

### Immuron Commences US Non-Deal Institutional Investor Roadshow

Melbourne, Australia, March 13th, 2017: Australian microbiome biopharmaceutical company Immuron Limited (ASX: IMC; NASDQ: IMRN) is pleased to release to shareholders and investors its latest Company Presentation ahead of commencing a comprehensive roadshow to investment institutions, analysts and shareholders in the United States and Australia.

Immuron's interim-CEO Dr. Jerry Kanellos will be providing an update on the recent NASH clinical trial results and other upcoming milestones.

Dr. Jerry Kanellos commented:

"We are excited to share our results from our IMM-124E NASH phase II clinical study, as well as providing the market with an update on our many other projects which are approaching critical milestones and targets".

Dr. Kanellos will be meeting with key US investment fund managers to highlight the current position and strength of Immuron's patent portfolio, the Company's multiple clinical trials which are currently underway in the areas of Non-Alcoholic Steatohepatitis (NASH), Severe Alcoholic Hepatitis (SAH), Pediatric Non-Alcoholic Fatty Liver Disease (NAFLD), Clostridium Difficile Infection, and the increasing traction Immuron's flagship product Travelan, for the prevention of travellers' diarrhea, is gaining both in the Australian and US markets.

A copy of the roadshow presentation is appended to this announcement.

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#### **ABOUT IMMURON:**

Immuron Limited (ASX: IMC, NASDAQ: IMRN), is an Australian microbiome biopharmaceutical company focused on developing and commercializing orally delivered targeted polyclonal antibodies for the treatment of inflammatory mediated and infectious diseases.. Immuron has a unique and safe technology platform that enables a shorter development therapeutic cycle. The Company currently markets and sells Travelan® for the prevention of Travelers' Diarrhea and its lead clinical candidate, IMM-124E, is in Phase II clinical trials for Non-Alcoholic Steatohepatitis (NASH), Severe Alcoholic Hepatitis (SAH) and Pediatric Non-Alcoholic Fatty Liver Disease (NAFLD). Immuron's second clinical stage asset, IMM-529, is targeting Clostridium difficile Infections (CDI). These products together with the Company's other preclinical immunotherapy pipeline products targeting immune-related diseases currently under development, will meet a large unmet need in the global immunotherapy market.

www.immuron.com

ABN: 80 063 114 045

For more information visit: <a href="http://www.immuron.com">http://www.immuron.com</a>



#### About the IMM-124E Study

The IMM-124E study is a Phase II proof of concept multinational, randomized, double-blind study comparing 2 doses of IMM-124E to placebo for the treatment of NASH in adults with any stage biopsy-proven NASH. The trial enrolled 133 patients across 25 clinical sites in Australia (6), Israel (2) and the USA (17). The trial has 12 scheduled visits over a 28-week study duration, with 24 weeks of treatment and four weeks of follow-up and screened a total of 237 patients. It initially aimed to enroll 120 patients with biopsy-proven NASH, and was fully enrolled at 133 patients, which exceeds the original 120-patient target. The patients were randomized into three arms: placebo, high dose (1200mg), and low dose (600mg). The established primary endpoints of the study were improvement of liver steatosis, as assessed by magnetic resonance imaging (MRI) comparing the mean values. The key secondary endpoints are: change in ALT as well as other liver enzymes and metabolic markers. IMM-124E enrolled adults with all-stage biopsy proven NASH up to 12 months of randomization under an IND approved by the FDA.

#### **About IMM-124E**

IMM-124E is an oral, three-times-daily, non-absorbable compound containing poly-clonal anti-LPS immunoglobulins proposed to interact with the gut LPS and immune system to achieve an immunomodulatory effect reducing LPS-related inflammation and inducing tolerance. Because of this unique mechanism of action, targeting multiple pathways, IMM-124E has the potential to play a differentiated role in the management of NASH and may form the cornerstone of NASH combination treatment strategies, both as a single agent and in combination with other agents.

In addition to the adult NASH study, IMM-124E is also being evaluated in two NIH funded Phase II proof-of-concept studies of IMM-124E in children with Pediatric NAFLD and adults with Severe Alcoholic Hepatitis.

#### About Non-Alcoholic Steatohepatitis (NASH)

Nonalcoholic fatty liver disease (NAFLD) is characterized by a buildup of fat in the liver that is not attributable to excessive alcohol use, NASH is a severe type of NAFLD, which is characterized by the accumulation of fat in the liver with no other apparent causes. NASH occurs when the accumulation of liver fat is accompanied by inflammation and cellular damage. The inflammation can lead to fibrosis (scarring) of the liver and eventually progress to cirrhosis, portal hypertension, liver cancer, and eventual liver failure, requiring the patient to have a liver transplant.

NAFLD is one of the most common causes of liver disease in the U.S., with the majority of patients having simple fatty liver. It is estimated that between 30-40% of adults in the U.S. have NAFLD. Although the epidemiology of NAFLD is not fully understood, the condition is associated with certain conditions, including obesity and obesity related conditions (e.g., type 2 diabetes). Researchers have found NAFLD in 40-80% of people with type 2 diabetes and in 30-90% of people who are obese. Over 90% of severely obese people undergoing bariatric surgery had NAFLD in epidemiological studies. NAFLD is not age-specific and has been shown to affect 10% of children ages 2-19, although the risk of developing NAFLD increases with age.

