Corporate Presentation

Nasdaq: IMNN

Chardan's 6th Annual
Genetic Medicines Conference

October 3-4, 2022

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 platforms** with proprietary synthetic delivery systems and multiple potential indications
- Initial clinical focus is on **immuno-oncology** and **infectious diseases**
- Phase II trial underway with 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
- Development of the PLACCINE platform in prophylactic vaccines, with **strong evidence of immunogenicity and durability of protection in a SARS-CoV-2 proof-of-concept model**
- 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 Scientific Officer

valentis
GENEMEDICINE

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

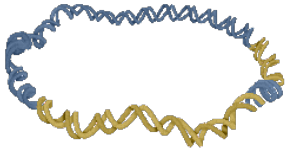
ALBA THERAPEUTICS
novavax
GENVEC
Meridian MEDICAL TECHNOLOGIES Manufacturing More Tomorrows™

Anthony Recupero, PhD
Vice President Business Development

ADARE PHARMACEUTICALS
APTALIS
EURAND
MaxCyte®
GENE LOGIC

Proprietary DNA Plasmid Platforms Encoding for a Variety of Proteins: cytokines, enzymes, mAb, antigens…

TheraPlas®

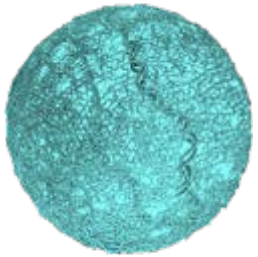


- Polymeric Nanoparticle Delivers DNA Plasmids Coding for Therapeutic Proteins
- Safely Administered to Over 100 Patients To-Date

PLACCINE®

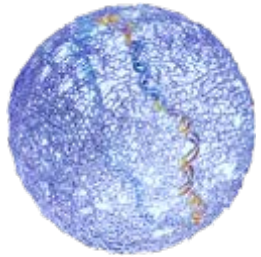
- DNA Plasmid vectors engineered for next generation vaccine technology and delivered with a synthetic delivery systems free of a device or viral vector
- Designed for multiple antigens
- Option for the co-expression of immunomodulators

Immuno-Oncology



Phase II Localized IL-12 Evaluation in Advanced Ovarian Cancer
Orphan Drug Designation: U.S. and EU Fast Track Designation

Prophylactic & Therapeutic Vaccines



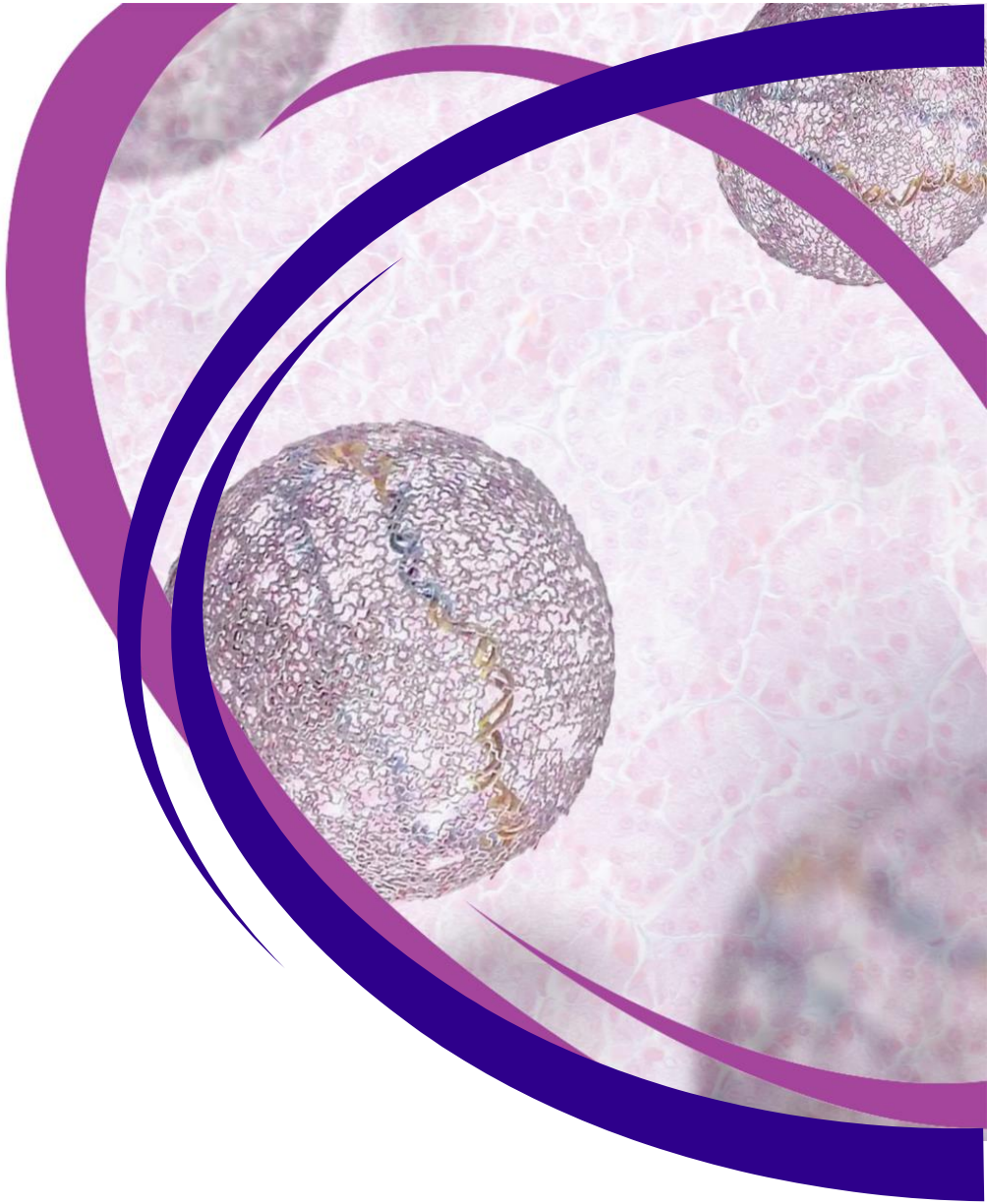
Proof-of-Concept to Demonstrate PLACCINE as Best-in-Class Vaccine Platform Using SARS-CoV-2 as a Benchmark

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			
	IL-12 IP in combination with **bevacizumab**	Advanced Ovarian, Fallopian Tube or Primary Peritoneal Cancer	GEN-1			
	IL-12 IP in combination with **dual checkpoint inhibitors**	Recurrent or persistent Ovarian Cancer	GEN-1			
PLACCINE	**Multicistronic SARS-Cov2.** Proof-of-Concept	COVID-19	PL-COV			
	Prophylactic Vaccine	Infectious Disease target	PL-X			
	Therapeutic Vaccine	Cancer target	PL-Z			

