IMUNON

Harnessing the Power of the Immune System

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, 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

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Corporate Secretary

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Anthony Recupero, PhD
Vice President
Business Development

ADARE PHARMACEUTICALS
APTALIS
EURAND
MaxCyte®
GENE LOGIC

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

IMUNON Strategic Priorities

Thoughtful five-pronged business strategy, capitalizing on the platform synergies across modalities

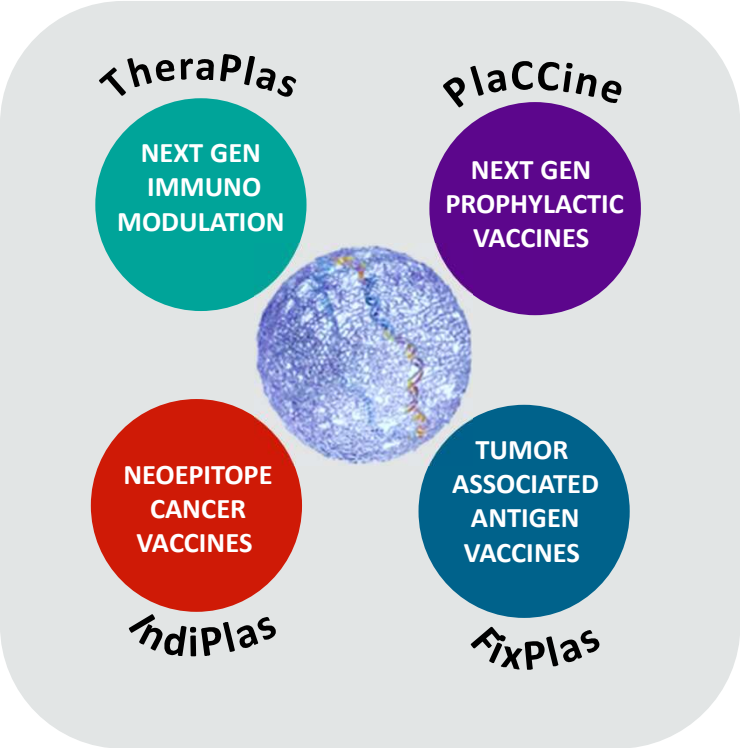
1	IMMUNO-ONCOLOGY	**An asset development opportunity,** in high disease burden cancers where an immunological approach through cytokine expression or cancer vaccines can improve outcomes.
2	PROPHYLACTIC VACCINES	**A partnership opportunity,** with pharmaceutical companies, institutions and government agencies to develop vaccines for pathogens of interest.
3	VERTICAL INTEGRATION	**Of the core elements of our business,** to control costs, deliverables and IP, realized through in-house early development scale of plasmids, synthetic delivery systems and investments in key partners.
4	COLLABORATIONS	**The bedrock of our business model,** to get access to new technologies or expertise, to enhance and de-risk our R&D efforts and generate new IP, to obtain non-dilutive funding.
5	NEW ASSET ACQUISITION	**To balance the risk profile of our pipeline,** in areas adjacent to our domain of expertise in immuno-oncology, gene therapy, nucleic acids and synergistic with our capabilities.

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)				
	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				
	Prophylactic Vaccine	Infectious Disease target	PL-X				THE WISTAR INSTITUTE; NIH National Institute of Allergy and Infectious Diseases
FixPlas	**Cancer Therapeutic Vaccine**	Trp2 /NYESO-1 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

Speed

Flexible manufacturing

Durable antigen expression

Induces robust immunological response

Non-viral DNA is a platform

Ability to go from sequence to the clinic to approved products in record time

Simple handling & distribution

Stability and long shelf-life at workable temperatures - Greater Capital Efficiency

