



FORGING COMMERCIAL & CLINICAL PATHWAYS

TARGETING INFECTIOUS DISEASES WITH ORAL
IMMUNOTHERAPIES – APRIL 2019

NASDAQ: IMRN
ASX: IMC



SAFE HARBOR 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

We are a commercial and clinical-stage biopharmaceutical company focusing on infectious diseases with oral immunoglobulin-based therapies.

Validated technology platform – with one registered asset, **Travelan®** generating revenue.

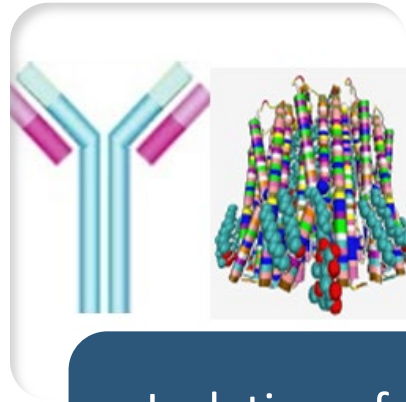
2 Lead clinical assets, IMM-124E & IMM-529, in **Phase 2 development** for the treatment of Liver Disease and *C. difficile*.

Plan for accelerated **regulatory path** to approval for IMM-124E (Travelan®) as drug to prevent Travelers' Diarrhea in USA.

PLATFORM OVERVIEW: ORAL IMMUNOGLOBULINS



Development
of Highly
Specific
Vaccines



Isolation of
hyperimmune
antibody-rich
bovine
colostrum



Oral
Antimicrobial
therapeutics
without
drawbacks of
antibiotics



Toxin
Neutralization



Clearance of
targeted gut
pathogens



US DOD R&D COLLABORATION AGREEMENTS

- Armed Forces Research Institute of Medical Sciences (AFRIMS) – June 2016
- Naval Medical Research Center (NMRC) – August 2016
- Walter Reed Army Institute (WRAIR) – June 2016





WRAIR R&D COLLABORATION – KEY MILESTONES

- **Evaluation of anti-Shigella specific activity of Travelan®**
 - Travelan® shown to target common bacterial antigens present on ETEC and Shigella.
 - Travelan® shown to bind 180 pathogenic strains of bacteria retrieved from infected personnel deployed in Bhutan, Cambodia, Nepal and Thailand.
 - Travelan® prevented clinical Shigellosis (bacillary dysentery) in non-human primates.
- **Development of a Shigella specific Therapeutic**
 - Three new products developed by Immuron
 - Preclinical testing initiated at WRAIR



THE POTENTIAL OF POLYCLONAL ANTIBODIES

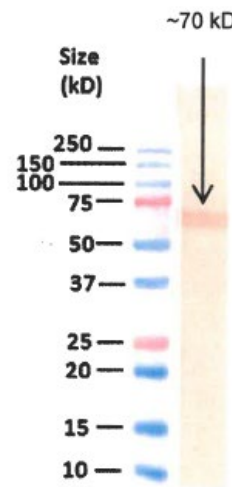


US Department of Defense Travelan[®] immunoreactivity study¹ (2017):

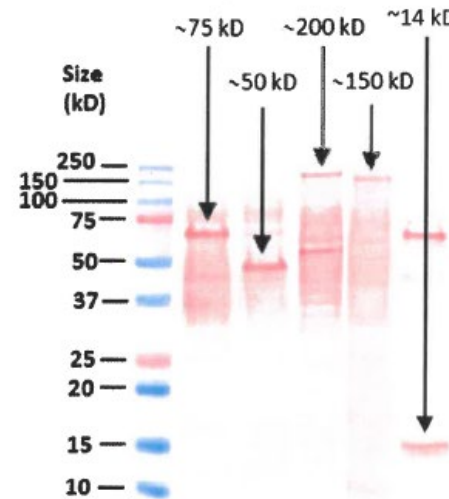
- Travelan[®] demonstrates broad-spectrum antimicrobial properties
- Antibodies in Travelan[®] able to bind & react with all 180 strains of bacteria isolated from infected DoD personnel

Pathogenic bacteria included Campylobacter, Shigella and Enterotoxigenic E. coli

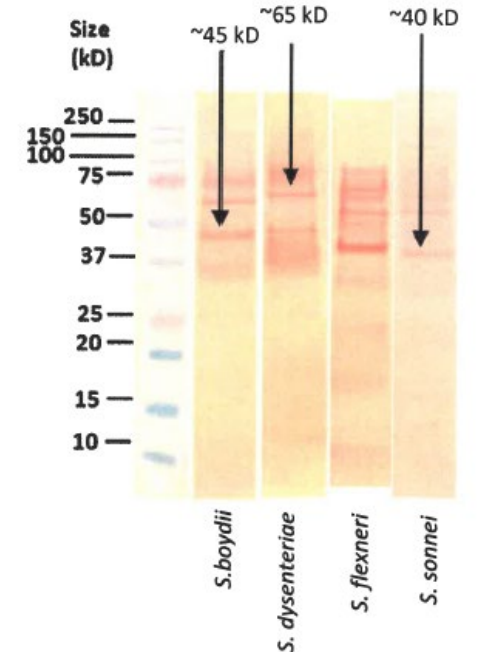
Campy single prominent immune-reactive band



ETEC prominent immune-reactive bands



Shigella prominent immune-reactive bands



WESTERN BLOT ANALYSIS

1 - Carried out by Armed Forces Research Institute of Medical Sciences (AFRIMS), Walter Reed Army Institute of Research (WRAIR), US Naval Medical Research Centre (NMRC)

DEVELOPMENT PIPELINE: TWO PRONGED PLAN



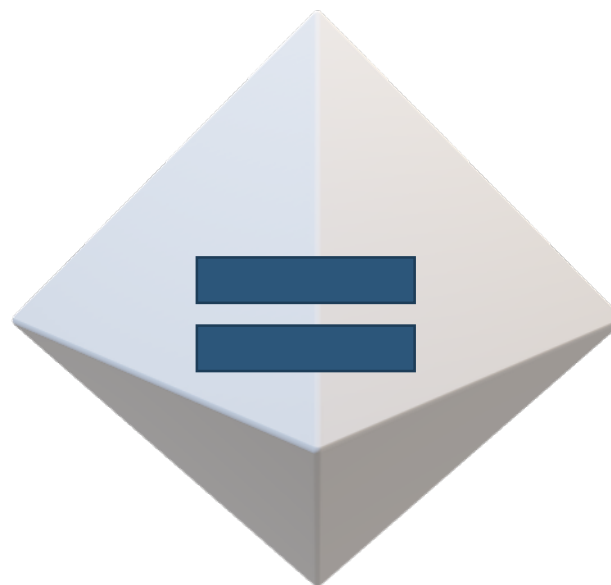
		DEVELOPMENT STAGE					HIGHLIGHTS
		PRE-CLINICAL	PHASE 1	PHASE 2	PHASE 3	MARKET	
ANTI-INFLAMMATORY PROGRAMS							
Travelan®	TGA ARTG Aust L106709 (2004)					Commercial product - Australia	
	Health Canada NPN 80046016 (2015)					Commercial product - Canada	
	Dietary supplement (2015)					Commercial product - USA	
IMM-124E (Travelan®)						PLAN TO DEVELOP AS DRUG TO PREVENT TRAVELERS' DIARRHEA IN USA	
IMM-529						TO PREVENT RECURRENCE IN <i>C. DIFFICILE</i> PATIENTS	

BACKGROUND OF TRAVELAN®: DIAMOND IN THE ROUGH



COMMERCIAL PRODUCT

Marketed in Australia, USA
and Canada



DRUG CANDIDATE IMM-124E

Status with FDA:
IND open and active



Plan to develop IMM-124E as an
approved drug in USA to treat
Travelers' Diarrhea



WHAT IS TRAVELERS' DIARRHEA?

- Caused by consuming food or water infected with pathogens. Three or more unformed stools in 24 hours.
- Bacterial pathogens are the predominant risk¹.
- Enterotoxigenic *E. coli* (ETEC) are the predominant pathogens:
 - 42% in Latin America
 - 28% in Southeast Asia
- Up to 70% of travelers suffer from travelers' diarrhea².



TRAVELAN® OTC BUSINESS



- A unique OTC targeting Travelers' Diarrhea in Australia & Canada
- In Australia, TGA listed medicine indicated to:
 - Reduce the risk of travelers' diarrhea
 - Reduce the symptoms of minor gastrointestinal disorders
- Dietary supplement in USA
- Significantly reduces the motility of ETEC strains
- Binds to multiple epitopes and antigens on both the bacterial surface and flagella



Available in 2000+ pharmacies in Australia

Travelan® has considerably greater reactivity against purified ETEC antigens than IgG purified from non-immune colostrum powder



TRAVELAN® COMMERCIAL PROFILE

- Annual revenues of AUD \$2M+; cash flow positive
- Net revenues: 1H2019 +20% vs 1H2018
- Potential WW peak sales: \$200M+
- Global market size: US\$630M – 2019
- Global market size expected to grow to US\$1B – 2025 (CAGR 7%)
- Pursuing new geographies
- Potential for new products & formulations (e.g Shigella)

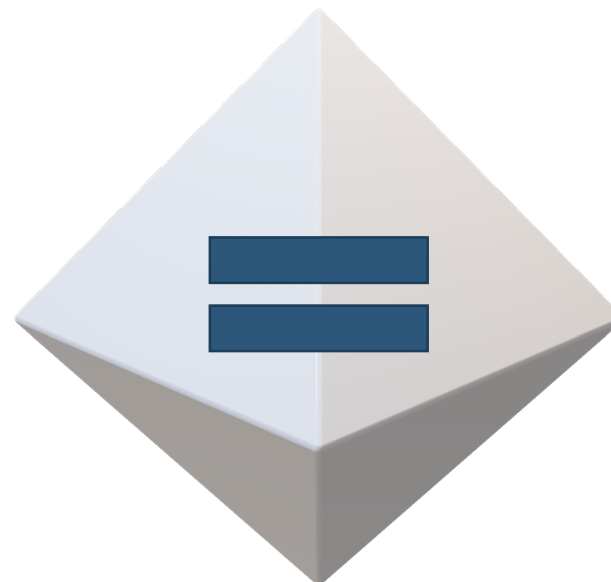


BACKGROUND OF TRAVELAN®: PLAN TO EXPAND USE



COMMERCIAL PRODUCT

Marketed in Australia, USA
and Canada



**DRUG CANDIDATE
IMM-124E**

**Status with FDA:
IND open and active**



Plan to develop IMM-124E as an
approved drug to treat Travelers'
Diarrhea

ANTIBIOTIC RESISTANCE: OPPORTUNITY FOR TRAVELAN®



International Society of Travel Medicine
Promoting healthy travel worldwide
Established 1991

International Society of Travel Medicine, 2017 guidelines for treating Travelers' Diarrhea included¹:

- Antibiotics should **NOT** be used routinely, except patients at high risk of complications
- Rifaximin recommended when antibiotic prophylaxis is indicated
- Fluoroquinolones not recommended for prophylaxis²
- Insufficient evidence to recommend prebiotics or probiotics

The opportunity: Travelan®, the alternative to antibiotic treatment of TD

¹ Riddle et al. 2017. Guidelines for the prevention and treatment of travellers' diarrhea: a graded expert panel report. Journal of Travel Medicine 24(1).