NASH is an emerging health crisis impacting 3% to 5% of the U.S. population and 2% to 4% globally, and is the fastest growing cause of liver cancer and liver transplant in the U.S. The increasing prevalence of NASH is attributed to the growing obesity epidemic and the disease is often diagnosed in patients who have diabetes, high cholesterol or high triglycerides. There is currently no approved treatment for NASH. NASH is projected to reach over \$25B annually by 2026 with a compound annual growth rate (CAGR) averaging 45% in the 2018-2026 period. Research analysts believe that peak sales for IMM-124E could exceed \$1.8B in the U.S. alone.

#### FORWARD-LOOKING STATEMENTS:

This press release may contain "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1934, each as amended. Such statements include, but are not limited to, any statements relating to our growth strategy and product development programs and any other statements that are not historical facts. Forward-looking statements are based on management's current expectations and are subject to risks and uncertainties that could negatively affect our business, operating results, financial condition and stock value. Factors that could cause actual results to differ materially from those currently anticipated include: risks relating to our growth strategy; our ability to obtain, perform under and maintain financing and strategic agreements and relationships; risks relating to the results of research and development activities; risks relating to the timing of starting and completing clinical trials; uncertainties relating to preclinical and clinical testing; our dependence on third-party suppliers; our ability to attract, integrate and retain key personnel; the early stage of products under development; our need for substantial additional funds; government regulation; patent and intellectual property matters; competition; as well as other risks described in our SEC filings. We expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in our expectations or any changes in events, conditions or circumstances on which any such statement is based, except as required by law.



## **Immuron Limited**

Oral Immunoglobulins
Changing the Paradigms
of Care

March 2018

## **Forward Looking Statement**

Certain statements made in this presentation are forward-looking statements and are based on Immuron's current expectations, estimates and projections. Words such as "anticipates," "expects," "intends," "plans," "believes," "seeks," "estimates," "guidance" and similar expressions are intended to identify forward-looking statements.

Although Immuron believes the forward-looking statements are based on reasonable assumptions, they are subject to certain risks and uncertainties, some of which are beyond Immuron's control, including those risks or uncertainties inherent in the process of both developing and commercializing technology. As a result, actual results could materially differ from those expressed or forecasted in the forward-looking statements.

The forward-looking statements made in this presentation relate only to events as of the date on which the statements are made. Immuron will not undertake any obligation to release publicly any revisions or updates to these forward-looking statements to reflect events, circumstances or unanticipated events occurring after the date of this presentation except as required by law or by any appropriate regulatory authority.



## **Company Highlights**

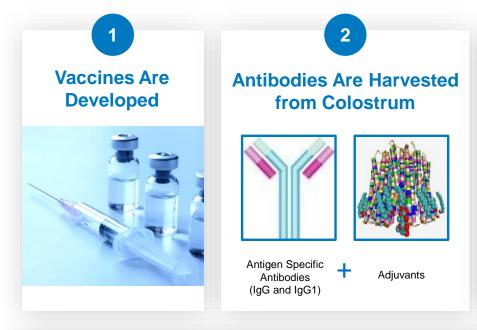


- Clinical stage biopharmaceutical company targeting inflammatory-mediated and infectious diseases with oral immunotherapies
- Validated technology platform with one registered asset generating revenue
- 2 Lead clinical assets in Phase 2 development for the treatment of multiple high value indications, Fat Liver Disease and CDI.
- Excellent safety profile, GRAS by FDA, expedited regulatory review and approval process
- Well positioned to address high unmet medical need in multiple blockbuster markets
- High-value peer licensing deals and M&A underscore potential upside
- Company listed on NASDAQ in 2Q 2017
- Experienced Management Team and strong support from leading KOLs and institutions (NIH, DoD)



## **Platform Overview: Oral Immunoglobulins**





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### **Broad Therapeutic Effect**

Induction of regulatory T-cells

+

Clearance of Targeted GUT Pathogens

- Reduced gut and blood pathogens responsible for initiating inflammation
- Reduces systemic inflammation
- Lowers organ injury
- Strong anti-toxin properties
- Decrease toxin levels results in decrease gut damage
- Generally Regarded as Safe (GRAS)

## Competitive Advantage

- Platform capable of producing multiple drug candidates → Long-term value creation
- Bovine IgG possesses a unique ability to remain active in the human GI tract 
  delivering its full benefits to the bacteria found there
- Bovine IgG is capable of withstanding the acidic environment of the stomach and is resistant to proteolysis by the digestive enzymes in the GI tract
- Safety established 

