmaco-economic burden of >US$20 billion in annual hospital costs

- There are currently no drug therapies specifically for the treatment of sepsis
- There is a desperate and unmet medical need for new safe and efficacious products

WHO – an urgent need for new antibiotics

Global priority list of antibiotic – resistant bacteria to guide research, discovery and development of new antibiotics

- February 2017 - WHO publishes a global priority pathogens list of antibiotic-resistant bacteria to help in prioritizing the R&D of new and effective antibiotic treatments
- The purpose was to identify the most important resistant bacteria at a global level for which there is an urgent need for new treatments
- The list includes 12 pathogens prioritized in three categories - Critical, High and Medium.

Priority 1: CRITICAL	RECCE 327
▪ Pseudomonas aeuginosa, carbapenem-resistant	✔ 1
▪ Enterobacteriacae, carbapenem-resistant, ESBL-producing	✔ 2
▪ Acinetobacter baumannii, carbapenem-resistant	Not tested
Priority 2: HIGH	
▪ Enterococcus faecium, vancomycin-resistant	✔ 3
▪ Staphylococcus aureus, methicillin-resistant, vancomycin-intermediate and resistant	✔ 4
▪ Helicobacter pylori, clarithromycin-resistant	✔ 5
▪ Neisseria gonorrhoeae, cephalosporin-resistant, fluoroquinolone-resistant	✔ 6
▪ Campylobacter spp., fluoroquinolone-resistant	Not tested
▪ Salmonellae, fluoroquinolone-resistant	Not tested
Priority 3: MEDIUM	
▪ Streptococcus pneumoniae, penicillin-non-susceptible	✔ 7
▪ Haemophilus influenzae, ampicillin-resistant	Not tested
▪ Shigella spp., fluoroquinolone-resistant	Not tested

1. Active *in vitro* against Recce's own superbug of this bacterium
2. Active *in vivo* against a member of this family CRE *E. coli*
3. Active *in vitro* against a very closely related species, *Enterococcus faecalis,* Vancomycin resistant
4. Active both *in vitro* and *in vivo* against MRSA, Methicillin-resistant *Staphyloccocus aureus*
5. Active both *in-vitro* and *in vivo* against three strains (2 of which were superbugs)
6. Active *in vitro* against the normal bacterium (superbug form unavailable)
7. Active *in vitro* against related superbug *Klebsiella pneumoniae*

World Health Organization

Established record of achieving goals

Announcements FY 16/17

- 13 July 2016 - RECCE® 327 showed efficacy *in vitro* against Influenza virus
- 20 July 2016 - Three genetic toxicity tests indicated that RECCE® 327 is not carcinogenic (does not cause cancer)
- 28 July 2016 – Scaled-up manual manufacturing capabilities in its Perth facilities, producing nine litres of RECCE® 327 a week
- 15 August 2016 - *In vivo* (mice), wide dosing window confirmed – at least four times therapeutic dose
- 20 December 2016 - Anti-viral test showed efficacy *in vivo* using RECCE® 327 against Influenza virus
- 12 January 2017 - RECCE® 327 reduced illness in mice infected by resistant *E. coli* bacteria.
- 24 February 2017 - Captured RECCE® 327 in action against *E.coli* bacteria - reinforcing our unique and patented mechanism of action at a cellular level
- 27 March 2017 - Further *in vivo* (dogs) safety results showed intravenous infusion of RECCE® 327 at 70 mg/Kg over four hours was well tolerated
- 19 May 2017 - Completed chemical analysis and structural study. Tests confirmed the compound's structure, chemical stability and mode of action
- 16 June 2017 - Secured up to AU$6.05 million (GB£3.64 million**)** agreement with US institutional investor over 24 months
- 22 June 2017 - Completed construction of a wholly owned production facility in Macquarie Park Sydney

Achievements in first month of FY 17/18

- Delivered automated manufacturing facility for Ph1 & Ph2 clinical trials ✓
- Completed pre-clinical study in small/large species to determine 7-17 fold therapeutic window ✓

Financials

	Year Ended 30 June 2017 AU $'000	Year Ended 30 June 2016 AU $'000	Year Ended 30 June 2015 AU $'000
Total Assets	1,465	3,721	546
Total Liabilities	963	207	272
Net Assets	502	3,514	274
Contributed equity	8,052	7,419	1,586
Reserves	1,628	2,248	-
Accumulated Losses	(9,178)	(6,153)	(1,312)
Loss for period	3,025	4,840	450

Supportive legislative and financial incentives

Discussions with Recce's FDA consultants and patent attorneys as part of preparation of the IND application have confirmed key opportunities, representing up to 10 years' extended global production and marketing monopolies:

