GeoVax Corporate Overview

December 2024

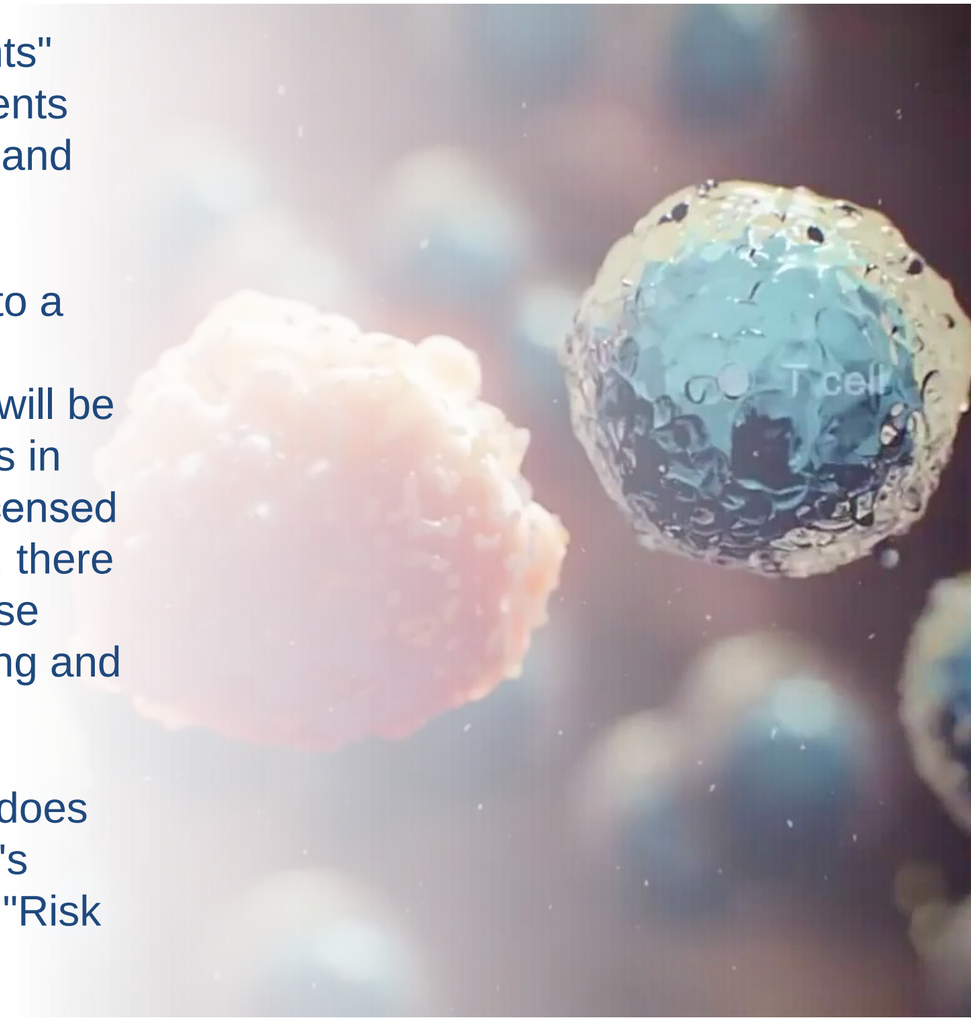
Nasdaq: GOVX

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.



GeoVax: Phase 2 clinical-stage biotechnology company developing **immunotherapies** and **vaccines** against a wide range of **cancers** and **infectious diseases**

Innovate → **Differentiate** → **Accelerate** → **Collaborate**

Unique, **patented products** addressing unmet medical needs

Targeting populations underserved by existing products/standard of care

Pursuing **expedited registration** pathways

Worldwide distribution and administration via business collaborations

A compelling **opportunity** with a value-driven **strategy**

Priority Programs Advancing

- **GEO-CM04S1: Next-generation COVID-19 vaccine – BARDA Project NextGen**
- **GEO-MVA: Mpox/Smallpox vaccine**
- **Gedeptin®: Solid Tumor Therapy**