² Tribble, D. 2017 Resistant pathogens as causes of traveller's diarrhea globally and impact(s) on treatment failure and recommendations. Journal of Travel Medicine 24(1)

TRAVELAN® AS A DRUG TO TREAT TRAVELERS' DIARRRHEA



- Results of Controlled Human Infection Model (CHIM) Studies
- Travelan® evaluated in two randomised, double-blind, placebo-controlled challenge clinical trials
- 90 healthy volunteers
- Published in Scandinavian Journal of Gastroenterology



STUDY 1: 30 participants

PLACEBO

15

IMM-124E

400mg

15

Oral challenge with O78 ETEC strain (H10407).
Treatment 5 days after challenge with ciprofloxacin 500mg bd for 5 days

Diarrhea was defined as passage of two or more unformed stools during 48 hour period within 72 hours of the challenge

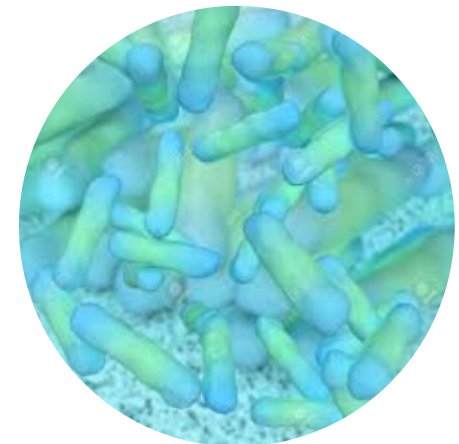
RESULTS: Travelan® provided up to 93% prophylactic efficacy against diarrhea due to infection by the major strain of E.coli that causes TD

Otto et al. 2011 RCTs using a tablet formulation of hyperimmune bovine colostrum to prevent diarrhea caused by ETEC in volunteers. Scandinavian Journal of Gastroenterology, 2011; 46: 862–868.

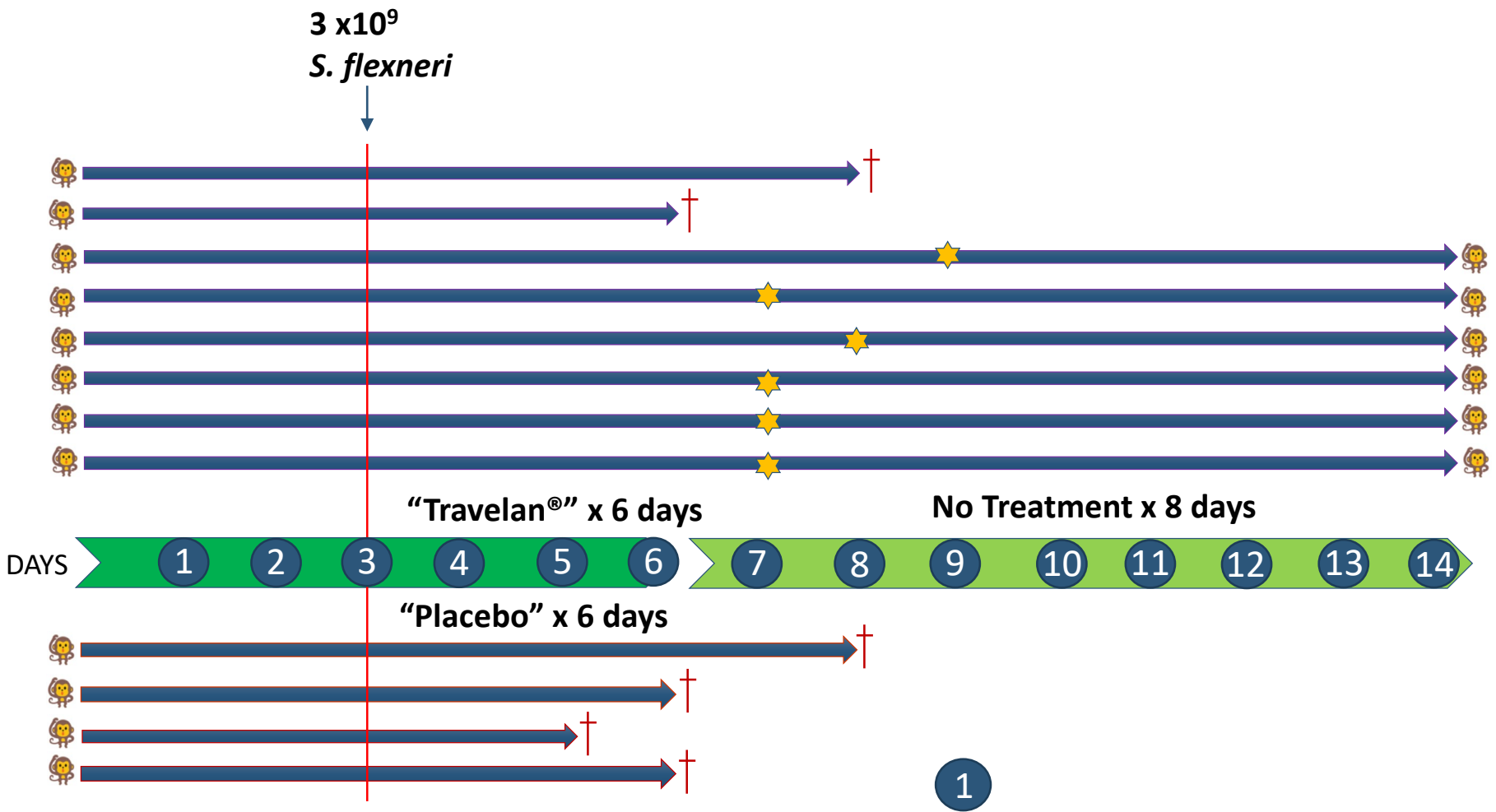
TRAVELAN®: ORAL CHALLENGE STUDY PREVENTION OF SHIGELLOSIS (BACILLARY DYSENTERY) IN PRIMATES



- 12 juvenile rhesus monkeys randomly assigned to Travelan® (n=8) or placebo (high protein milk powder) (n=4) treatment groups
- Travelan® or placebo (500mg) was administered 2x daily for 6-days, starting on day 0
- Each monkey challenged with 2.8×10^9 *Shigella flexneri* 2a intragastrically on day 3
- Travelan® /placebo treatment stopped on day-6. Monkeys monitored through to day 14
- Faecal samples taken 2 x daily and cultured to establish presence/absence of *Shigella flexneri*
- Animals continually monitored for clinical signs



RESULTS OF TRAVELAN® SHIGELLA CHALLENGE STUDY



★ = last day of *S. flexneri* consecutive +ve stool culture



SUMMARY OF TRAVELAN® SHIGELLA ANIMAL STUDY

Placebo (high protein milk powder) provided no protection against acute shigellosis

- All (4/4) Placebo treated monkeys developed severe acute enteric shigellosis.

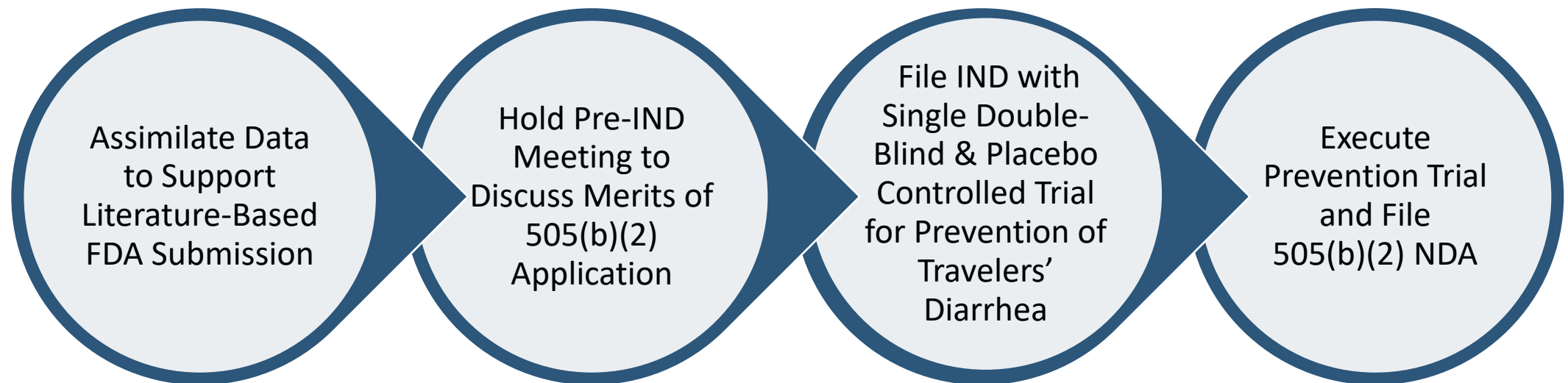
Travelan® provided 75% protection against acute shigellosis

- 2 of 8 (25%) Travelan®-treated monkeys developed severe acute enteric shigellosis
- 6 of 8 (75%) Travelan®- treated monkeys survived *Shigella flexneri* challenge
- *S. flexneri* was undetectable in consecutive faecal samples by day-7 in 4 of 6 (67%) survivors and by day 9 in the remaining 2 (33%) survivors



IMM-124E DRUG DEVELOPMENT PLAN

Revamp Travelan® for FDA approval as drug to treat Prevent Travelers' Diarrhea in Travelers to Endemic Areas:



US SALES FORECAST FOR TRAVELAN® IF APPROVED AS DRUG FOR TD



MARKET POTENTIAL FOR TRAVELAN® SALES:

USD >\$100 MILLION

Market potential figure derived from:

2014 figures of US citizens traveling to high risk destinations for TD (44.3 million)¹ and obtaining pretravel advice (22.2 million)². Sources of pre-travel advice include primary care provider, travel medicine specialist, company doctors, pharmacist, and travel agencies². Our forecast utilizes a very conservative estimate for % of US citizens purchasing Travelan® after seeking pre-travel advice.