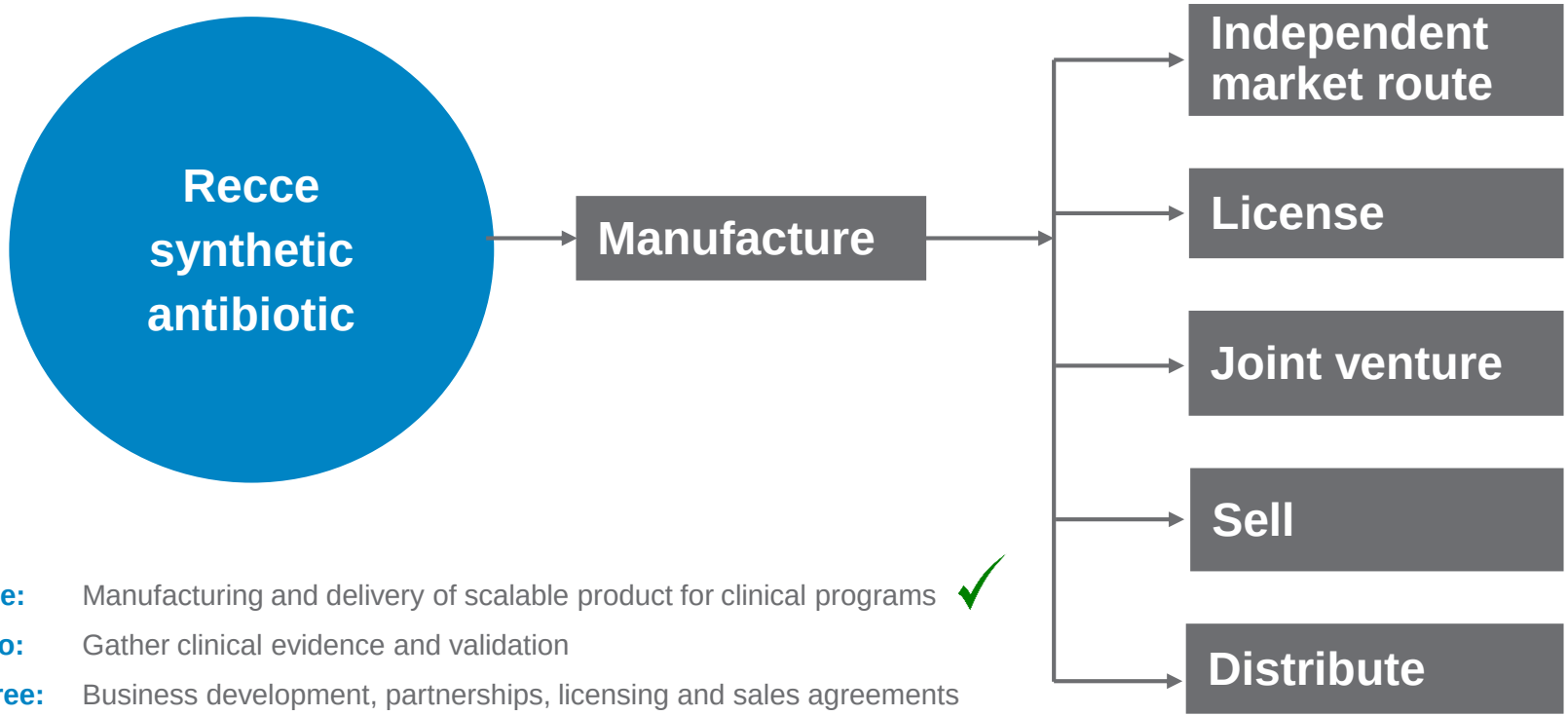
- **US GAIN Act** – An extra five years patent exclusivity
- **New Chemical Entity (NCE)** – A further five years for new molecules
- **Expedited Review Status** – fast track review for drugs targeting urgent health needs

The rapid development of new antibiotics is also supported by a range of other initiatives globally

Non-dilutive grants

- The US Biomedical Advanced Research & Development Agency (BARDA) Broad Spectrum Antimicrobials program and the European Innovative Medicines Initiative (IMI) New Drugs For Bad Bugs (ND4BB) program
  - Both provide direct financial support to nearly 20 percent of all antibiotics currently under development globally
- CARB-X is a public-private partnership focused on preclinical discovery and development of new antimicrobial products
- CARB-X funds come from the US Govt (BARDA) and a public-private initiative in the United Kingdom
  - US$44 million in first year and up to $350 million in the next five years in grants to companies developing new antibiotics and diagnostics.