COVID-19: GEO-CM04S1

1st Generation COVID-19 Vaccines

(mRNA: Pfizer/BioNTech; Moderna; Protein subunit vaccine: Novavax)

- ***Limited breadth of protection: Requiring reconfiguration/updating as new variants emerge (e.g., Delta, Omicron, JN.1, etc.)***
- ***Limited durability (e.g., 4-6 months vs goal of ~12 months)***

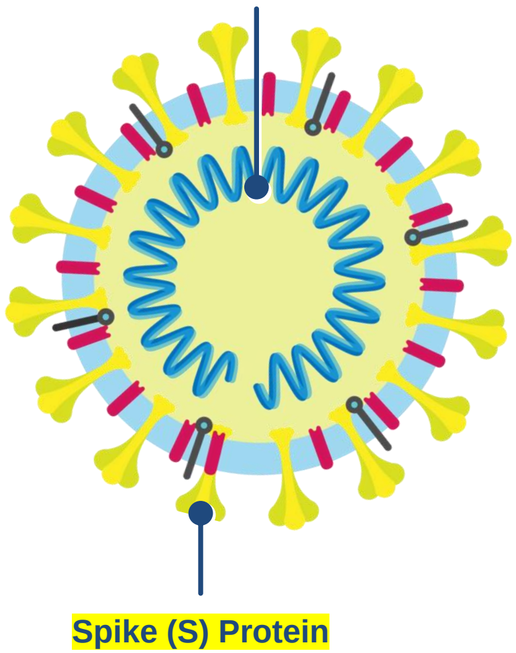
Next-Generation COVID-19 Vaccines

- ***Increased breadth of protection: Encompassing new variants without the continuous need for reconfiguration/updating***
- ***Increased durability (e.g., ~12 months)***

Critical Importance of Both Antibodies & T-cells for Protection

GEO-CM04S1

S+N Proteins are Co-Expressed



Immune Responses for Protection against Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2)

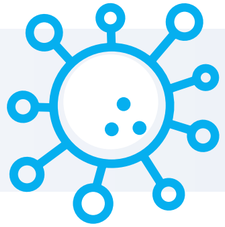
COVID-19 Disease Severity

	Asymptomatic Infection	Symptomatic Infection	Severe Disease, Hospitalization	Death
Antibodies	++++	+++	++	++
T Cells	+	++	++++	++++

Both humoral (antibody) and cellular (T cell) immune responses contribute to protection against SARS-CoV-2. “+” signs denote the relative importance of antibodies and T cells for protection at each stage of disease severity, with more “+” signs indicating greater importance/protection.

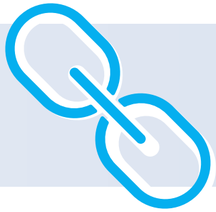
Barouch DH, N Engl J Med 2022; 387:1011-1020

GEO-CM04S1



COVID-19 Vaccine

More robust -- “Variant Agnostic”

