Corporate Presentation

February 2023

Nasdaq: IMNN

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, 2021.

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.

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

- Leveraging **innovative plasmid DNA platform** with proprietary synthetic delivery systems and multiple potential indications
- Initial clinical focus is on **immuno-oncology** and **infectious diseases**
- Development of the PLACCINE modality in prophylactic vaccines, with **strong evidence of immunogenicity and durability of protection in a SARS-CoV-2 proof-of-concept model**
- Phase II trial underway with IMNN-001 (GEN-1) (**IL-12 immunotherapy) for the localized treatment of advanced ovarian cancer;** Fast Track and Orphan designations received; plans for combination studies to address a multibillion-dollar market
- Focus on **continued platform innovation** and discovery
- **Strong balance sheet** supports strategy into 2025 and robust news flow of value-creating activities in pursuit of building a **fully integrated** biotech company

Experienced Management Team

Corinne Le Goff, PharmD MBA
President, CEO and Director

moderna
AMGEN
Roche
sanofi
MERCK
Pfizer

Nicholas Borys, MD
Executive Vice President and
Chief Medical Officer

Progenics Pharmaceuticals
CytoGen
Anthera PHARMACEUTICALS, INC.
Amersham
Roche

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

valentis
GENEMEDICINE

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

ALBA THERAPEUTICS
novavax
GENVEC
Meridian MEDICAL TECHNOLOGIES
Manufacturing More Tomorrows™

Anthony Recupero, PhD
Vice President
Business Development

ADARE PHARMACEUTICALS
APTALIS
EURAND
MaxCyte®
GENE LOGIC

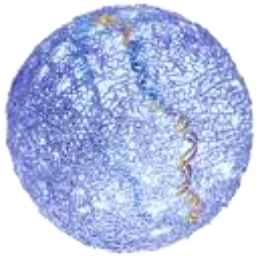
IMUNON Next Generation DNA Plasmid Technology Platform

Proprietary Synthetic Delivery System (No Virus, No Device)

Vaccine Modality: PLACCINE

- DNA Plasmid vectors engineered for next generation vaccine technology
- Designed for multiple antigens/epitopes with co-expression of immunomodulators

Self-assembling Synthetic Nanocarriers



SARS-CoV-2 (IMNN-101)

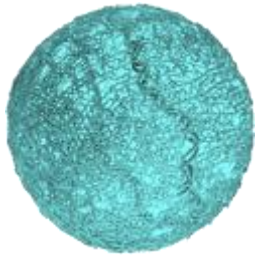
Seasonal Multivalent Vaccine for COVID-19

Preclinical Development Stage

Gene Therapy Modality: TheraPlas

- Delivers DNA Plasmids Coding for Therapeutic Proteins
- Multiple development programs on-going

Synthetic Polymeric Nanoparticle Cholesterol conjugated



IMNN-001 (GEN-1)
Immunotherapy

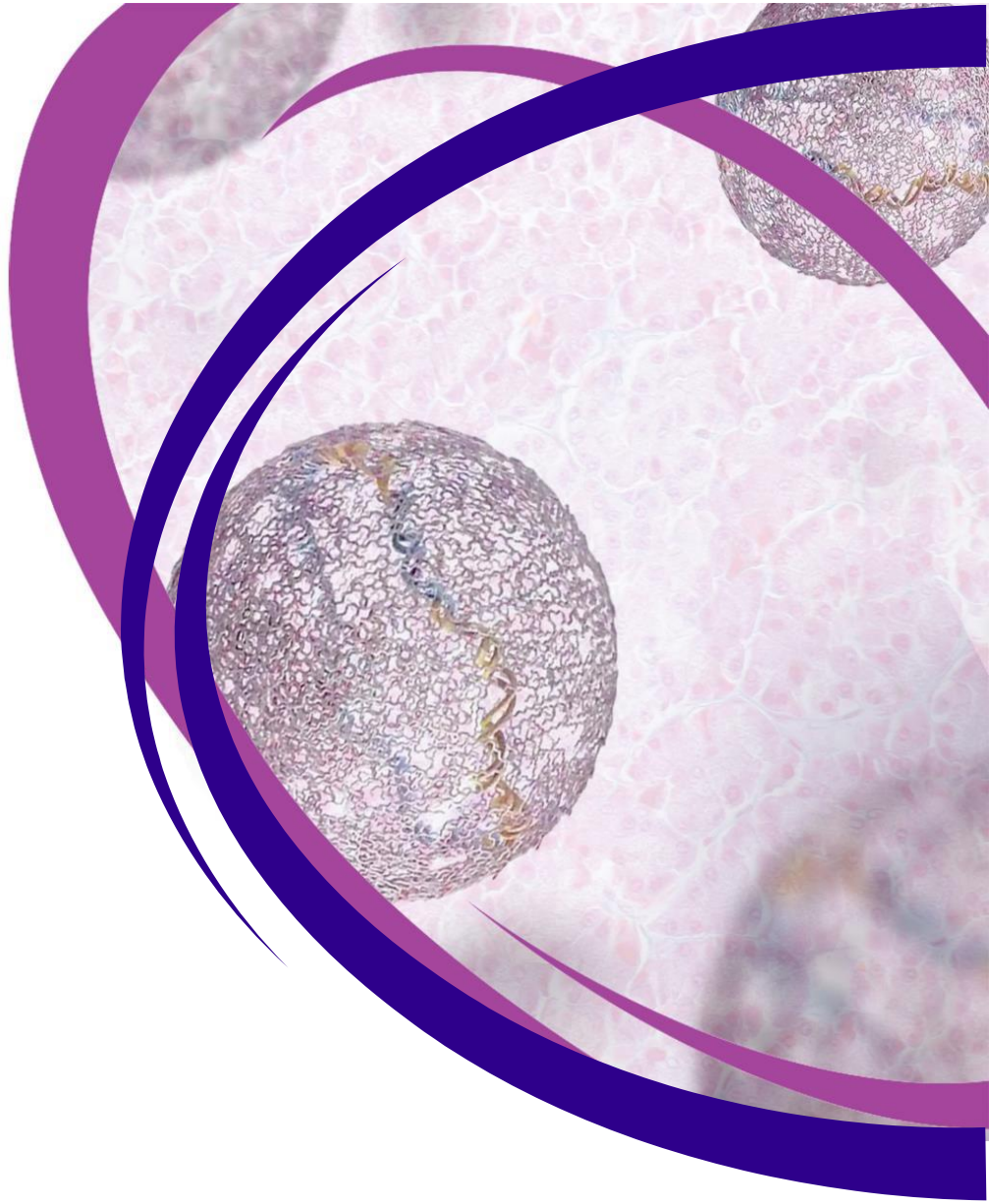
Localized Interleukin -12 Immunotherapy

Phase II Evaluation in Advanced Ovarian Caner
Orphan Drug Designation: U.S. and EU
Fast Track Designation

IMUNON's Pipeline of DNA-based Transformative Medicines

Platform	Program	Indication(s)	Discovery	IND enabling	Phase 1	Phase 2
TheraPlas	**IL-12 (OVATION)** Intraperitoneal (IP)	Advanced Ovarian, Fallopian Tube or Primary Peritoneal Cancer	GEN-1 (IMNN-001)			
	IL-12 IP in combination with **bevacizumab**	Advanced Ovarian, Fallopian Tube or Primary Peritoneal Cancer	IMNN-001 + bevacizumab			
PLACCINE	**Multicistronic SARS-CoV-2.** Clinical Proof-of-Concept	COVID-19 Seasonal Vaccine	IMNN-101			
	Prophylactic Vaccine	Infectious Disease target	PL-X			
	Therapeutic Vaccine	Cancer target	PL-Z			

PLACCINE SARS-CoV-2 PROOF OF CONCEPT PROPHYLACTIC VACCINES PROGRAM



More than 80 Pathogenic Viruses Discovered since 1980

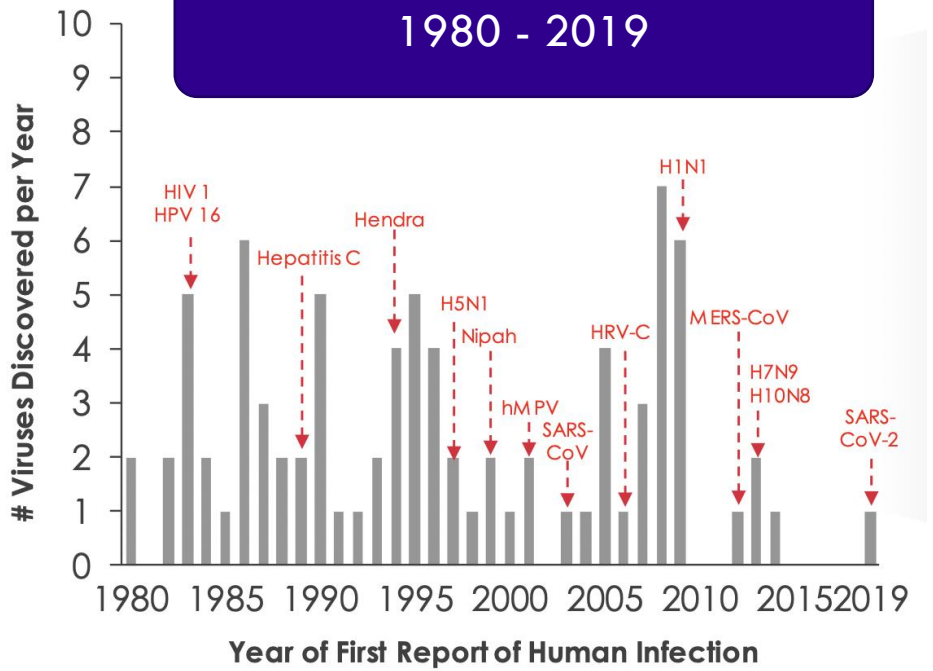
Less than 4% have a vaccine commercially available

Before 1980

Select viruses:

- Yellow fever (1901)
- Rubella (1941)
- Dengue (1943)
- PIV3 (1950s)
- Chikungunya (1952)
- Hepatitis B (1965)
- Marburg (1967)
- Lassa (1969)
- Ebola (1976)
- Zika (1952)
- VZV (1954)
- RSV (1956)
- CMV (1956-1957)
- EBV (1964)

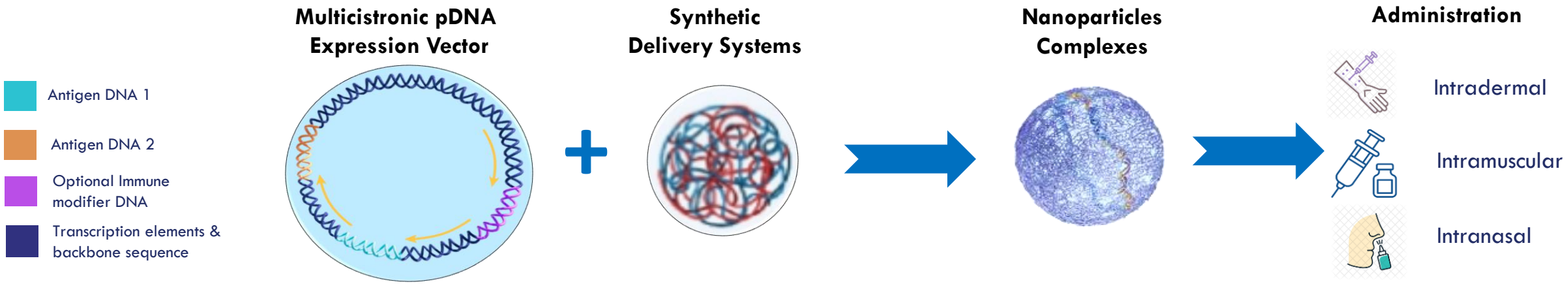
1980 - 2019



Sources: Institute of Medicine (US) Forum on Microbial Threats(2009);Medscape Medical News(2008);Lederburg,J. *Emerging Infectious Diseases from the Global to the Local Perspective:A Summary of a Workshop of the Forum on Emerging Infections*(2001); National Institute of Health(US)Biological Sciences Curriculum Study(2007);Holshue,M. *et al NEJM* (2020);Bush,L. *Emerging...andRe-emerging Infectious Diseases*(2015);Gibbs,A.J.*Virology*(2009); CDC Zika Overview;CDC Ebola About;Plotkin,S.A. *Clinical Infectious Diseases*(2006);Woolhouse,M.*et al.PhilTransRSoc*(2012);WHO H7N9 China Update(2018);Tapparel,C. *et al. Virology*(2013); Hepatitis B Foundation.History Page;Ho,M.*MedMicrobiolImmunol.*(2008);Nature.Dengue Viruses Page;Brauberger, K. *et al. Viruses*(2012);FDA approved vaccine list; CDC RSV Overview; Hendrickson,K.J. *Clinical Microbiology Reviews*(2003); Andersson,J.*Herpes*(2000);WHO Chikungunya Overview;CDC Varicella Overview;Xu,Y.*et al. Infect Genet Evol.*(2015);CDC Lassa Fever Overview