GEN-1 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

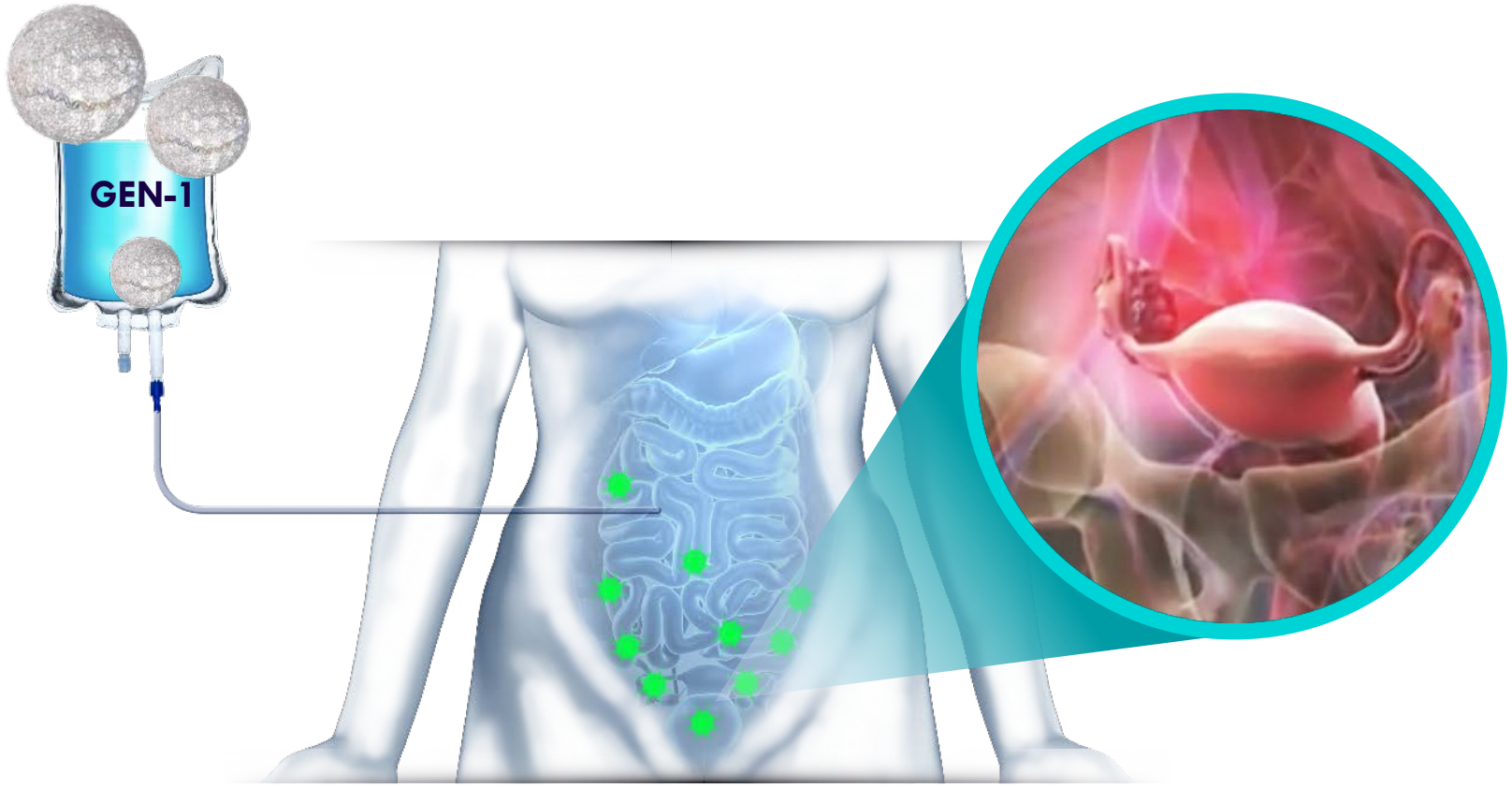
5th
leading cause of cancer mortality in women

GEN-1 has the potential to revolutionize today's standard of care

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

GEN-1 Targets the Micro-Environment of Ovarian Cancer

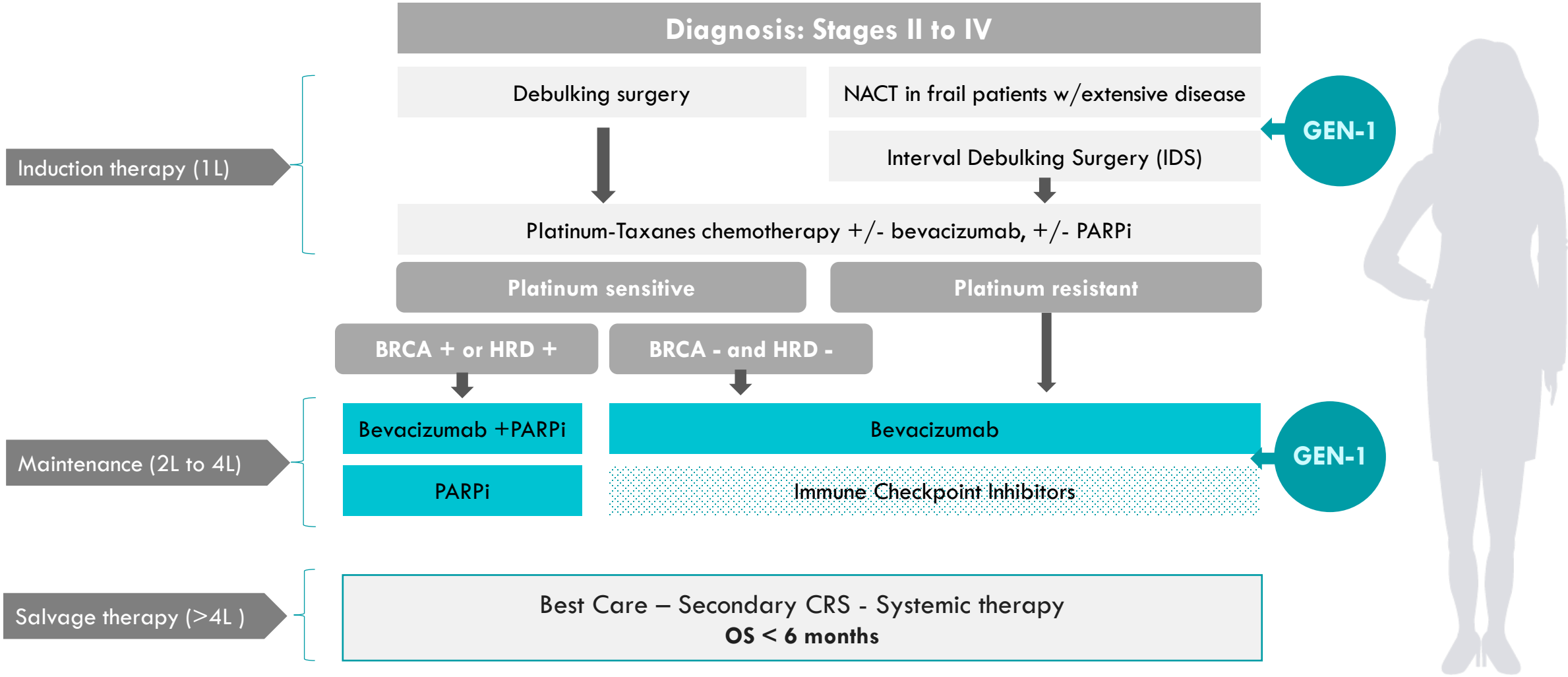
Local production of safe and durable levels of a powerful anti-cancer immune agent, IL-12



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

- Intracavity infusion of GEN-1 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 GEN-1

As an Immuno-oncology Agent, GEN-1 has the potential to play a key role in new combination strategies



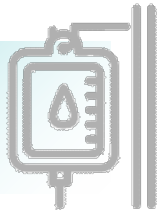
Sources: NCCN Clinical Practice guidelines – Ovarian Cancer, Version 2.2020. JNCCN.org, Vol.19 Issue 2, Feb. 2021
Annals of Oncology doi:10.1093/mdz104

GEN-1 OVATION 2 Ovarian Cancer Study

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

Newly Diagnosed Ovarian Cancer Tissue Collection

1 : 1 Randomization Added Control Arm to OVATION 2



Neoadjuvant Chemotherapy (NACT) + 8 weekly cycles of GEN-1

Interval Debulking Surgery Tissue Collection

Adjuvant Chemotherapy + 9 weekly cycles of GEN-1

Ovarian Cancer Patients (FIGO IIIC & IV)