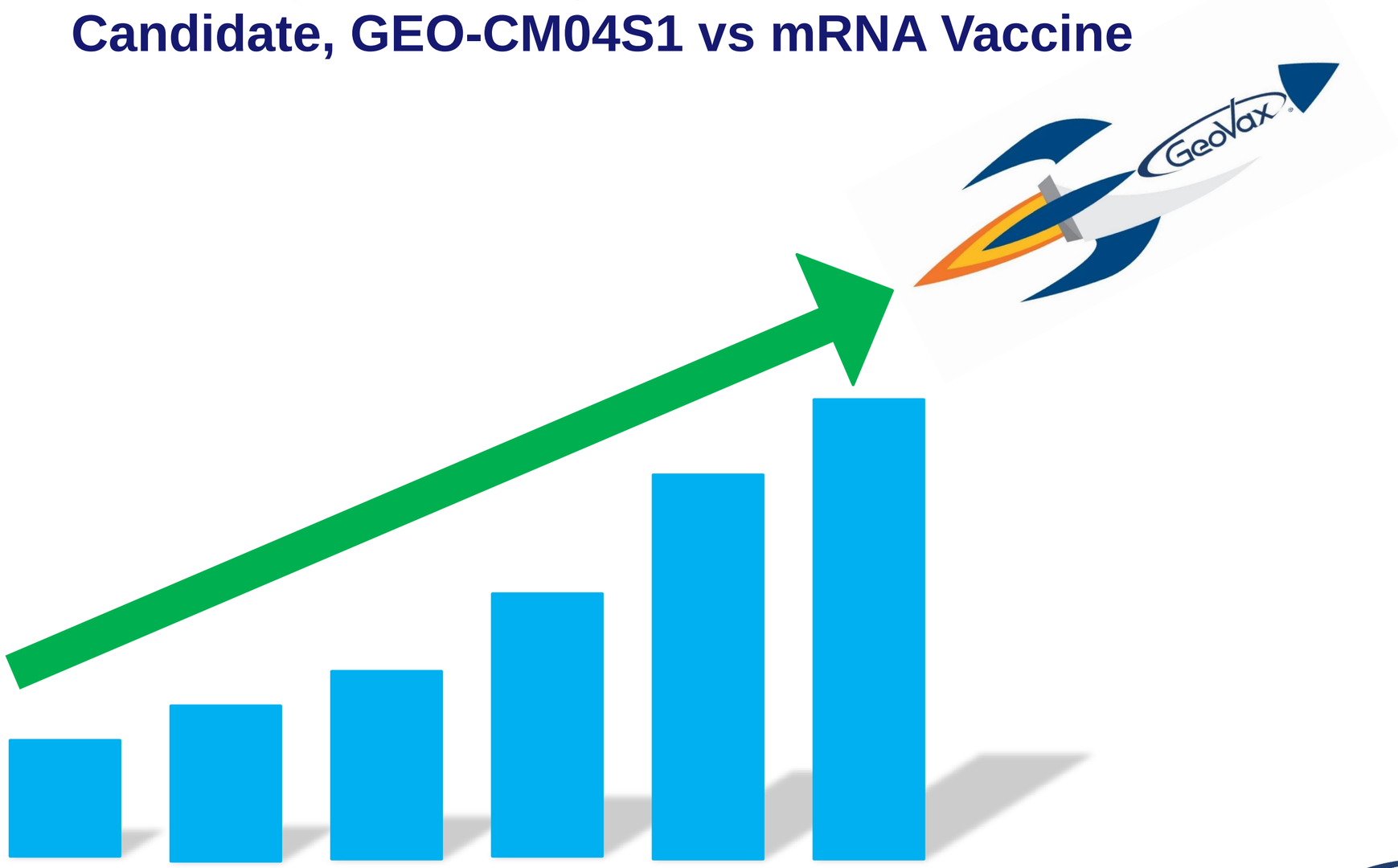


More durable – longer duration

GeoVax platform (MVA): recognized safety, potent, durable, minimal refrigeration/freeze-dried delivery

- Current vaccines do not provide sufficient protection for those with depleted immune systems
- GEO-CM04S1: More robust, durable protection than authorized vaccines – reduces need for boosters
- Can be used as booster to existing vaccines or stand-alone for immune compromised patients

BARDA Project NextGen Award Valued at ~$400 Million to Conduct Phase 2b Clinical Study Evaluating Next-Generation COVID-19 Vaccine Candidate, GEO-CM04S1 vs mRNA Vaccine



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BARDA Project NextGen

Phase 2b Head-to-Head Study in COVID-19

Randomized study evaluating GEO-CM04S1 vaccine with an FDA approved vaccine

Collaborator	N	Randomization	Study Population
BIOMEDICAL ADVANCED RESEARCH AND DEVELOPMENT AUTHORITY BARDA	~10,000 Pts. ~ 100 Sites	1:1	Previously Vaccinated Healthy Volunteers

Study Arms (Control vs Treatment)

