



# Creating Vaccines to Serve Humanity

**GeoVax Corporate Update**  
July 2021

NASDAQ: GOVX

# Forward Looking Statements

Certain statements in this presentation may constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act. These statements are based on management's current expectations and are subject to uncertainty and changes in circumstances. Actual results may differ materially from those included in these statements due to a variety of factors, including whether: GeoVax can develop and manufacture its vaccines with the desired characteristics in a timely manner, GeoVax's vaccines will be safe for human use, GeoVax's vaccines will effectively prevent targeted infections in humans, GeoVax's vaccines will receive regulatory approvals necessary to be licensed and marketed, GeoVax raises required capital to complete vaccine development, there is development of competitive products that may be more effective or easier to use than GeoVax's products, GeoVax will be able to enter into favorable manufacturing and distribution agreements, and other factors, over which GeoVax has no control. GeoVax assumes no obligation to update these forward-looking statements and does not intend to do so. More information about these factors is contained in GeoVax's filings with the Securities and Exchange Commission including those set forth at "Risk Factors" in GeoVax's Form 10-K.

# About GeoVax Labs, Inc.

**GeoVax Labs, Inc.** is a clinical-stage biotechnology company developing vaccines and immunotherapies against a wide range of infectious diseases and cancers using a novel, proprietary platform **GV-MVA-VLP™**



The development pipeline includes vaccines and immunotherapies addressing:

- Coronaviruses (SARS-CoV-2 & Variants)
- Solid tumors
- HPV-associated head and neck cancers
- Hemorrhagic fever viruses –  
Ebola, Lassa, Marburg and Sudan
- Malaria
- Zika virus
- HIV

**GeoVax is well capitalized to advance priority programs into clinical development within 12-15 months.**

# Pipeline Focused on Near-term Value Drivers

**Coronavirus (COVID-19)**

**Immuno-Oncology**

Solid Tumors

HPV-associated Head and Neck Cancer

**Infectious Disease**

HIV (Preventive; HVTN)

HIV (Functional Cure; UCSF)

Lassa Fever

Ebola, Marburg, Sudan

Zika Virus

Malaria

GEO-CM01-04

GOVX-B11

GOVX-B01

GEO-LM01

GEO-EM01

GEO-ZM02

GEO-MM01

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PRV Candidate  
(priority review voucher)

IND-Enabling

Internal & Non-dilutive

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Phase 2A

Non-dilutive

Phase 1

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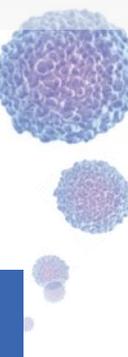
Internal

IND-Enabling

Primarily non-dilutive



# GV-MVA-VLP™ Vector Vaccine Platform



Modified Vaccinia Ankara-Virus-Like Particle (MVA-VLP) creates noninfectious VLPs in a vaccinated individual

- ✓ **Modified Vaccinia Ankara (MVA)** developed as a vaccine against smallpox for immunocompromised individuals; key benefits include:

**Safe** – Extensive clinical testing in immunocompromised and elderly individuals demonstrating excellent safety from MVA-based vaccines

