IMUNON

Harnessing the Power of the Immune System

Nasdaq: IMNN

BIO International Convention

June 5-8, 2023 | Boston, MA

Safe Harbor Statement

This presentation and any statements made during any presentation or meeting contain forward-looking statements related to Imunon, Inc. (“Imunon”) under the safe harbor provisions of Section 21E of the Private Securities Litigation Reform Act of 1995 and are subject to risks and uncertainties that could cause actual results to differ materially from those projected. These statements may be identified by the use of forward-looking words such as "anticipate," "planned," "believe," "forecast,” "expected," and "intend," among others. There are many factors that could cause actual events to differ materially from those indicated by such forward-looking statements. Such factors include, among other things, unforeseen changes in the course of research and development activities and in clinical trials; possible changes in cost, timing and progress of development, preclinical studies, regulatory submissions; Imunon’s ability to obtain and maintain regulatory approval of any of its product candidates; possible changes in capital structure, future working capital needs and other financial items; changes in approaches to medical treatment; introduction of new products by others; success or failure of our current or future collaboration arrangements, possible acquisitions of other technologies, assets, or businesses; the ability to obtain additional funds for operations; the ability to obtain and maintain intellectual property protection for technologies and product candidates and the ability to operate the business without infringing the intellectual property rights of others; the reliance on third parties to conduct preclinical studies or clinical trials; the rate and degree of market acceptance of any approved product candidates; possible actions by customers, suppliers, potential strategic partners, competitors, and regulatory authorities; compliance with listing standards of The Nasdaq Capital Market; and those risks listed under “Risk Factors” as set forth in Imunon’s most recent periodic reports filed with the Securities and Exchange Commission, including Imunon’s Form 10-K for the year ended December 31, 2022.

While the list of factors presented here is considered representative, no such list should be considered to be a complete statement of all potential risks and uncertainties. Unlisted factors may present significant additional obstacles to the realization of forward-looking statements. Forward-looking statements included herein are made as of the date hereof, and Imunon does not undertake any obligation to update publicly such statements to reflect subsequent events or circumstances except as required by law.

Experienced Management Team

Corinne Le Goff, PharmD MBA
President, CEO and Director

Khursheed Anwer, PhD MBA
Executive Vice President and
Chief Science Officer

Jeffrey W. Church
Executive Vice President, CFO &
Corporate Secretary

Anthony Recupero, PhD
Vice President
Business Development

Developing new medicines that harness the building blocks of life to work in harmony with the body's immune system

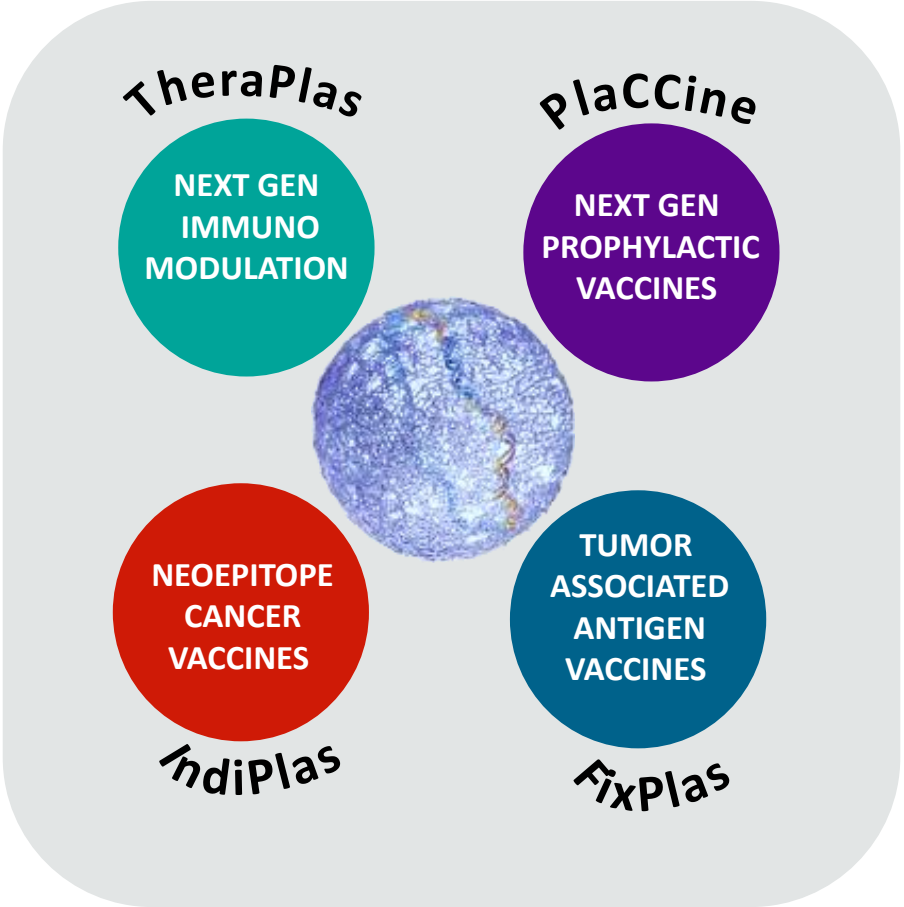
- Leveraging **innovative non-viral DNA platform** with proprietary synthetic delivery systems and multiple potential indications
- Initial clinical focus is on **immuno-oncology** and **infectious diseases**
- **Already tested in humans** with a trial underway in ovarian cancer, to address a multibillion-dollar market.
- Focus on development of infectious diseases vaccines: strong evidence of efficacy **in a SARS-CoV-2 proof-of-concept model**
- Focus on development of **new modalities in cancer vaccines**
- **Strong balance sheet** supports strategy into 2025 and robust news flow of value-creating activities in pursuit of building a **fully integrated** biotech company