GEO-CM04S1 Vaccine	VS	FDA-approved COVID-19 Vaccines

Study Activation H1 ‘25

> 80 Sites Confirmed

GEO-CM04S1 – Phase 2 Clinical Trials
(In Addition to BARDA PNG Phase 2b Trial)

Immunocompromised/stem cell transplant patients

- Patients with hematologic malignancies receiving stem-cell transplantation or CAR-T therapy
  - Highest at-risk groups for severe infection, hospitalization and death
  - Primary vaccine in direct comparison to mRNA vaccines

Immunocompromised/Chronic Lymphocytic Leukemia (CLL) patients

- High at-risk population with abated antibody response
  - Major, currently unmet, medical need for alternative immune enhancement response (e.g., T-cells)
  - Booster vaccine in direct comparison to mRNA vaccine

Booster to mRNA vaccine

- Healthy population following vaccination with an mRNA vaccine
  - Potential for broader and more durable protection versus multiple, continuous mRNA doses

GeoVax Announces Positive Interim Data Review for Phase 2 Clinical Trial of COVID-19 Vaccine Booster in Patients with Chronic Lymphocytic Leukemia

GEO-CM04S1 Improved Immune Response vs mRNA Vaccine

ATLANTA, GA, November 19, 2024 — GeoVax Labs, Inc. (Nasdaq: GOVX), a biotechnology company developing immunotherapies and vaccines against cancers and infectious diseases, today announced the completion of an interim data review by the Data Safety Monitoring Board (DSMB) for the ongoing Phase 2 clinical trial of GEO-CM04S1, GeoVax's dual-antigen next-generation COVID-19 vaccine, as a booster vaccine for patients with chronic lymphocytic leukemia (CLL).

Based on the interim analysis of immune responses from the patients enrolled to date, the DSMB determined that, while the mRNA control arm of the study failed to meet the predetermined primary endpoint, the study should continue enrollment of the experimental arm utilizing GeoVax's Next-Generation GEO-CM04S1 vaccine.

…"the outcome of the DSMB interim review appears to support our view of GEO-CM04S1 as a potentially superior COVID-19 vaccine booster within the CLL patient population"

GEO-CM04S1 Development Plan

- Validate the Differentiation and Value of GEO-CM04S1
  - Broader (Variant Agnostic), more durable (~12 months) protection
  - “Preferred COVID-19 vaccine for immunocompromised patients”
- Expedited Registration Focused on Immunocompromised Patient Populations

Global Development & Commercialization via Collaborations/Partnering

Mpox & Smallpox: GEO-MVA

WHO Declaration – Aug 14 & Nov 19

World Health Organization | Health Topics | Countries | Newsroom | Emergencies | Data | About WHO

العربية | 中文 | Français | Русский | Español

WHO Director-General declares mpox outbreak a public health emergency of international concern

14 August 2024 | News release | Reading time: 3 min (789 words)

Media Contacts

News / Press Releases

Africa CDC Declares Mpox A Public Health Emergency of Continental Security, Mobilizing Resources Across the Continent