  Not absorbed into the blood



# **Immuron's Clinical Programs Multiple Near-Term Inflection Points**



Duaguan	Indications	Development Stage			Duranen Highlighte	
Program		Pre-Clinical	Phase 1	Phase 2	Phase 3	Program Highlights
			Anti-Inflamm	atory Programs		
IMM-124E	NASH					- Topline results Available
IMM-124E	ASH					- NIH Funded; UVA - Topline results expected 2019
IMM-124E	Pediatric NAFLD			- NIH Funded; Emory University - Topline results expected 4Q 2018		
IMM-124E	Colitis			Collaboration with Dr. Rogler, Zurich University		
IMM-124E	Autism			Murdoch Childrens Research Institue, La Trobe & RMIT Universities		
Anti-Infective Programs						
IMM-529	C. difficile			- Phase 1/2 initiated 4Q 2017 - Topline results expected Q4 2018		
IMM-124E / Shigella Vaccine	Shigella Infections					Collaboration with US Army
IMM-124E	Campylobacter; ETEC Infections			Collaboration with US Navy		

### **TRAVELAN**

- Hyperimmune bovine colostrum powder 200mg (30 caplets, 24 month shelf life)
- Reduces the risk of TD, reduces the symptoms of minor GI disorders







**US** Packaging

Regulatory Authority	Regulatory Pathway	Indications
TGA	Listed Medicine	<ul> <li>Reduces the risk of travellers' diarrhoea</li> <li>Reduces the symptoms of minor gastro-intestinal disorders</li> <li>Antimicrobial</li> </ul>
Medsafe (New Zealand)	Not marketed in New Zealand	Not marketed in New Zealand
FDA (USA)	Self-affirmed generally regarded as safe (GRAS) Dietary supplement. FDA does not review dietary supplements for safety and effectiveness	Hyperimmune colostrum dietary supplement
Health Canada	Natural Health Product	Travelan helps reduce the risk of traveller's diarrhea.
EMA (Europe)	Not marketed in Europe	Not marketed in Europe

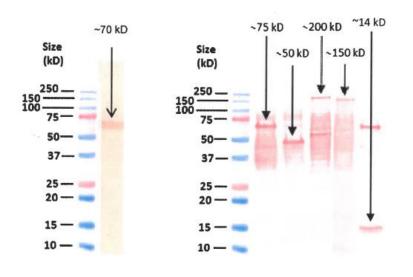
## Prominent immune-reactive bands of Campylobacter, ETEC and Shigella isolates

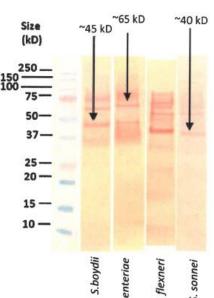


### from Bhutan, Cambodia, Nepal and Thailand

Campy single prominent immunereactive band ETEC prominent immune-reactive bands

Shigella prominent immune-reactive bands





### Travelan immunoreactivity study:

- Armed Forces Research Institute of Medical Sciences (AFRIMS)
- Walter Reed Army Institute of Research (WRAIR)
- US Naval Medical Research Centre (NMRC)





## IMM-124E-2001 NASH Clinical Trial Top Line Results

March 2018



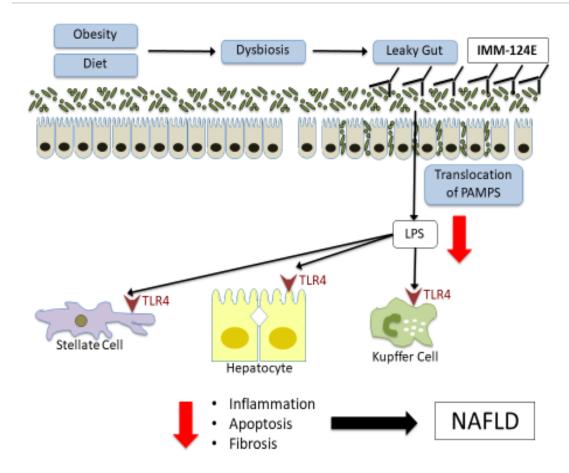
### SUMMARY: IMM-124E Clinical Trial Results



- IMM-124E demonstrated good safety and tolerability on both doses
- A statistically significant effect of IMM-124E to reduce serum levels of LPS
- A statistically significant and clinically meaningful effect to reduce ALT levels by 30% or more in patients with elevated ALT at enrollment
- Statistically significant reduction in mean AST compared to placebo.
- Statistically significant effect to reduce CK-18 compared to placebo
- IMM-124E was shown to remain in the gut and not cross into the bloodstream
- No effect on liver steatosis

## LPS ANTAGONISM FIRST IN CLASS MoA



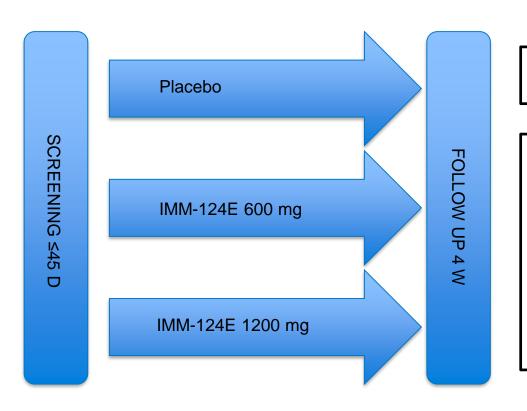


- Obesity, Diet and liver disease
- Dysbiosis
- "leaky gut" (LPS)
- Endotoxemia
- LPS engages TLR4
- lipogenesis, inflammation, hepatocyte apoptosis and fibrosis
- Hyperglycemia drives intestinal barrier dysfunction and risk for enteric infection. Thaiss CA et al. Science, 2018
- Non-alcoholic fatty liver and the gut microbiota. Stavros B et al. Molecular Metabolism, 2016
- Age-Associated Microbial Dysbiosis Promotes Intestinal Permeability, Systemic Inflammation, and Macrophage Dysfunction. Thevaranjan N1, et al.
   Cell Host Microbe 2017.
- Hepatic TLR4 signaling in obese NAFLD. Sharifnia T, et al. Am J Physiol Gastrointest Liver Physiol 2015