- Up to 110 patients
- 14 patients in Phase 1 Run-in (100 mg/m²)
- Up to 96 patients in Phase 2
- Randomized 1:1
- NACT +/- GEN-1

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

Additional Treatment Regimen vs. OVATION I Trial Design

Continue GEN-1 treatment following surgery (Maintenance Therapy)

GEN-1 OVATION 2 Ovarian Cancer Study

Interim Data Suggest that GEN-1 is Safe and Active

Phase I/II Open Label Trial

- Phase I Portion (N=14) **Completed**
- 100 mg/m² GEN-1 Dose **Confirmed**
- 21 Clinical Sites in U.S. and Canada
- Enrollment to be Completed in Q3 2022

Interim Data (50% of events)

	NACT ONLY	NACT + GEN-1
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%

GEN-1 OVATION 2 Ovarian Cancer Study: Interim Data in BRCA-/HRP

Greatest Medical Need

Targeted Therapy Approach

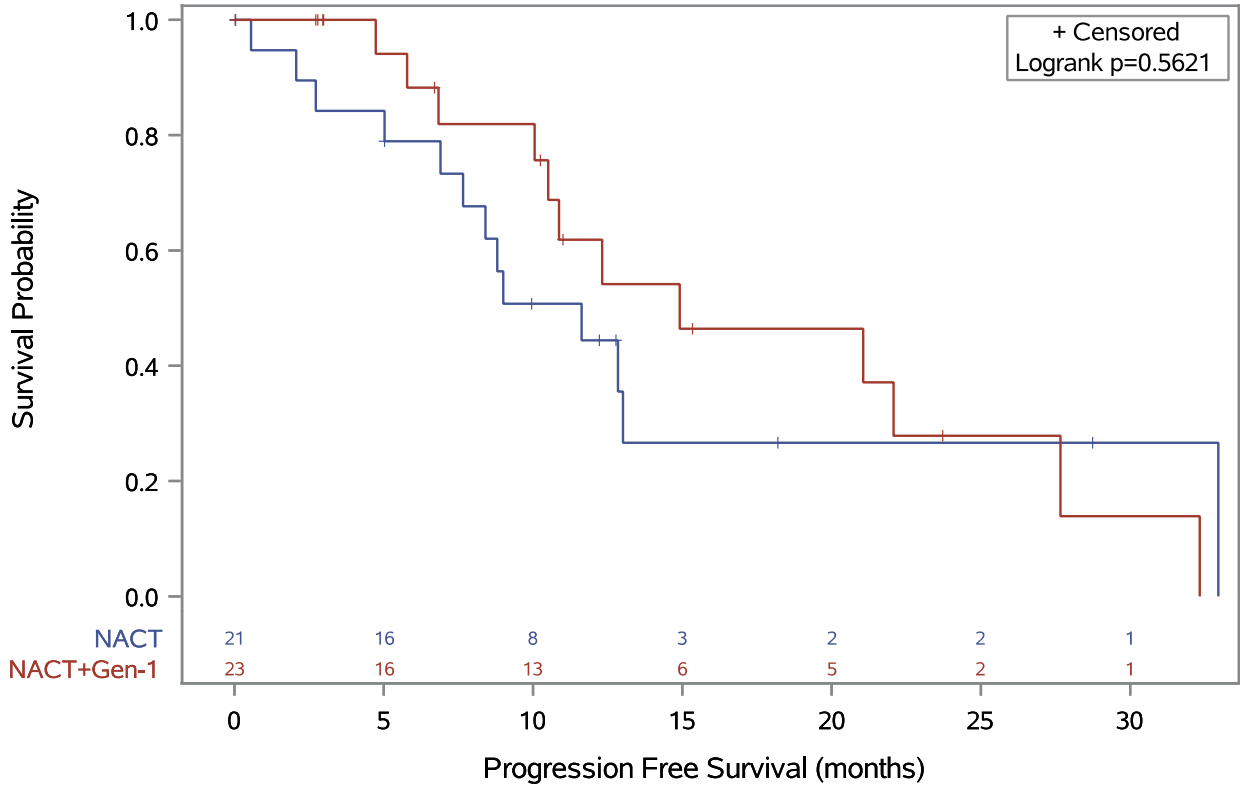
HRP (homologous recombination proficient with no BRCA 1/2 mutations)

- Median time to progression is about 9 months
- About **45% of ovarian cancer patients** are not getting a clinical benefit from PARP inhibitors

Interim OVATION 2 data indicates subjects on GEN-1 who are HRP may have improved PFS

- 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

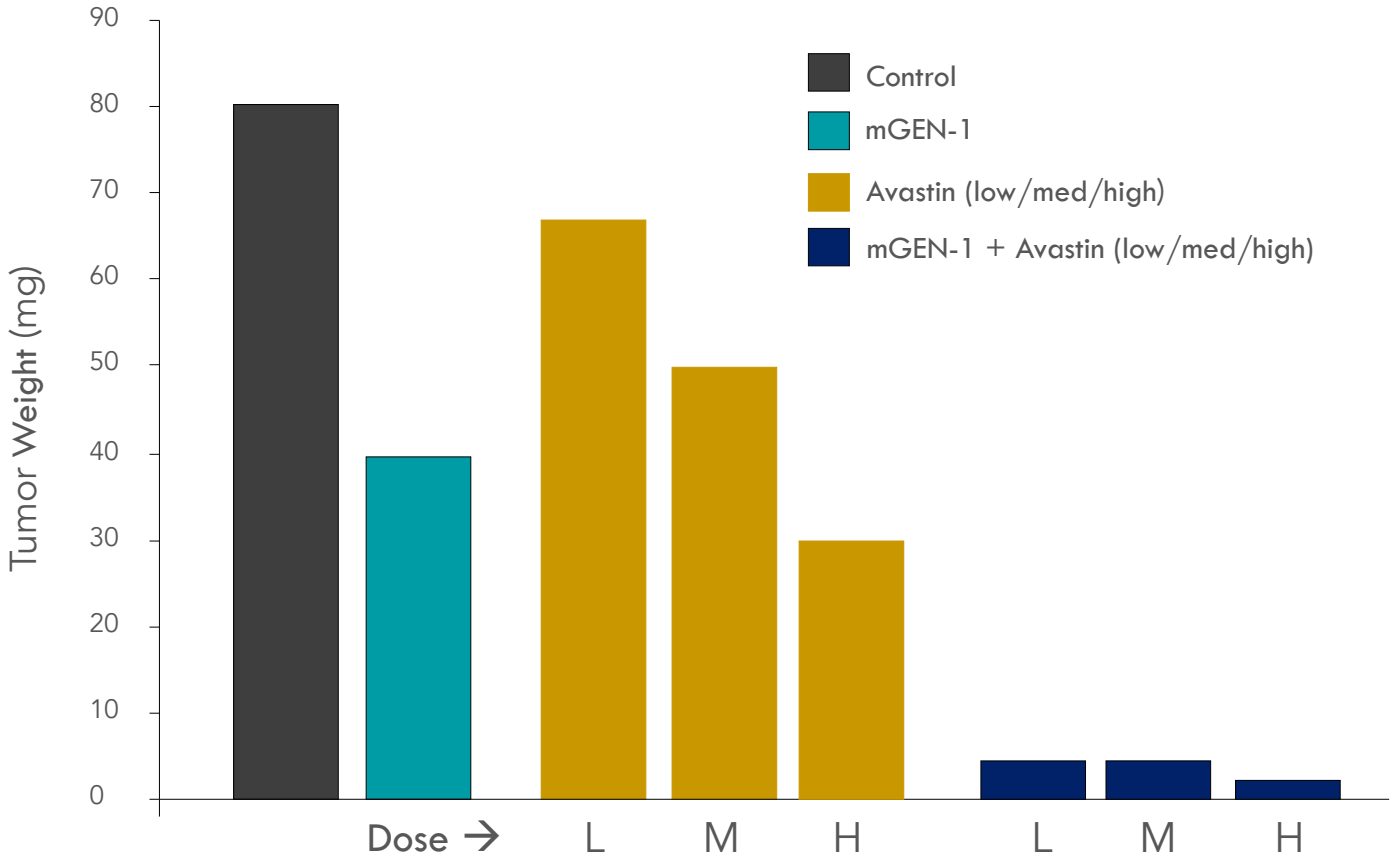


	Subjects	Event	Censored	Median Survival	95%	CL
NACT	21	13	8	11.63	6.899	
NACT + GEN-1	23	12	11	14.91	10.05	27.66