1. U.S. Department of Commerce, International Trade Administration, National Travel and Tourism Office. U.S. Citizen Traffic to Overseas Regions, Canada & Mexico 2014. Monthly Statistics, U.S. Outbound Travel by World Regions. 2014. Available at: <http://travel.trade.gov/view/m-2014-O-001/index.html>. Accessed June 26, 2015.

2. Mathyas Wang, MD, Thomas D. Szucs, MD, MBA, MPH, LLM, and Robert Steffen, MD. Economic Aspects of Travelers' Diarrhea. Journal of Travel Medicine, Volume 15, Issue 2, 2008, 110–118

COMPETITOR MARKET ANALYSIS – ANTI-DIARRHEAL DRUGS



Drug	Indication	Dosing	Ave cost – 2 week trip	Revenue USD Millions (Year)
FDA APPROVED OTC DRUG TREATMENT FOR DIARRHEA				
PEPTO BISMAL (BSS) 	Relief for heartburn, nausea, indigestion, upset stomach and diarrhea.	2 tabs QID	\$14.56	97.8 (2018) 82.6 (2013)
IMMIDIUM 	Decrease the frequency of diarrhea in TD, gastroenteritis, inflammatory bowel disease, and short bowel syndrome.	2 tabs (2 mg)	\$11.48 (48 caplets)	82.5 (2013)
CIPROFLOXACIN (FLUOROQUINOLINE) 	Bacterial infections.	500 mg	\$44.52	40.8 (2015)
RIFAXIMIN 	Treatment of Travellers' Diarrhea.	3 caps (200 mg) TID	\$246.96 - \$493.92	
NO FDA APPROVED DRUG TO PREVENT TRAVELERS' DIARRHEA				
TRAVELAN®	Dietary Supplement.	3 caps (200 mg) TID	\$30 – 30 caplets	0.77 (2018)

TRAVELAN® UNIQUELY POSITIONED FOR SUBSTANTIAL GROWTH - *NO FDA APPROVED DRUG TO PREVENT TD*



Market Opportunity

- Therapeutic market is expected to grow from US\$630 million in 2019 to over \$1 billion by 2025 – CAGR 7%.
- 44.3 million US Citizens travel to high risk destinations each year 30 to 70% will get TD.
- 22.2 million US Citizens seek pretravel health advice.

Unmet Need

- **Antibiotic** Chemoprophylaxis can provide up to 90% protection against TD – NOT Recommended due to emerging resistance to this class of drug.
- **Bismuth Subsalicylate (BSS)** shown to provide up to 65% protection against TD not commonly used as prophylaxis for TD due to adverse effects, salicylate toxicity, inconvenient dosing (2 tablets 4X a day) and low compliance.
- **Vaccines** – No current products targeting TD registered in the USA.

Travelan® Positioning

- Highly differentiated – Neutralizes ETEC but does not impact microbiome.
- Targets many isolates (Campylobacter, ETEC, Klebsiella, Salmonella, Shigella).
- Listed medicine in Australia over 600,000 packets sold WW.
- There is also growing resistance to antibiotic treatments.

DEVELOPMENT PIPELINE: TWO PRONGED PLAN

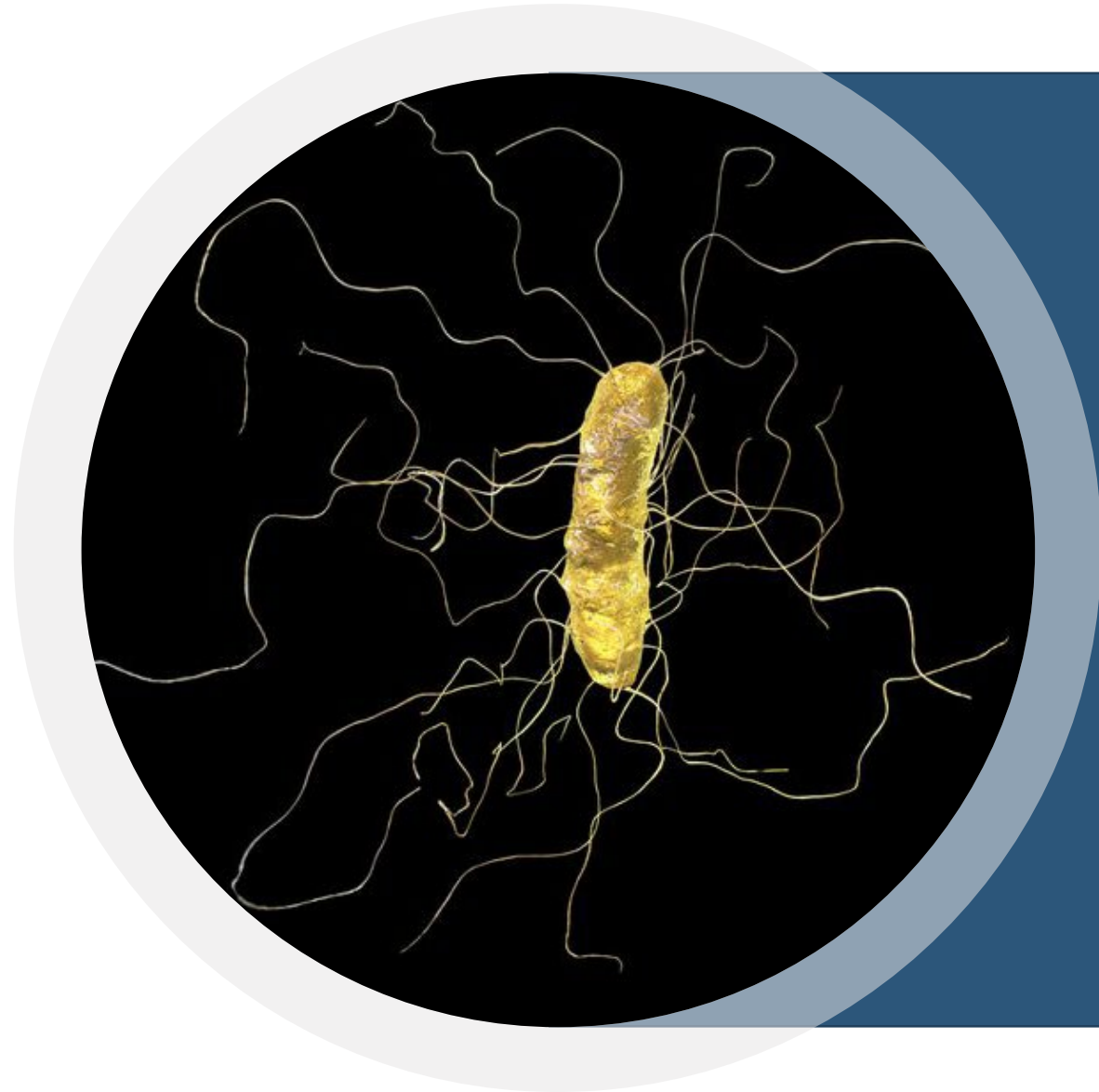


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1	Travelan®					DEVELOP AS DRUG TO TREAT TRAVELERS' DIARRHEA
2	IMM-529					PREVENT RECURRENCE IN C. DIFFICILE PATIENTS



NEUTRALIZING *CLOSTRIDIUM DIFFICILE*, WHILE SPARING THE MICROBIOME

IMM-529



CLOSTRIDIUM DIFFICILE MARKET OPPORTUNITY



- Therapeutic market expected to grow from US\$360 million in 2014 to over \$1.7 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)



THE UNMET NEED

- Current standard of care for *C. difficile* includes vancomycin and metronidazole, accounting for 80% of patient share (US)
- Therapies plagued by significant CDI recurrences (1st relapse: 25%; 2nd: 40%; 3rd: 60%) underscoring need for new treatments
- Growing resistance to vancomycin treatment
- Some treatments are administered intravenously rather than via the gut where *C. difficile* resides



Isobel Ramsay, Nicholas Brown and David Enoch. Recent Progress for the Effective Prevention and Treatment of Recurrent Clostridium difficile Infection. Infectious Diseases: Research and Treatment Volume 11: 1–4 (2018). DOI: 10.1177/1178633718758023