## STUDY DESIGN IMM-124E-2001





120 patients, 3-arms, Randomized, double blind, Placebo – 2dose, balanced 1:1:1 design

### Major Inclusion Criteria

Histologically proven NASH (≤12 months)

- NASH activity score (NAS) ≥4
- Cytologic ballooning score of at least 1
- 10% or more macrovesicular steatosis
- HBA1C of <u><</u>9.0

## STUDY ENDPOINTS



### **PRIMARY**

- Safety
- Hepatic Fat Fraction

### **SECONDARY**

- liver enzymes ALT, AST, GGT
- Glucose homeostasis and serum lipid profile
- Serum Bovine Ig Pharmacokinetics
- Establish recommended dose

### MoA

- Lipopolysaccharides (LPS)
- CK-18
- Cytokines
- Adiponectin and GLP-1

### STUDY POPULATIONS



Patients Screened: N = 237

Screening Failure N = 104

Patients Randomized: N = 133

Early Discont. N = 21

Study Analysis Sets:

PP: 102 FAS: 133 ITT: 133

### **Definitions**:

ITT = Intention to Treat

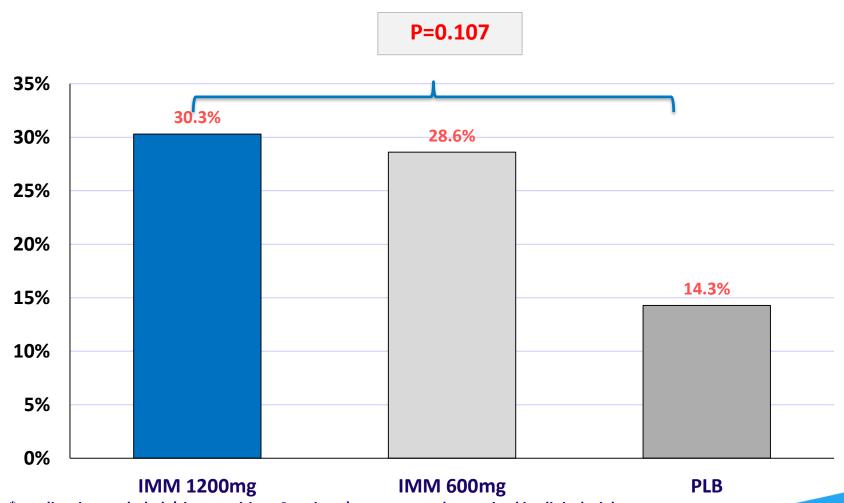
FAS = Full analysis set

PP = Per Protocol



## SERUM ALANINE AMINO-TRANSFERASE (ALT) RATE OF SUBJECTS WITH ≥30% DECREASE \*



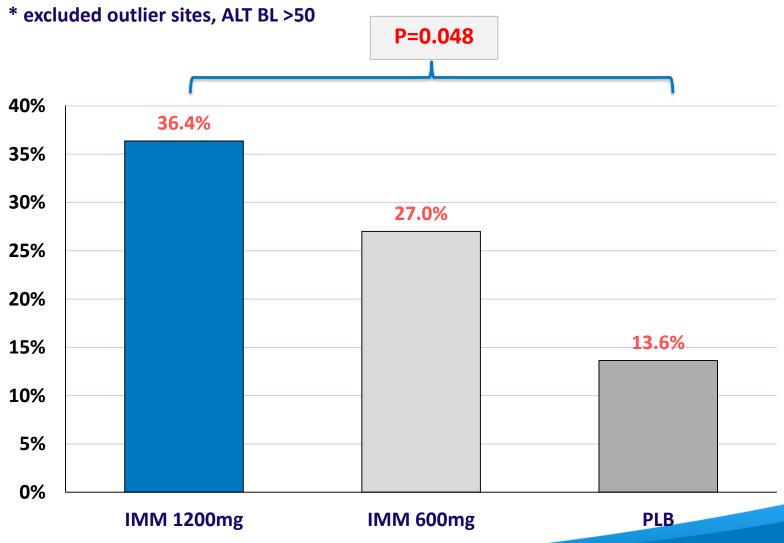


<sup>\*</sup> outlier sites excluded (site recruiting <3 patients) – as commonly practiced in clinical trials