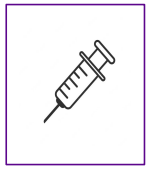
PlaCCine

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

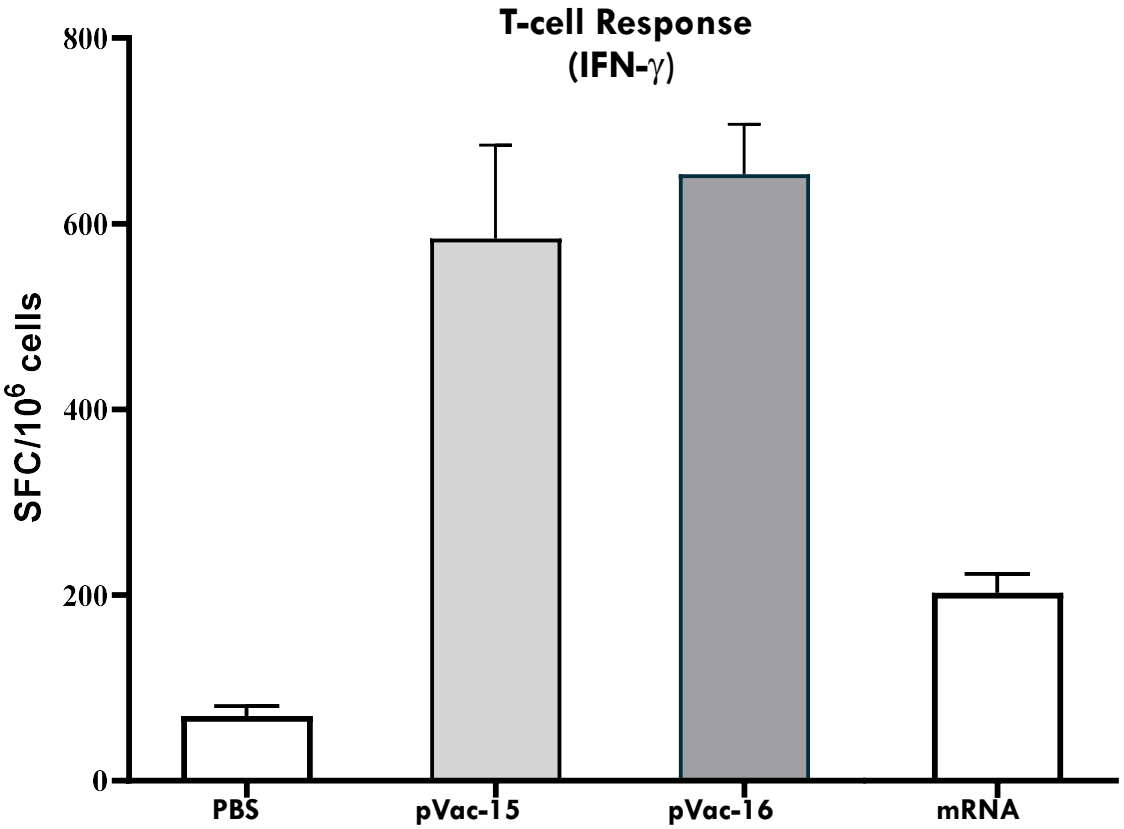
Wistar Institute Collaboration

PlaCCine Vaccines Provide Durable Antibody and Cellular Responses

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

PlaCCine Vaccines Provide Durable Cellular Response

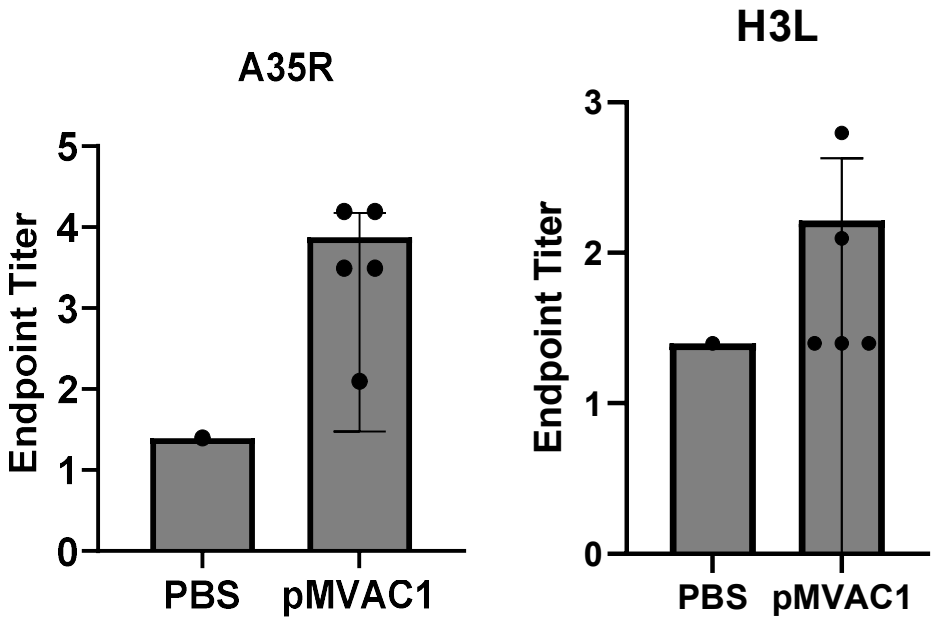
>12-months Durability in Mice in a Two-Dose Vaccination Design