PLACCINE Platform: Powering the Next Generation of Vaccines

By addressing the shortcomings of current nucleic acid, viral vector and protein subunit vaccines



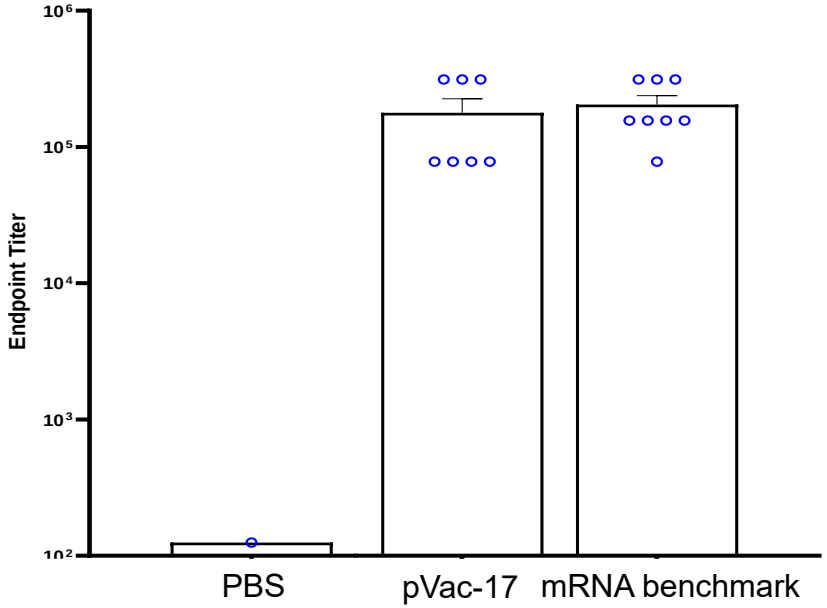
- **Durability of Protection** — Durable antigen expression induces robust immunological response
- **Breadth of Protection** — Multicistronic vectors increase the breadth of immune response and allows for combination vaccines
- **Transmission Advantage** — Strong T-cell activity. Option for co-expression of potent immune modifiers increases the immune response and lowers the risk of viral shedding
- **Safe and Convenient** — Synthetic delivery systems present no risk of genotoxicity - no virus, or cytotoxicity - no device. Convenient handling for pandemic control.
- **Flexible Manufacturing** — Truly versatile platform enables rapid response to changing pathogens.
  Stability and long shelf-life at normal refrigerator temperatures simplifies handling and distribution.

Bivalent PLACCINE Vaccine Produces Stronger Neutralizing Immune Response than mRNA Benchmark

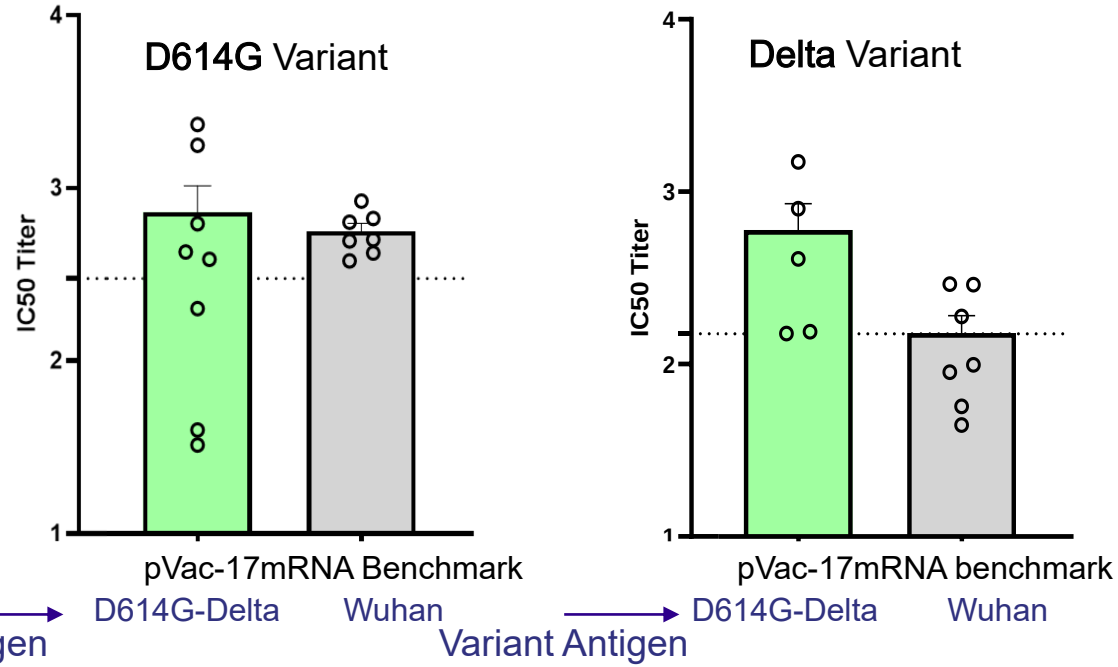
Multi-cistronic vector: **pVac-17**

- Spike antigen: **D614G, Delta**
- Formulation: **PLACCINE**
- 125 μg DNA
- IgG & nAB titer (day 35)

IgG Titer



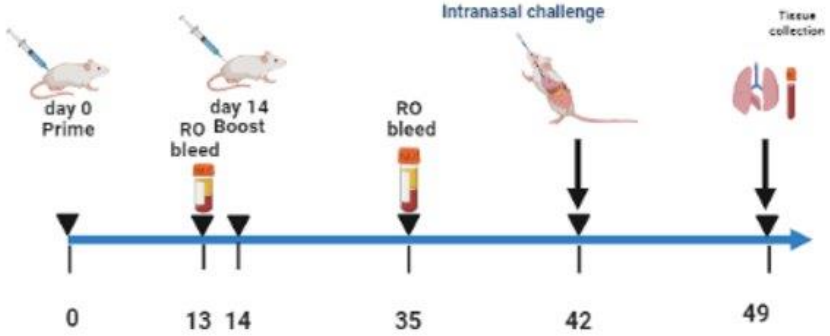
Neutralizing Antibody Titer
(pseudovirus competition assay)



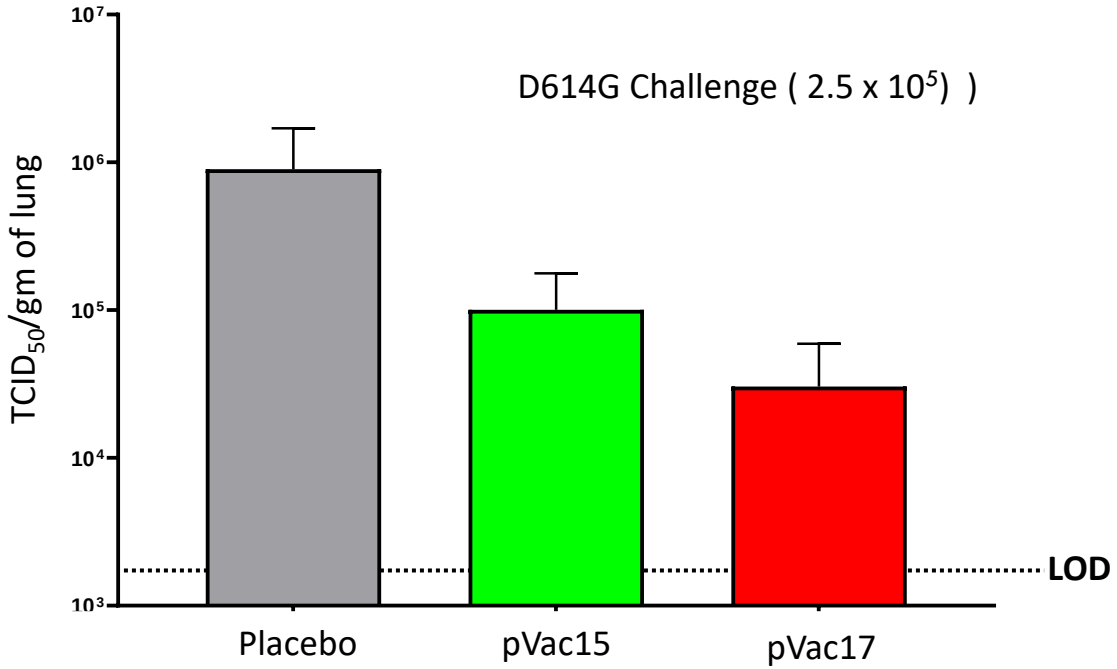
Over 90% Protection From Live Viral Challenge

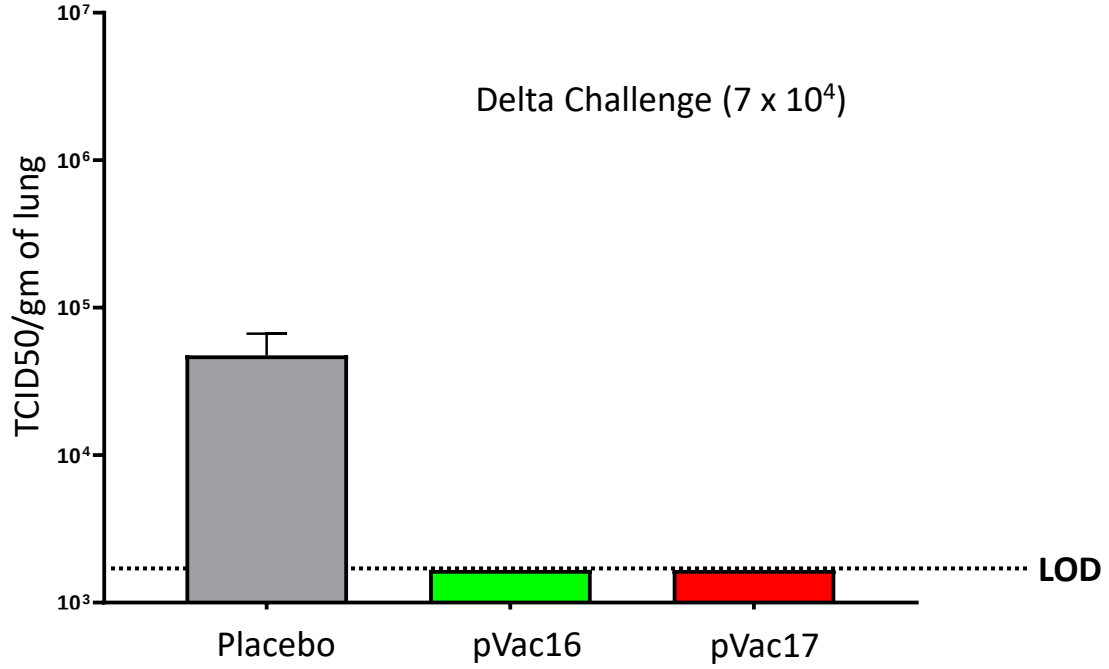
Activity of PLACCINE-SARS-CoV-2 Vaccines in hACE2:K18 SARS-CoV-2 Model