Multiple paths to profitability



Step one: Manufacturing and delivery of scalable product for clinical programs ✓

Step two: Gather clinical evidence and validation

Step three: Business development, partnerships, licensing and sales agreements

Board and management in place to deliver

Dr Graham Melrose: Executive Chairman
BSc (Hons), PhD (UWA), MBA (Macq), FRACI, C Chem, FAICD

Founder and inventor. Former Chief Research Executive of Johnson & Johnson (Aust) Pty Ltd in Sydney, with global responsibilities, particularly in Asia-Pacific.

Michele Dilizia: Executive Director
BSc (Med Sci), Grad Dip Bus (Mkting), BA (Journ), GAICD, MASM

Co-inventor and qualified medical scientist; specialisation in medical microbiology & regulatory affairs.

James Graham: Executive Director
BCom (Entrepreneurship), GAICD

Extensive experience in marketing, business development and commercialisation of early stage technologies with global potential.

Peter Williams: CFO and Company Secretary
B.Bus, FCPA, MAICD

Accomplished senior ASX finance professional with significant local and international experience. Former VP Finance with BHP World Minerals reporting to the CEO.

Arthur Kollaras: Principal Engineer
BSc Beng (Chem), PhilEng (Enviro)

Highly qualified in chemical engineering and microbiology, has significant experience taking a new technology concept to pilot plant and full scale FDA standards and production internationally.

Dr Justin Ward: Senior Quality Chemist
BSc (Chem), Ph.D (Chem), MRACI, CChem

A quality control expert who has worked with leading pharmaceutical companies. He will bring Recce's research and development laboratory in Perth up to US FDA standard.

Investment summary

- Powerful proprietary technology to develop a pipeline of new synthetic antibiotics
- Initial focus on treating drug resistant sepsis (blood poisoning) - RECCE® 327
- A high unmet clinical need supported by favorable legislative and financial incentives
- Lead candidate with significant pre-clinical validation demonstrating safety and efficacy
- Experienced management and Board with a track record of delivering commercial outcomes
- Focused on creating value by continuing to meet development and clinical milestones
- Pre-clinical data presented to US FDA as first part of Investigative New Drug submission

Thank you

Contact

James Graham
Executive Director
Level 34, 50 Bridge Street
Sydney NSW 2000 Australia
T: + 61 2 8216 0768
E: james.graham@recce.com.au

Twitter: @RecceLtd

LinkedIn: Recce Limited

Appendix: RECCE® 327 is rapid acting*

Rate RECCE® 327 acts against standard bacteria *in vitro*

S. aureus	*E. coli*	*P. aeruginosa*	*S. pyogenes*	*C. difficile*
20 – 60 minutes	20 – 60 minutes	1 – 24 hours	20 – 60 minutes	20 – 60 minutes

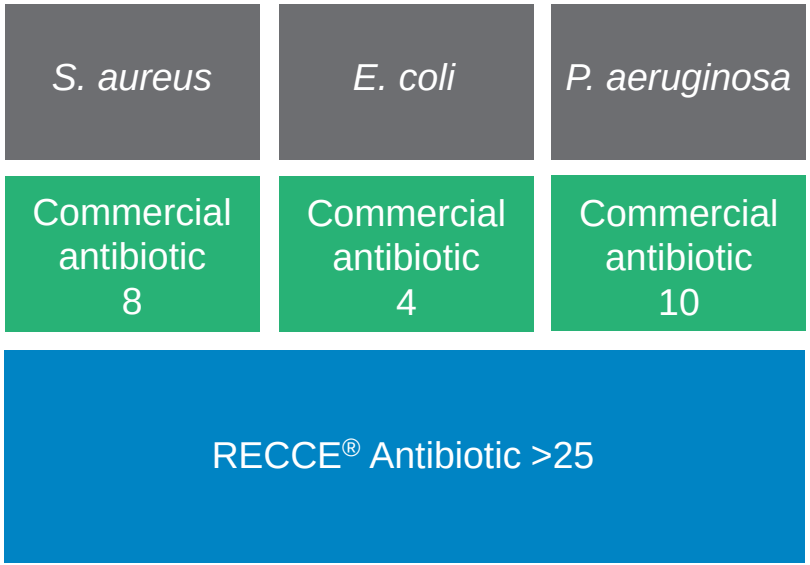
Rate RECCE® 327 acts against a number of superbugs *in vitro*

S. aureus	*E. coli*	*P. aeruginosa*	
20 – 60 minutes	20 – 60 minutes	1 – 24 hours	**Same rapid rate for standard bacteria and their superbugs**

*Using concentrations of 1000ppm

Appendix: RECCE® antibiotics do not fall to superbugs

Number of repetitive uses before displaying loss of antibiotic activity



After repetitive use, the commercial antibiotic lost activity; **RECCE® antibiotics did not**