Our Disruptive Non-Viral DNA Technology Toolkit in Infectious Diseases and Immuno-Oncology

Proprietary Synthetic Delivery and Facilitating System, that promotes DNA Protection, Uptake, Bioavailability and Enhanced Antigen Expression

Gene Therapy

Personalized Cancer Vaccine



Prophylactic Vaccine

Off- the-shelf Cancer Vaccine

IMUNON's Pipeline of DNA-based Transformative Medicines

Modality	Program	Indication(s)	Discovery	IND enabling	Phase 1	Phase 2	Partnerships
TheraPlas	**IL-12 (OVATION)** Intraperitoneal (IP)	Advanced Ovarian, Fallopian Tube or Primary Peritoneal Cancer	IMNN-001 (formerly GEN-1)				
TheraPlas	**IL-12** IP in combination with **bevacizumab**	Advanced Ovarian, Fallopian Tube or Primary Peritoneal Cancer	IMNN-001 + bevacizumab				BREAK THROUGH CANCER #RadicalCollaboration
PlaCCine	**Multicistronic SARS-CoV-2.** Clinical Proof-of-Concept	COVID-19 Seasonal Vaccine	IMNN-101				
PlaCCine	**Prophylactic Vaccine**	Infectious Disease target	PL-X				THE WISTAR INSTITUTE
FixPlas	**Cancer Therapeutic Vaccine**	Trp2 Tumor Associated Antigen in Melanoma	IMNN-201				
IndiPlas	**Individualized Neoantigen Cancer Vaccines**		IP-Y				

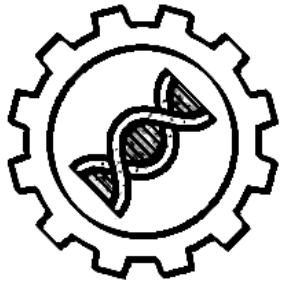
IMUNON's Non-viral DNA Vaccine Platform is addressing these challenges

Durability of protection

Durable antigen expression
induces robust immunological response

Speed

Non-viral DNA is a platform
ability to go from sequence to the clinic to approved products in record time



Flexible manufacturing

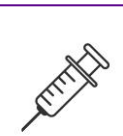
Simple handling and distribution
stability and long shelf-life at workable temperatures
Greater Capital Efficiency