- pVac-15- D614G
- pVac-16- Delta
- pVac-17- D614G - Delta
- Formulation: PLACCINE
- Dose- 125 µg DNA



TCID50 Tissue Culture Infection Dose

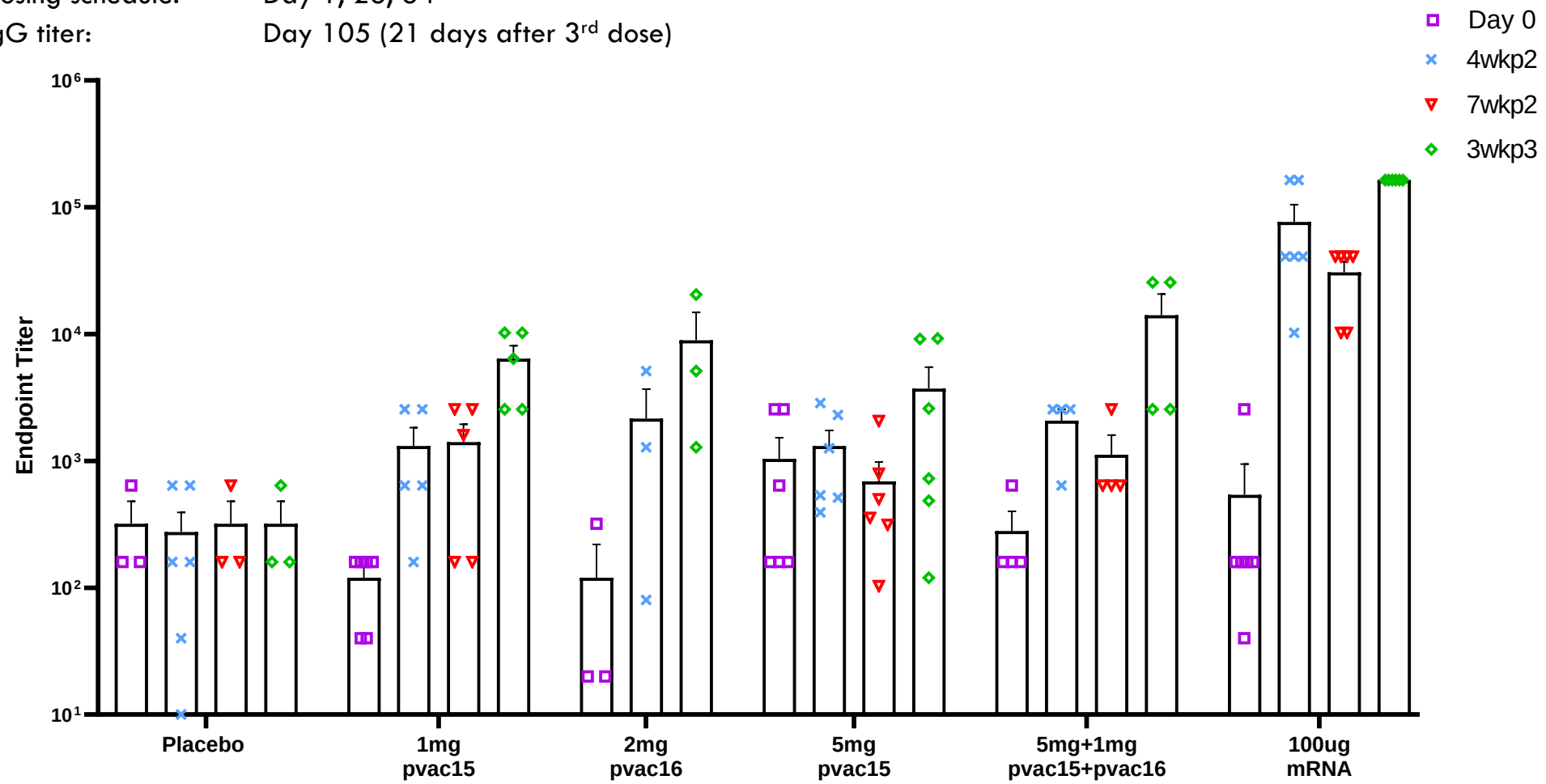




Monovalent PLACCINE Vaccine is Immunogenic in Cynomolgus Monkeys

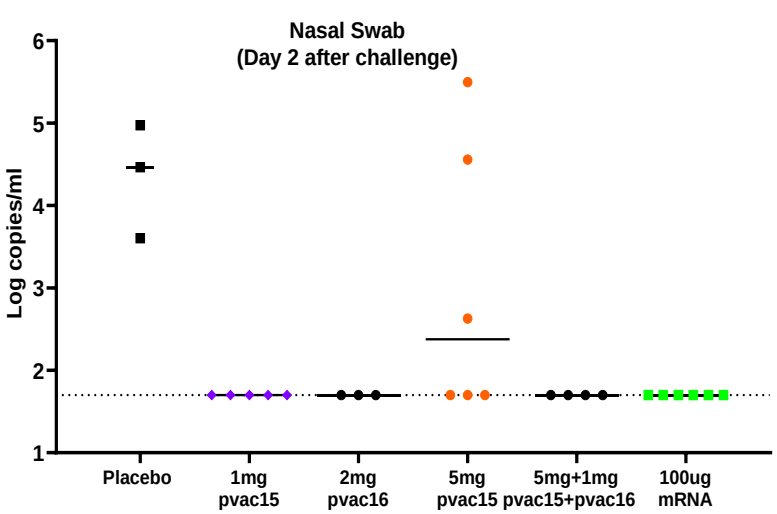
PLACCINE Subjects Showed IgG and Neutralizing Antibody Response

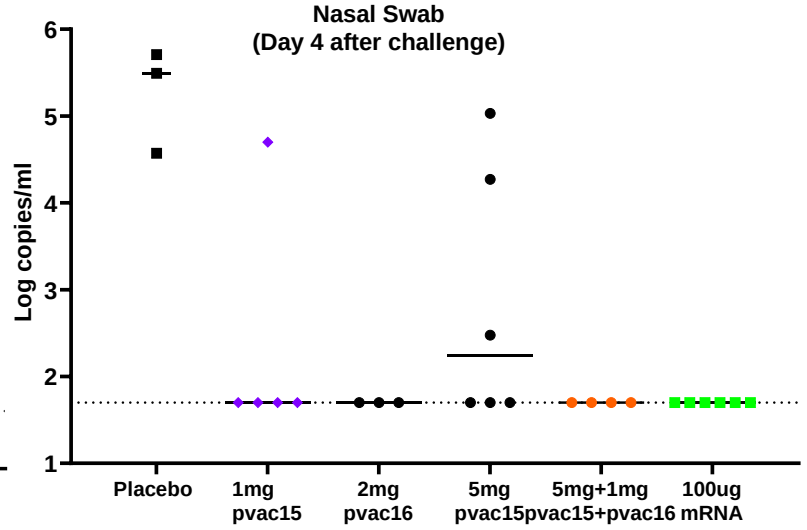
- Single antigen vector: **pVac-15 (D614G) or pVac-16 (DELTA)** in PLACCINE
- Comparator mRNA: **Commercial mRNA Vaccine** (LNP)
- Dosing schedule: Day 1, 28, 84
- IgG titer: Day 105 (21 days after 3rd dose)

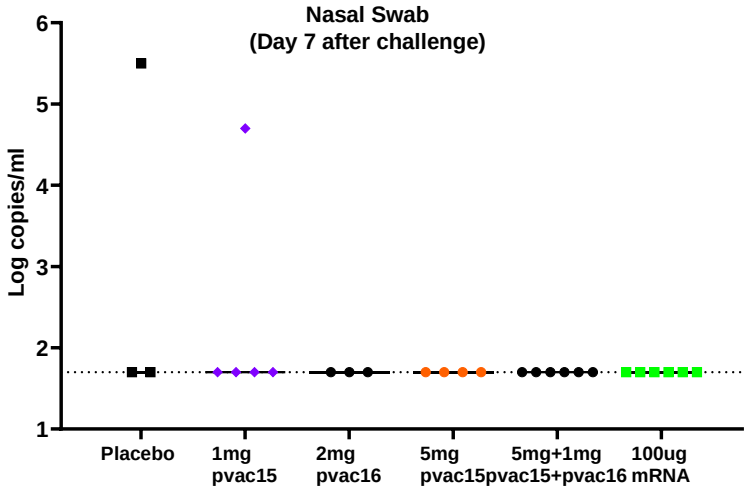


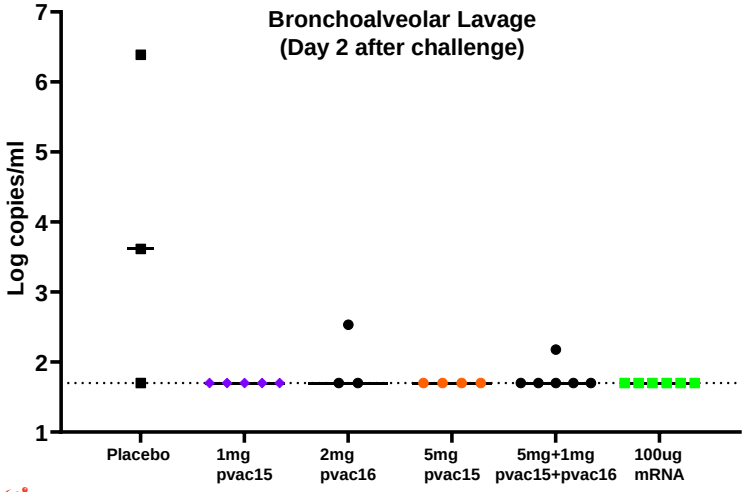
Viral Clearance by PLACCINE is Comparable to mRNA Vaccine

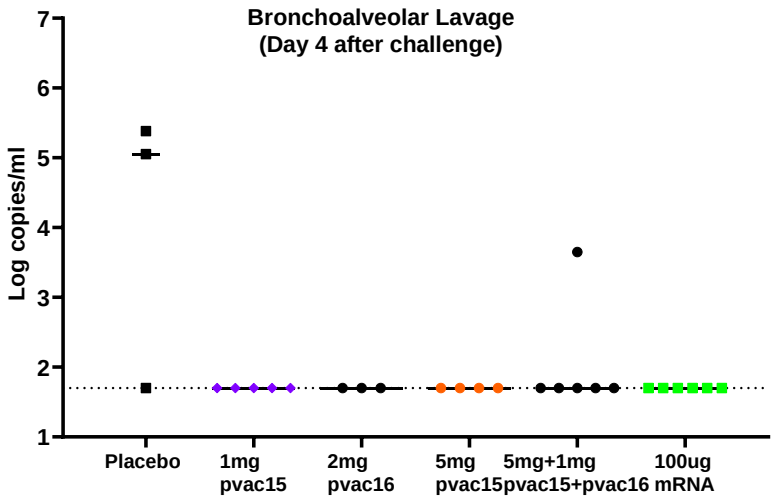
Clearance is Sustainable with Efficiency >99% by PCR assay