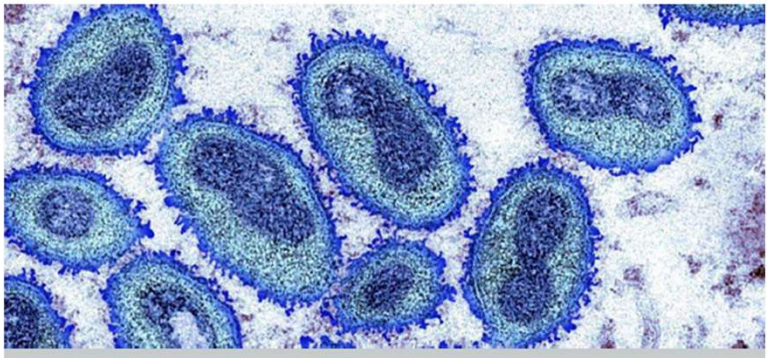


Novel PlaCCine DNA Monkeypox Vaccine Induces Humoral Immune Responses

Initial Monkey Pox Data Confirms 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

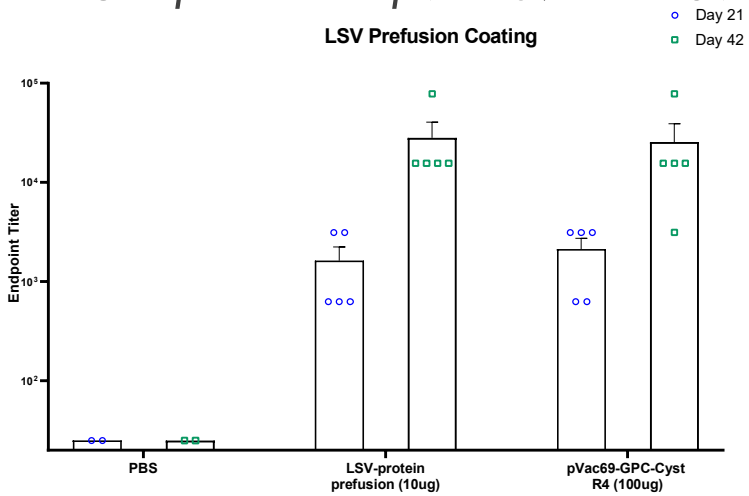


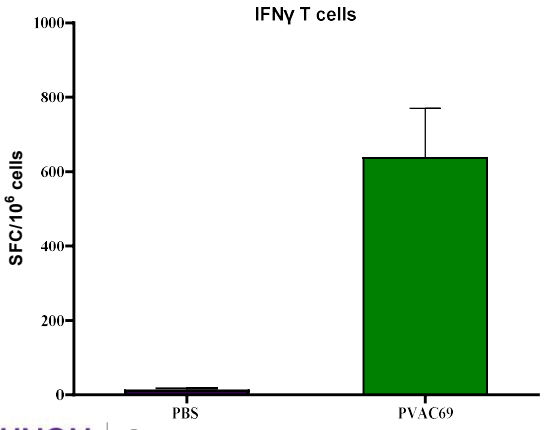


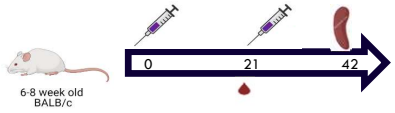
- Our DNA plasmid modality is uniquely adaptable to address viral outbreaks and tackle pathogens that threaten global health
- The flexibility of our platform allows for rapid antigen design and pre-clinical testing

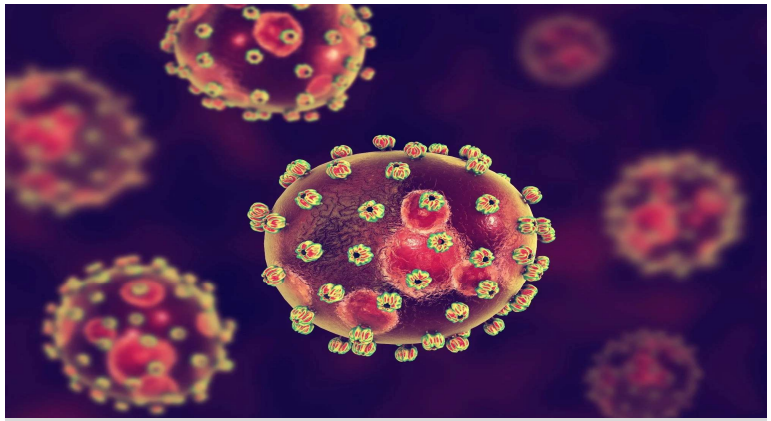
Novel PlaCCine DNA Lassa Virus Vaccine Induces Humoral and Cellular Immune Responses