IMM-529 OPPORTUNITY

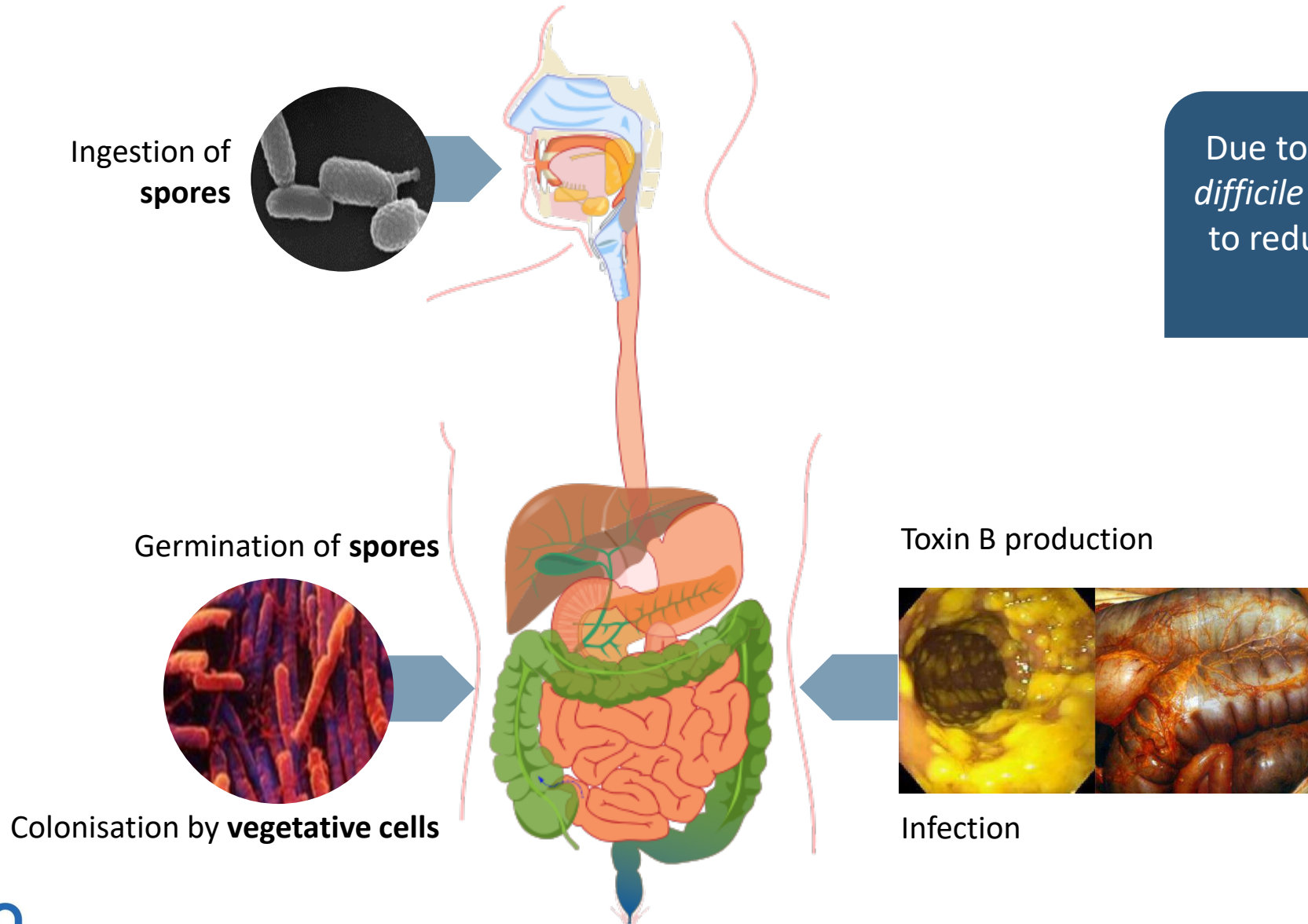


- IMM-529 highly differentiated – neutralizes *C. difficile* but does not impact microbiome
- Targets not only toxin B but also spores and vegetative cells responsible for recurrence
- Potential use in combination with standard of care
- Targets many isolates



Toxin B

IMM-529 TARGETS



Due to unique character of *C. difficile* bacterium, it is difficult to reduce its recurrence with antibiotics.

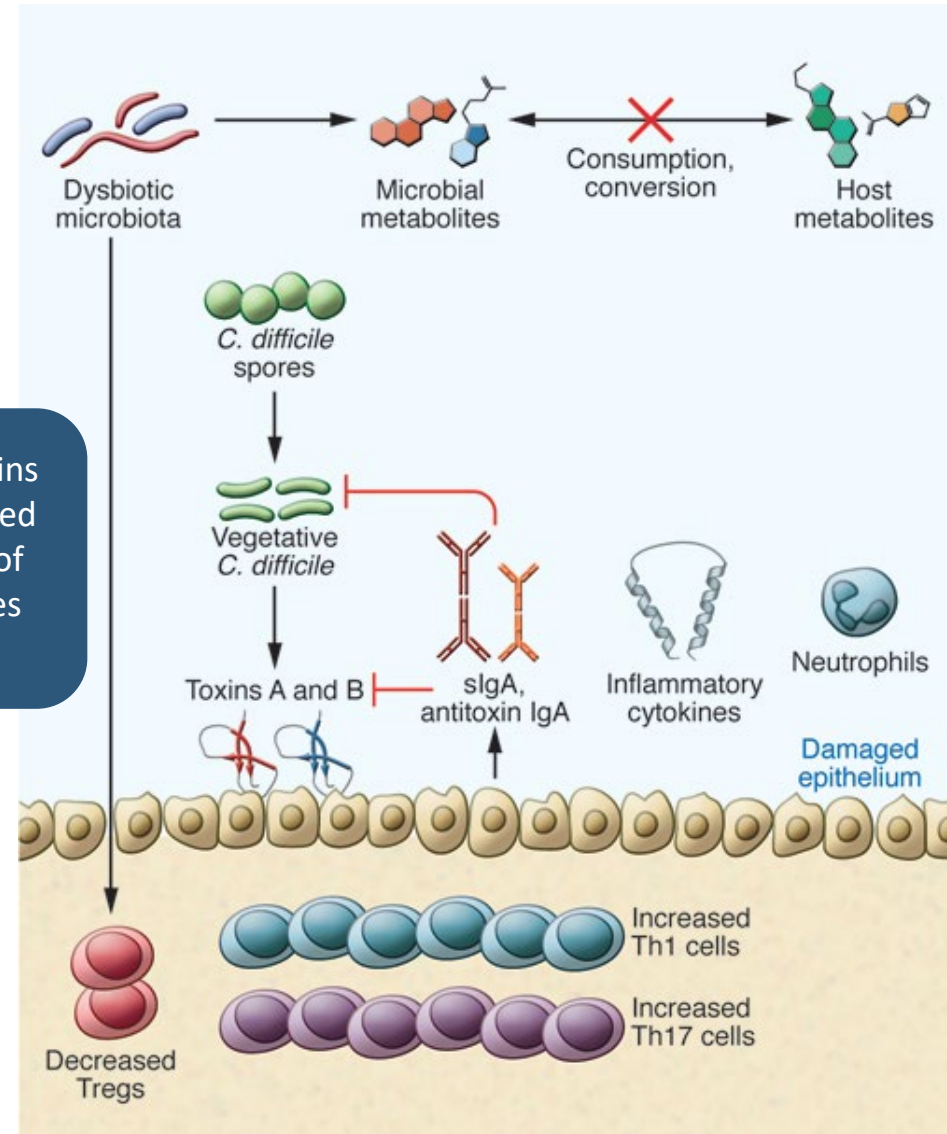
IMM-529 UNIQUE MOA IN CDI



SPORES - Infectious particles – Heat, ethanol & UV resistant. Survive gastric acid, adhere to cells in the colon & germinate. IMM-529 antibodies bind to surface antigens on spores & prevent adherence to host cells & limit germination.

VEGETATIVE CELLS – Fimbriae & other surface layer proteins (SLP) contribute to bacterial colonization. Fimbriae are used to adhere to other bacteria & to host cells. Fimbriae one of the primary mechanisms of virulence. IMM-529 antibodies bind to SLP on vegetative cells & limit colonization.

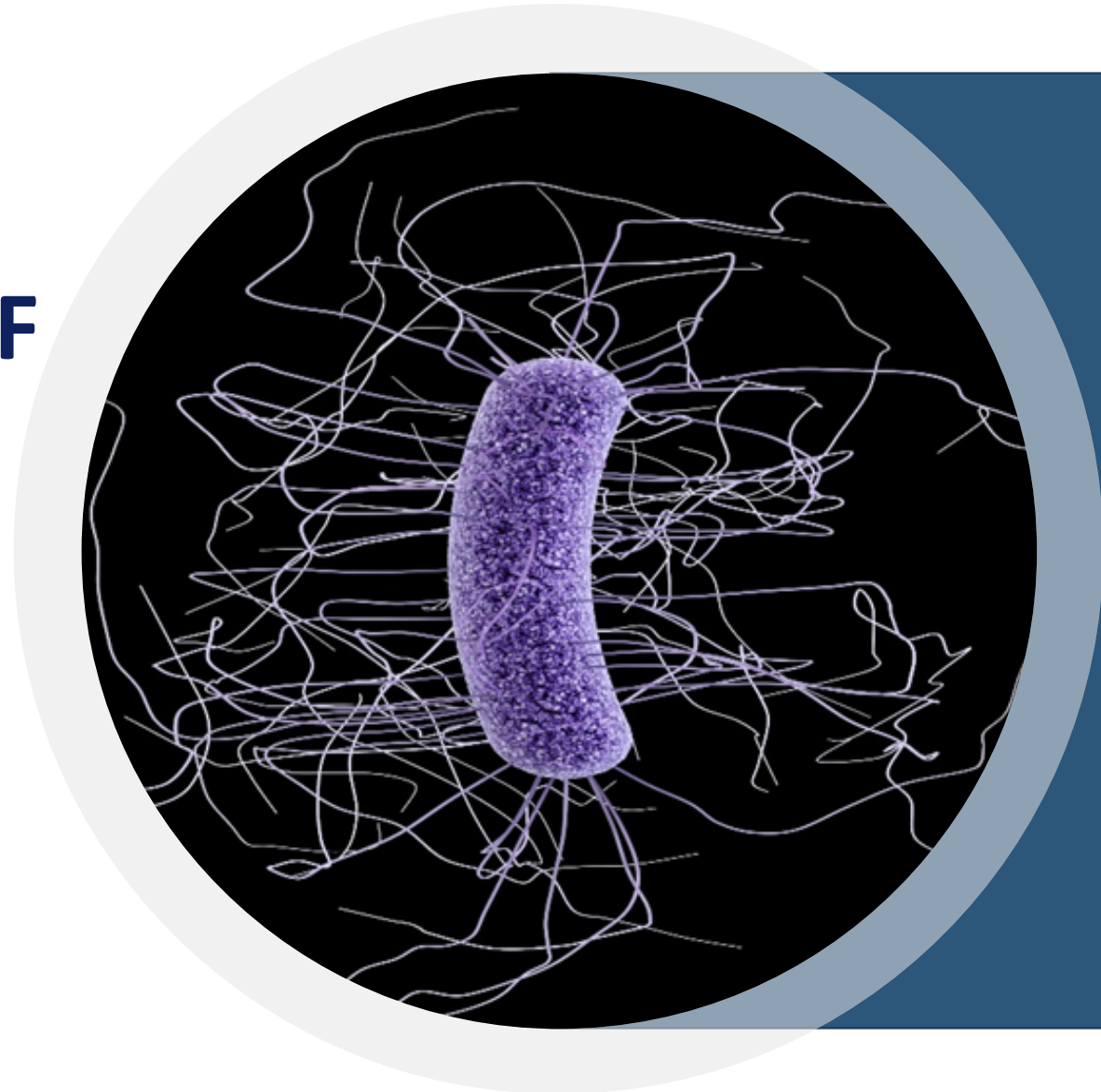
TOXIN B – is essential for virulence. Toxin B disrupts the cytoskeleton and tight junctions of intestinal epithelial cells. IMM-529 antibodies neutralise toxin B, inhibiting toxin mediated epithelial cell apoptosis & limit toxin translocation into the systemic circulation & inflammatory signal cascades.





