ASX Announcement

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Recce's lead compound reduces illness in mice infected by resistant *E. coli* bacteria

SYDNEY Australia 18 January 2017: Recce Limited (ASX: RCE), a pre-clinical-stage pharmaceutical company engaged in the development of a new class of synthetic antibiotics to treat serious infections, today announced encouraging early results for the company's lead product candidate RECCE® 327 as a potential treatment against Carbapenem resistant Gram-negative (CRE) *Escherichia coli* (CRE *E. coli*).

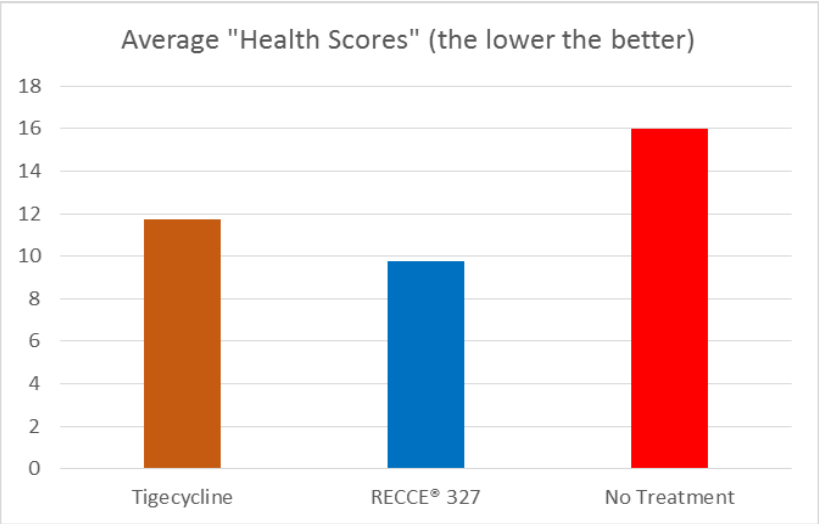
CRE stands for carbapenem resistant Enterobacteriaceae, a family of bacteria difficult to treat because they have very high resistance to antibiotics. CRE infections usually happen to patients in hospitals and other healthcare settings. They have been categorised the highest threat level of 'urgent' by the US Centers for Disease Control and Prevention.[1]

The study, conducted by an independent Contract Research Organisation (CRO) in the USA, observed three groups of eight mice infected with drug resistant *E. coli*. Mice infected were then treated with Tigecycline, RECCE® 327 and No Treatment, respectively.

Tigecycline is a last line antibiotic used to treat bacterial infections. It was developed in response to growing rates of antibiotic resistance in bacteria such as *E. Coli* and *Staphylococcus* and was approved by the US FDA in 2005.

Based on "Health Scores" results indicated intravenous (IV) injection of RECCE® 327 antibiotic (70 mg/Kg) reduced illness in mice infected by intravenous and intra-kidney Carbapenem resistant Gram-negative (CRE) *E. coli*. (See chart below)

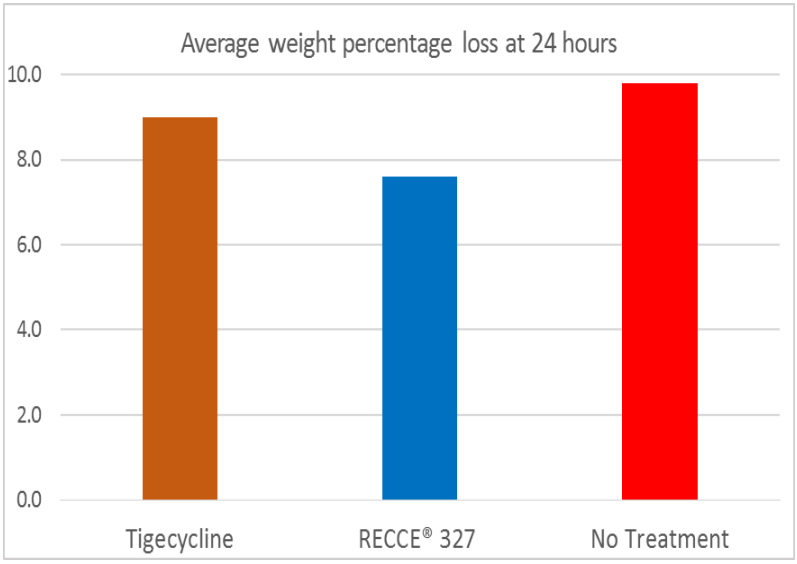
[1] "Antibiotic Resistance Threats in the United States, 2013", page 53, published by the U.S. Department of Health and Human Services, Centres for Disease Control and Prevention on their website at www.cdc.gov