Demonstrated Immunogenicity of our Vaccine pre-clinically

Over 90% Protection From Live Viral Challenge

Viral Clearance by PlaCCine is Comparable to mRNA Vaccine

Clearance is Sustainable with Efficiency >99% by PCR assay

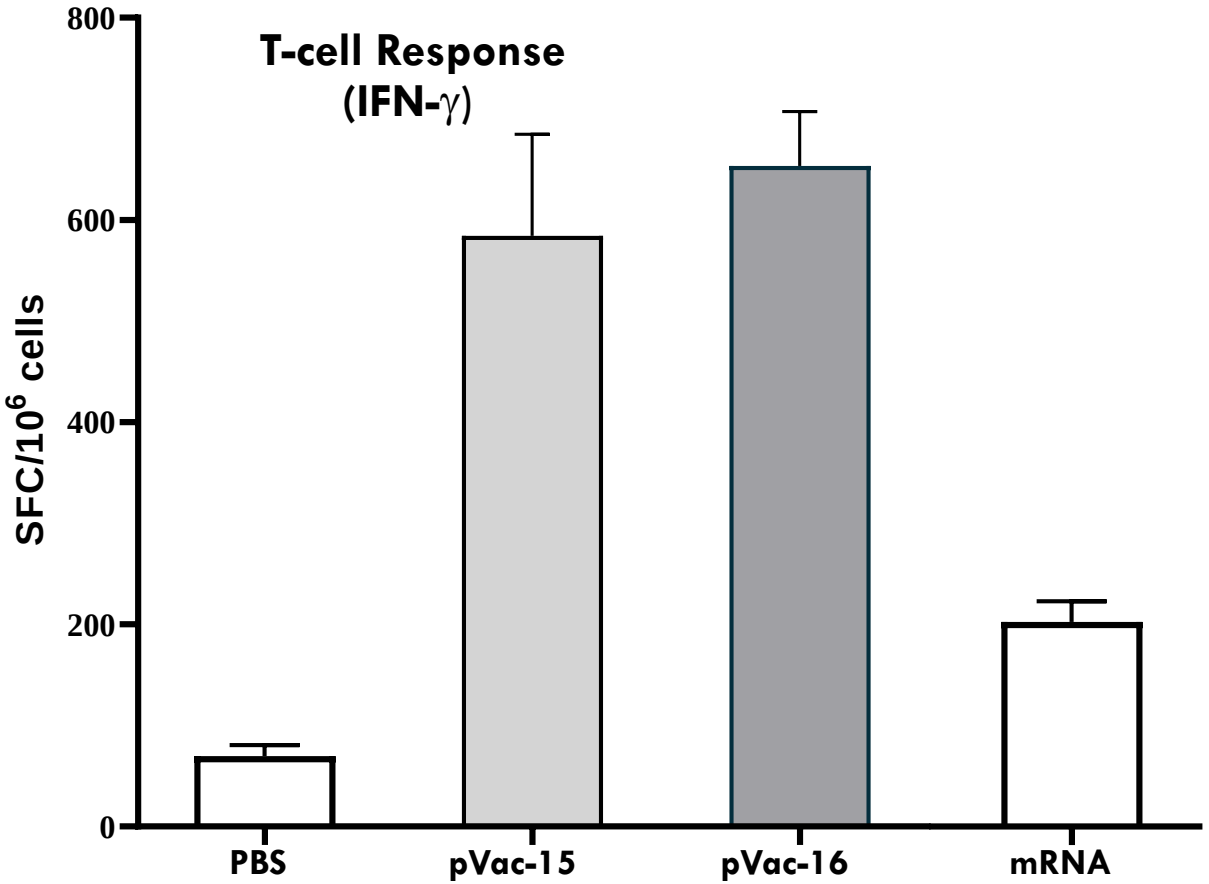


PlaCCine Induces Robust Immune Response after a Single Injection

Wistar Institute Collaboration

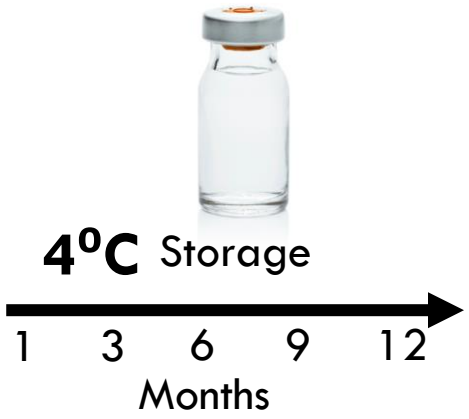
PlaCCine Vaccines Provide Durable Cellular Response