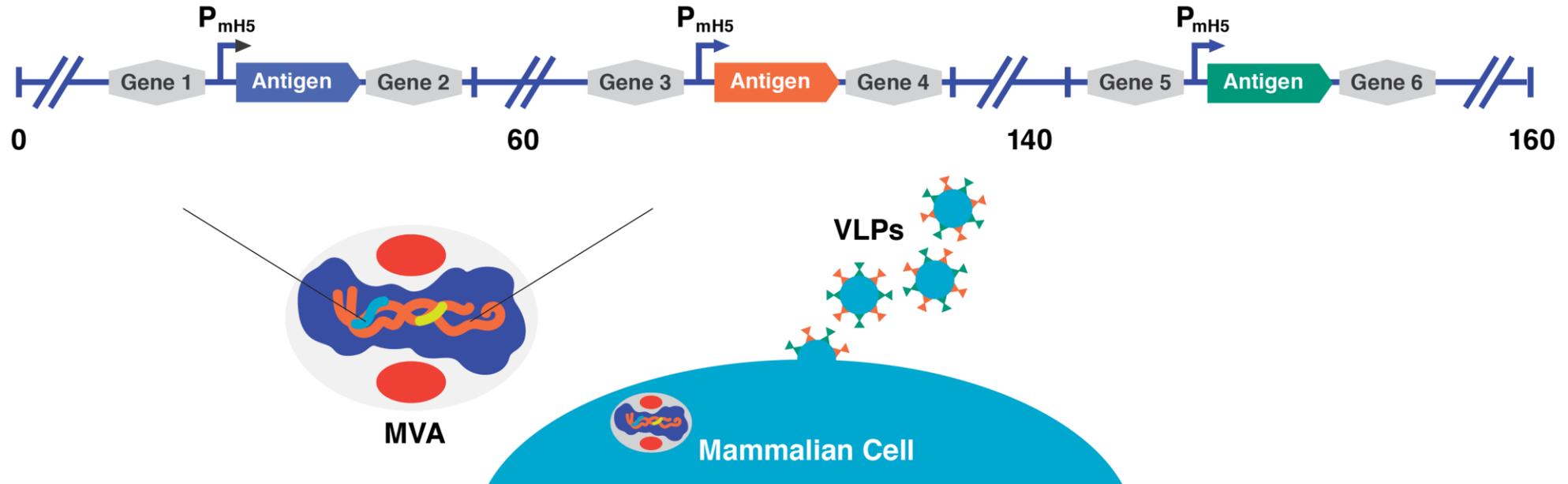
**Potential Single Dose Protection** – upon vaccination, MVA-VLPs mimic natural particles of the targeted pathogen virus capable of exposing the immune system to multiple vaccine proteins with a single dose in various animal testing models through Non-Human Primate evaluation

**Self-Adjuvant** – MVA trains the body's immune system to recognize and kill the authentic virus should it appear

**Well validated and accepted** by regulatory agencies

# GV-MVA-VLP™ Vaccine Technology

Vaccines are designed such that **non-infectious virus-like particles** are generated in the patient, resulting in robust antibody and t-cell immune responses



- Upon vaccination, MVA-VLPs **mimic natural viral particles** where target proteins are displayed on the surface of the VLPs produced by the vaccine

- VLP-displayed proteins **stimulate both antibody and t-cell immune responses** to recognize, prevent, and control target infections/diseases

# Infectious Disease Portfolio



## CDC Science Brief: Emerging SARS-CoV-2 Variants

Updated Jan. 28, 2021

### **Multiple SARS-CoV-2 variants are circulating globally. Several new variants emerged in the fall of 2020, most notably:**

In the **United Kingdom (UK)**, a new variant of SARS-CoV-2 (known as 20I/501Y.V1, VOC 202012/01, or B.1.1.7) emerged with a large number of mutations. This variant has since been detected in numerous countries around the world, including the United States (US). In January 2021, scientists from UK reported evidence that suggests the B.1.1.7 variant may be associated with an increased risk of death compared with other variants. More studies are needed to confirm this finding. This variant was reported in the US at the end of December 2020.

In **South Africa**, another variant of SARS-CoV-2 (known as 20H/501Y.V2 or B.1.351) emerged independently of B.1.1.7. This variant shares some mutations with B.1.1.7. Cases attributed to this variant have been detected in multiple countries outside of South Africa. This variant was reported in the US at the end of January 2021.

In **Brazil**, a variant of SARS-CoV-2 (known as P.1) emerged that was first identified in four travelers from Brazil, who were tested during routine screening at Haneda airport outside Tokyo, Japan. This variant has 17 unique mutations, including three in the receptor binding domain of the spike protein. This variant was detected in the US at the end of January 2021.

# Universal SARS-CoV-X Vaccine Program

**Universal Coronavirus vaccine** Focused on providing broad protection to SARS-CoV-2 and emerging mutant strains.

**Four vaccines** GEO-CM01-04 designed; animal testing results: H2 '21

## Funding Opportunities

### CEPI

Call for Proposals:

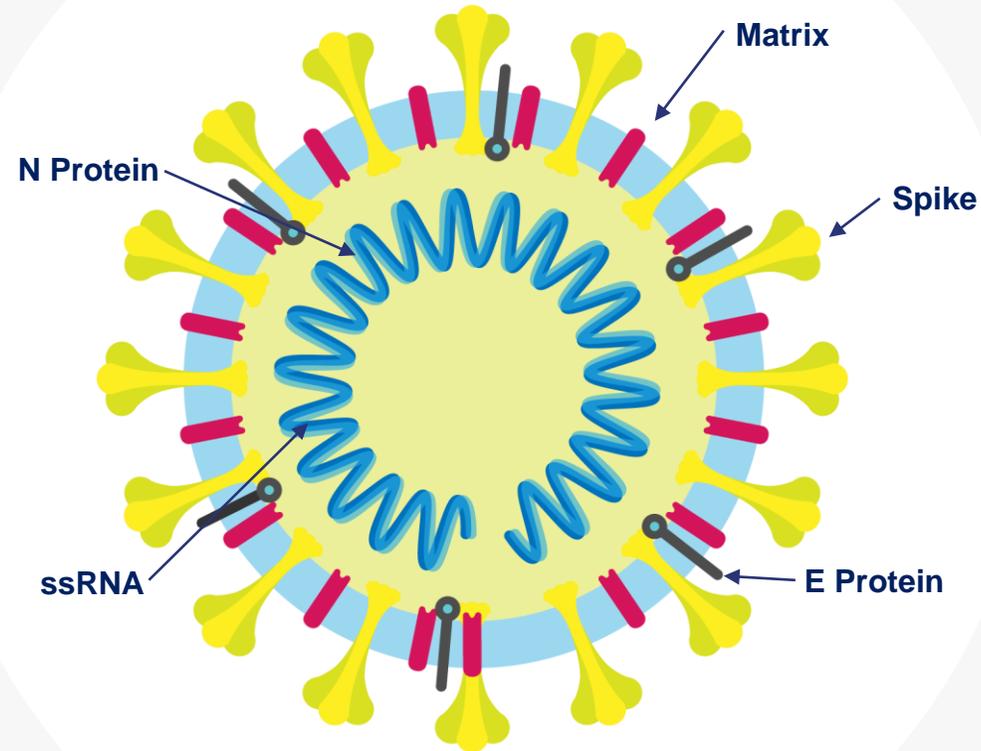
Broadening protection against SARS-COV-2 and new broadly protective Betacoronavirus candidate vaccines

CEPI is pleased to announce a new funding opportunity for the development of vaccines with one of the following attributes:

1. A broad-based (BPC)
2. A broad-based (BPC)

**Emergency Awards: Notice of Special Interest (NOSI) on Pan-Coronavirus Vaccine Development Program Projects**

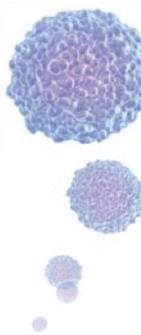
**Notice Number:**  
NOT-AI-21-002



**Advancing to Clinic**  
Focused on accelerating development into clinical testing.

**No FDA requirement** for toxicology testing expected.

**Scale up** for Emergency Use Authorization readiness during Phase 1a/1b clinical trial.



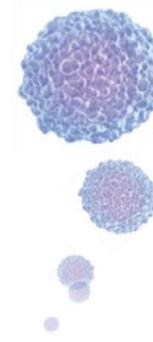
## **GeoVax Awarded NIH Grant to Advance COVID-19 Vaccine Development**

*Company Focused on Single-dose Vaccine Against Multiple COVID Strains*

**ATLANTA, GA, January 11, 2021** – GeoVax Labs, Inc. (NasdaqCM: GOVX), a biotechnology company developing immunotherapies and vaccines against cancers and infectious diseases, announced today that the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health (NIH), has awarded the Company a Small Business Innovative Research (SBIR) grant in support of its development of a vaccine against SARS-CoV-2, the virus that causes COVID-19.

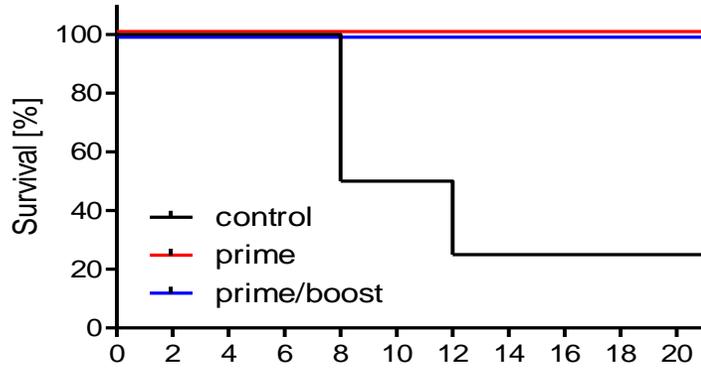
The Phase 1 grant, titled, “*Preclinical Development of GV-MVA-VLP Vaccines Against COVID-19*,” will support the ongoing design, construction and preclinical testing of GeoVax’s vaccine candidates in preparation for human clinical trials. The efficacy testing will be performed in collaboration with the University of Texas Medical Branch (UTMB).