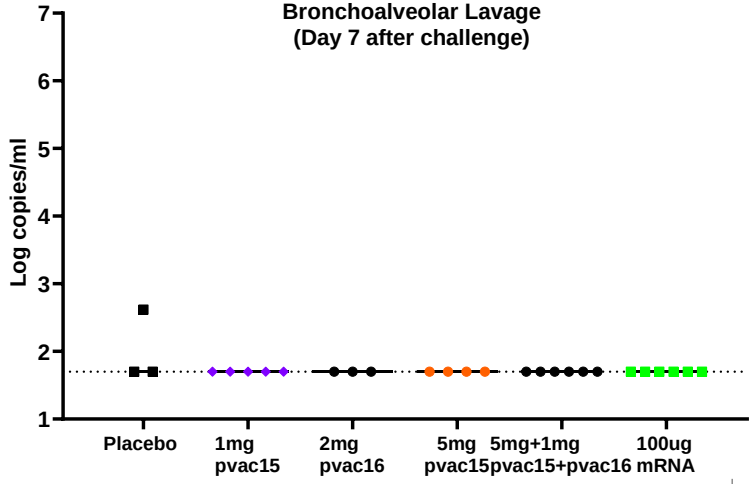








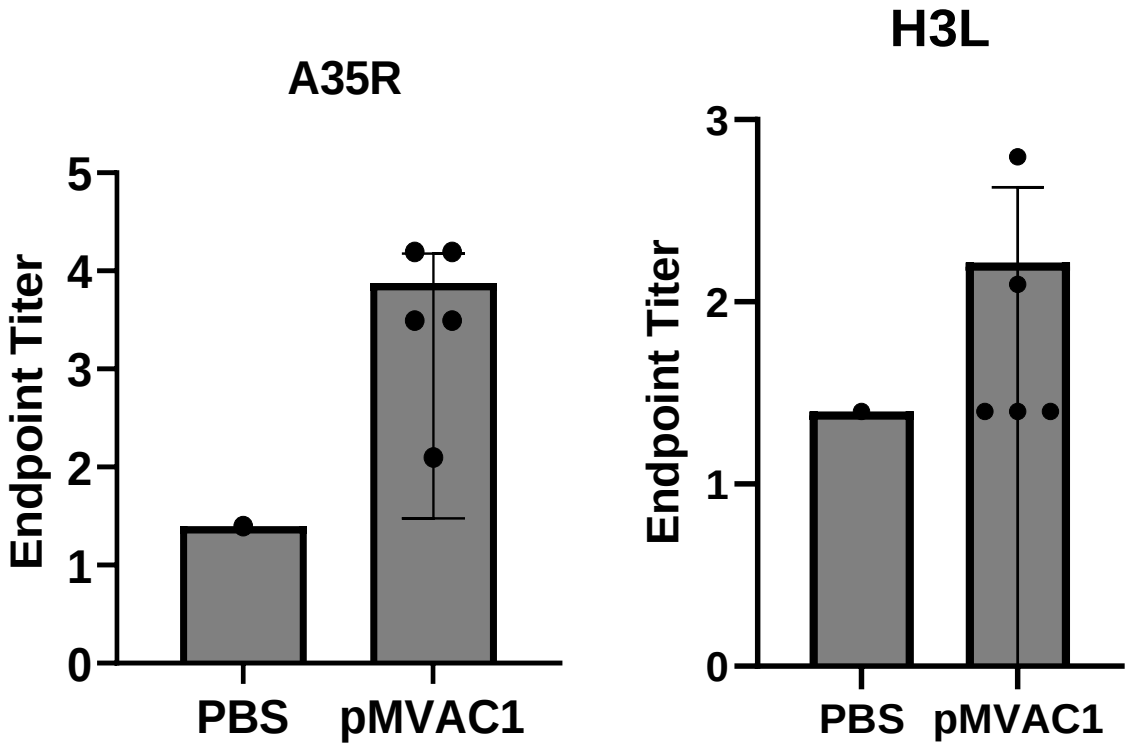


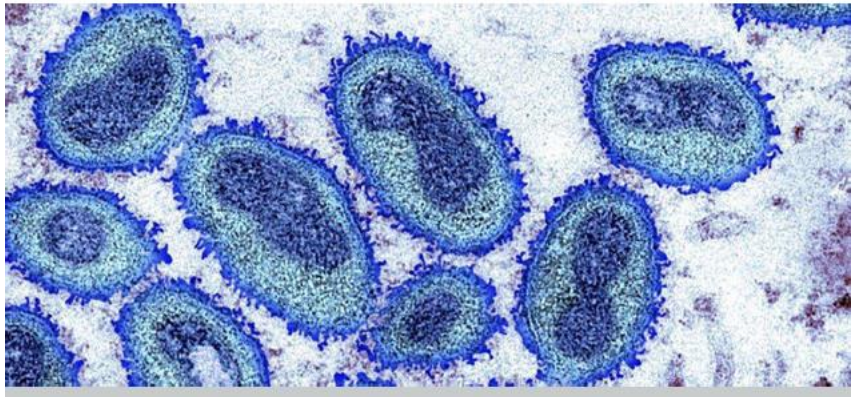


Novel PLACCINE DNA Monkey Pox Vaccine Induces Humoral Immune Responses

Initial Monkey Pox Data Confirm the Validity of PLACCINE as a Platform with Broad Applicability

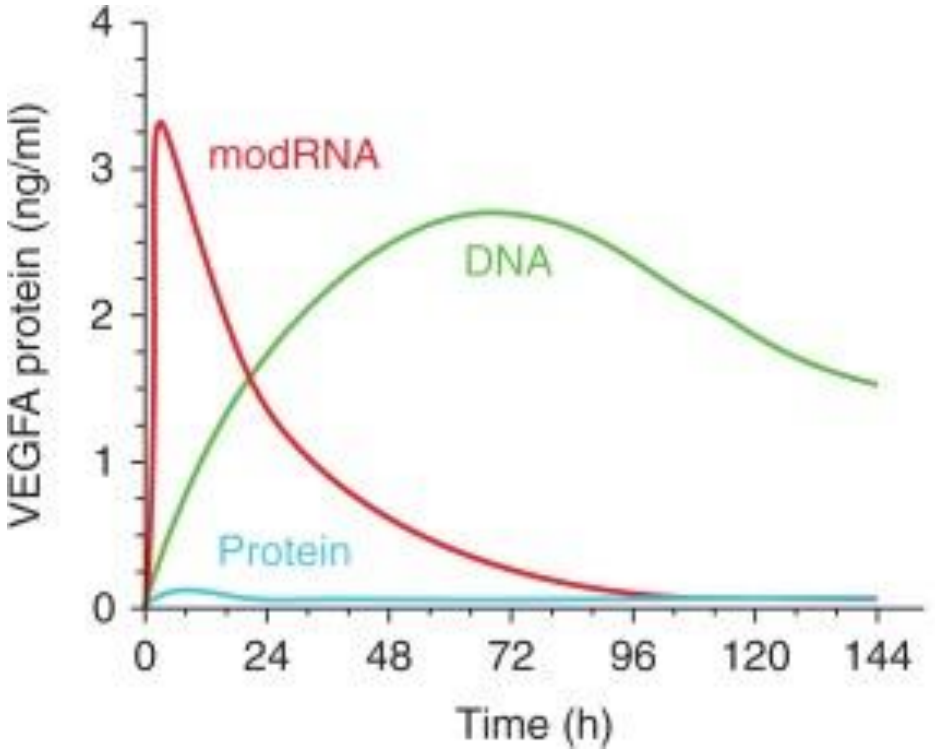
- Mice immunized at days 0 and 14 with pMVAC-1
- Vaccine expressing M1R, H3L and A35R



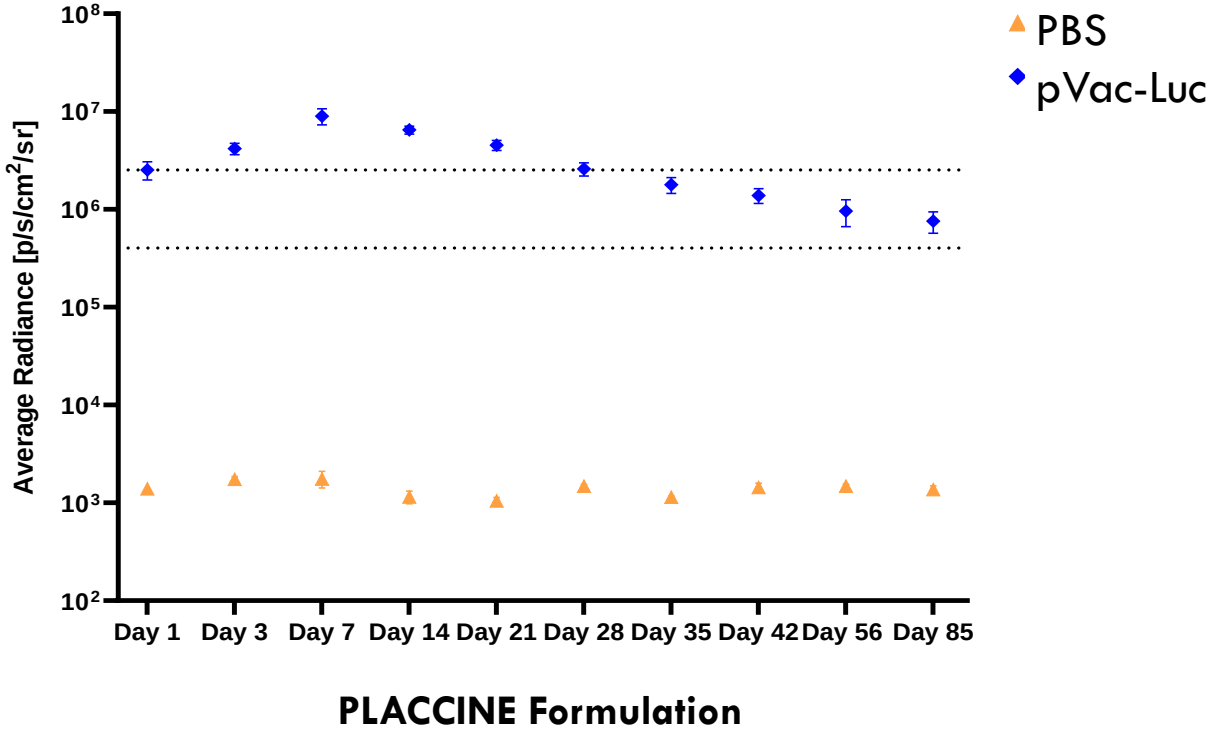


- Our DNA plasmid modality is uniquely adaptable to address viral outbreaks and tackle pathogens that threaten global health
- The flexibility of our platform allows for rapid antigen design and pre-clinical testing