Comparison of pVac-69 and LSV Protein









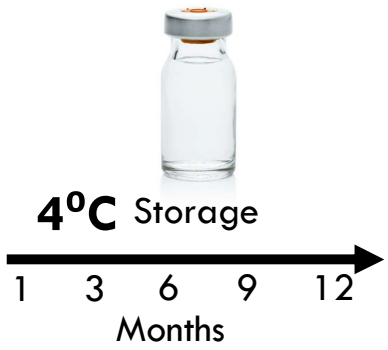
Filoviruses are among a WHO list of pathogens of interest

Hemorrhagic fevers, which are caused by viruses like Lassa are among the most serious threats to public health both in the endemic regions of West Africa and worldwide

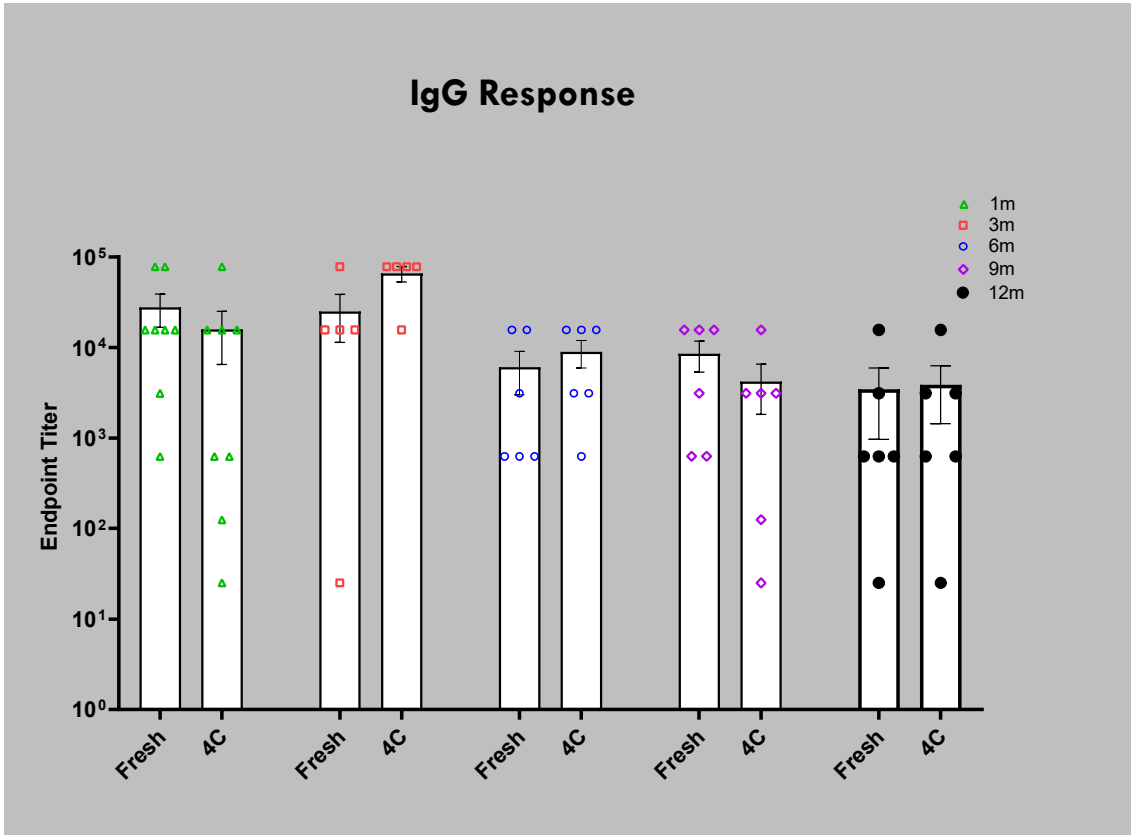
They are also potential biodefense threats if used as biological weapons against civilians.