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

Enhancement of Avastin® Antiangiogenic Agent Activity in Ovarian Cancer by GEN-1

SKOV-3 Ovarian Cancer in Nude Mice

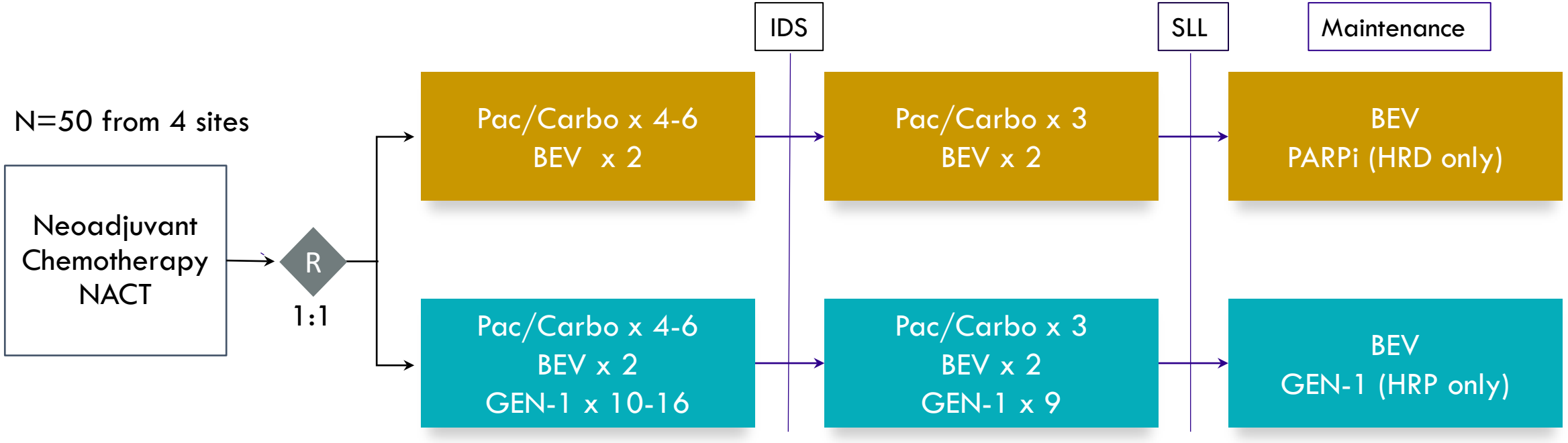


Key Rationale for Combination of GEN-1 with Avastin®

- Synergistic efficacy potential of VEGF level reduction by Avastin and VEGF production inhibition by GEN-1
- Efficacy improvement of low dose Avastin by GEN-1 combination improves its therapeutic index and cost

New Phase 2 Study in Combination with bevacizumab

Avastin (BEV) + GEN-1 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)

New Phase 1/2 Study in Combination with Immune Checkpoint Inhibitors

ICI/GEN-1 Study Design in Advanced Epithelial Ovarian Cancer. Accepted by the FDA.

Recurrent Ovarian Cancer

Phase 1: 3+3 dose escalation (n=12-24)

GEN-1 (dose escalation) 60, 80 and 100 mg/m2 IP q 2wks

Nivolumab 240 mg q 2 wks

Ipilimumab 1mg/kg q 6wks

Phase 2: 2-Stage Design (n=40)

Study powered to show true response rate of 45% or higher in a 2-stage design:

Stage 1: 20 patients enrolled and hold until 6 or more achieve CR or PR

Stage 2: Additional 20 patients enrolled to confirm if 14 of 40 achieve CR or PR.