pDNA Yields More Durable Antigen Expression than Protein or modified mRNA



Chien KR Cold Spring Harb Perspect Med 2015;5:a014035

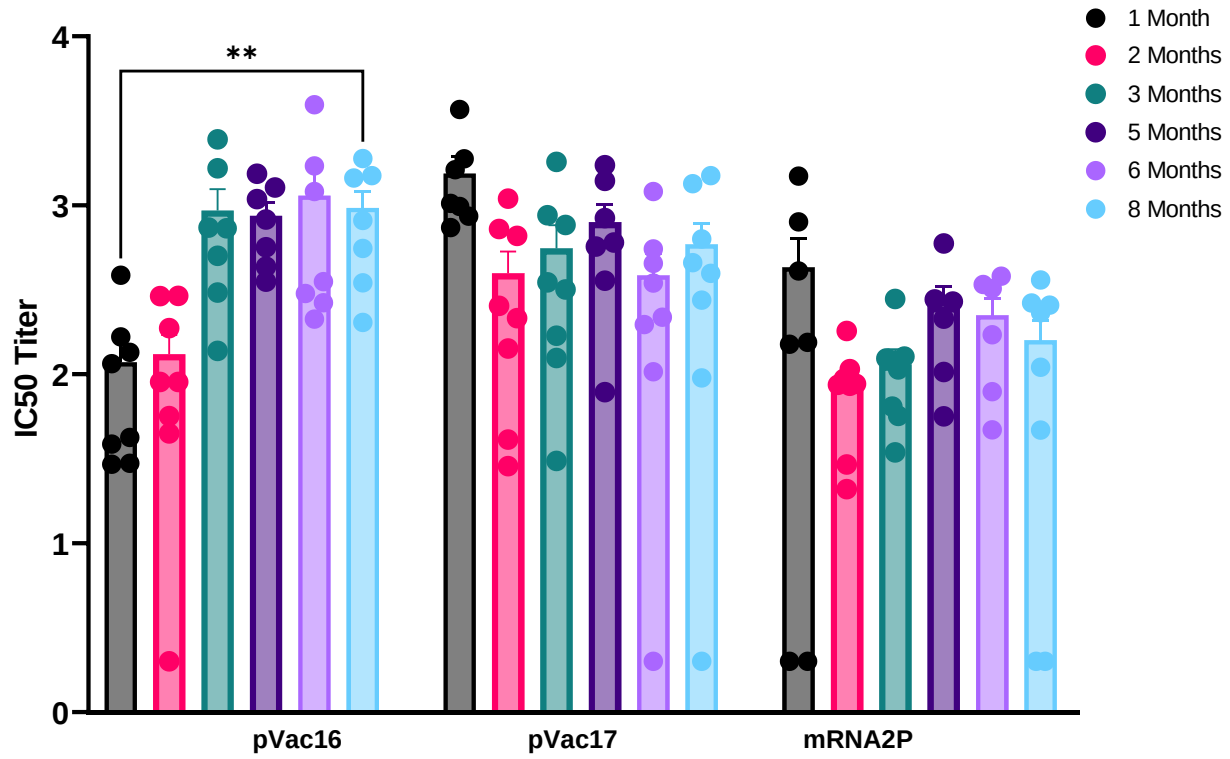


Durable Neutralizing Antibody Response to PLACCINE-SARS-CoV-2 Vaccines

Evidence of Durability For 8 Months (Ongoing Study)

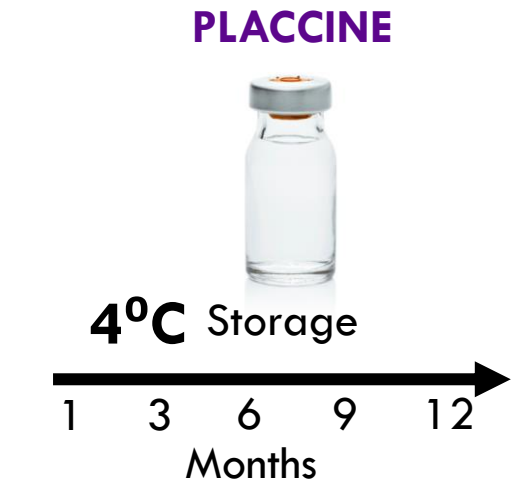
- Vectors: **pVac-16** (Delta), **pVac-17** (D614G - Delta)
- Formulation 125 µg DNA
- IgG titer (2, 3, 5 months)

nAB Assessment by a Delta Pseudo Lentivirus Assay

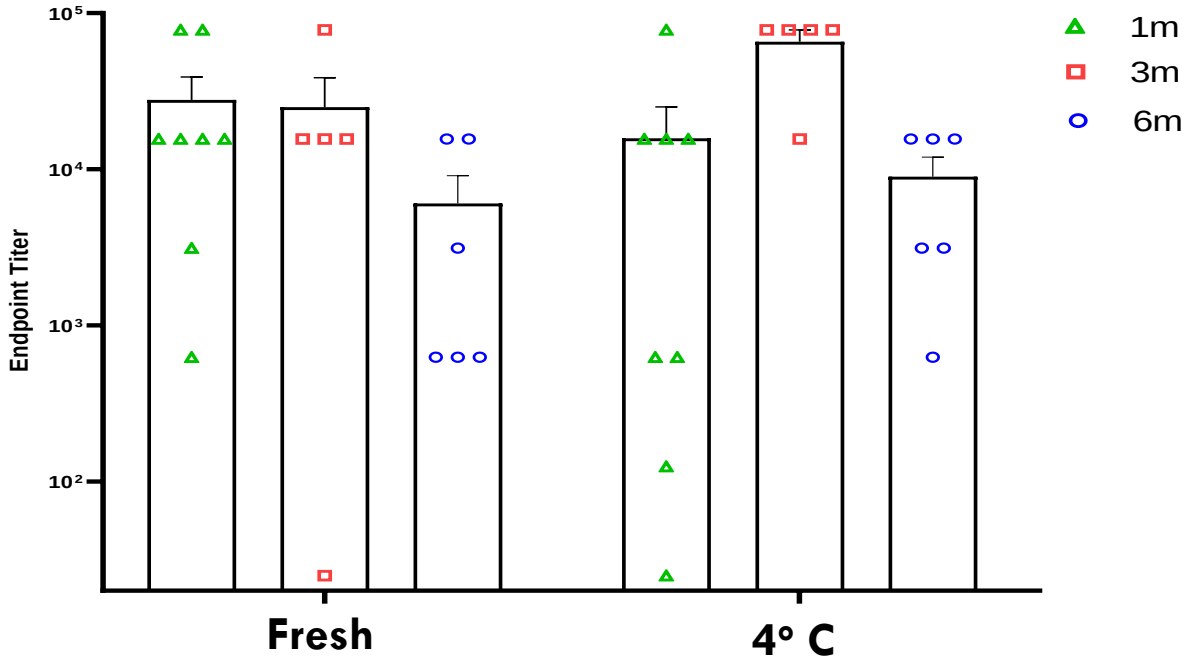


PLACCINE is Stable at 4°C for Six Months or Longer

- Vector: pVac-17 (D614G-Delta)
- Formulation: PLACCINE



Immunogenicity Studies in Mice



Next Steps for our PLACCINE Prophylactic Vaccine Modality

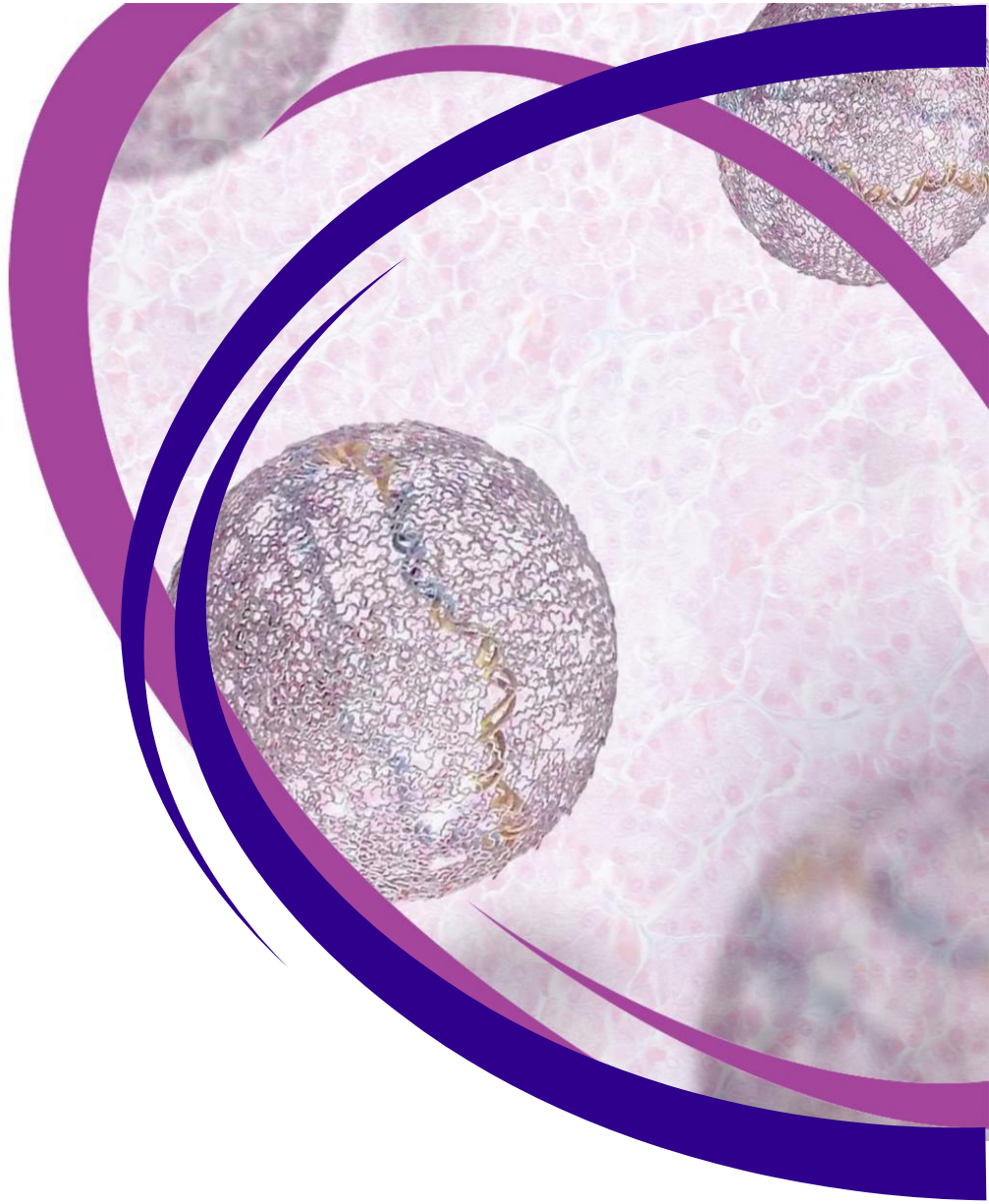
- Pre-IND meeting with FDA for the development of a COVID-19 seasonal booster

- Exploration of new pathogens and new vaccine formulations through IMUNON's collaboration with The WISTAR Institute.

- Expansion of our technology to other types of delivery systems as we position our nuclei acid-based modality as the future of vaccinology

IMNN-001

IL-12 IMMUNO-ONCOLOGY PROGRAM



IL-12: A Powerful Immune-Modulating Agent

Interleukin-12 Can Induce Anti-cancer Immunity Through Multiple Mechanisms

Activation/Proliferation

Stimulates the proliferation of CD-8 positive T-cells and natural killer (NK) cells and their cytotoxic activity against the tumor

Maturation/Proliferation

Shifts the differentiation of naive CD-4 positive T-cells toward a TH-1 phenotype, further enhancing the immune response – Turns "cold" tumors into "hot" tumors

Anti-Angiogenesis

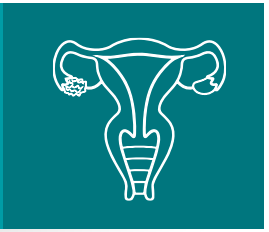
Promotes cellular production of the potent immune mediator IFN-γ and TNF-α. IFN-γ promotes the expression of anti-angiogenic molecules, halting the growth of new blood vessels that supply oxygen to the tumor

Inhibition of Immune Suppression

IL-12 inhibits regulatory T-cells that suppress immune responses by "hiding" the tumor from the body's immune system

First Target: Ovarian Cancer

Epithelial ovarian cancer (EOC) is insidious and usually diagnosed late at an advanced stage. Though EOC initially responds to treatment, the recurrence rate is high. Recent treatments delay progression but overall survival has not improved. Hence there is a need for effective therapy for patients with EOC.