GeoVax is leveraging its GV-MVA-VLP™ platform to address the global need for an effective and safe SARS-CoV-2 vaccine. Unique among other vaccines under development, the experimental GeoVax candidates...

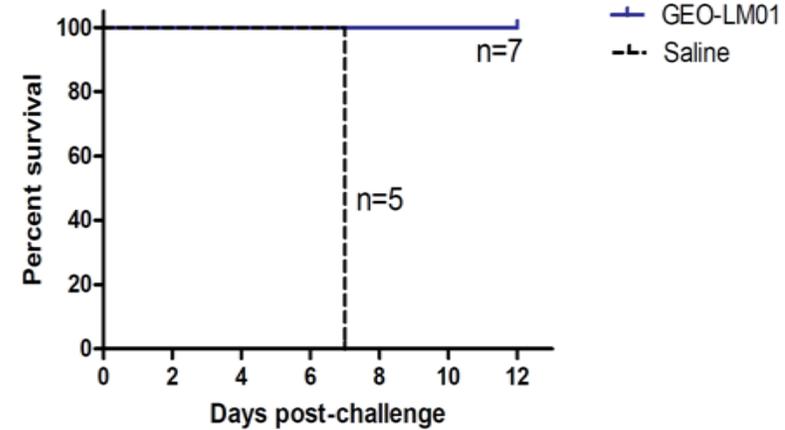


# 100% Protection, Single Dose Validation Hemorrhagic Fever Indications -- Preclinical Evaluations

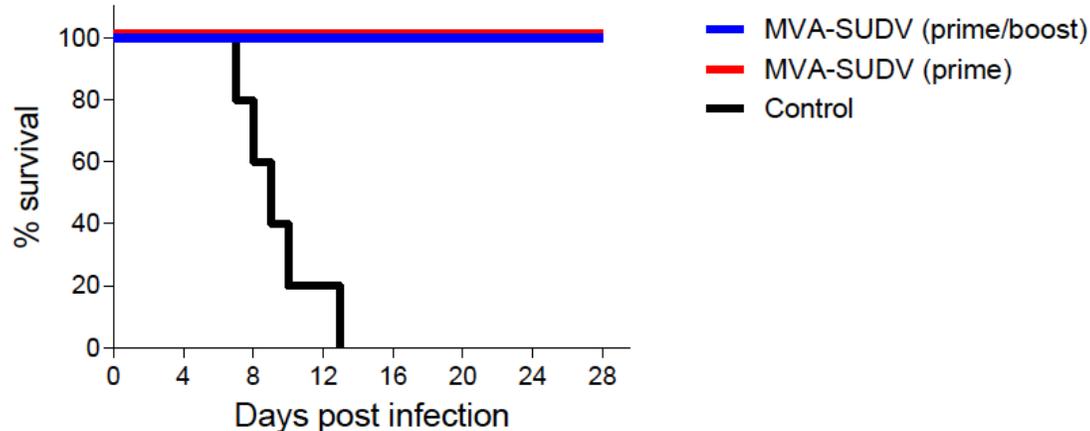
Zaire Ebola Monkey



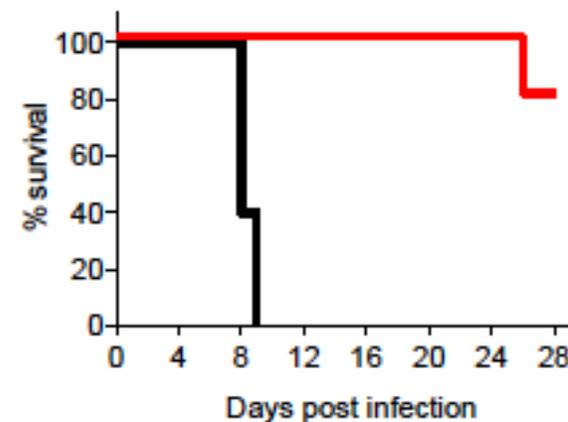
Lassa Fever Mice



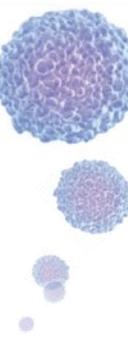
Sudan Ebola Guinea Pig



Marburg Guinea Pig



# 100% Protection, Single Dose -- Zika Vaccine Preclinical Evaluation



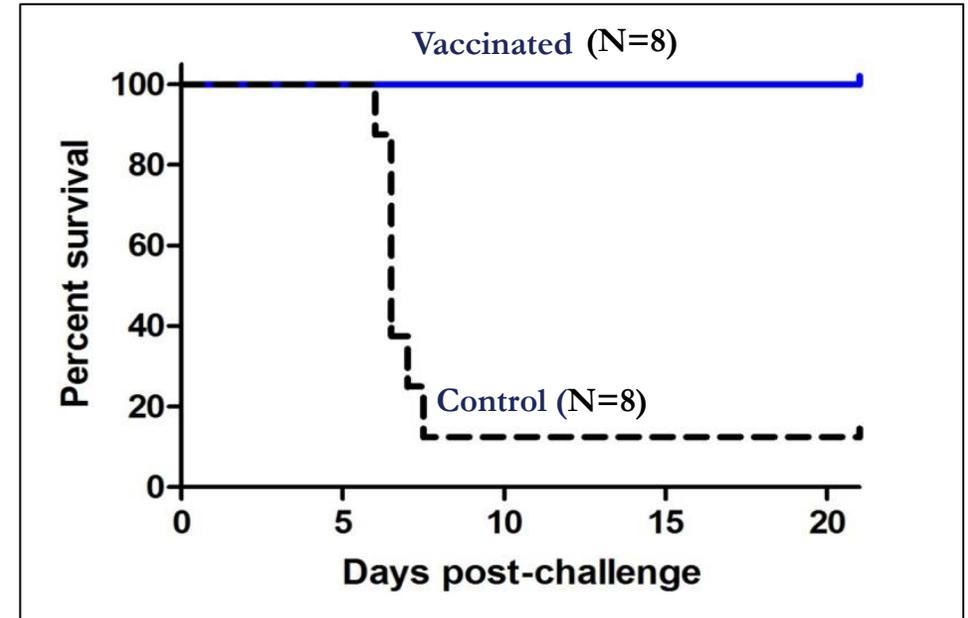
## Novel vaccine design

- **Competitive Advantage**
  - No risk of Antibody Dependent Enhancement (ADE) of infection against Dengue or other flaviviruses

## Excellent preclinical data

- **100% single-dose survival in vaccinated mice**

Completed Immunogenicity and Efficacy studies in Nonhuman Primates with NIH grant support



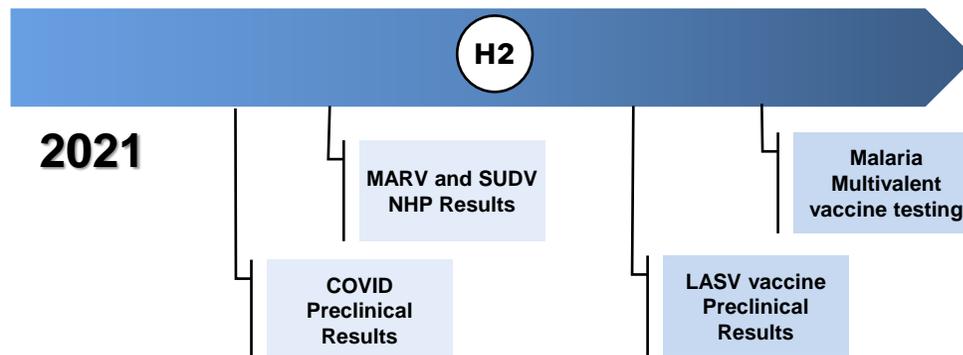
# Near-term Data Milestones

**Coronavirus vaccines** animal testing – results H2 '21

**Lassa vaccine** funding from the Department of Defense through non-human primates (NHPs) and cGMP manufacturing for our Lassa fever vaccine – results H2 '21

**Marburg and Sudan vaccines** testing in NHPs by NIH (no cost to GeoVax) – results H2 '21

**Malaria vaccines** currently being evaluated in small animal challenge models through the USAID – results H2 '21



# HIV Vaccine (GOVX-B11)

## Most clinically advanced HIV vaccine program:

preventive vaccine for the subtype of HIV prevalent in the Americas, Australia, Japan and Western Europe

### Excellent safety and immunogenicity:

Phase 1 through 2a clinical trials completed

**Demonstrated** superior antibody profile and durability compared to RV144 trial (Sanofi Phase 3 clinical trial)

## Preventive vaccine (GOVX-B11):

- Progressing to the next clinical trial (Phase 1; HVTN 132), evaluating GOVX-B11+novel booster, with support from HVTN/NIH

## “Functional Cure” programs: Phase 1 trials planned or in progress.

- Collaboration with University of California San Francisco (UCSF)