PlaCCine: Stable at 4°C for at Least 12 Months; 1 Month at Room Temperature

Immunogenicity Studies in Mice

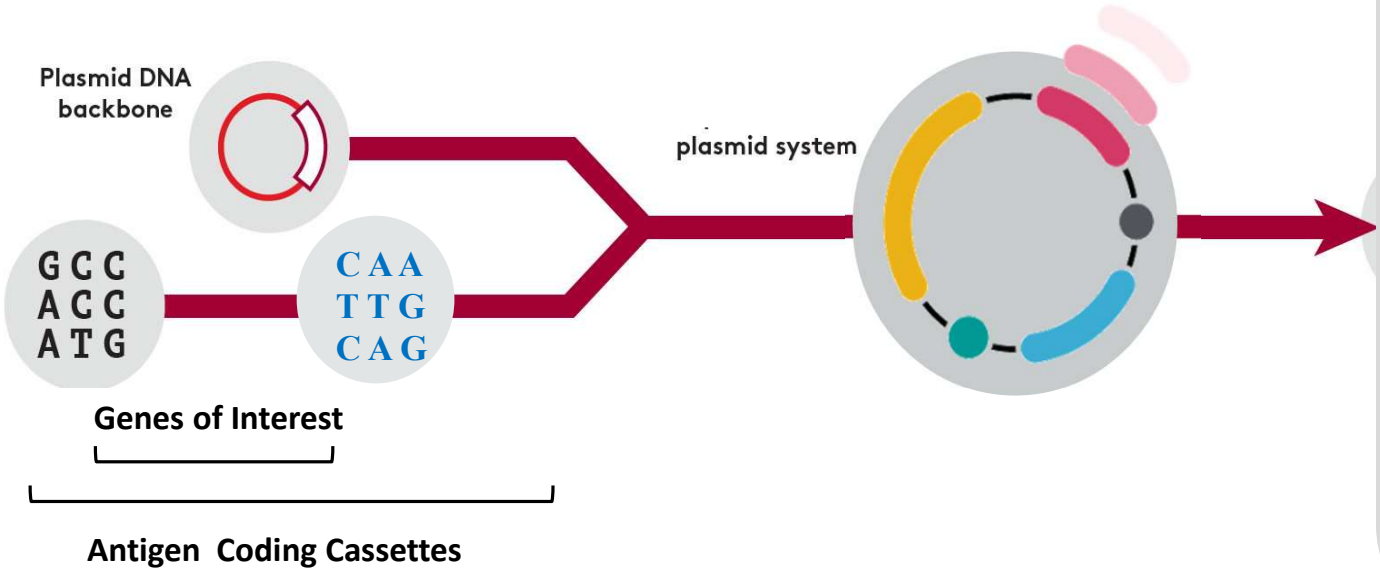


Simplified Supply Chain Around the world



IMNN-101: "Plug & Play" Design Enables 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) proposed annual COVID booster.
- For the 2023/24 season, the FDA VRBPAC selected the Omicron XBB 1.5 strain
- PlaCCine platform delivers flexible design & rapid vaccine manufacturing

IMUNON Phase 1 cGMP Manufacturing Facility

Gowning Room

Upstream Processing (USP) Room

Downstream Processing (DSP) Room

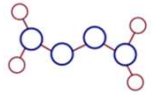
Facilitating Agent Mfg. Room

Filling Room w/ISO-5 Laminar Flow Hood

PlaCCine pDNA System

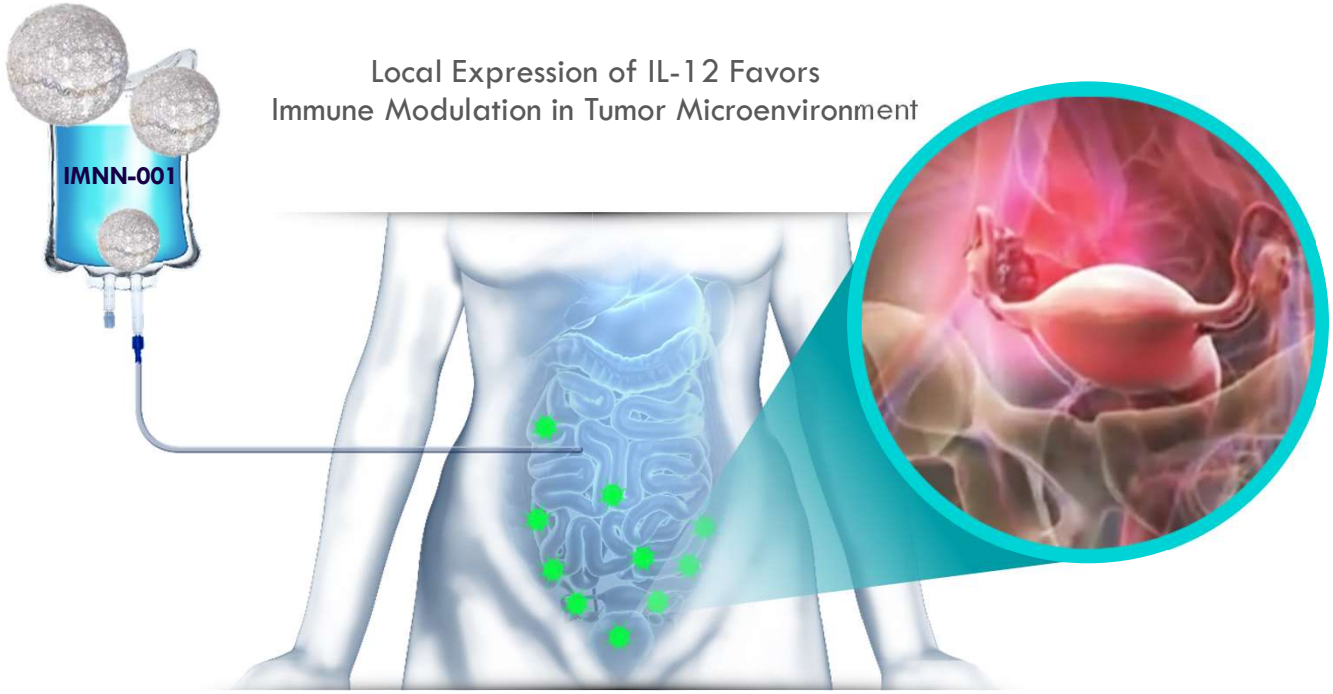
- ✓ Internal capability to produce plasmid DNA and Facilitating Agent to support Phase 1 Studies per the 2008 FDA Guidance "cGMP for Phase 1 Investigational Drugs"
- ✓ Supported by adjacent GMP Quality Control Laboratory