## SERUM ALANINE AMINO-TRANSFERASE (ALT) RATE OF SUBJECTS WITH ≥30% DECREASE\*

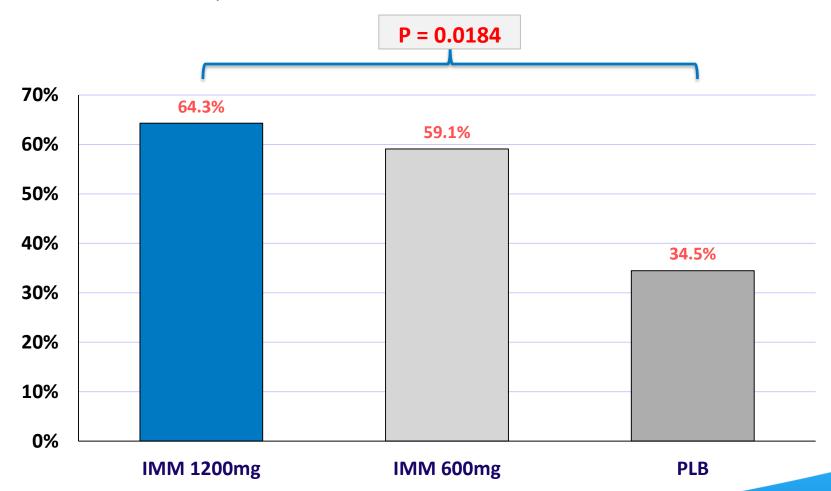




# SERUM LIPOPOLYSACCHARIDES (LPS) RATE OF PATIENTS WITH ≥15% DECREASE\*

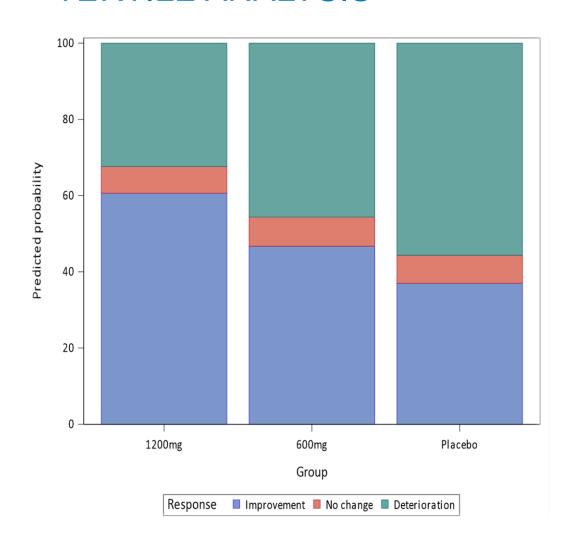


\* Outlier sites excluded, Baseline LPS>250



# SERUM LPS OVERALL RESPONSE TO TREATMENT TERTILE ANALYSIS



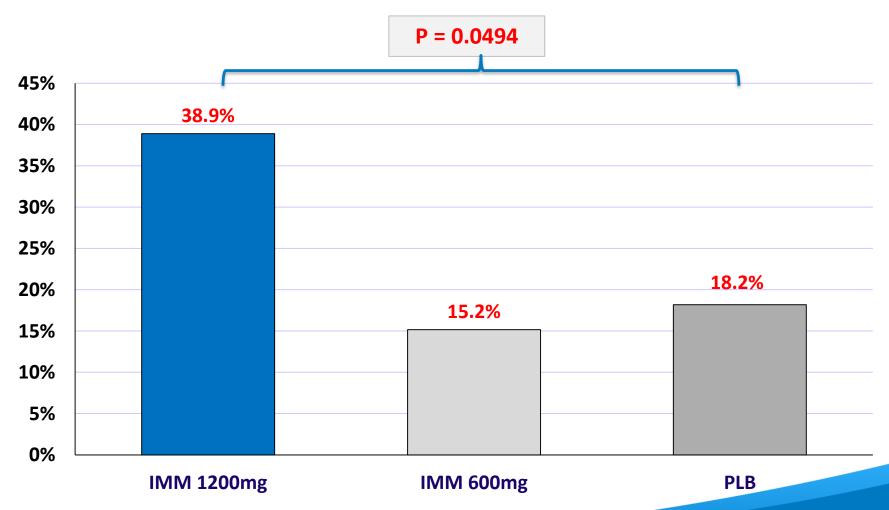


- Analysis aimed at looking at the entire population
- Shows an overall beneficial effect across all patients
- Minimizes risk of cut-off selection bias
- p=0.0715 (1200mg vs. PLB)