### The GeoVax HIV Vaccine Program

has been supported primarily by non-dilutive funding from NIH/NIAID



HIV VACCINE  
TRIALS NETWORK



# Immuno-oncology Program



# Cancer Immunotherapy Focus

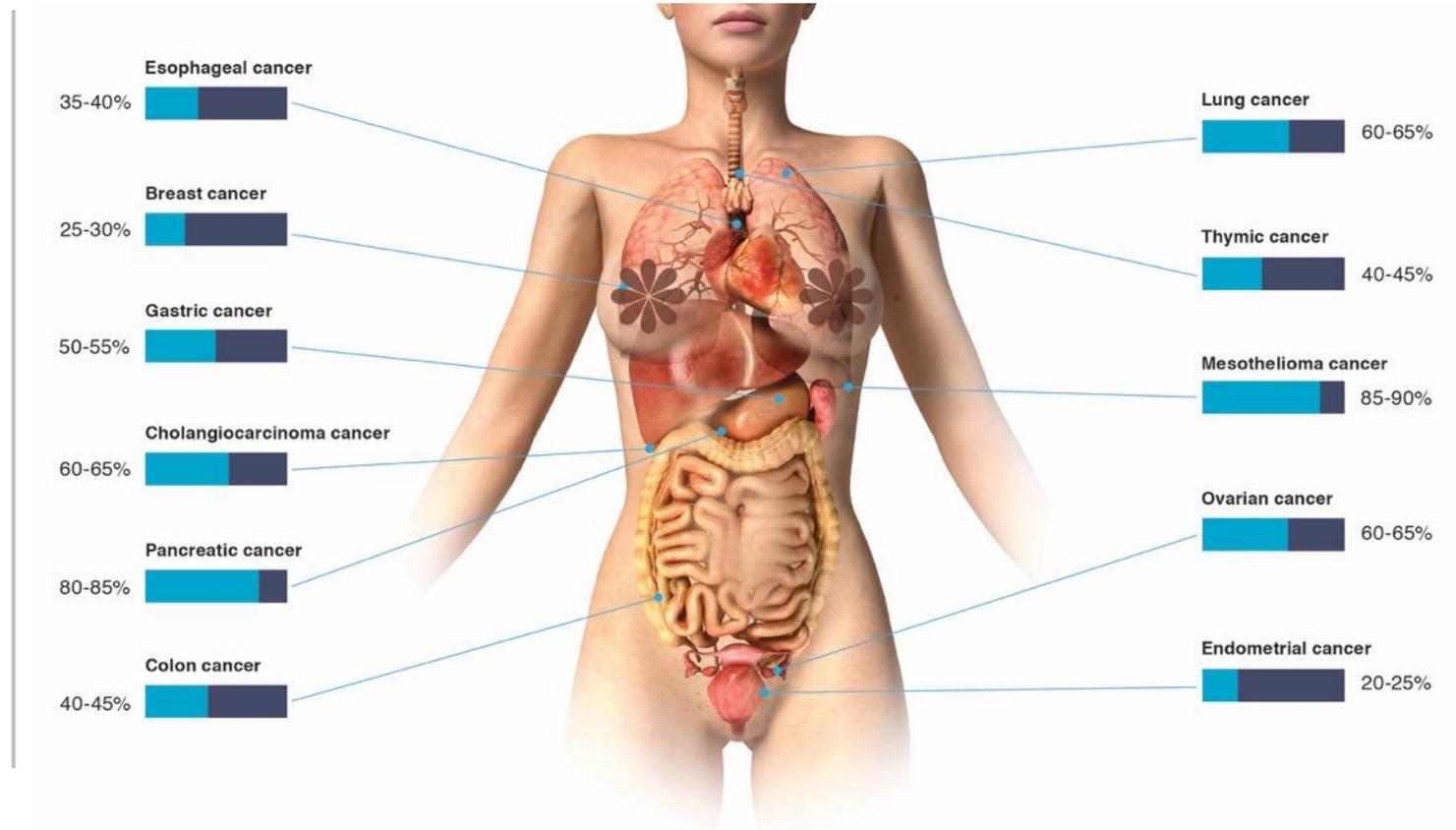
Combination cancer vaccine strategy to utilize standard-of-care (SOC) treatments + vaccination, and immune checkpoint inhibitors (CPI) to unleash a patient's immune system to fight cancers

Collaboration with Dr. Olivera Finn, Distinguished Professor, University of Pittsburgh, Depts. of Immunology and Surgery, leading expert in cancer immunotherapy