PlaCCine Facilitating Agent



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



- 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

Theraplas

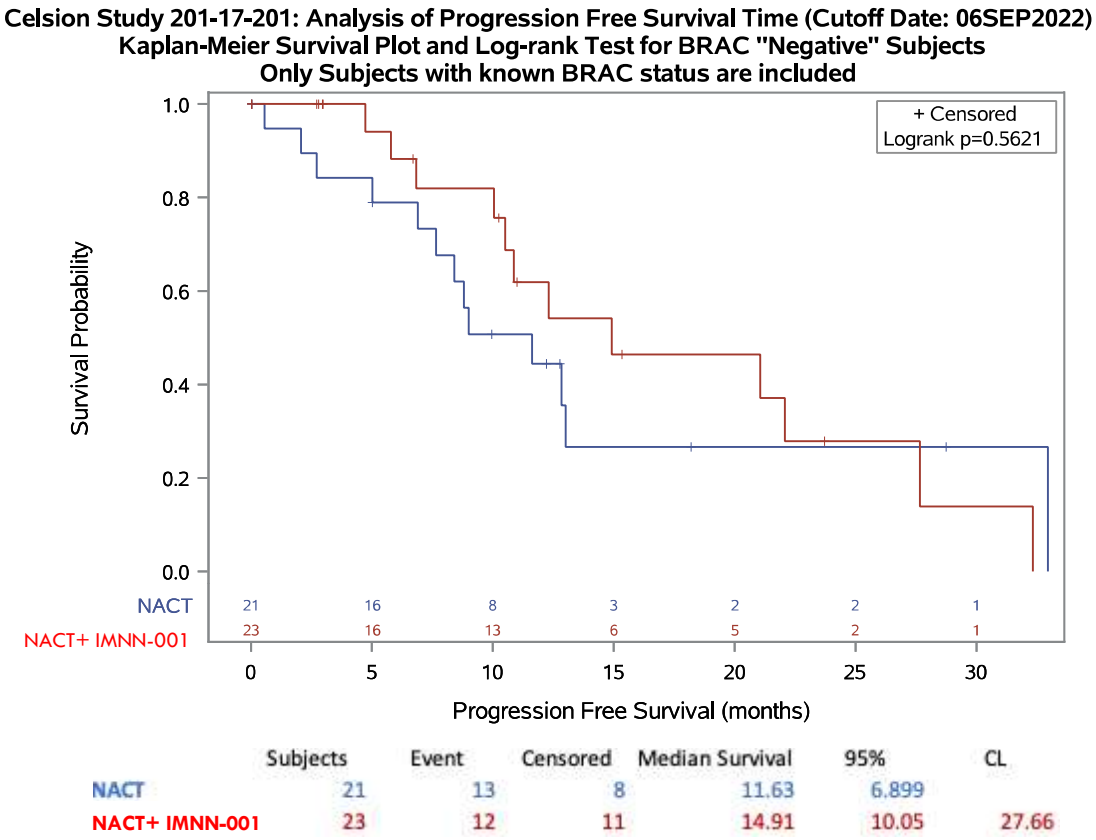
Interim OVATION 2 Data Indicates Subjects on IMNN-001 who are BRCA-/HRP may have Improved PFS