20,000 cases
diagnosed each year in U.S.
13,000 deaths

Standard of care has remained
stagnant for decades

80%
diagnosed in late stage (III/IV)

50%
will die within 5 years of diagnosis

225,000
cases per year Globally
> 100,000
Patients in the U.S. alone

5th
leading cause of cancer mortality in women

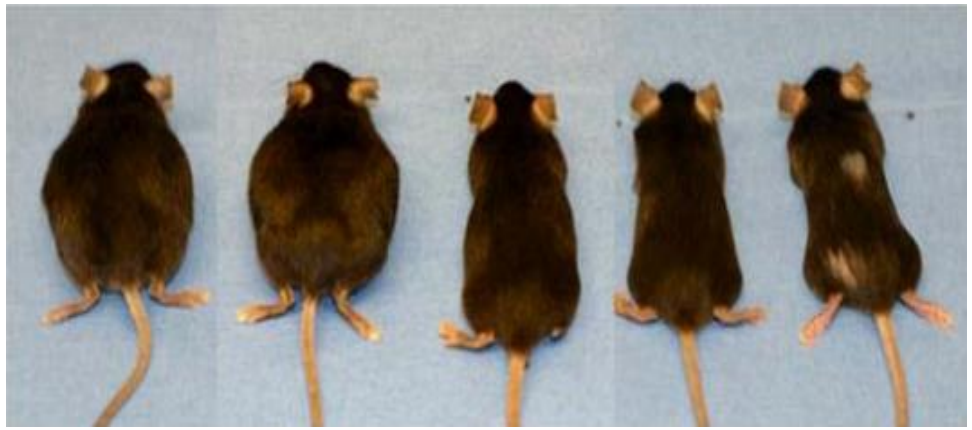
IMNN-001 has the potential to revolutionize today's standard of care

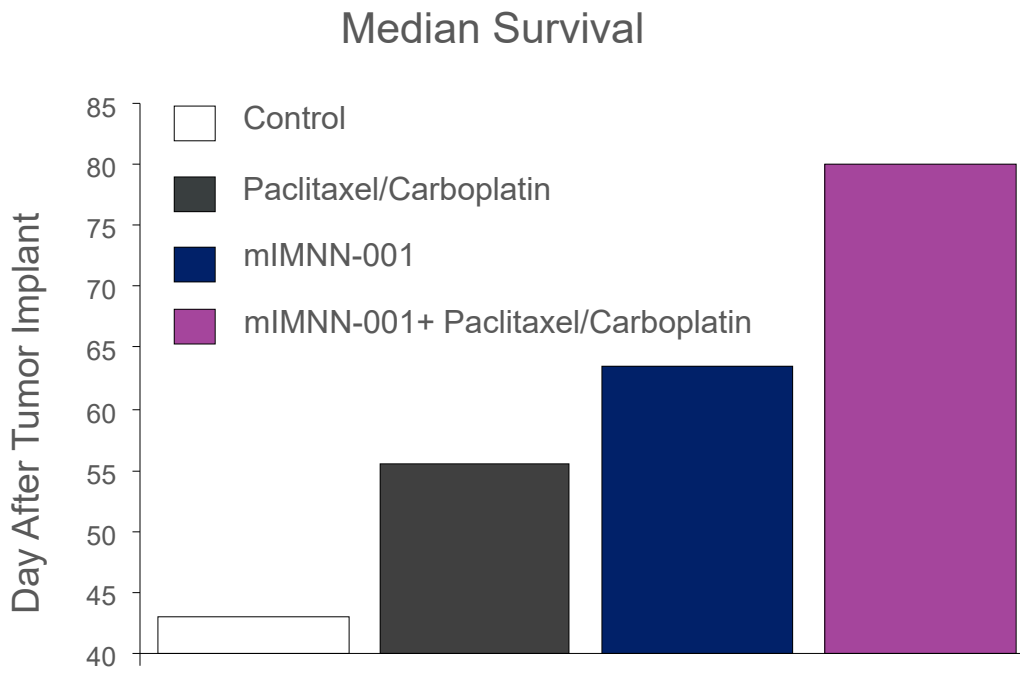
Sources: Cancer Statistics, American Cancer Society; Globocan; SEER database. CDC

Survival Benefit of IMNN-001 in an ID-8 Mouse Ovarian Cancer Model

Dose dependent effects of intraperitoneal mIMNN-001:

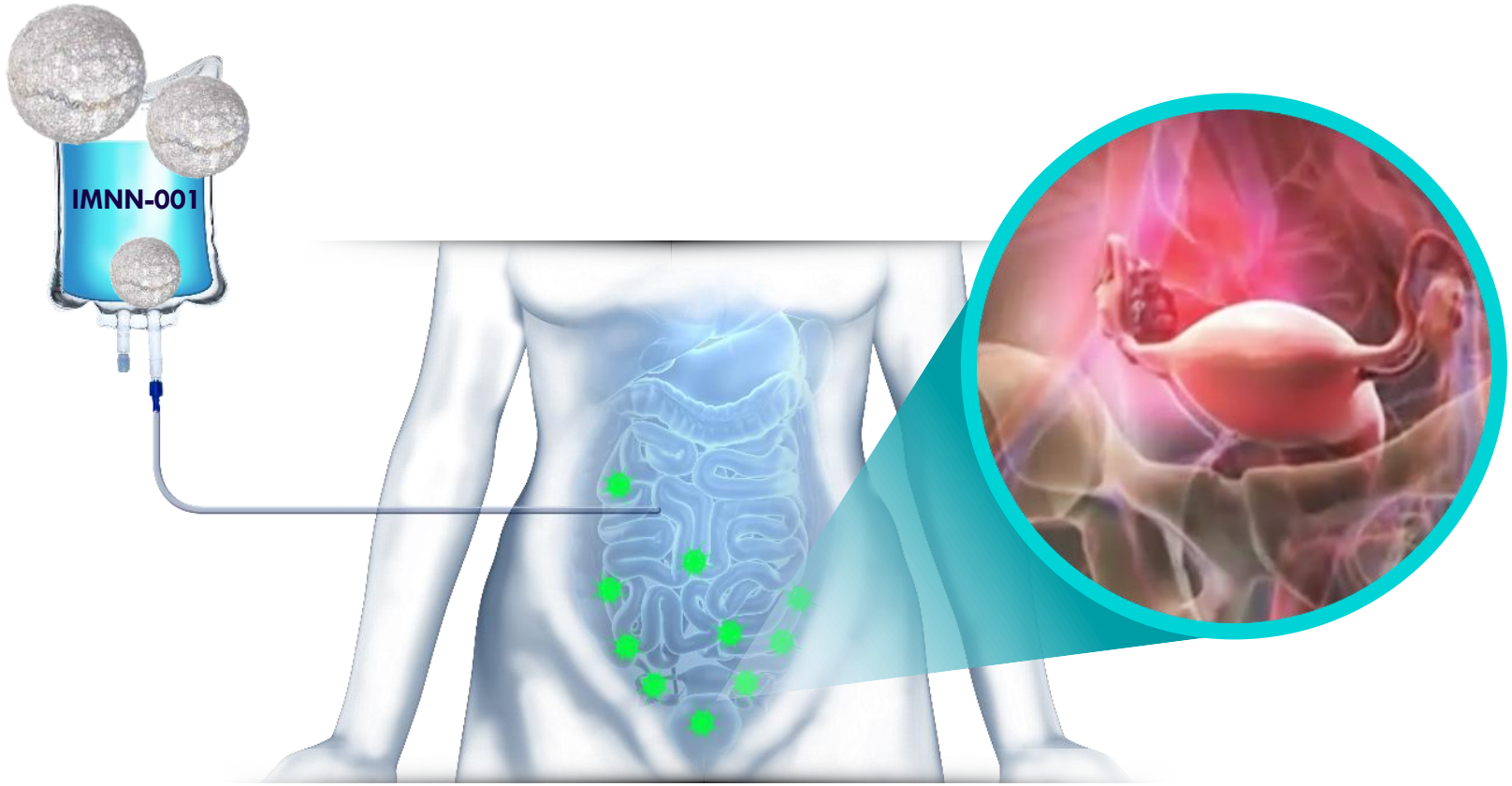
- Reduction in tumor ascites
- Reduction in tumor weight
- Improvement in survival





IMNN-001 Targets the Micro-Environment of Ovarian Cancer

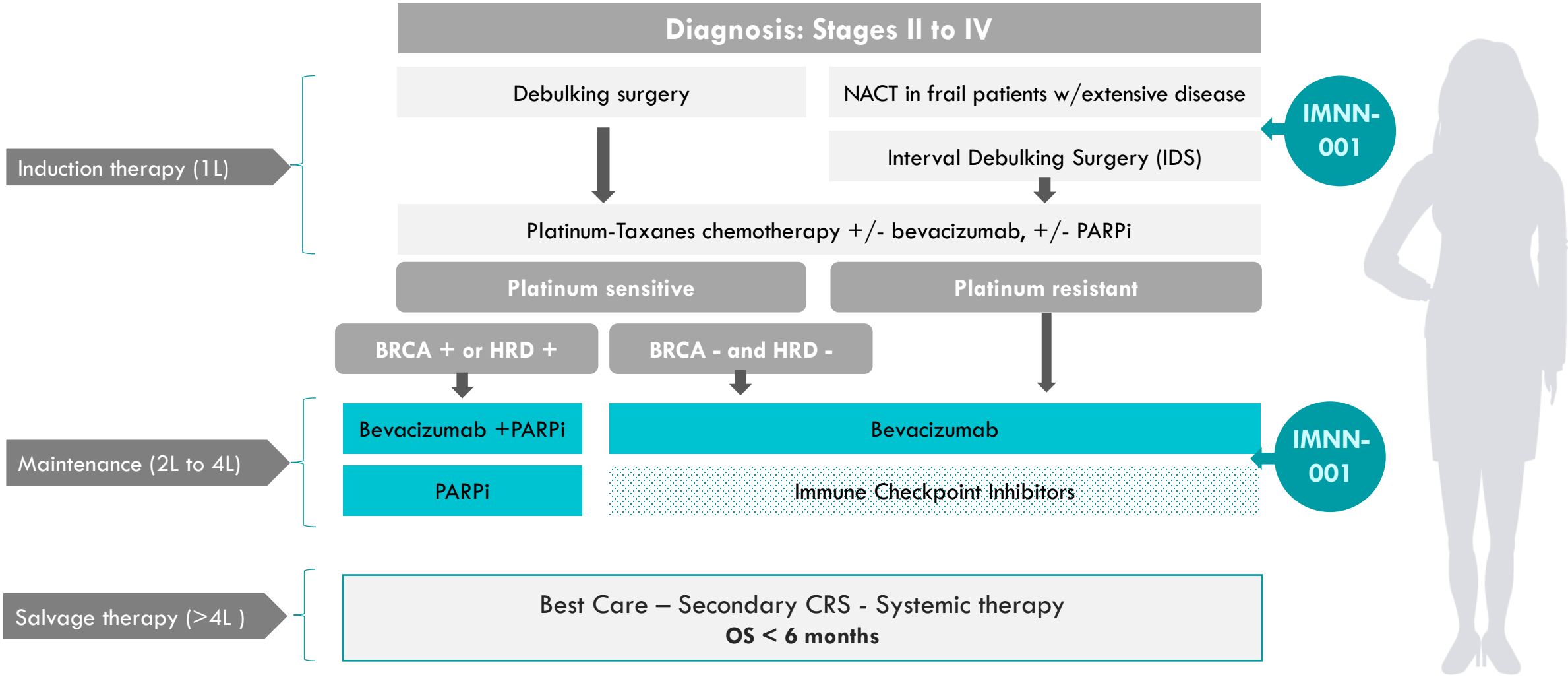
Local production of safe and durable levels of a powerful anti-cancer immune agent, IL-12