>12-months Durability in Mice in a two-dose vaccination design



PlaCCine is Stable at 4^{0}C for at Least 9 Months

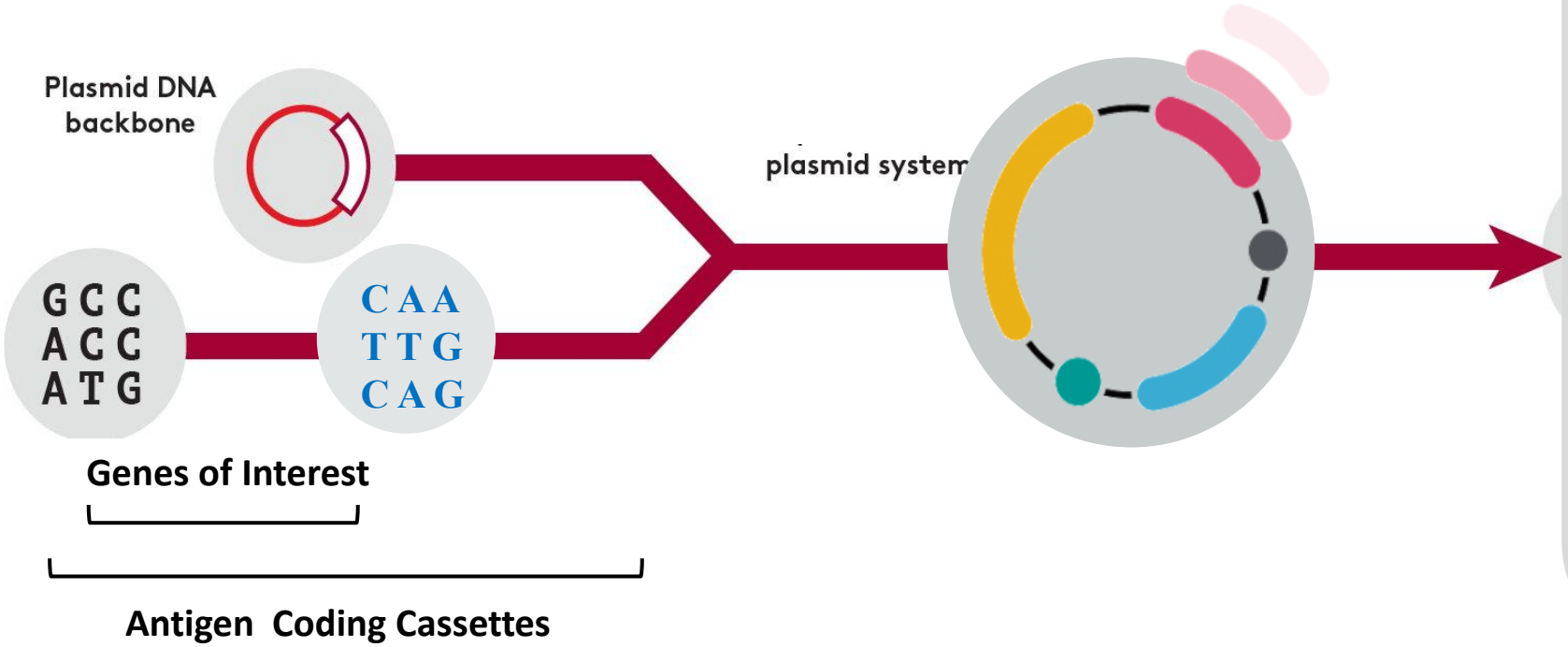
Immunogenicity Studies in Mice



Simplified Supply Chain Around the world

IMNN-101: "Plug & Play" Design Allows for a Rapid Response to Changing Pathogen

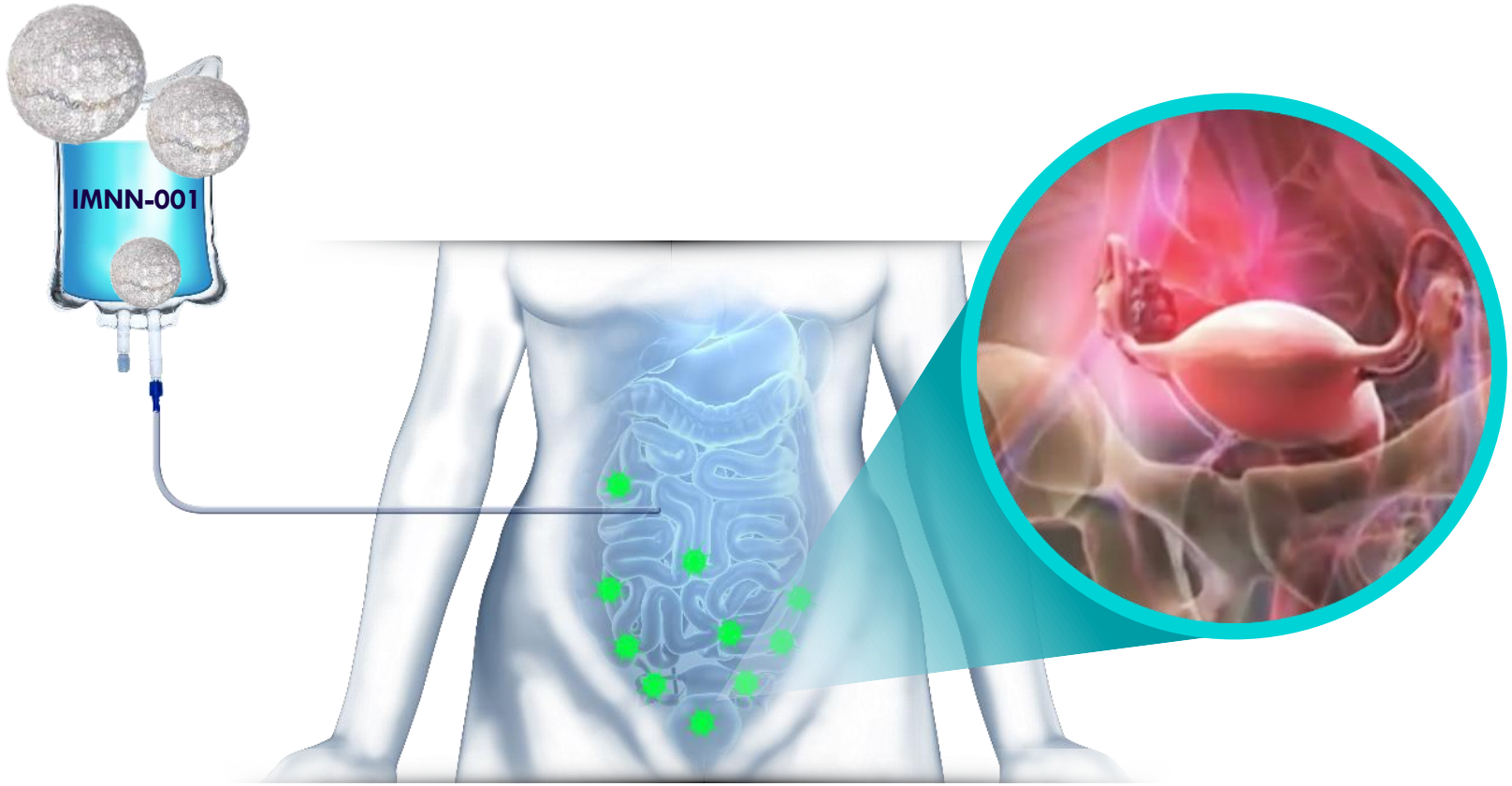
Seasonal COVID-19 Booster, adapted for the latest strain



- January 2023 FDA VRBPAC (Vaccines and Related Biological Products Advisory Committee) agreed that an annual COVID shot is optimal.
- The FDA is proposing to select the strain in June.
- Our technology offers flexible design and rapid production.

IMNN-001 Targets the Micro-Environment of Ovarian Cancer

Local production of safe and durable levels of a powerful anti-cancer immune agent, IL-12



Local Expression of IL-12 Favors
Immune Modulation in Tumor Microenvironment

- Intracavity infusion of IMNN-001 has demonstrated durable and local expression of IL-12 in the peritoneum
- No supraphysiological increases in IL-12 commonly associated with the bolus rIL-12 minimizes excessive systemic exposure of IL-12, thereby giving a favorable safety profile to IMNN-001

Interim OVATION 2 Data Indicates Subjects on IMNN-001 who are BRCA-/HRP may have Improved PFS