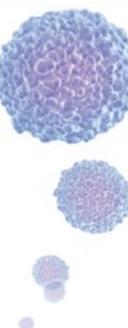
- Dr. Finn was the first to show that many tumors express an abnormal form of cell surface-associated Mucin 1 (MUC1) protein that could be recognized by the immune system as foreign

GeoVax novel Cancer Immunotherapy uses combinations of:

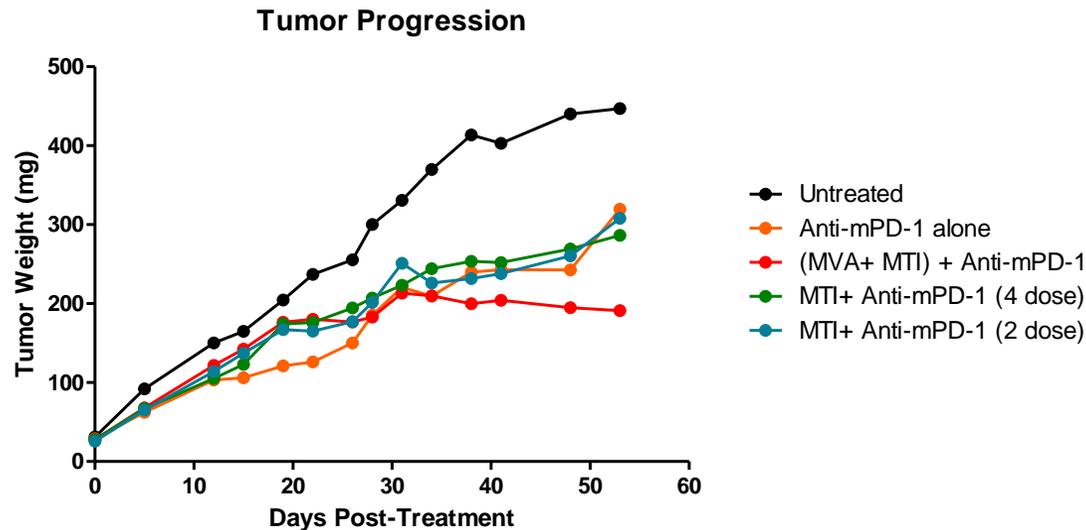
- MVA-VLP cancer vaccines
- Select proteins, peptides (e.g., MUC1)
- Immune check-point inhibitors (e.g., anti-PD1)



# GeoVax Immuno-oncology – Promising Results

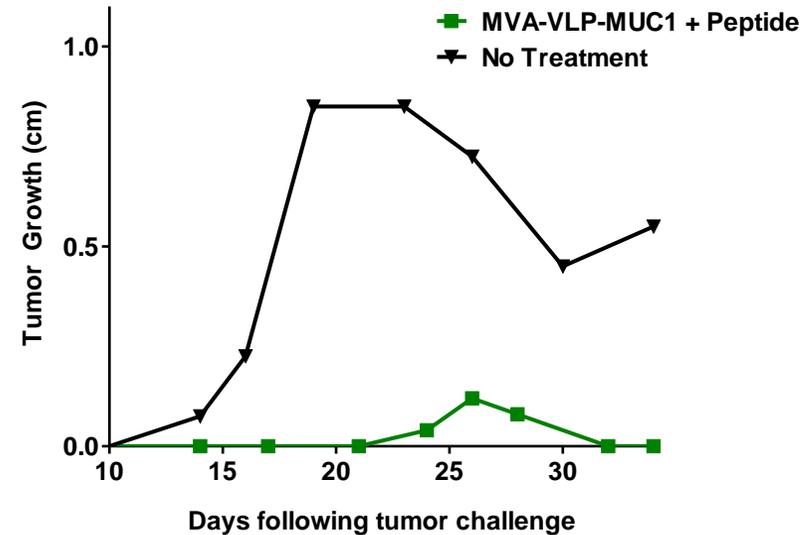


## Therapeutic Experiment Results



MVA+MTI+CPI arrested tumor growth and shrank tumors – **57% difference between vaccine combo group vs untreated group**