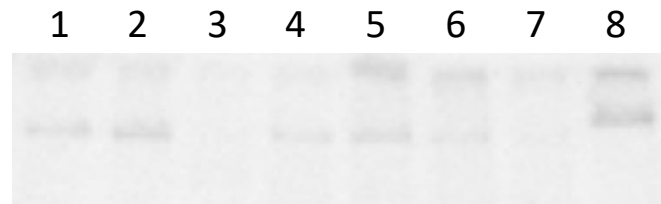
IN VITRO **CHARACTERISATION OF** ***C. DIFFICILE*** **IMM-529 ANTIBODIES**

SPORE, VEGETATIVE CELL AND TOXIN B



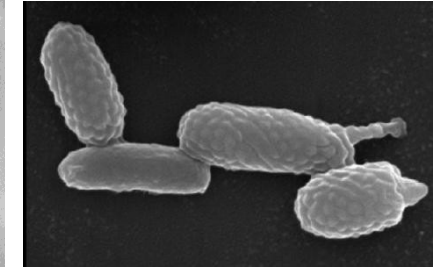
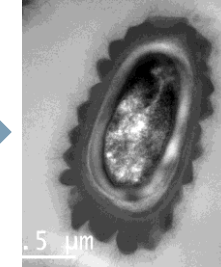


IMM-529 ANTIBODIES CROSS-REACT WITH *C. DIFFICILE* SPORES

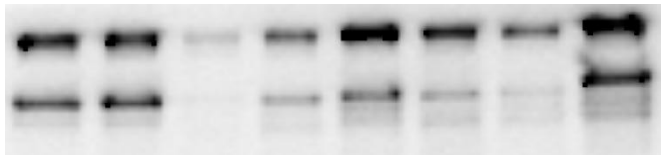


250 kDa

Exosporium

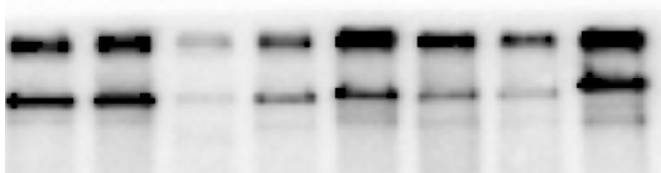


Non-immune



250 kDa

IMM-529 B#1



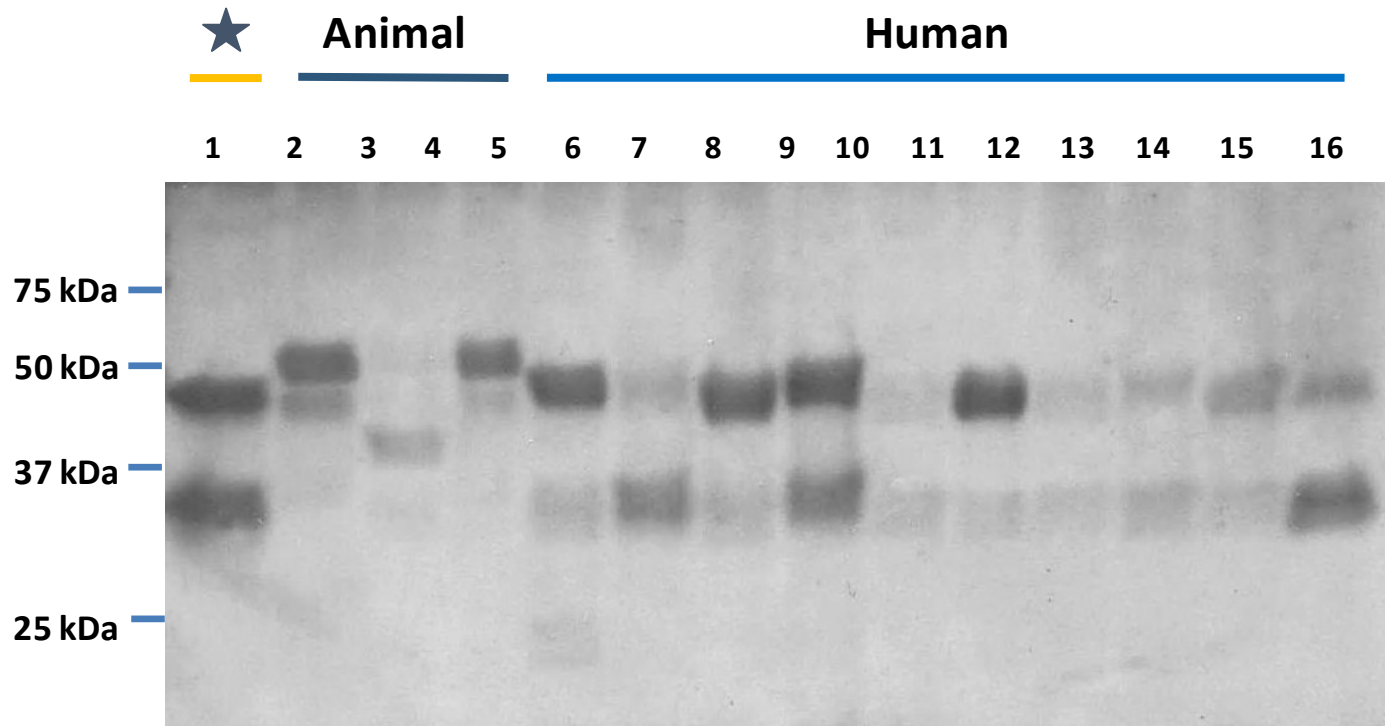
250 kDa

IMM-529 B #2

1. KI (A+B⁺)*
 2. M7404 (A+B⁺)
 3. VPI10463 (A+B⁺)
 4. GE (A+B⁺)
 5. MDU2992 (A-B⁺)
 6. JGS6133 (A+B⁺)
 7. AI35 (A-B⁺)
 8. -1470 (A-B⁺)
- *Strain used to generate product

IMM-529 contains antibodies that are cross-reactive with the exosporium layer of spores from variety of isolates (human and animal)

IMM-529 ANTIBODIES CROSS-REACT WITH CELL LYSATES FROM *C. DIFFICILE* VEGETATIVE CELLS



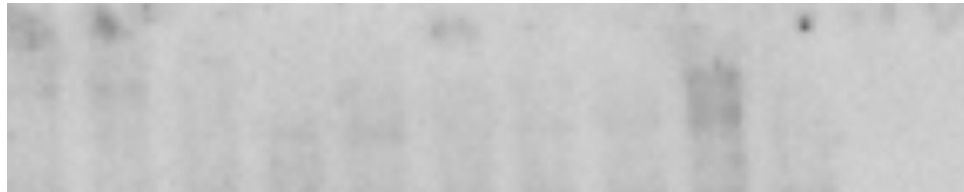
★ Strain used to generate product

IMM-529 contains antibodies that are cross-reactive with vegetative cell whole cell lysates from a variety of human and animal *C. difficile* isolates