Endpoints

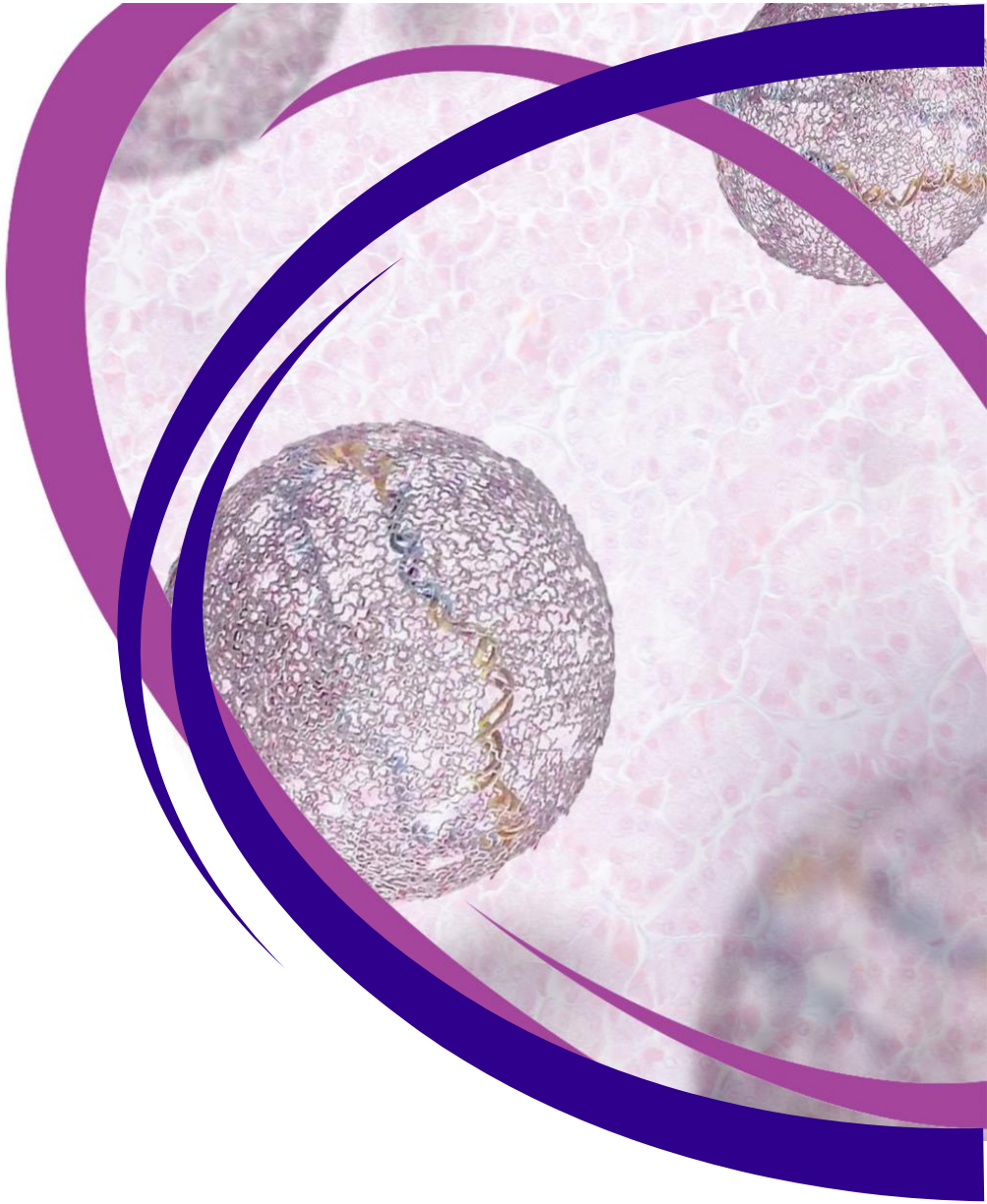
Primary: ORR: CR + PR

Secondary: PFS from study enrollment to disease progression or death

OS from study enrollment to death

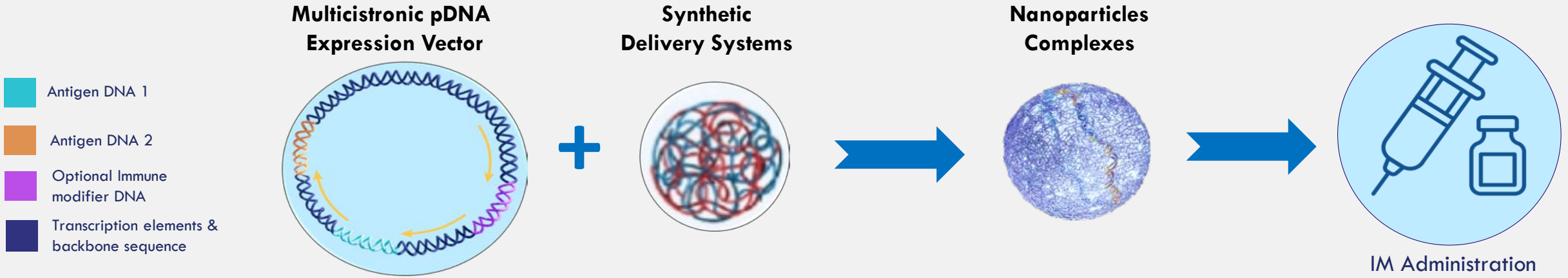
PLACCINE SARS-CoV-2 PROOF OF CONCEPT

PROPHYLACTIC VACCINES PROGRAM



PLACCINE Platform: Powering the Next Generation of Vaccines

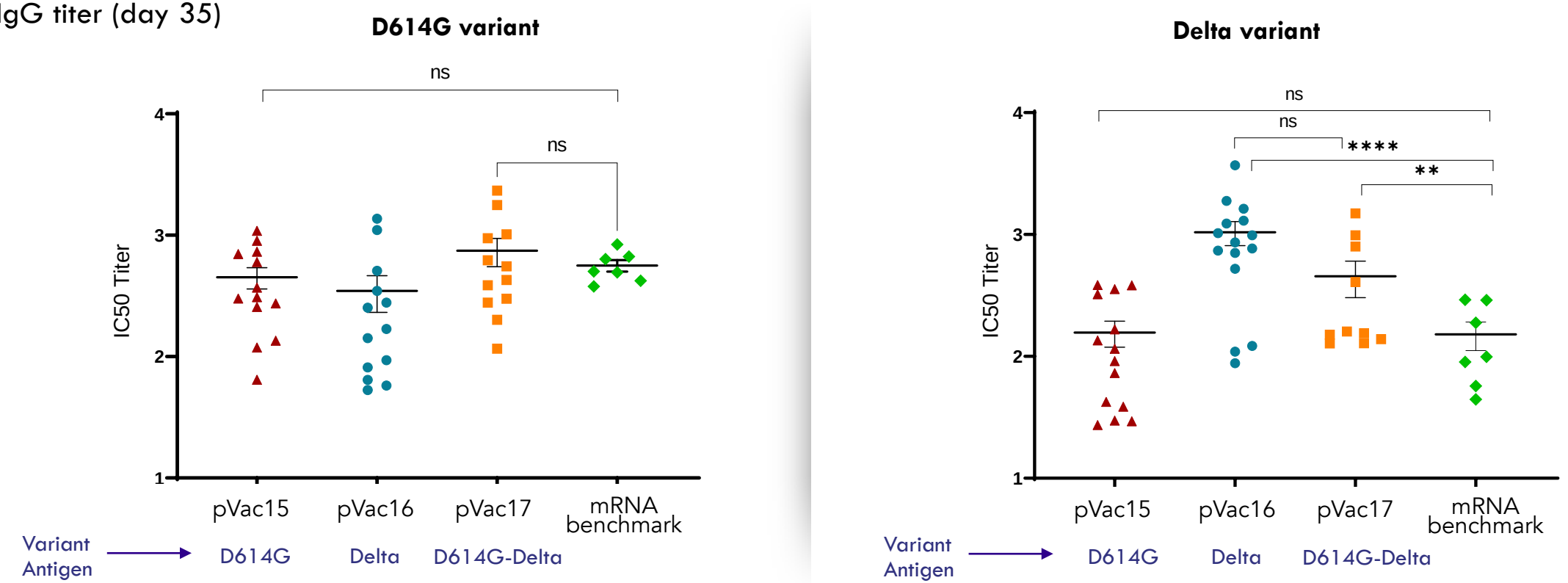
By addressing the shortcomings of current nucleic acid, viral vector and protein subunit vaccines



- **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** — 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 or cytotoxicity. No need for a device. Convenient handling for pandemic control.
- **Flexible Manufacturing** — Truly versatile platform enables rapid response to changing pathogens. Stability at normal refrigerator temperatures simplifies handling and distribution.

PLACCINE-SARS-CoV-2 Bicistronic Vaccine Produces Stronger Neutralizing Immune Response than mRNA Benchmark

- Vectors: **pVac-15** (D614G); **pVac-16** (Delta); **pVac-17** (D614G-Delta)
- 125 μg DNA
- IgG titer (day 35)



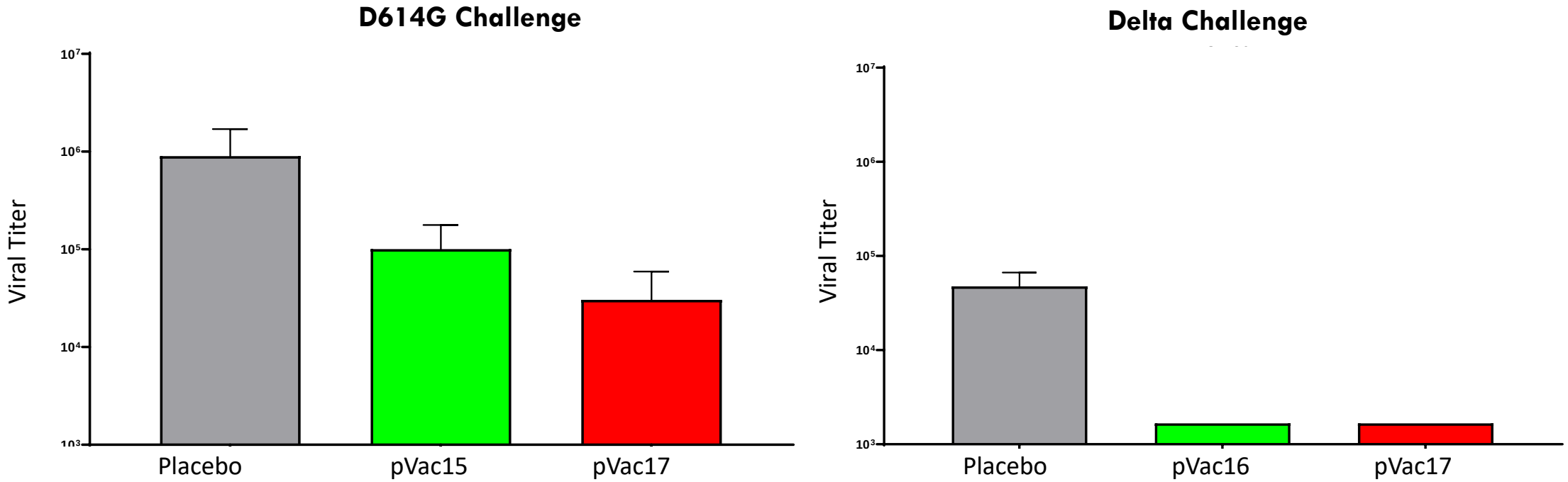
T-test (unpaired, two-tailed)
ns – nonstatistical; * P value < 0.05; ** P value < 0.001; *** P value 0.001