## SERUM CYTOKERATINE-18 (CK-18) RATE OF PATIENTS WITH ≥15% DECREASE\*

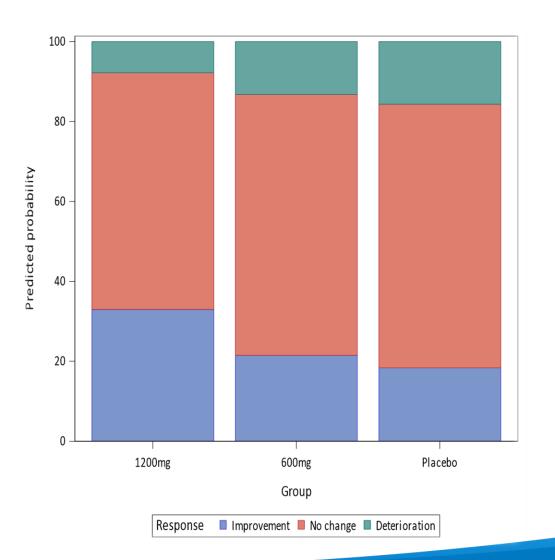


\* excluded outliers sites



## SERUM CK-18 OVERALL RESPONSE TO TREATMENT TERTILE ANALYSIS



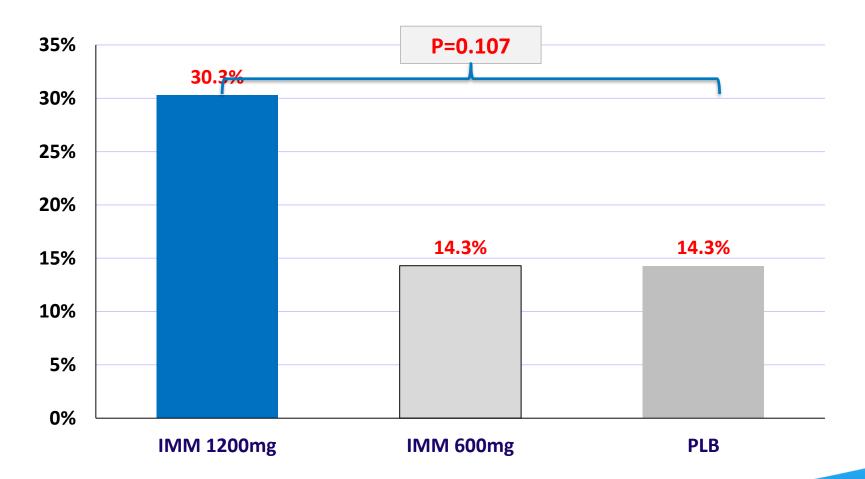


- Analysis aimed at looking at the entire population
- Shows an overall beneficial effect across all patients
- Minimizes risk of cut-off selection bias



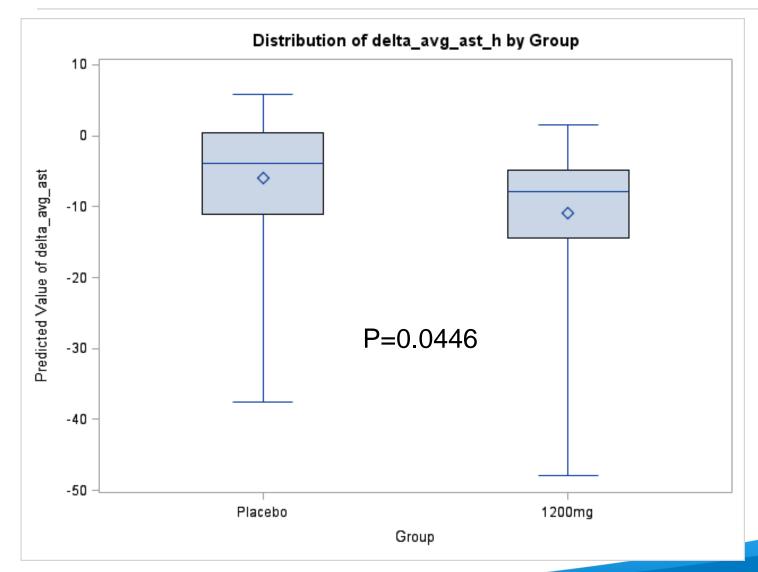
# SERUM ASPARTATE-AMINOTRANSFERASE AST RATE OF SUBJECTS WITH AST DECREASE\* >30%

\* excluded outlier sites



# ASPARTATE TRANSAMINASE (AST) LINEAR REGRESSION PREDICTED VALUES

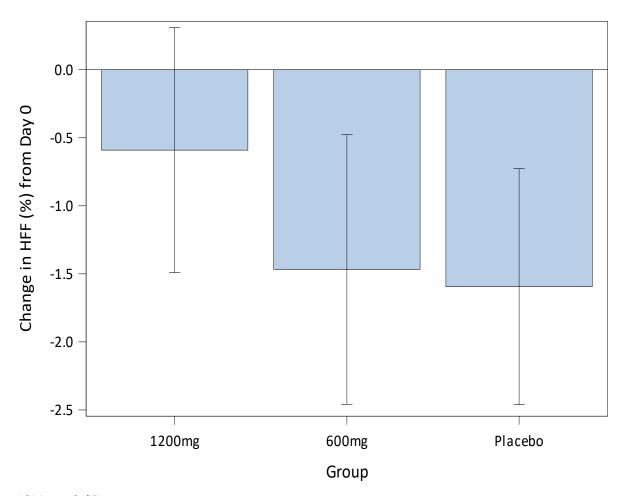






## HEPATIC FAT FRACTION





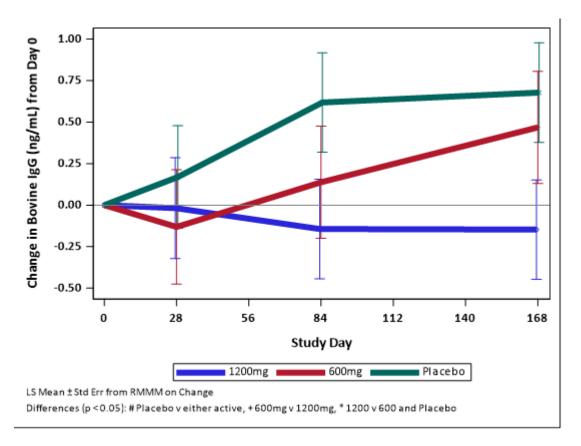
- No effect seen in any of the arms
- Since IMM-124E is no anti-steatotic