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

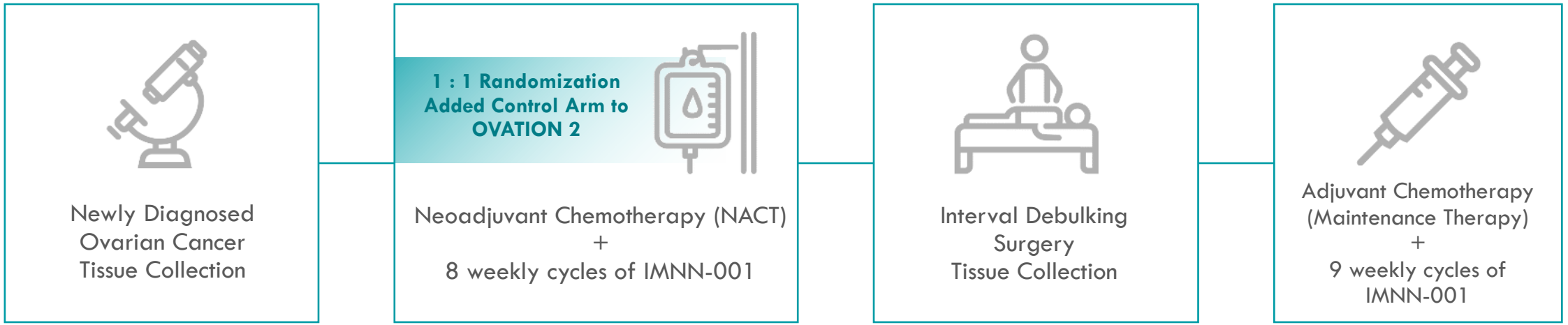
As an Immuno-oncology Agent, IMNN-001 has the potential to play a key role in new combination strategies



Sources: NCCN Clinical Practice guidelines – Ovarian Cancer, Version 2.2020. JNCCN.org, Vol.19 Issue 2, Feb. 2021
Annals of Oncology doi:10.1093/mdz104

IMNN-001 OVATION 2 Ovarian Cancer Study

To Determine Efficacy and Biological Activity With NAC in Stage III/IV Patients



Ovarian Cancer Patients
(FIGO IIIC & IV)

- 110 patients. **Enrollment completed**
- 50% of expected primary endpoint data collected
- ITT population contains mix group of BRCA +/- subjects (BRCA + have much longer time to PFS due to PARPi)

Primary Endpoint

- Progression Free Survival (PFS). After 80 PFS events or at least 16 months, whichever is longer

Secondary Endpoints

- Clinical Response (ORR), Pathological Response, Surgical Resection Scores (R0, R1, R2), Biological Response, Safety

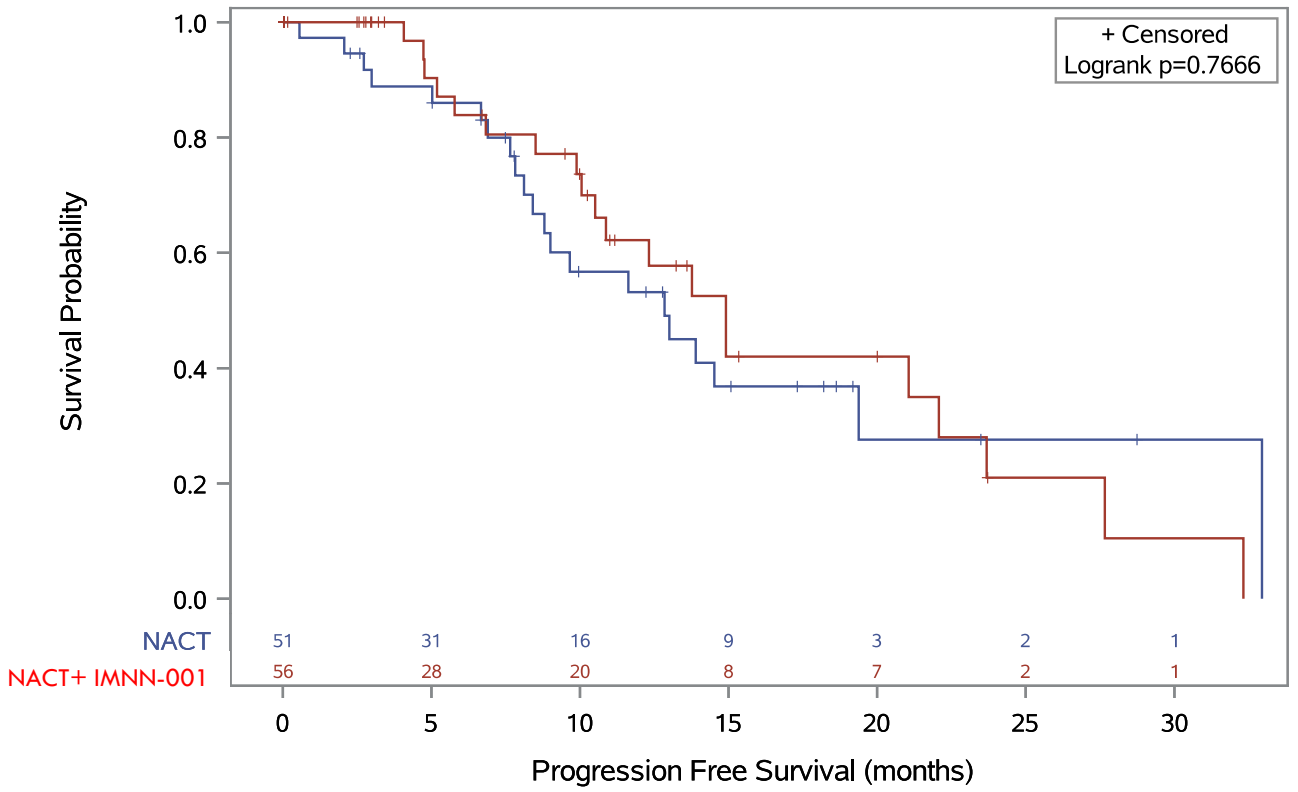
Interim OVATION 2 Data suggest that IMNN-001 is Safe and Active

ITT population: PFS benefit likely confounded by PARPi positive impact (50% of events)

ITT population	NACT ONLY	NACT + IMNN-001
Interval Debulking Surgery (n=70) R0 Resection Rate	56%	68%
Median Time to Progression (mos.) 50% of events	12.8	15.0
Chemotherapy Response Score of CRS3	17%	31%

- HR 0.91 (95% CL, 0.49-1.70) *P*=0.767

Celsion Study 201-17-201: Analysis of Progression Free Survival Time (Cutoff Date: 06SEP2022)
Kaplan-Meier Survival Plot and Log-rank Test
All subjects are included



	Subjects	Event	Censord	Median Survival	95%	CL
NACT	51	21	30	12.84	8.41	19.38
NACT+ IMNN-001	56	20	36	14.91	10.51	22.08

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

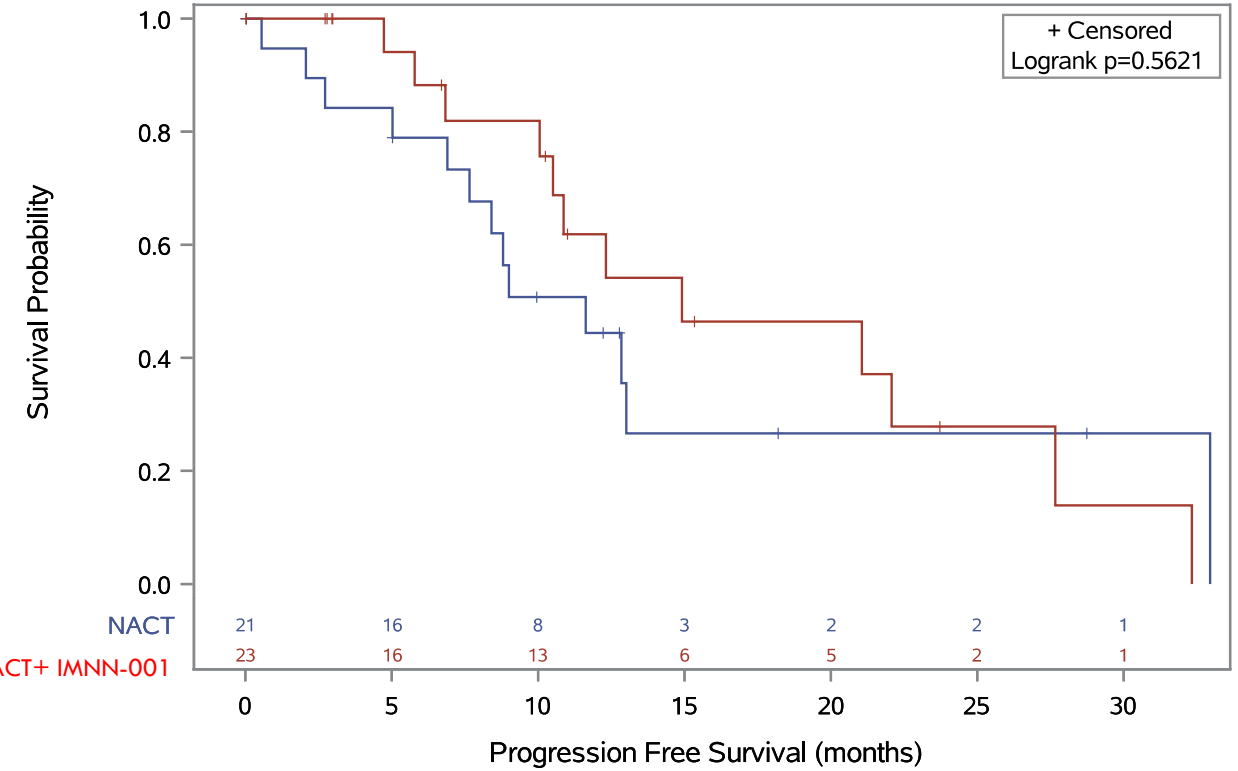
Sub-population of patients with the greatest medical need