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)
- 125 µg DNA

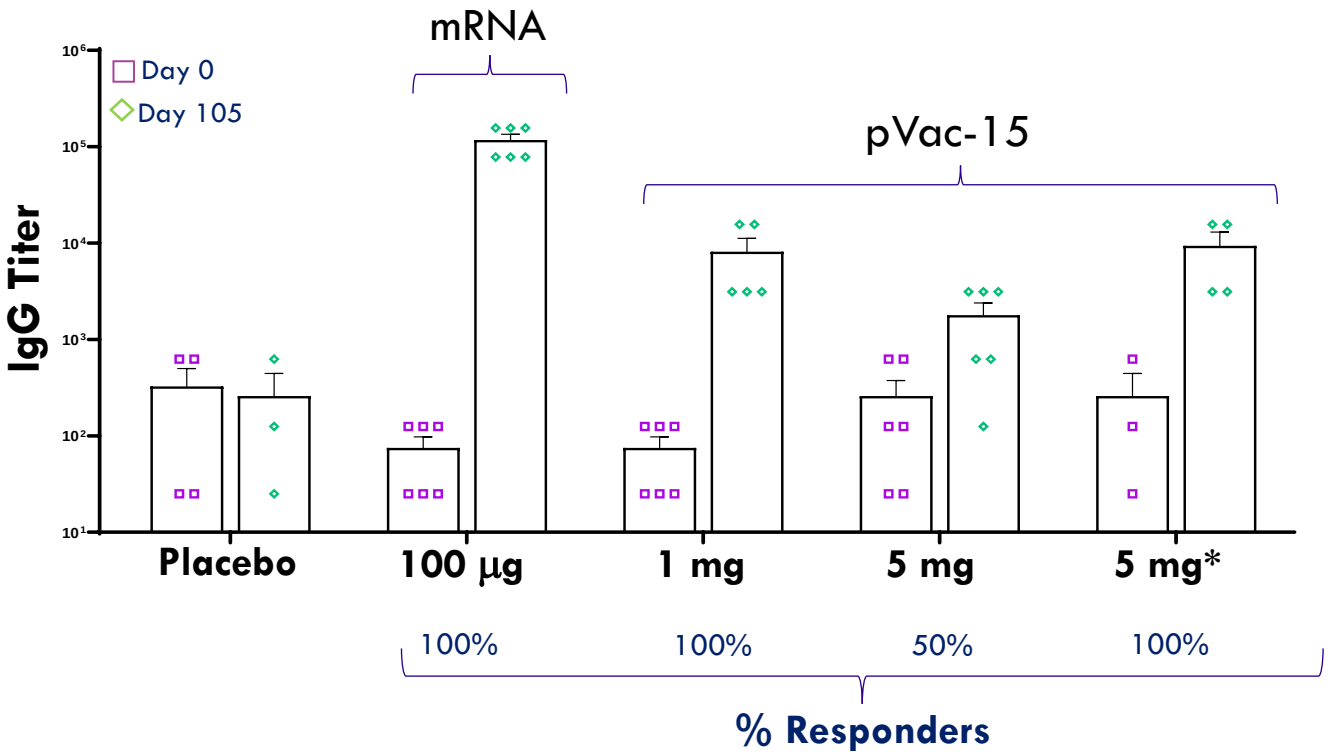
TCID50 Tissue Culture Infection Dose



Single Antigen PLACCINE Vaccine is Immunogenic in Cynomolgus Monkeys

80% of PLACCINE Subjects Showed IgG Response

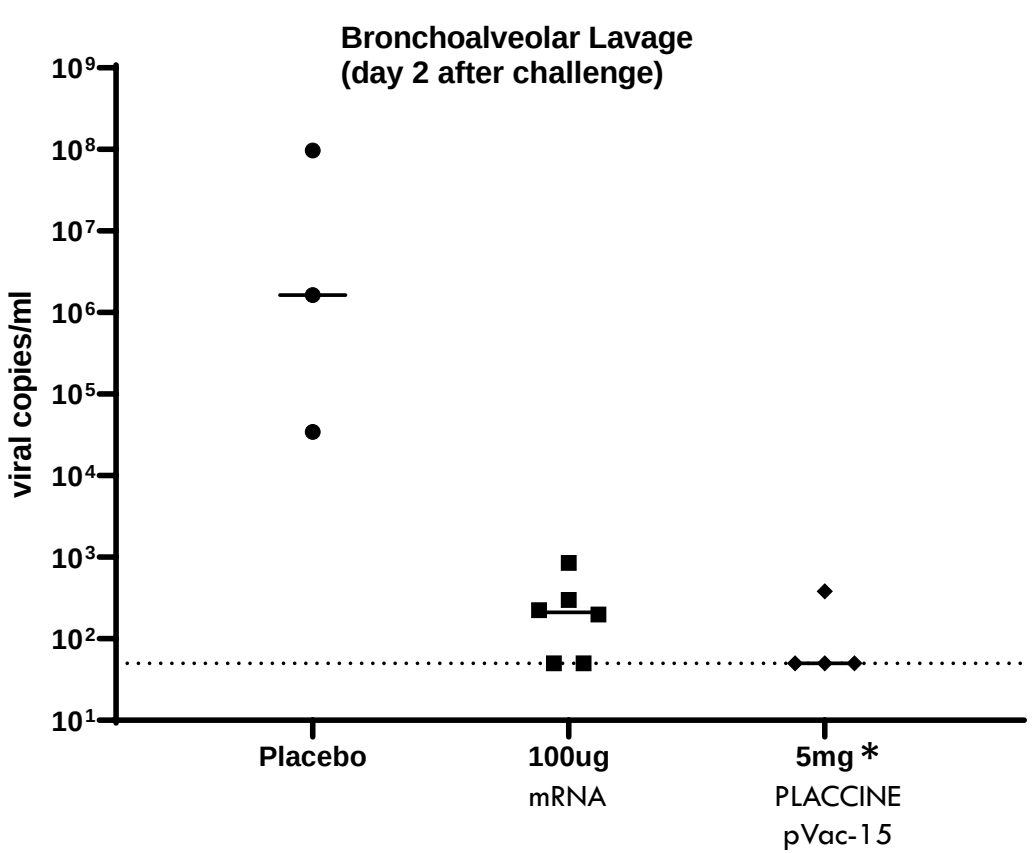
- Single antigen vector **pVac-15 (D614G)** in CP-AlPO4
- Comparator mRNA **Commercial mRNA Vaccine** (LNP)
- Dosing schedule Day 1, 28, 84
- IgG titers Day 105 (21 days after 3rd dose)