The above chart shows the average of the total of "Health Scores" in mice, using a range of 0 (healthy) to 13 (unhealthy), recorded at 8 hours, 18 hours and 24 hours, respectively after infection of the individual mice (n = 8 per group) with resistant Gram negative *E. coli* (4.71 x 10^7 bacteria). These results are detailed in the table below.

									Average	SD
Tigecycline	11	8	9	7	16	18	11	14	11.75	3.92
RECCE® 327	5	12	11	8	8	16	8	10	9.75	3.33
No Treatment	10	27	26	15	13	17	11	9	16	6.99

Also, results indicate IV injection of RECCE® 327 antibiotic (70mg/Kg), controlled weight-loss in mice infected by intravenous and intra-kidney Carbapenem-resistant Gram negative *E. coli*: The following Graph shows the average weight percentage loss at 24 hours.



These results are detailed in the table below.

									Average	SD
Tigecycline	8.8	8.9	8.2	12.6	5.7	11.8	6.7	9.0	8.96	2.32
RECCE® 327	4.5	7.9	10.4	9.8	4.8	8.3	6.0	8.7	7.55	2.22
No Treatment	10.5	11.1	8.8	9.6	9.7	9.8	9.1	-	9.8	0.79

RECCE® 327 is a synthetic compound currently being developed to treat sepsis (blood poisoning with a near term goal of filing an investigational new drug (IND) application with the US Food & Drug Administration (FDA) in 2017.

Recce Limited Executive Chairman Dr Graham Melrose said "This new pre-clinical data will potentially strengthen Recce's IND submission for RECCE® 327 to be trialled in humans as a new class of antibiotic for a range of drug resistant infections. The promising results using RECCE® 327 in a mouse model for CRE resistant superbug Gram-negative *E.coli* warrant further investigation, based on the dosage administered".

For further information please visit www.recce.com.au or contact:

Investor Relations
Peter Williams
CFO & Company Secretary
Recce Ltd
Tel: (08) 9253 9800

Media (Australia)
Andrew Geddes
CityPR
Tel: (02) 9267 4511

Media (International)
Sue Charles/Daniel Gooch
Instinctif Partners
Tel: +44 (0)20 7866 7905
E: recce@instinctif.com

About Recce Ltd

Recce Ltd (ASX: RCE) is a world-leader in synthetic-polymer antibiotics. The RECCE® antibiotics have been synthesized by an extremely economic method. RECCE® antibiotics have shown in laboratory tests that they have continued activity against bacteria, including superbugs, even after repeated use.
Recce is positioned to achieve milestones in both pre-clinical trials for FDA purposes, and the development of the manufacture of RECCE® 327.

The discovery of RECCE® 327's *in vitro* capabilities against cancer and viruses (as well as bacteria-superbugs) has greatly increased the value of the Company's technology, especially in view of the synergism between antibiotic/anti-cancer properties and anti-viral/anti-cancer properties.

Recce has granted patents in Australia, United States, Europe, Japan and China – giving it legal monopolies, and potential financial returns, from manufacture and distribution of its products in about 80% of the world's pharmaceutical markets for antibiotics.

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