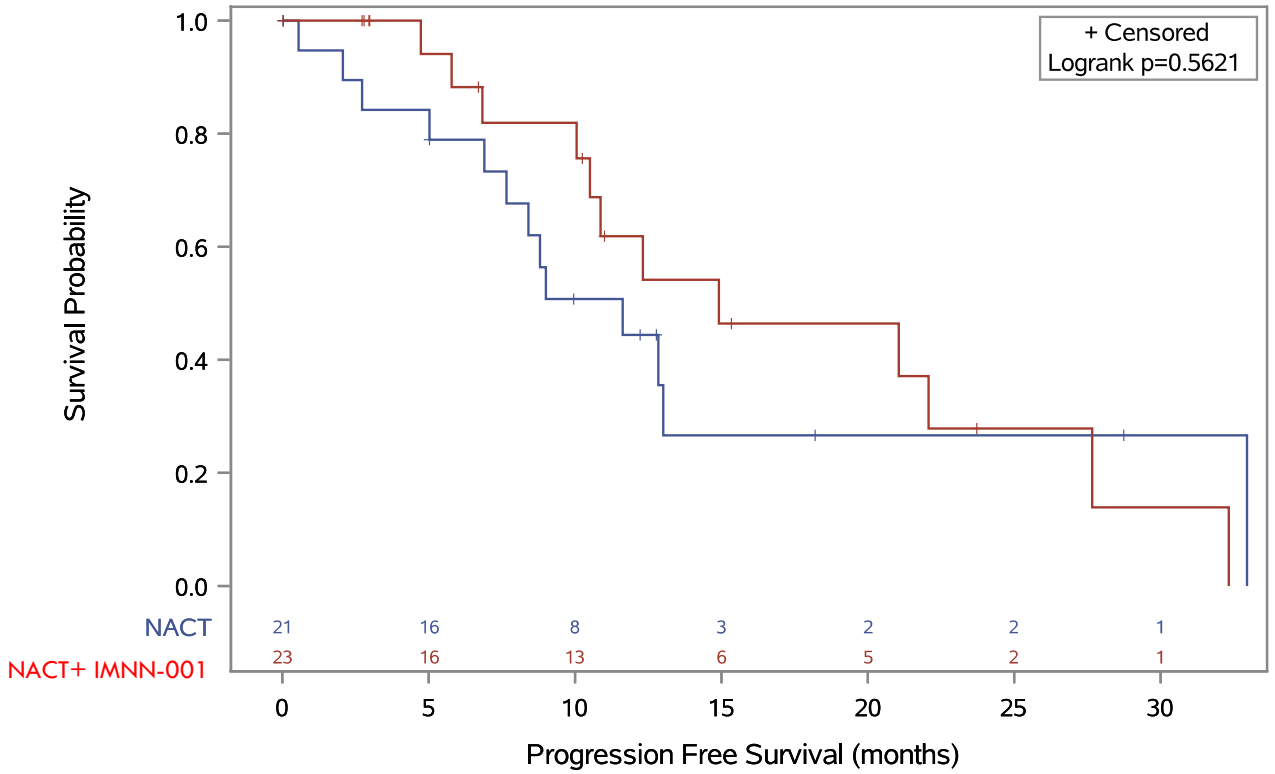
Sub-population of patients with the greatest medical need

Targeted Therapy Approach

HRP (homologous recombination proficient with no BRCA 1/2 mutations)

- Early data suggests 3-month improvement in this identified subgroup of interest
- About **45% of ovarian cancer patients** are not getting a clinical benefit from PARP inhibitors
- HR 0.79 (95% CI, 0.35-1.77) *P*=0.563

Celsion Study 201-17-201: Analysis of Progression Free Survival Time (Cutoff Date: 06SEP2022)
Kaplan-Meier Survival Plot and Log-rank Test for BRAC "Negative" Subjects
Only Subjects with known BRAC status are included