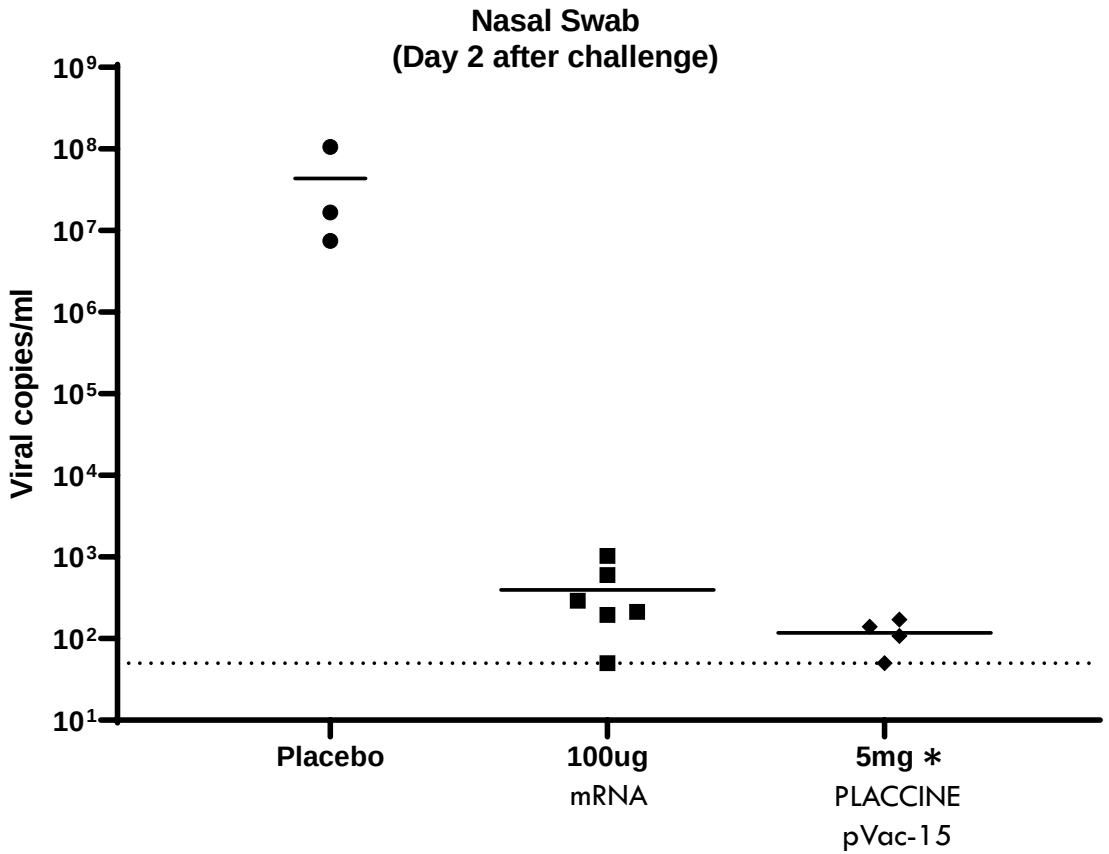


*3rd dose 1 mg pVac-16

Single Antigen PLACCINE Vaccine Cleared Viral Load of Cynomolgus Monkeys

Clearance efficiency comparable to mRNA vaccine by PCR assay : >99% clearance in every subject compared to average placebo control





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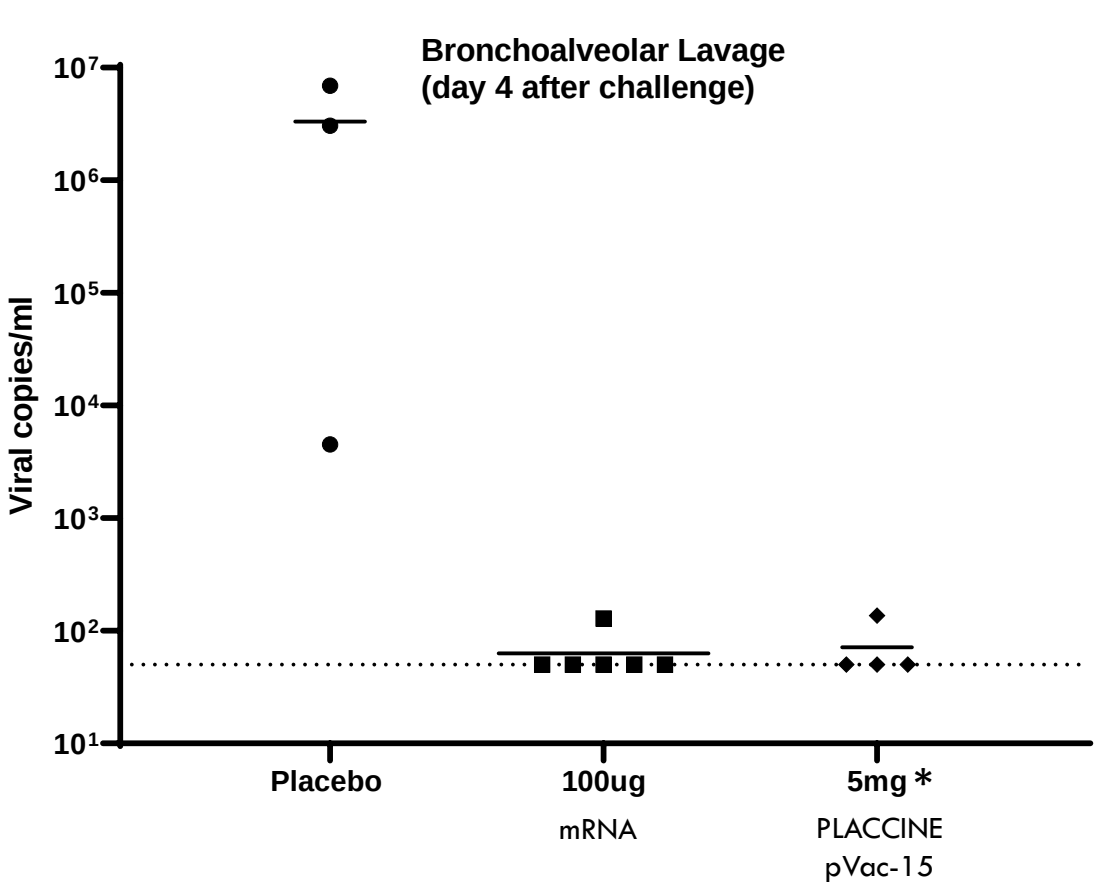
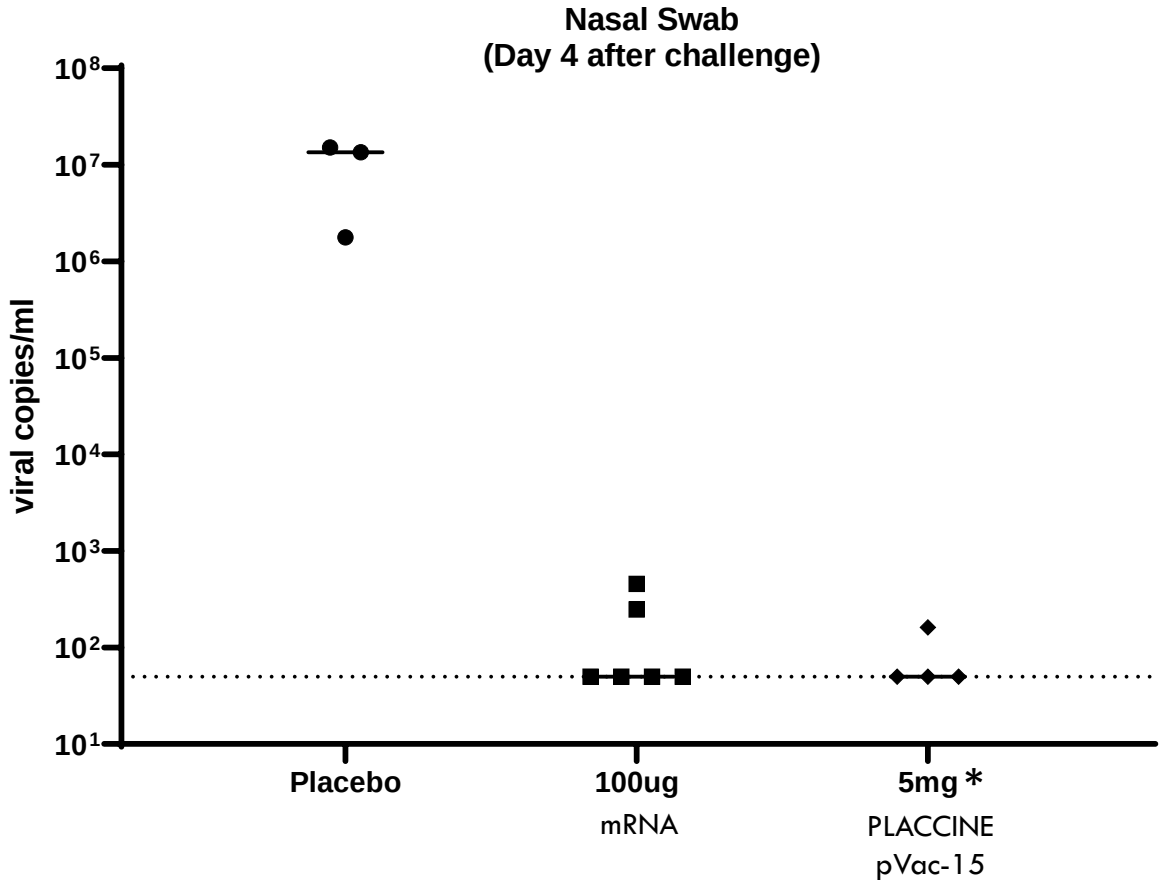