13 August 2024

Theme

Emergency Response and Preparedness

Region

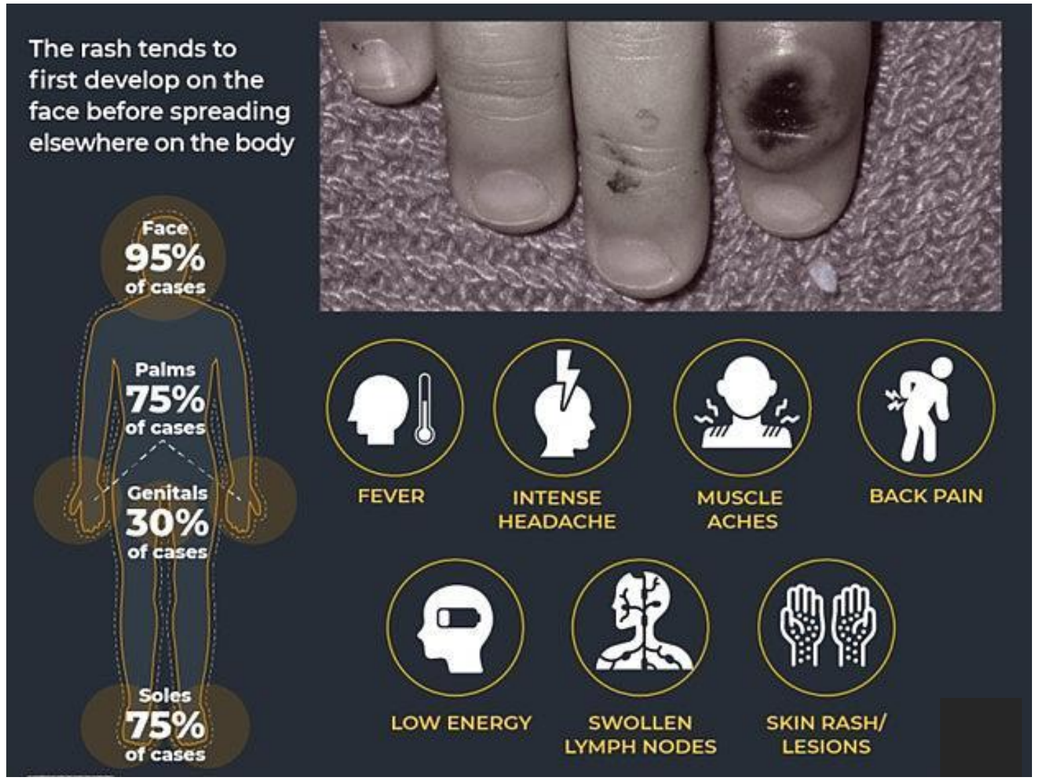
Central Africa, Eastern Africa, Northern Africa, Southern Africa, Western Africa

Mpox – "What's the Big Deal?"

- WHO Declaration of State of Emergency (8/14 & 11/19 2024)
- Different than 2022 – more virulent and higher mortality
- Spread by close contact (sex) but can be casual contact
- Vaccination is critical to reduce morbidity/mortality threat
- Africa & worldwide need for significant resources
  - Medical care
  - Vaccine supply, distribution & administration

Source: Adapted from MedCram.com

Symptoms


The rash tends to first develop on the face before spreading elsewhere on the body
Face 95% of cases
Palms 75% of cases
Genitals 30% of cases
Soles 75% of cases
FEVER
INTENSE HEADACHE
MUSCLE ACHES
BACK PAIN
LOW ENERGY
SWOLLEN LYMPH NODES
SKIN RASH/ LESIONS

Africa

- 45,000+ infected (96% in DRC)
- 1300+ deaths (70% children)
- Critical needs
  - 20M doses of Mpox vaccine – max of 2M-5M doses likely available by end of 2025!!!
    - **Single-source supplier worldwide with limited production capability**
    - **Additional, potential Mpox vaccine suppliers??**

$4B needed to support medical care and support

Source: Adapted from MedCram.com

Mpox – 2024 vs 2022

Clade Ib (2024)		Clade IIb (2022)
• Endemic to Central Africa – Most common strain in DRC – 400 new cases per week (majority in children) • More virulent • More deadly (~ 10% mortality) • Migrating worldwide!!!	≠	• Endemic to West Africa • Less infectious • Less deadly (~ 1% mortality)

Source: Adapted from MedCram.com

Available Vaccines Against Mpox

ACAM 2000

- Older version
- Designed for Smallpox, but also effective for Mpox
- Live virus
- Replicating in humans
  - Contraindicated inpregnant women, immunocompromised; etc.)
- Side effects (Not 1st choice)

MVA-BN

- Newer version
- Designed for Smallpox, but also effective for Mpox
- Live virus (weakened)
- Non-replicating in humans
  - Safe in immunocompromised, pregnant women, etc.
- Better tolerated/less side-effects

Source: Adapted from MedCram.com

“What’s the Solution?”