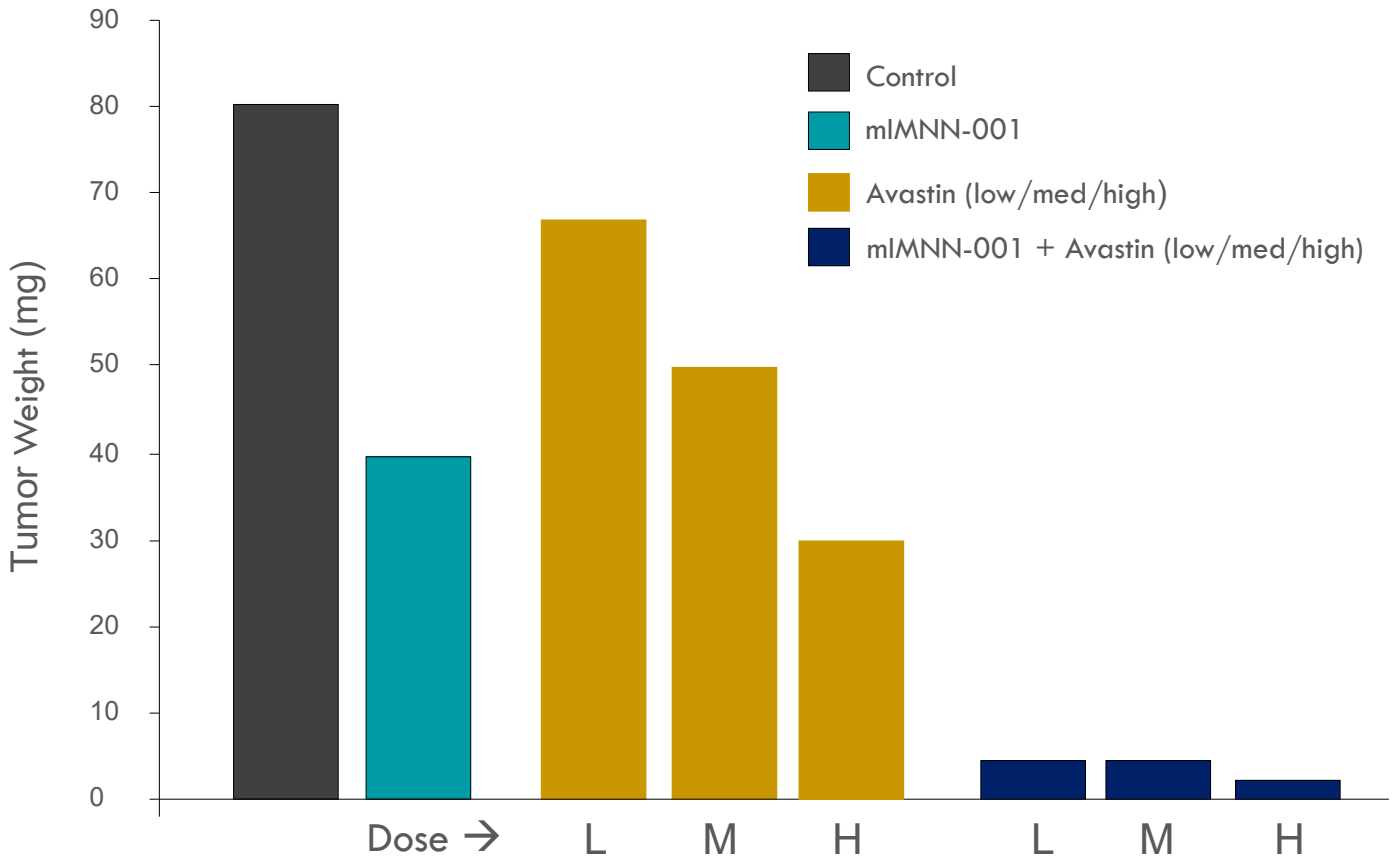


	Subjects	Event	Censored	Median Survival	95%	CL
NACT	21	13	8	11.63	6.899	
NACT+ IMNN-001	23	12	11	14.91	10.05	27.66

HR 0.79 (95% CI, 0.35-1.77) *P*=0.56

Synergistic Antiangiogenic Effect of IMNN-001 + bevacizumab in Ovarian Cancer

SKOV-3 Ovarian Cancer in Nude Mice



Key Rationale for Combination of IMNN-001 with Avastin®

- Synergistic efficacy potential of VEGF level reduction by Avastin and VEGF production inhibition by IMNN-001
- Efficacy improvement of low dose Avastin by IMNN-001 combination improves its therapeutic index and cost

Financial Summary & Upcoming Key Milestones:

Robust Flow of Value Creating Activities

Cash , Cash Equivalents & Investments

$37.3M

As of March 31, 2023

Shares Outstanding

10.1M

First Quarter 2023 Operating Expenses

$5.7M

As of March 31, 2023

2H 2023

- **IMNN-001 OVATION 2 Interim Data**
- **IMNN-101 SARS-CoV-2 IND**
- **IMNN-201 POC Data**

1H 2024

- **IMNN-001 OVATION 2 Topline Results**
- **Interim Results IMNN-001 + bevacizumab**
- **IMNN-101 SARS-CoV-2 Phase 1 Results**