IMM-529 ANTIBODIES CROSS-REACT AGAINST TOXIN B FROM DIFFERENT *C. DIFFICILE* STRAINS



1 2 3 4 5 6 7 8 9 10 11



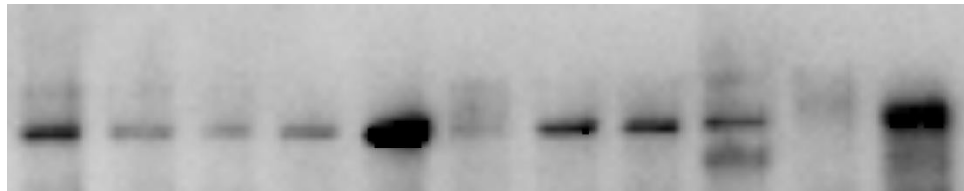
250 kDa

Non-immune



250 kDa

IMM-529 B#1



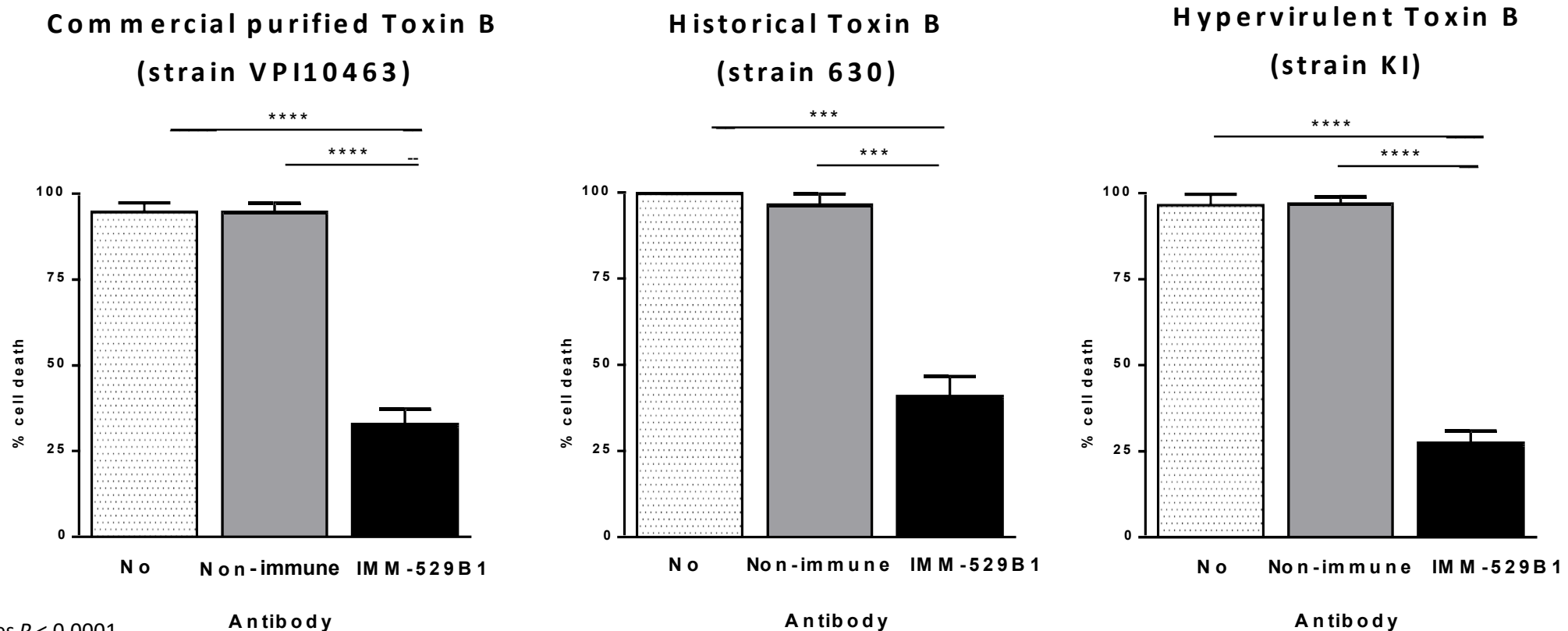
250 kDa

IMM-529 B#2

1. KI (A⁺B⁺)
2. M7404 (A⁺B⁺)
3. VPI10463 (A⁺B⁺)
4. GE (A⁺B⁺)
5. MDU2992 (A⁻B⁺)
6. JGS6133 (A⁺B⁺)
7. AI35 (A⁻B⁺)
8. 8-1470 (A⁻B⁺)
9. CD37 (A⁻B⁻)
10. Purified Toxin B (commercial)

IMM-529 contains antibodies specific to Toxin B from a variety of human and animal isolates

IMM-529 ANTIBODIES NEUTRALIZE TOXIN B FROM HISTORICAL AND HYPERVIRULENT STRAINS



****Indicates $P < 0.0001$.

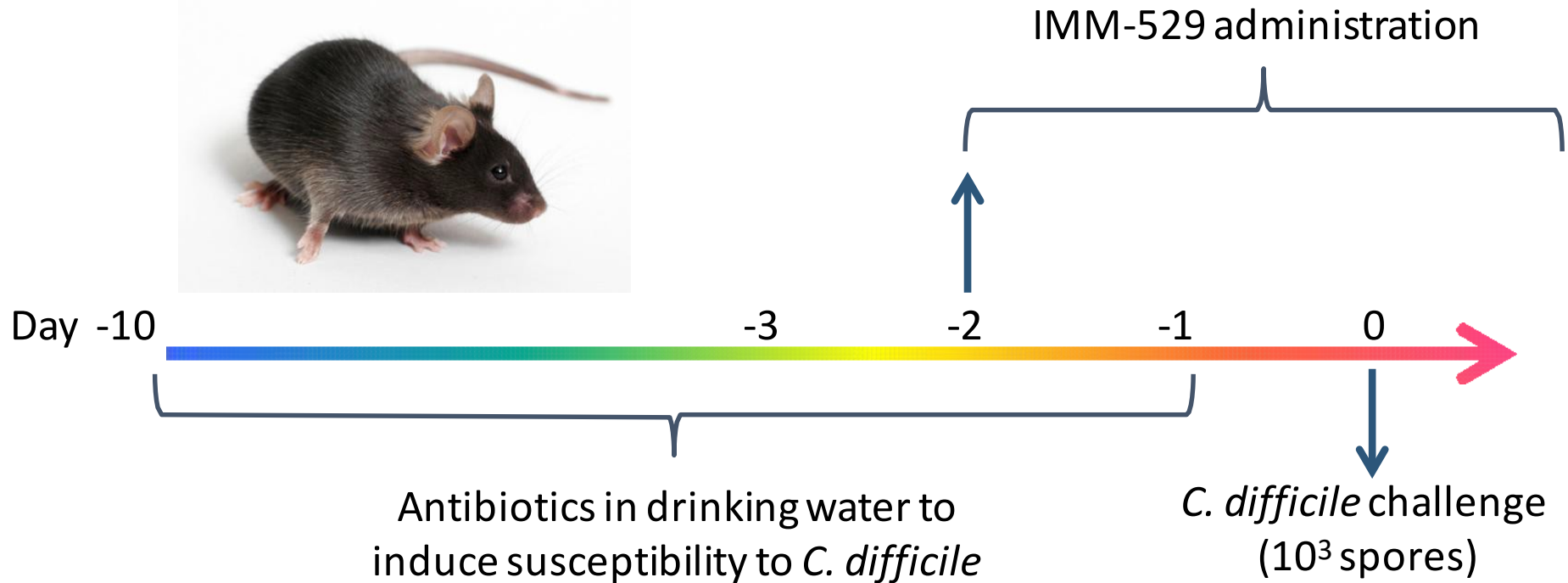
***Indicates $P < 0.001$

Hutton et al. Bovine antibodies targeting primary and recurrent *Clostridium difficile* disease are a potent antibiotic alternative. Scientific **Reports** | 7: 3665 | DOI:10.1038/s41598-017-03982-5 (June 2017)

THE *C. DIFFICILE* PREVENTION MOUSE MODEL



C57BL/6 mice 6–7 weeks



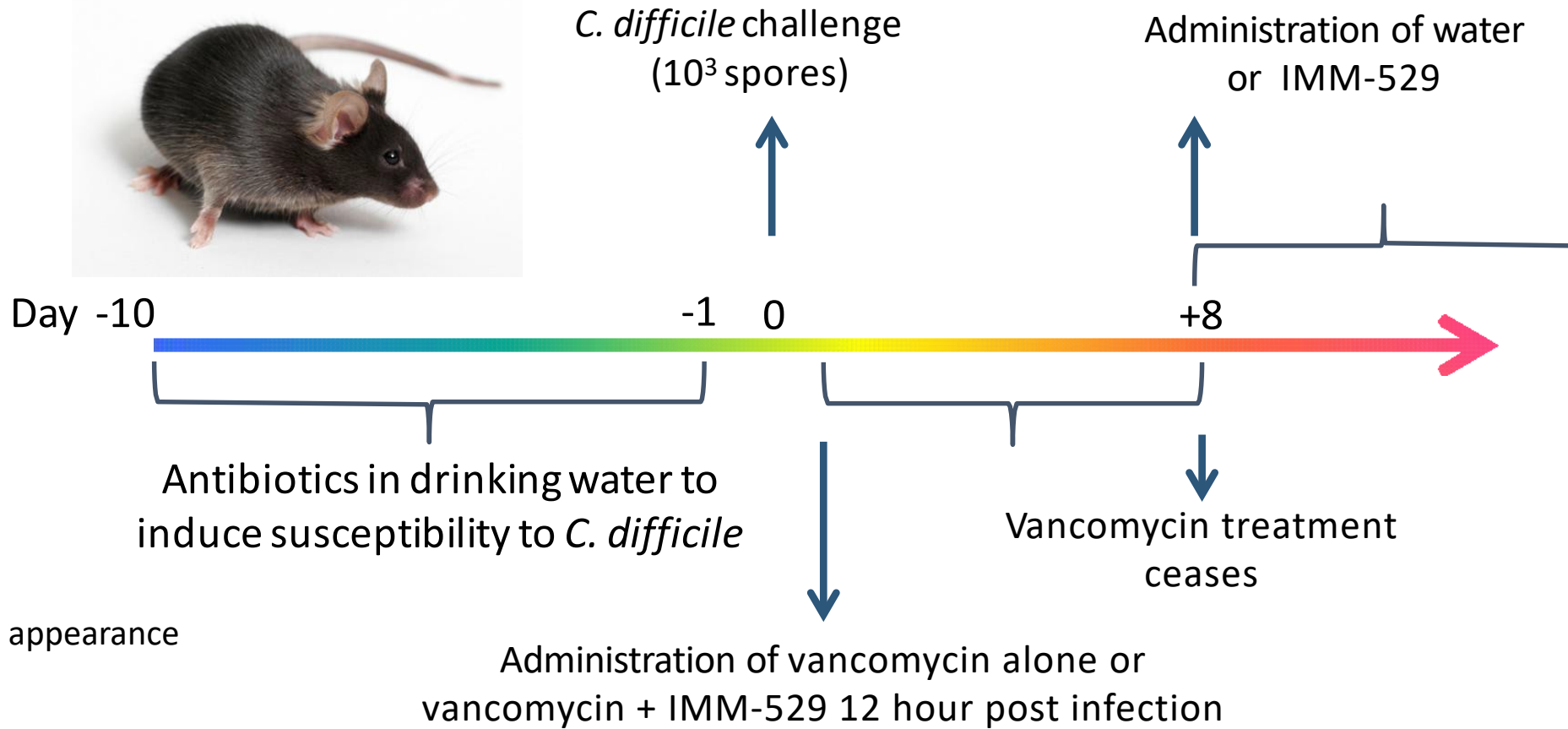
Monitor:

- Weight loss
- Physiological appearance
- Activity
- Diarrhoea

THE *C. DIFFICILE* RELAPSE MOUSE MODEL



C57BL/6 mice 6–7 weeks



Monitor:

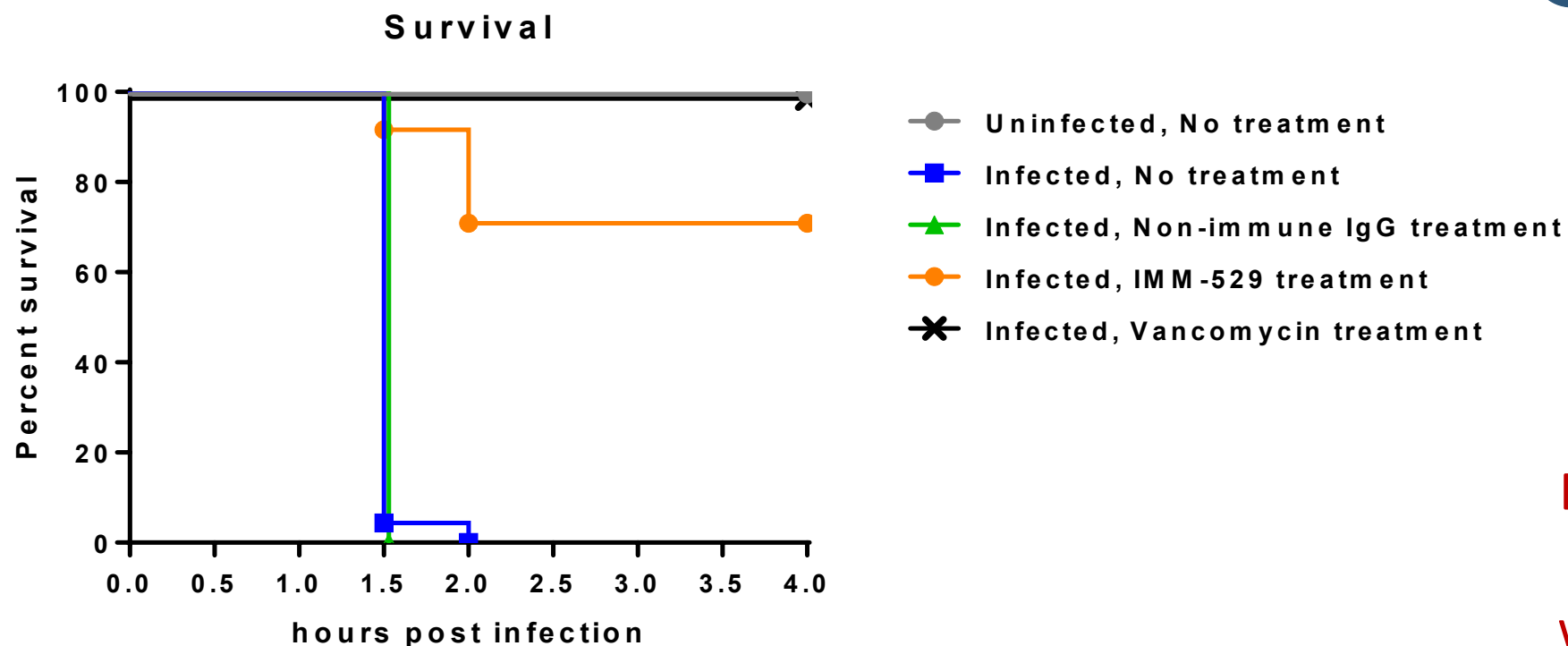
- Weight loss
- Physiological appearance
- Activity
- Diarrhoea

IMM-529 ANIMAL MODEL STUDY



Prevention Study

All studies statistically significant



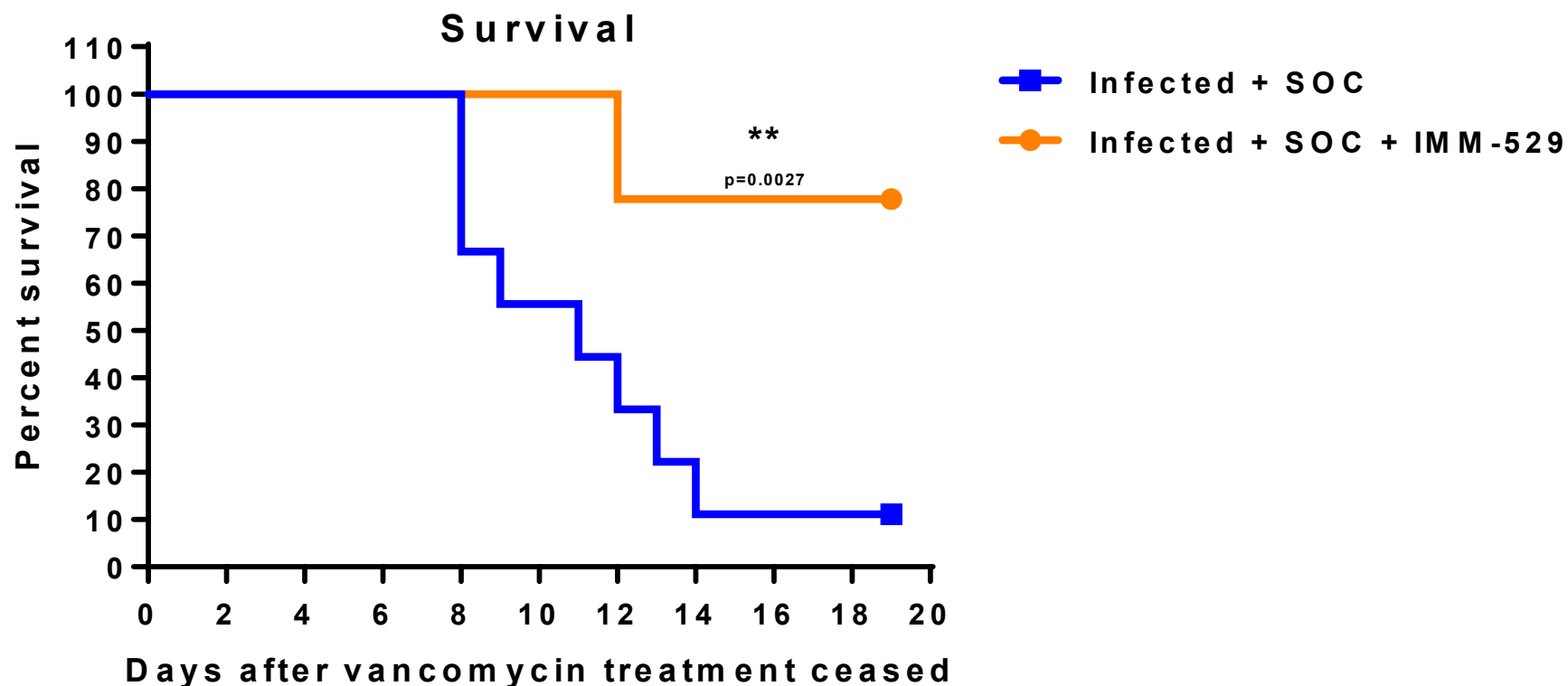
Demonstrated
80% efficacy
without use of
antibiotics

IMM-529 ANIMAL MODEL STUDY



Relapse Study

All studies statistically significant



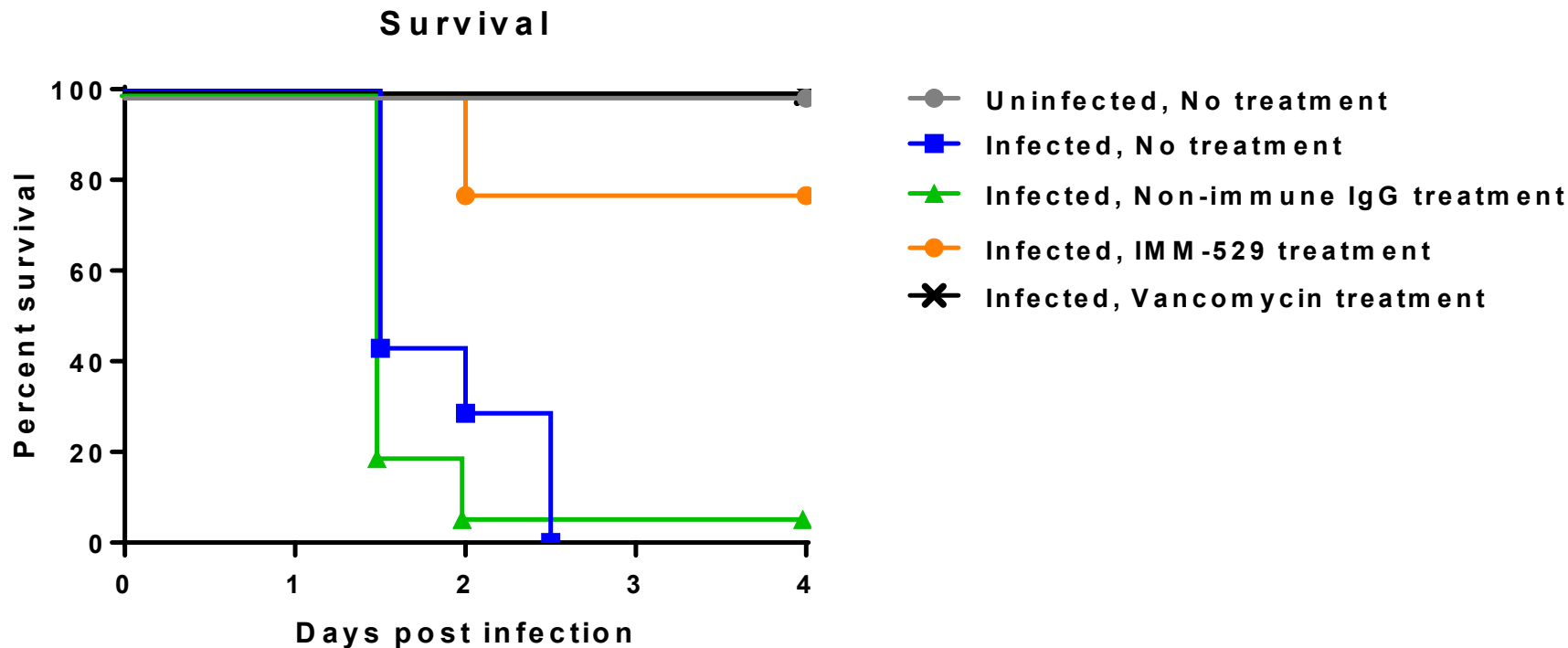
Demonstrated
~90% survival
rate vs. 22%
survival rate in
control group