LS Mean ± Std Err



# PHARMACOKINETICS SERUM BOVINE Ig





- No significant change in any of the arm
- All curves remain essentially flat

## **Safety Results**



	Total	Placebo n=44 [n(%)]	600mg IMM124E n=43 [n(%)]	1200mg IMM124E n=46 [n(%)]
All Adverse Events	572	167	192	213
Grade 3-4 Subjects (events)	28	6 (6)	6 (12)	5 (10)
SAE <sub>1</sub> Events	6	3	1	2
Rx stopped due to AE	2	0	$I_2$	13
Death	1	14	0	0

- 1 SAE None determined related to study drug
- 2 Possibly related to study drug: Worsening of Arthraligia Grade 2
- 3 Possibly related to study drug: Diarrhea Grade 1
- 4 Road accident, Unrelated to study drug

### **SUMMARY**



- IMM-124E demonstrates an outstanding safety profile
- IMM-124E shows a significant decrease in serum LPS making it the first ever LPS-antagonist drug candidate
- IMM-124E reduces Liver enzymes
- IMM-124E demonstrates a significant reduction in CK-18
- No change in Hepatic Fat Fraction was demonstrated in any study arm
- Pharmacokinetics shows no IMM-124E translocation into blood

## **IMM-529**

Neutralizing Clostridium *difficile*, while Sparing the Microbiome



## IMM-529 in Clostridium difficile Infection (CDI)



- Biologic with unique triple mechanism of action
  - Targets and neutralizes the toxin B, the spores and the vegetative cells
- Potential to redefine the standard-of-care (SOC) therapy for CDI
  - Stops virulence, without impacting the microbiome
  - Compelling data in all three phases of the disease including (1) prevention of primary disease, (2) treatment of primary disease and (3) prevention of recurrence
  - Orally administrated, safe
- >70% survival rate in CDI mice treated with IMM-529 vs. <7% survival rate in control groups
- Potential orphan disease designation; Potential breakthrough / fast track designations
- Market exclusivity (biologics; High barriers to generic biosimilar entry)

### **IMM-529** for the Treatment of CDI



## Market Opportunity

- Therapeutic market is expected to grow from US\$356.3 million in 2014 to over \$1.5 billion by 2024 – CAGR 15%
- Nearly 30,000 patients die each year from C. difficile infections (US)
- Potential orphan disease (7 years market exclusivity and premium pricing)

#### **Unmet Need**

- Vancomycin and metronidazole are the current standard of care, accounting for 80% of patient share (US)
- However, therapies are plagued by significant CDI recurrences (1st relapse: 25%; 2nd: 40%; 3rd: 50%) underscoring need for new treatments
- There is also growing resistance to vancomycin treatment

## IMM-529 Positioning

- Highly differentiated Neutralizes C. difficile but does not impact microbiome
- Only asset that targets not only toxin B but also the spores and the vegetative cells responsible for recurrence
- · Can be used in combination with standard of care
- Targets many isolates



# Triple Action MOA Neutralizing C. difficile; Sparing the Microbiome



### **Spores – Infectious Particles**

**IMM-529** antibodies bind to multiple epitopes on surface antigens on spores and prevent adheres to host cells and limit germination.

Heat, ethanol and UV resistant. Survive gastric acid, adhere to cells in the colon and germinate.

### **Vegetative Cells**

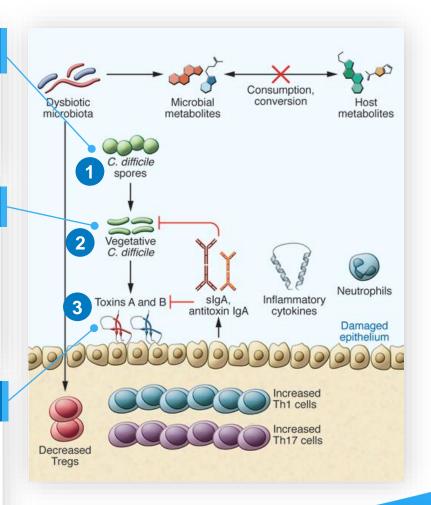
**IMM-529** antibodies bind to multiple epitopes on the surface layer proteins (SLP) on vegetative cells and limit colonization.