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

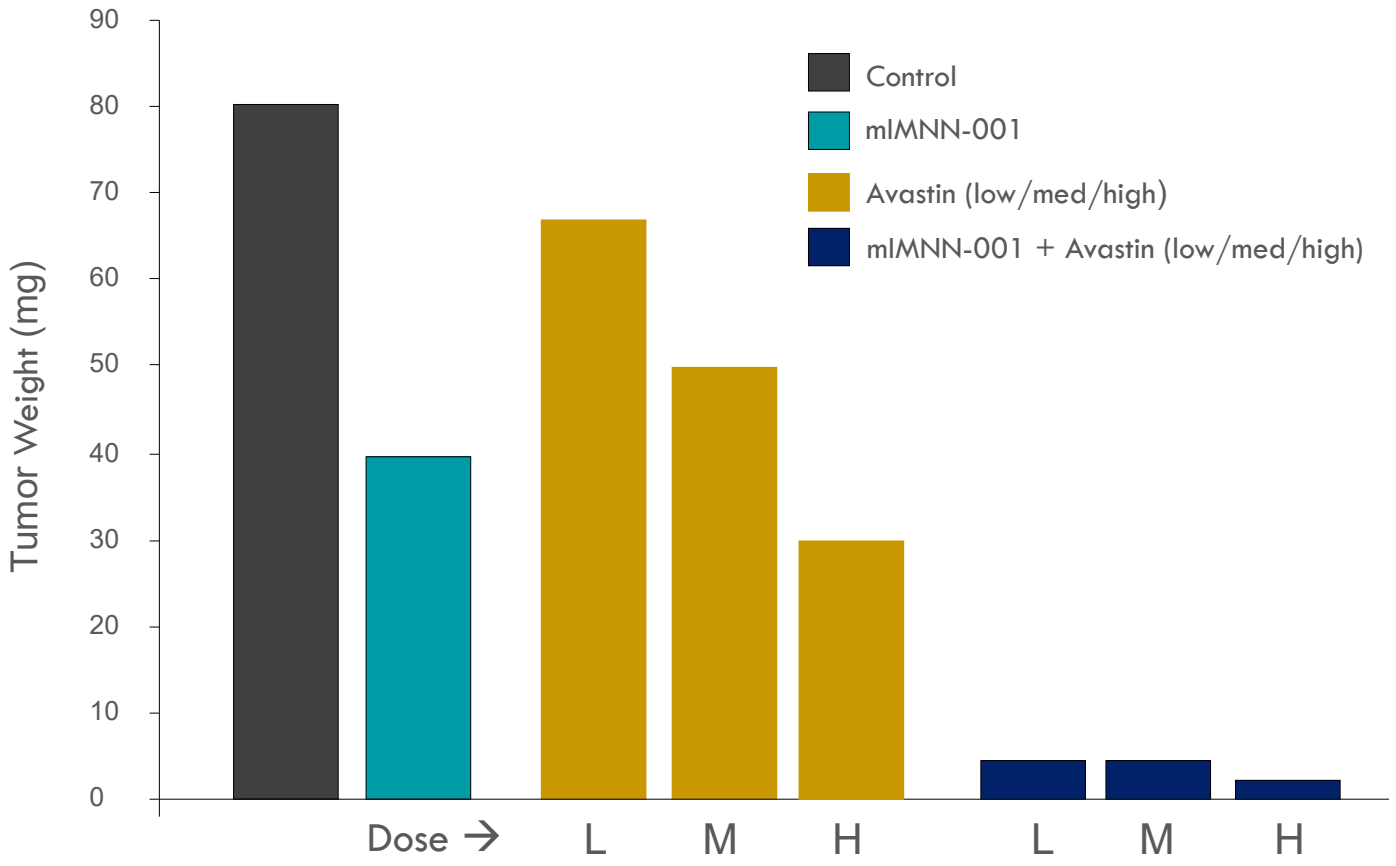


	Subjects	Event	Censored	Median Survival	95%	CL
NACT	21	13	8	11.63	6.899	
NACT+ IMNN-001	23	12	11	14.91	10.05	27.66

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

Synergistic Antiangiogenic Effect of IMNN-001 + Avastin® in Ovarian Cancer

SKOV-3 Ovarian Cancer in Nude Mice

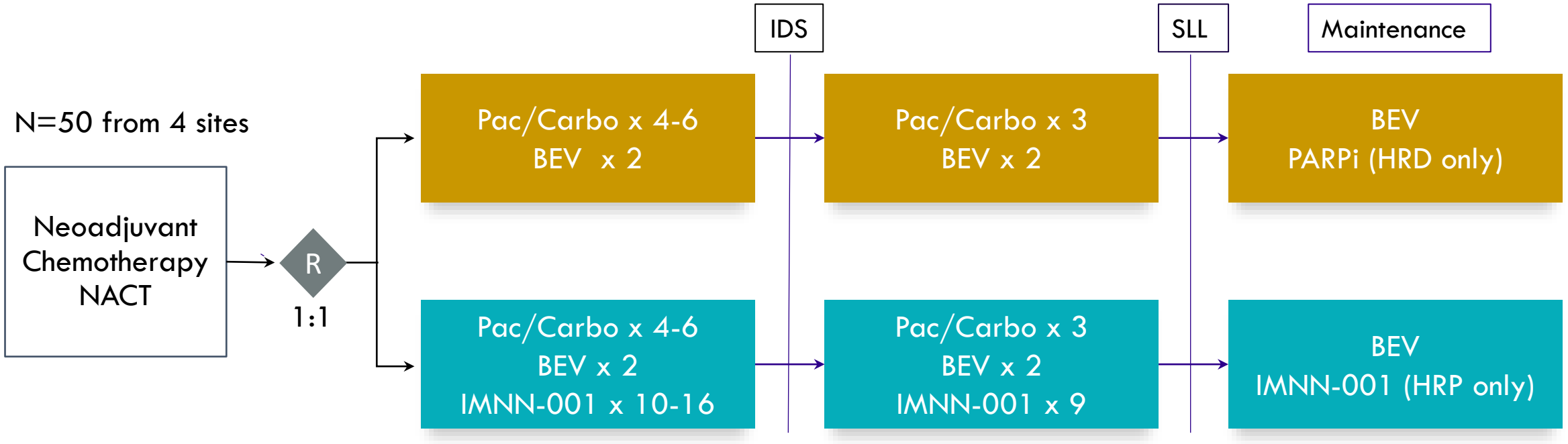


Key Rationale for Combination of IMNN-001 with Avastin®

- 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

New Phase 2 Study in Combination with bevacizumab

Avastin® (BEV) + IMNN-001 Study Design in Advanced Epithelial Ovarian Cancer Accepted by the FDA



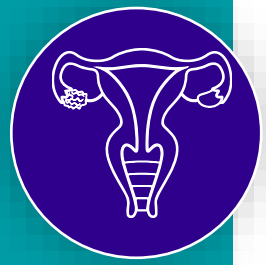
Primary Endpoint = Second Look Laparotomy (SLL)

Secondary = Progression-Free Survival (PFS)

Interval Debulking Surgery (IDS)

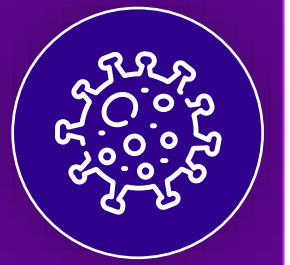
Summary of Development Programs

IMNN-001 offers a novel way to harness the powerful immunological properties of IL-12: the "Master Switch" to the body's immune system.



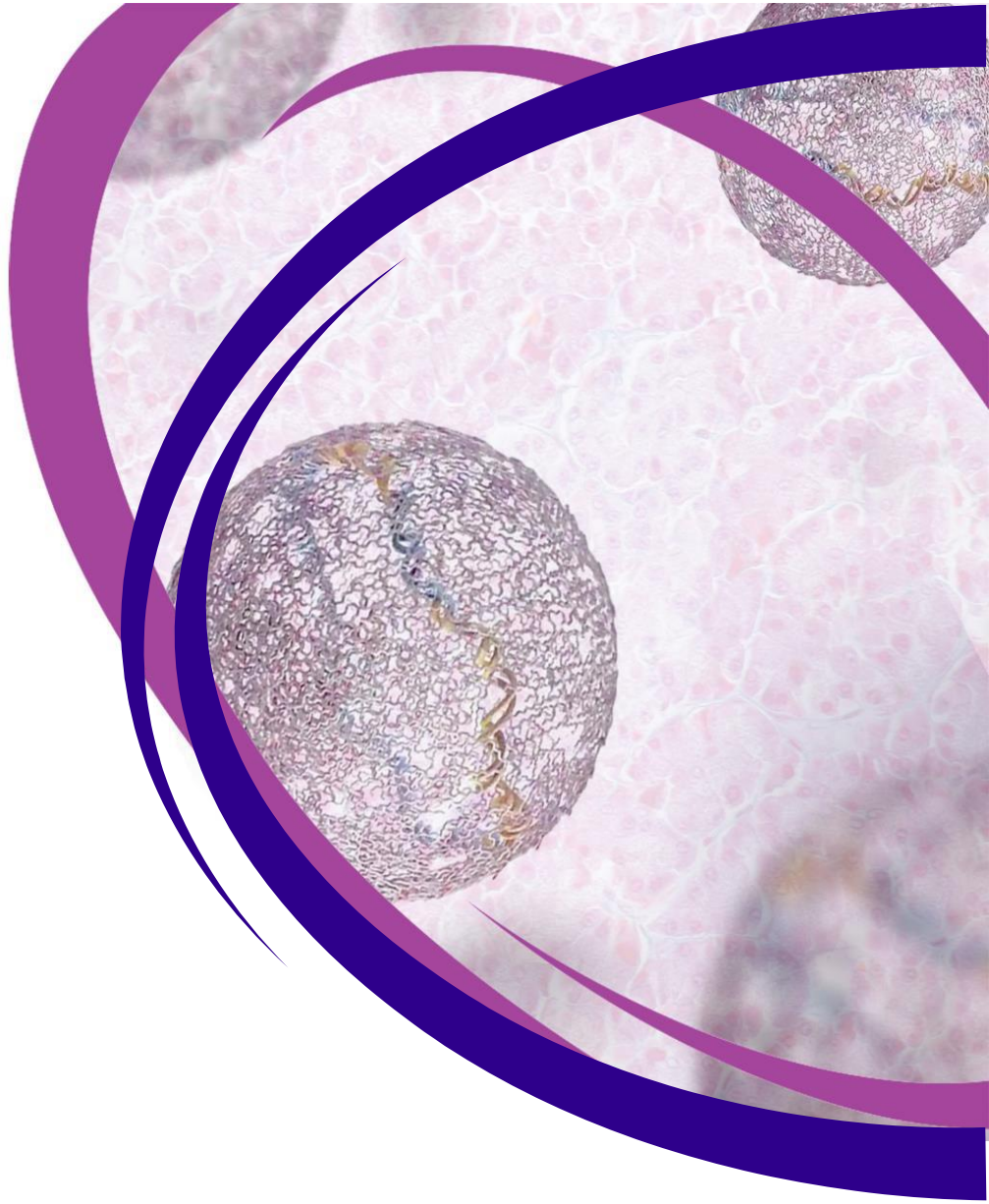
- Five completed ovarian cancer trials demonstrate **biologic and clinical activity**
- Safety and activity signals in Phase I; Mechanism of action confirmed
- **OVATION 2 offers new hope for ovarian cancer patients.** Interim data are promising, with potential of a targeted therapy approach in BRCA negative sub-group
- One new phase 2 trial will explore **combination strategy with VEGF inhibitors**

PLACCINE SARS-CoV-2 Proof Concept has demonstrated that our multicistronic formulated plasmid DNA platform can produce a robust immune response.



- **Evidence of IgG, neutralizing antibody and T-cell responses and protection against live virus challenge**
- Activity demonstrated with both single & bicistronic vectors
- **Immune quality is comparable to commercial mRNA vaccine benchmark**
- Evidence of **8-month durability** (ongoing study)
- Evidence of **6-month stability at 4°C** (ongoing study)
- Non-Human Primate study demonstrates initial POC

Milestones & Financials



Upcoming Key Milestones:

Robust Flow of Value Creating Activities

2H 2022

- IMNN-001 OVATION 2 ORR & Surgical Data
- NHP SARS-CoV-2 Data
- PLACCINE Next Pathogen Target

1H 2023

- Initiation of IMNN-001 P2 Combo trial with bevacizumab
- IMNN-101 SARS-CoV-2 IND

2H 2023

- IMNN-001 OVATION 2 Interim Data
- PL-X Pre-clinical Challenge Data
- PL-Z POC Data

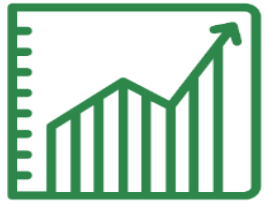
1H 2024

- IMNN-001 OVATION 2 Topline Results
- Interim results IMNN-001 P2 Combo trial with bevacizumab
- PL-X IND filing

Strong Balance Sheet Supports Upcoming Milestones

Cash Runway into 2025

Cash + Investments @ 9/30/2022	$43.4 million
Projected NOL sales – 2022-2024	+ $3.5 million
Total	**$46.9 million**
Estimated cash usage/quarter (2022)	**~$5 million**
Cash Runway at current spending	**Into 2025**



Common shares outstanding @ 9/30/2022	7.1 million
+ Stock Options	0.9 million
+ Warrants	0.2 million
Fully diluted shares outstanding	**8.2 million**
Market Capitalization	**$12 million**
Avg Daily Trading Volume	**~ 50,000**

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