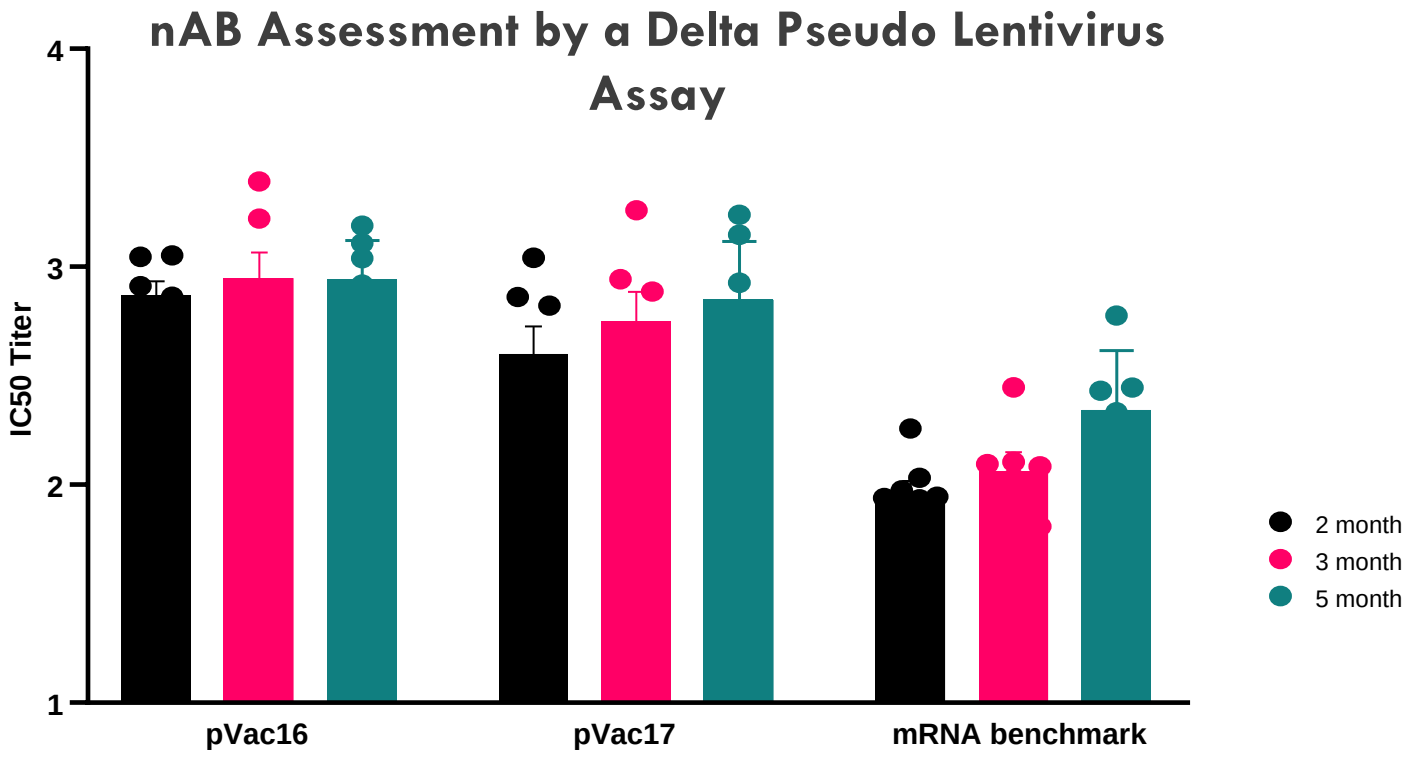


*3rd dose 1 mg pVac-16

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

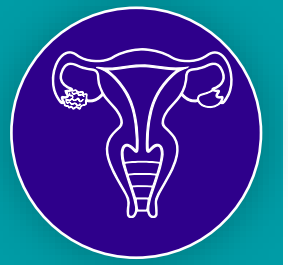
Evidence of Durability For Up To 5 Months (Ongoing Study)

- Vectors: **pVac-16** (Delta), **pVac-17** (D614G -Delta)
- 125 µg DNA
- IgG titer (2, 3, 5 months)
- Study: 22-002



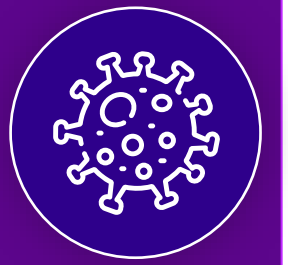
Summary of Development Programs

GEN-1 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**
- Strong efficacy signals in Phase I. Mechanism of action confirmed
- **OVATION 2 offers new hope for newly diagnosed advanced ovarian cancer patients.** Interim data are promising, with potential of a targeted therapy approach in BRCA negative sub-group
- Two new phase 2 trials will explore **new combinations strategies**

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 five-month durability (ongoing study)
- Evidence of three-month stability at 4°C (ongoing study)
- Non-Human Primate study in progress

Milestones & Financials

Upcoming Key Milestones: Robust Flow of Value Creating Activities

2H 2022

- GEN-1 OVATION 2 ORR & Surgical Data
- NHP SARS-Cov2 Data
- PLACCINE Next Pathogen Target

1H 2023

- Initiation of GEN-1 P2 Combo trial with bevacizumab
- Initiation of GEN-1 P1/2 Combo trial with dual checkpoint inhibitors
- PLACCINE SARS-Cov2 IND

2H 2023

- GEN-1 OVATION 2 PFS Data
- PL-X Pre-clinical Challenge Data
- PL-Z POC Data

1H 2024

- GEN-1 Initiation of P3 in EOC
- Interim results GEN-1 P2 Combo trial with bevacizumab
- Completion of GEN-1 P1/2 Combo trial with dual ICI
- PL-X IND filing

Strong Balance Sheet Supports Upcoming Milestones

Cash Runway into 2025

Cash + Investments @ 6/30/2022	$48.1 million
Projected NOL sales – 2022-2024	+ $3.5 million
Total	**$51.6 million**
Estimated cash usage/quarter (2022)	**$5 million**
Cash Runway at current spending	**Into 2025**

Common shares outstanding @ 6/30/2022	7.1 million
+ Stock Options	0.9 million
+ Warrants	0.2 million
Fully diluted shares outstanding	**8.2 million**
Market Capitalization	**$20 million**
Avg Daily Trading Volume	**~ 75,000**

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