WHO is coordinating global health response

- **WHO looking to access additional MVA-Mpox vaccine supply**
  - Requires engaging with companies having
    - Experienced with the MVA-platform
    - MVA based Mpox vaccine candidate(s) in development
    - Access to existing manufacturing capability for MVA

Critical needs

cGMP MVA Master Viral Seed (MVS) bank

cGMP MVA clinical batch

- **Strong preference to establish Regional/Local Africa based Mpox vaccine manufacturing**
  - Difficult for processes requiring Chicken Embryo Fibroblasts (CEFs) as starting materials

Critical need

Establishment of a Next-Generation MVA Manufacturing Platform

GEO-MVA

GeoVax

Focused on expedited registration for 1st U.S.-sourced vaccine against Mpox & Smallpox

- One supplier worldwide (MVA-BN) – unable to meet demand
- Strong U.S. government interest in establishing a U.S. based supplier
- HHS needs to replenish/re-stock SNS (Strategic National Stockpile)
- GeoVax advancing the development of GEO-MVA
  - cGMP Master Viral Seed (MVS) bank released
  - cGMP clinical batch manufacture & release: Dec ‘24
  - CEF manufacturing platform established at CDMO
    - Evaluating options to expand CEF manufacturing footprint
  - In dialogue with various U.S. & Global stakeholders
  - Regulatory discussion/guidance received supporting abbreviated approval pathway
  - Implementation of Next-Generation manufacturing platform underway

Oncology: Gedeptin®

Gedeptin®: Significant Medical Need

Target Cancer Patient Populations

- Advanced Head & Neck (initial indication; Orphan Drug Status)
- Earlier-Stage Head & Neck
- Breast
- Prostate
- Colon
- Ovarian
- Pancreatic
- Lung