## Prevention Experiment Results

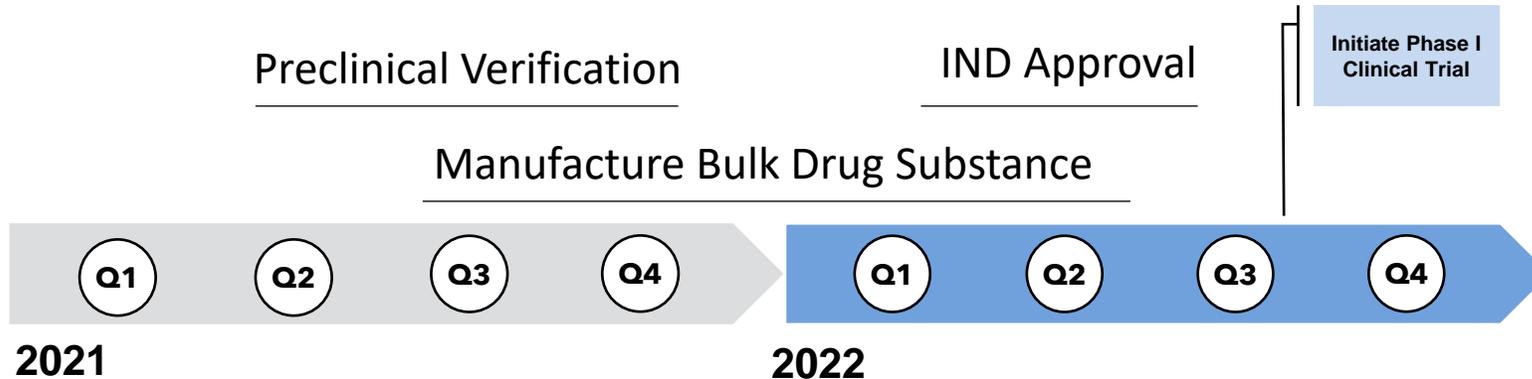


MUC1 Tumor Associated Antigen (TAA):

- Combination therapy:
- MVA-VLP-MUC1 and MUC1 peptide
- GeoVax MVA-VLP combination achieved tumor prevention – **100% prevention**

# MVA-VLP-MUC1 strategy to the clinic

- GeoVax MUC1 vaccine works in combination with different peptides
  - U. Pitt (Olja Finn)
  - ViaMune
- Manufacture cGMP material
- Validate MVA-VLP-MUC1 in another solid tumor model (colon, lung)



# Strong IP for Vaccine Technology

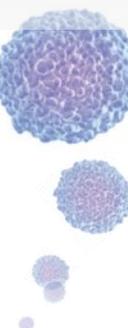
# 70

granted or pending patent applications spread over 20 patent families

Our own and in-licensed patent estate relevant to our other vaccine programs, on a worldwide basis, includes wholly owned pending patent applications directed to our vaccine programs

- COVID-19 vaccines
- Hemorrhagic fever (Ebola, Marburg, Sudan, Lassa)
- Zika, Malaria vaccine
- HPV-associated cancer
- Solid tumors

In-licensed patents from Emory University (laboratory of Dr. Harriet Robinson) and the NIH (laboratory of Dr. Bernard Moss) relevant to our HIV vaccine program



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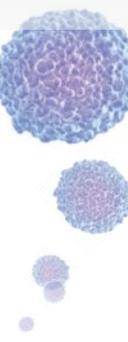
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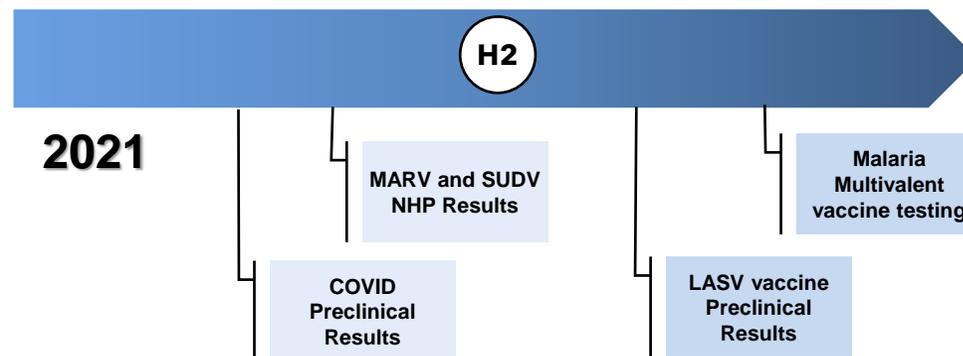


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# Thank You



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**For More Information**  
GeoVax Labs, Inc.  
[investor@geovax.com](mailto:investor@geovax.com)  
678-384-7220

1900 Lake Park Drive, Suite 380  
Atlanta, GA 30080  
Tel: (678) 384-7220  
Fax: (678) 384-7281  
[www.geovax.com](http://www.geovax.com)

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