Sub-population of patients with the greatest medical need

Targeted Therapy Approach

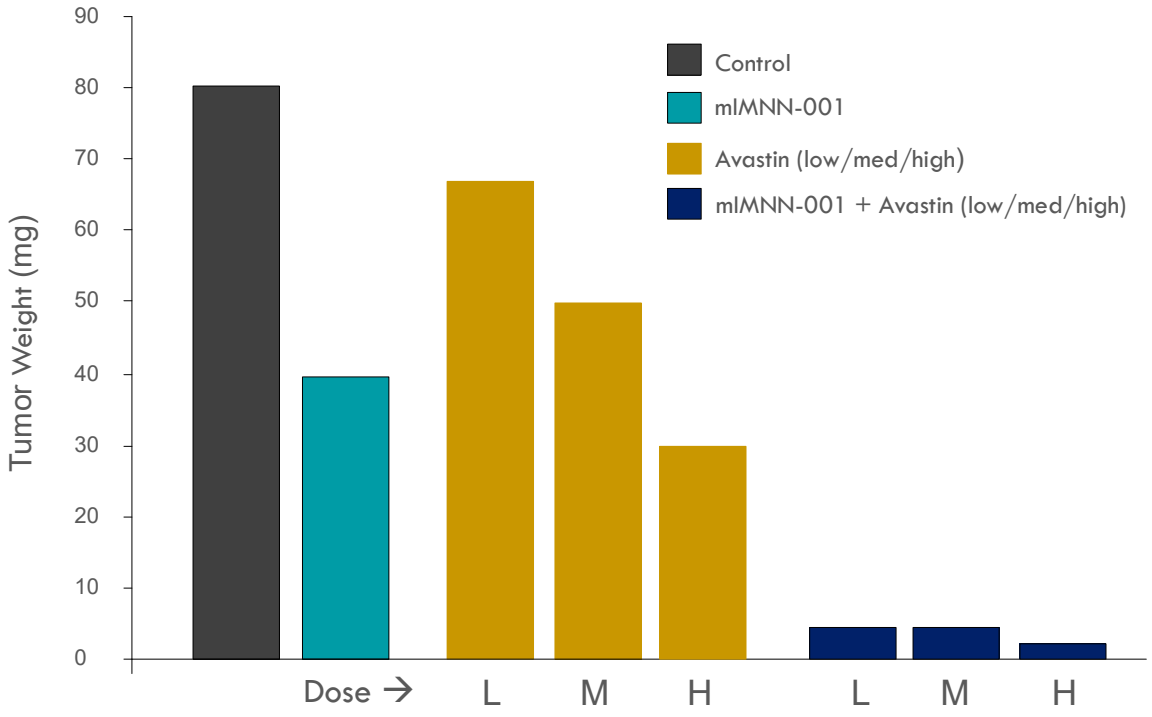
HRP (homologous recombination proficient with no BRCA 1/2 mutations)

- 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



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 bevacizumab - Avastin®

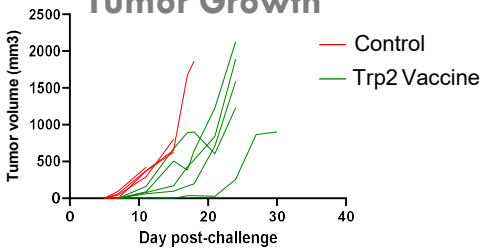
- Synergistic efficacy potential of VEGF level reduction by Avastin and VEGF production inhibition by IMNN-001
- New phase I/II study of IMNN-001 in combination with bevacizumab in partnership with BREAK THROUGH CANCER #RadicalCollaboration

FixPlas Vaccination Followed by Tumor Challenge Delayed Tumor Growth and Improved Survival in a Mouse Melanoma Model

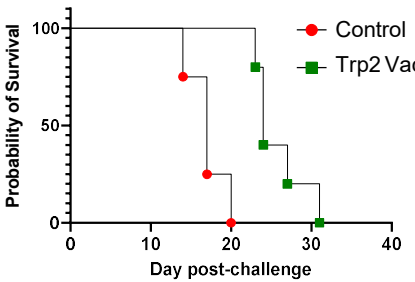
B16F10 Tumors Expressing Trp2 and NYESO1 Antigens