IMM-529 ANIMAL MODEL STUDY



Treatment Study

All studies statistically significant



Demonstrated
80% efficacy
without use of
antibiotics

ONGOING PHASE I/IIA *C. DIFFICILE* TRIAL

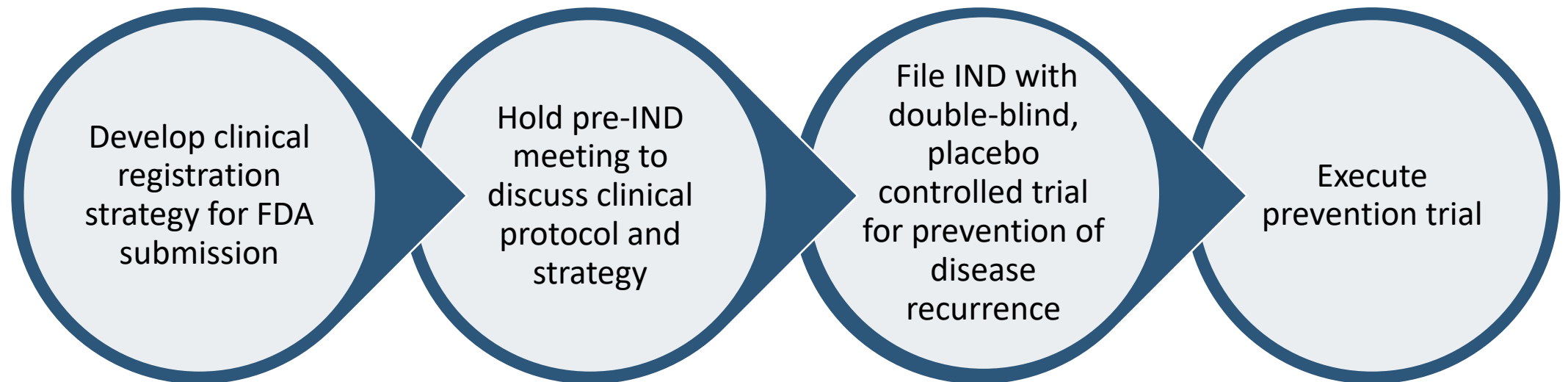


- Randomized, double blind, placebo-controlled clinical study of IMM-529 for treatment of CDI
- 60 subjects to be enrolled up to 3 weeks of definitive diagnosis of CDI (at least 20 subjects to be enrolled within the first 72 hours)
- Subjects randomized to IMM-529 or placebo in a 2:1 ratio
- Treatment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



IMM-529 DRUG DEVELOPMENT PLAN

Develop clinical protocol for FDA approval as drug to prevent recurrent *Clostridium difficile* Infection:



IMM-529 FOR THE TREATMENT OF CDI



Market Opportunity

- Therapeutic market is expected to grow from US\$360 million in 2014 to over \$1.7 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 current standard of care - 80% of patient share in U.S.
- Therapies plagued by significant CDI recurrences (1st relapse: 25%; 2nd: 40%; 3rd: 60%) underscoring need for new treatments
- 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 spores and vegetative cells responsible for recurrence
- Can be used in combination with standard of care



COMPETITOR MARKET ANALYSIS – CDI

Company	Drug	Type	Status
Reduce recurrence of CDI			
 MERCK	Zinplava (bezlotoxumab)	IV Monoclonal Antibody	FDA approved 2016
 SERES THERAPEUTICS™	SER-109	Oral microbiome therapeutic	Phase 3
 FINCH	CP101	Oral microbiome therapeutic	Phase 2
Treatment of Primary CDI			
 summit	Ridinilazole	Oral antibiotic	Phase 3
 ACTELION A JANSSEN PHARMACEUTICAL COMPANY OF <i>Johnson & Johnson</i>	Cadazolid	Oral antibiotic	Failed Phase 3
 SERES THERAPEUTICS™	SER-262	Oral microbiome therapeutic	Phase 1b

COMMERCIAL & PRODUCT DEVELOPMENT PIPELINE



PROGRAM	INDICATIONS	DEVELOPMENT STAGE					PROGRAM HIGHLIGHTS
		PRE-CLINICAL	PHASE 1	PHASE 2	PHASE 3	MARKET	
ANTI-INFLAMMATORY PROGRAMS							
Travelan®	Travelers' Diarrhea	TGA ARTG Aust L106709 (2004)					Commercial product Australia.
Travelan®	Travelers' Diarrhea	Health Canada NPN 80046016 (2015)					Commercial product Canada.
Travelan®		Dietary supplement (2015)					Commercial product USA.
Travelan® (IMM-124E)	Travelers' Diarrhea						Plan for FDA submission.
Travelan® (IMM-124E)	NASH						Top Line Results Reported March 2018
IMM-124E	ASH						NIH Funded U of Virginia. Topline results expected 2Q 2019.
IMM-124E	Pediatric NAFLD						NIH Funded; Emory University. Topline results expected 1Q 2020.
IMM-529	C. Difficile						Developing to prevent recurrence in C. difficile patients.
WRAIR	Shigella						Walter Reed Army Institute of Research.

IMM-124E: FATTY-LIVER PORTFOLIO



Two ongoing NIH funded Phase 2 Programs currently underway: ASH and Pediatric NAFLD

ASH

- **NIH funded; sponsored by University of Virginia**
- Lead Principal Investigator: Arun Sanyal; Former President of AASLD (American Association for the Study of Liver Diseases) and current Chair of the Liver Study Section at the NIH (National Institute of Health)
- **Fully recruited: 56 patients**
- Endpoint: Serum endotoxin/ lipopolysaccharide (LPS) levels
- **Timing: topline results in 2Q2019**

PEDIATRIC NAFLD

- **NIH funded; sponsored by Emory University**
- Lead Principal Investigator: Miriam Vos;
- **Current enrollment: 23/40 patients**
- Endpoint: ALT; 3 months treatment
- **Timing: topline results in 1Q 2020**

US DEPARTMENT OF DEFENSE COMMISSIONED PRE-CLINICAL STUDIES



Collaboration with:

- Department of Enteric Diseases (DED)
 - Armed Forces Research Institute of Medical Sciences (AFRIMS)
 - A overseas laboratory of the Walter Reed Army Institute of Research (WRAIR)
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- 60 clinical isolates of each bacteria, *Campylobacter*, ETEC, and *Shigella*, (180 in total) were tested by Western blot analysis.
 - The clinical isolates were collected from infected patients located in Bhutan, Cambodia, Nepal and Thailand between 1993 and 2016, allowing researchers to measure the impact of Travelan[®] antibodies on infectious bacterial strains in the field.
 - When compared to the controls, researchers found that the antibodies within Travelan[®] were reactive to all **180 clinical isolates** from these infected individuals.

US DOD PRECLINICAL STUDIES



Armed Forces Research
Institute of Medical Sciences
(AFRIMS)

- Travelan® protective efficacy against shigellosis in a juvenile *Rhesus macaque* challenge model.
- Travelan® prevented clinical shigellosis in 75% of Travelan® treated NHPs compared to placebo. Overall results strongly suggest that Travelan® is functionally cross-reactive and an effective prophylactic tool against Shigellosis.
- These results provide an alternative approach of non-antibiotic interventions which could lead to a new preventative modality for the US DoD.



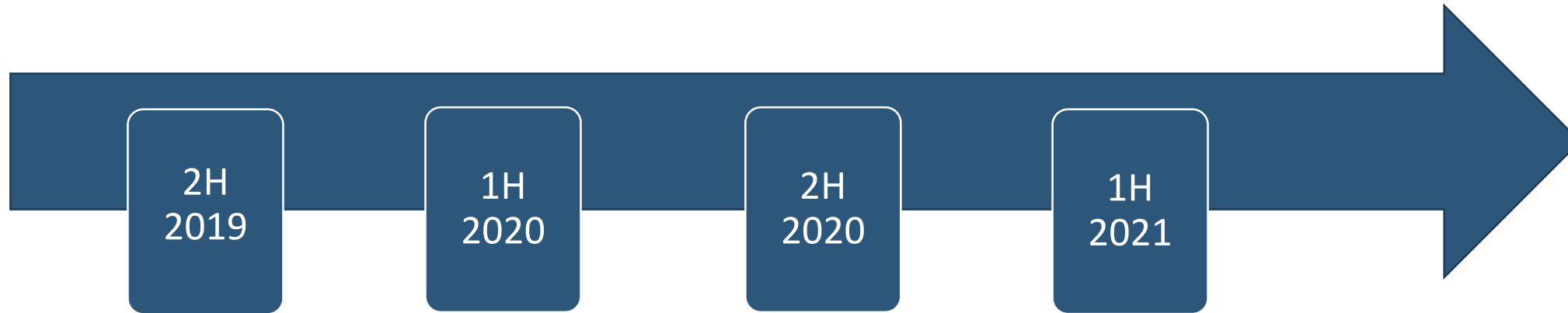
US DOD – SHIGELLA SPECIFIC THERAPEUTICS

Walter Reed Army Institute of
Research (WRAIR)

- Immuron has produced three Shigella specific therapeutic products utilizing vaccines developed by the Walter Reed Army Institute of Research (WRAIR).
- The hyperimmune products from the study have been processed and shipped to the WRAIR for preclinical assessment.
- Under the current terms of the Cooperative Research Agreement, the WRAIR will fund the evaluation of the anti-Shigella therapeutics and assess their protective capacity in a head to head comparison with Travelan® in established small animal models.



KEY MILESTONES EXPECTED TO DRIVE VALUE



- Pre-IND Meeting to Discuss IMM-124E Literature-Based 505(b)(2)
- IMM-124E ASH Clinical Trial Top Line Results
- Opening additional CDI clinical sites for IMM-529 Trial
- Initiate Phase 3 Clinical Trial on IMM-124E TD prevention study
- Pediatric NAFLD Top Line Results
- Phase 3 IMM-124E TD Clinical Data Available
- File 505(b)(2) NDA for IMM-124E TD prevention study

Results from US Army and US Navy trials expected 2019/2020