Fimbriae and other surface layer proteins (SLP) contribute to bacterial colonization. Fimbriae are used to adhere to other bacteria and to host cells and is one of the primary mechanisms of virulence

### **Toxin B**

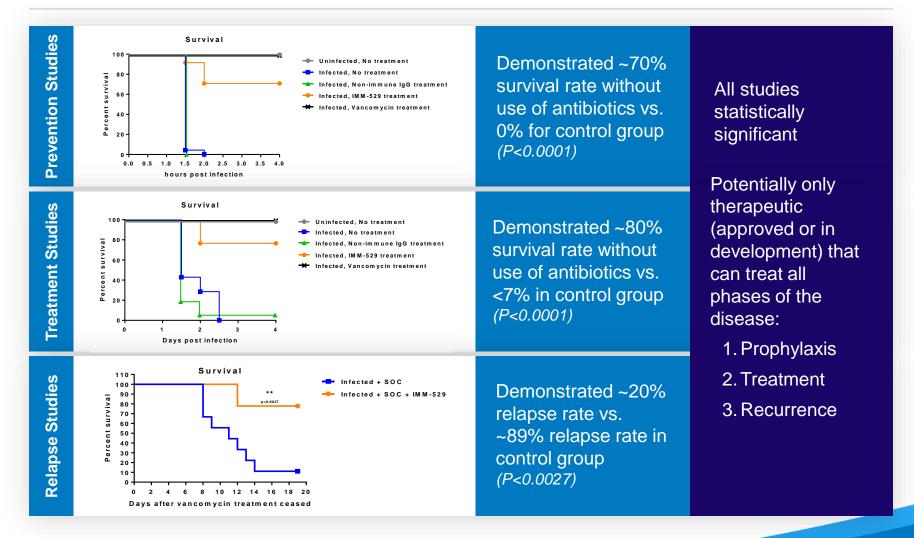
IMM-529 antibodies bind to multiple epitopes effectively neutralize toxin B, inhibiting toxin mediated epithelial cell apoptosis and limit toxin translocation into the systemic circulation and inflammatory cascades.

Toxin B is essential for virulence. Toxin B disrupt the cytoskeleton and tight junctions of intestinal epithelial cells.



### **Results of Pre-Clinical Studies**





## Phase 1/2 Study Design



### Phase 1/2 Study in CDI Initiated 4Q 2017

- Phase 1/2, randomized, double blind, placebo-controlled clinical study of IMM-529 for the treatment of CDI
- 60 subjects to be enrolled up to 3 weeks of definitive diagnosis of CDI (at least 20 subjects to be enrolled within the first 72 hours)
- Subjects randomized to IMM-529 or placebo in a 2:1 ratio
- Treatment duration: 28 days on top of SOC (vancomycin / metronidazole)
- Follow-up: 3 months overall
- Primary objective: To evaluate the safety and tolerability of IMM-529 together with standard of care (SOC) in patients with CDI
- Secondary objective: To evaluate the effectiveness of IMM-529 together with SOC to treat patients with CDI

# NASH and C. difficile Comps Indicate Potential for Substantial Growth



Company	Ticker	Program	Development Stage	Market Cap*		
	Program in NASH					
Intercept	ICPT	Obeticholic acid	Phase 3	US\$2.9B		
GENFIT TOWARDS BETTER MEDICINE	GNFT	Elafibranor	Phase 3	US\$1.1B		
Conatus ***	CNAT	ENCORE-LF	Phase 2	US\$195M		
Program in C. Difficile						
SERES THERAPEUTICS*	MCRB	SER-109; SER-262	Phase 2	US\$423M		
summit	SMMT	SMT19969	Phase 1	US\$143M		
assembly	ASMB	ABI-M101	Preclinical	US\$419M		

<sup>\*</sup>As of May 4, 2017



## Capital Profile Immuron Limited (ASX:IMC NASDAQ:IMRN)



**Current Top 10 Shareholders** 

Rank		Holder Name	Current Qty	%
1		HSBC CUSTODY NOM AUST LTD (ADR Program)	19,531,706	14.97%
2	*	GRANDLODGE PL	9,056,682	6.94%
3		AUTHENTICS AUST PL	8,624,999	6.61%
4		RETZOS EXECUTIVE PL	3,800,000	2.91%
5	*	ANASTASIOU PETER + K P	2,907,236	2.23%
6		INVERAREY PL	2,731,632	2.09%
7	*	FIFTY-FIFTH LEPRECHAUN PL	2,645,983	2.03%
8		INSYNC INV PL	2,500,000	1.92%
9		SBI INV PR LLC	2,000,000	1.53%
10		ADVANCE PUBLICITY PL	2,000,000	1.53%
		TOTAL TOP 20 SHAREHOLDERS	55,798,238	42.76%
,		BALANCE OF SHARES	74,642,224	57.24%
		TOTAL SHARE ON ISSUE	130,440,462	100.00%

<sup>\*</sup> Denotes a Director Related Entity

**Current Company Market Capitalization** 

 $AUD$51.2M \approx USD$39.5M (9<sup>th</sup> Mar 2018)$ 



## **Key Milestones Expected to Drive Value**





IMM-529

closed

Initiation of Phase
 1/2 Trial in CDI

- NASH Phase 2 topline results
- NASH centric transaction
- Pediatric NAFLD Phase 2 topline results
- ASH Phase 2 topline results
- IMM-529
- Topline results expected from Phase 1/2 study in CDI

Results from colitis preclinical studies and US Army and US Navy trials expected 2018



## **Thank You**