Monovalent Trp2 Vaccine

Tumor Growth

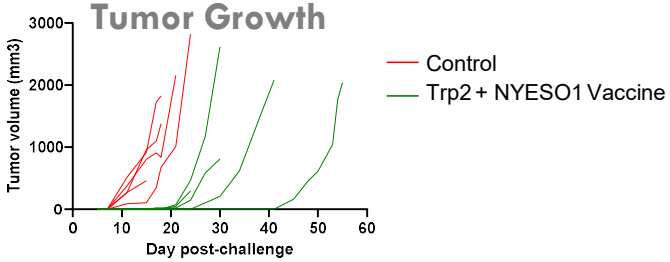


Animal Survival

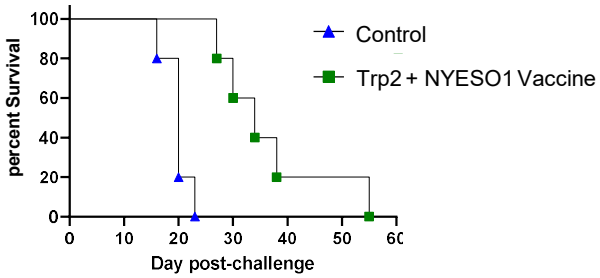


Bivalent Trp2-NYESO1 Vaccine

Tumor Growth

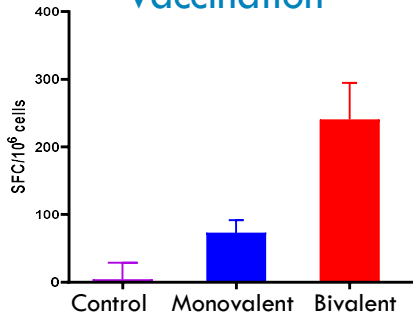


Animal Survival

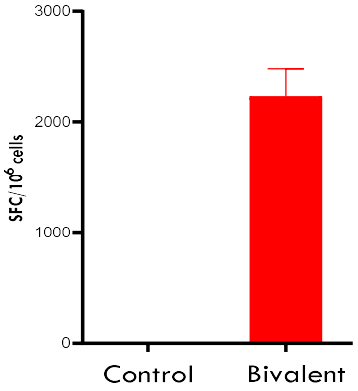


Fixplas

T-Cell Response to Vaccination



(Trp2 single peptide)



(NYESO-1 peptide pool)

Financial Summary & Upcoming Key Milestones:

Robust Flow of Value Creating Activities

Cash & Investments

$24.1M + $1.8M in NOL Sales

As of June 30, 2023

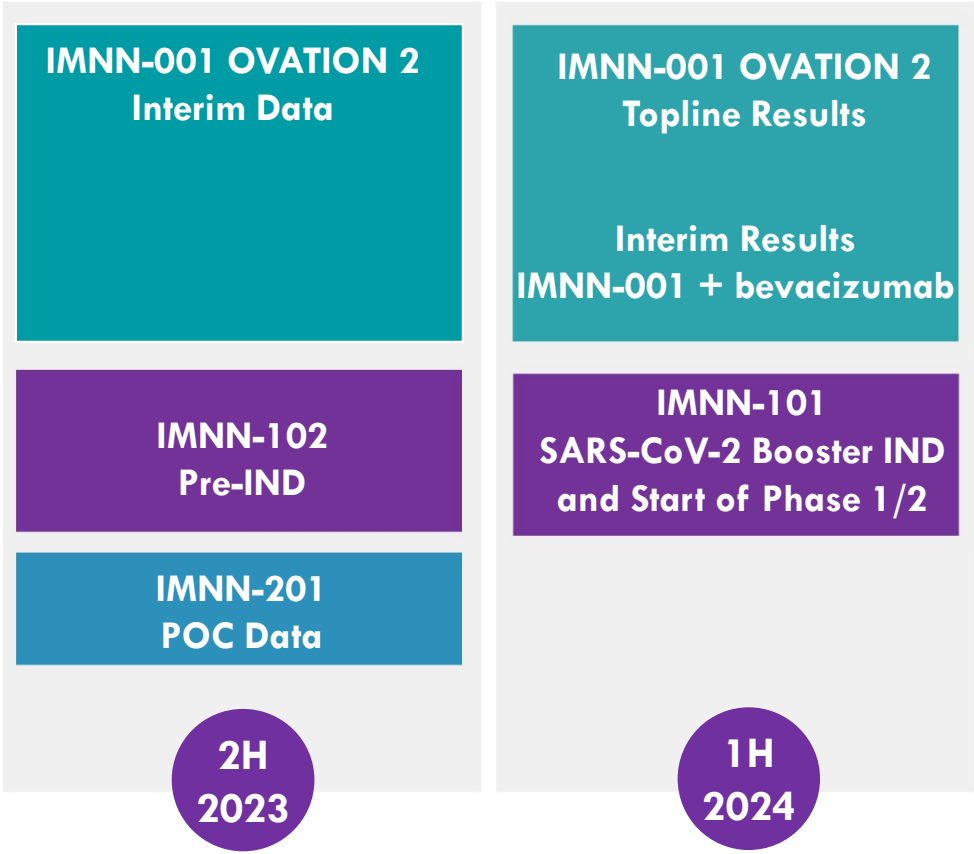
Fully Diluted Shares Outstanding

10.4M

Estimated Operating Expenses per quarter

$4.5M

As of June 30, 2023



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