Patient Characteristics

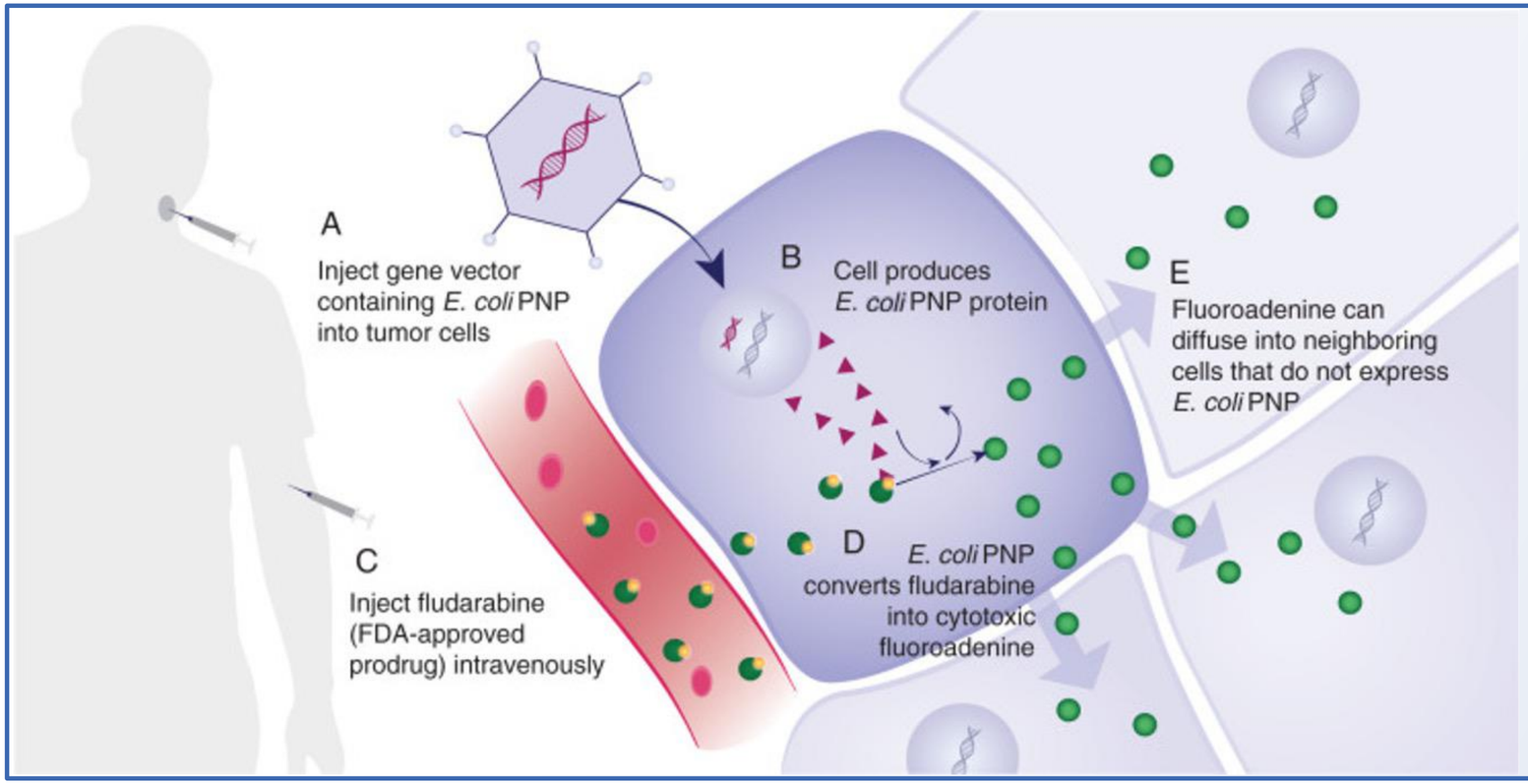
- “Needle-accessible” solid tumors

Patient Prevalence (U.S.)

- Advanced Head & Neck Cancer (deaths/yr) - 16,000
- Early-Stage Head & Neck Cancer (new dx/yr) - 71,000
- Other Solid Tumors (deaths/yr) - 321,000

Source: American Cancer Society (ACS) Cancer Facts & Figures 2024

Gedeptin® Mechanism of Action



- Unprecedented level of cell-killing activity
- Novel tumor killing mechanism
- Facilitates destruction of refractory solid tumors
- “Tumor agnostic”

Phase I dose-escalating trial of Escherichia coli purine nucleoside phosphorylase and fludarabine gene therapy for advanced solid tumors - PMC (nih.gov)

Gedeptin® Clinical Data*

Phase 1/ 2 study of Ad/PNP with fludarabine for the treatment of head & neck squamous cell carcinoma

A. Dimitrios Colevas[1*], Eric J. Sorscher[2*], William Parker[3], Roan Courtney Raymundo[1], Jeong S. Hong[2], Regina Rab[2], Camilo Henao[4], Nikki Schmitt[2], Madison Stallings[2], Kelly T. McKee, Jr.[5], Eben Rosenthal[6], Joseph Curry[4]

- Evaluation of Gedeptin® as an experimental therapy for refractory tumors (NCT03754933)
- Safety and efficacy of repeat cycles of Gedeptin® therapy in patients with recurrent head and neck squamous cell carcinoma (HNSCC) with tumor(s) accessible for injection and no curable treatment options
- Data highlights (8 patients):
  - No dose limiting toxicities or serious adverse events (SAEs) are attributable to treatment
  - No adverse events above grade 3 severity
  - Up to 5 cycles of Gedeptin® treatment administered without limiting sequelae
  - Intratumoral expression of the PNP transgene bt RT-PCR established in treatment tumors to date
  - Impaired tumor growth (i.e., stable disease using RECIST 1.1 evaluation criteria) in targeted lesions seen in 5 of 7 patients (tumor response assessment in 1 patient remains under study)
- Conclude from interim analysis that administration of Gedeptin® is safe and feasible

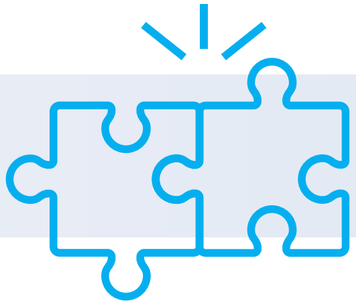
* Poster presentation at the July 10, 2023 American Association for Cancer Research (AACR) and the American Head and neck Society (AHNS) joint Head and Neck Cancer Conference in Montreal, QC, Canada

1. Stanford Cancer Institute, Stanford University; **2.** Emory University School of Medicine; 3. PNP Therapeutics, Inc.; **4.** Thomas Jefferson University; **5.** GeoVax Laboratories; **6.** Vanderbilt University

Gedeptin® Clinical Development Plans

Initial Focus: Advanced Head & Neck Cancer Indication (Mono-therapy)

- Completed initial Ph 1/2 trial (FDA funded), validating safety and tumor shrinkage against advanced HNC



Secondary Focus: Combination-Therapy (Gedeptin® with ICI)

- Expanded Ph 2 trial focused on Gedeptin + ICI therapy against 1st recurrent HNC

Global Development & Commercialization via Collaborations/Partnering

GeoVax Announces Phase 2 Plans for Gedeptin®
Cancer Therapy Following Clinical Advisory Committee Review

Company plans Phase 2 trial in first-recurrence head & neck cancer,
in combination with immune checkpoint inhibitor

Atlanta, GA, July 31, 2024…

…The primary goal of the planned Phase 2 trial will be to establish efficacy of neoadjuvant Gedeptin therapy combined with an immune checkpoint inhibitor in first-recurrence squamous cell head and neck cancer…The Company has initiated the necessary planning activities, including protocol development, manufacturing, and CRO selection with the trial activation anticipated during the first half of 2025…

…“We look forward to activation of this trial and are pursuing development plans in additional solid tumor indications in partnership with leading academic oncology centers…” added David Dodd, GeoVax’s Chairman and CEO.

Milestones, Catalysts & Summary

2024 Milestones & Catalysts

GEO-CM04S1 (Next-Generation COVID-19 Vaccine) – Phase 2b & 2 Clinical Program

- **PNG: Operational progress re trial activation**
- Immunocompromised/stem cell transplant patients: **Additional sites initiated; interim data results**
- Immunocompromised/Chronic Lymphocytic Leukemia (CLL) patients: **Interim analysis indicated GEO-CM04S1 superiority vs mRNA**
- Healthy patient booster trial: **Data results**

Gedeptin® (Solid Tumor Therapy) – Phase 2 Clinical Trial

- Phase 2 expanded trial: **Operation progress re trial activation**

GEO-MVA (Mpox; Smallpox)

- Progress re cGMP GEO-MVA production
  - **cGMP clinical batch: Dec ‘24**
- Expanded U.S. & Global stakeholder discussions

Advanced, Transformative Continuous Cell-line MVA Manufacturing

- Process Development underway; GEO-CM04S1 and GEO-MVA

GeoVax Portfolio: Revenue Opportunity

Product	Disease	Target	Est'd Market Revenue Potential $(Billion)
GEO-CM04S1	COVID-19	Primary Vaccine For Immune Compromised Patients/Booster to mRNA	**$ 30.0+**
GEO-MVA	Mpox/Smallpox	Global Health Emergency U.S. SNS	**$ 10+**
Gedeptin®	Cancer	Early-Stage Head & Neck Cancer	**$ 12.4**
Gedeptin®	Cancer	Advanced Head & Neck Cancer	**$ 2.8**

~$55 Billion in Market Revenue Potential

GeoVax Strategy

Innovate → **Differentiate** → **Accelerate** → **Collaborate**

Unique, **patented products** addressing unmet medical needs

Targeting populations unserved by existing products/standard of care

Pursuing **expedited registration** pathways

Worldwide distribution and administration via business collaborations

A compelling **opportunity** with a value-driven **strategy**

GeoVax
Thank You !!!