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INITIATION REPORT

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GeoVax Labs Inc. (GOVX) – Initiating with a Buy Rating & $4.00 Target

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Jason H. Kolbert
Managing Director & Senior Analyst
jkolbert@dawsonjames.com

Driving an Orphan, Addressing Unmet Medical Needs

GeoVax has transformed itself under the leadership of David Dodd, emerging with two assets that are worthy of attention – the first, a salvage gene therapy for head & neck cancers (with utility potentially in multiple tumor types) and a niche market vaccine technology to address immune-comprised patients susceptible to Covid where current vaccines show little efficacy. Beyond these, there is a platform for additional vaccines to combat Zika Virus, hemorrhagic fever viruses (Ebola, Sudan, Marburg, and Lassa), and malaria.

Gedeptin – Gene Therapy for Solid Tumors: Gedeptin is now in P1/2 trial in advanced head and neck squamous cell carcinoma (HNSCC). This trial is partially funded by the FDA's Orphan Products Clinical Trials Grants Program. The trial is designed to inform the design of a larger patient trial that also may involve patients with other anatomically accessible oral and pharyngeal cancers, including cancers of the lip, tongue, gum, floor of the mouth, salivary gland, and other oral cavities.

What is it? Gedeptin is a gene-directed enzyme prodrug therapy (GDEPT) that results in the formation of an oncolytic agent within the tumor itself. This agent then triggers tumor cell death while significantly limiting systemic exposure. Gedeptin is based upon a replication-deficient adenoviral vector that is injected directly into the tumor mass three times over a period of two days. The PNP enzyme, by itself, has no anti-cancer activity, but when used in combination with purine nucleoside prodrugs (Fludara), it generates an active chemotherapeutic agent within the tumor cells (in situ).

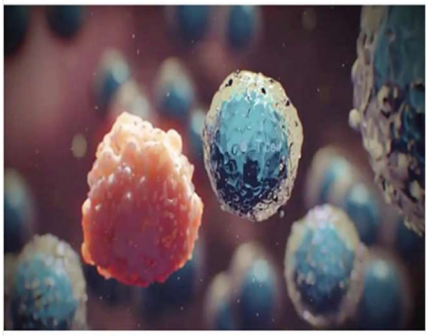
GEO-CM02 – A Covid vaccine for immunocompromised patients. The company is applying its novel Modified Virus Ankara - Virus-Like Particle (GV-MVA-VLPTM) platform to create an effective Covid vaccine for immunocompromised patients where the current vaccines fall short. This vaccine has been shown to induce a balanced antibody and cellular (T-cells) response against the multiple encoded immunogens, potentially limiting immune escape by emerging variants. Expression of the SARS-CoV-2 spike (S), membrane (M), and envelope (E) proteins by MVA supports the in vivo formation of virus-like particles (VLPs), which induce both antibody and T-cell responses.

Additional Research Programs for Numerous Vaccines: Monkey Pox, Hemorrhagic fever viruses (Ebola Zaire, Ebola Sudan, Marburg, and Lassa Fever), and malaria are at various stages of development. Expansion of the Gedeptin technology to other Cancers too.

Valuation: We project our model out to 2033. We apply a 30% success probability to our projected revenues in our product model in addition to our 30% risk rate applied in our Free Cash Flow to the Firm (FCFF), discounted EPS (dEPS), and Sum-of-the-Parts (SOP) models. We use a fully diluted out-year share count, assuming multiple raises. The result is equal-weighted and averaged, and rounded to the nearest whole number to derive our 12-month projected price target of $4.0.

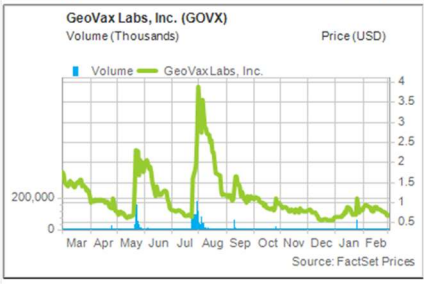
Risks to our thesis include: 1. Regulatory Approvals; 2. Capital Requirements 3. Adoption Rates 4. Intellectual Capital 5. Dilution.

Current Price	$0.72
Price Target	$4.00



Source: GeoVax Labs Inc.

Stock Data			
52-Week Range	$0.53	-	$4.30
Shares Outstanding (mil.)			26.3
Market Capitalization (mil.)			$19
Enterprise Value (mil.)			-$16
Debt to Capital			0%
Book Value/Share			-
Price/Book			5.3
Average Three Months Trading Volume (K)			238
Insider Ownership			1.1%
Institutional Ownership			8.1%
Short interest (mil.)			3.5%
Dividend / Yield			$0.00/0.0%

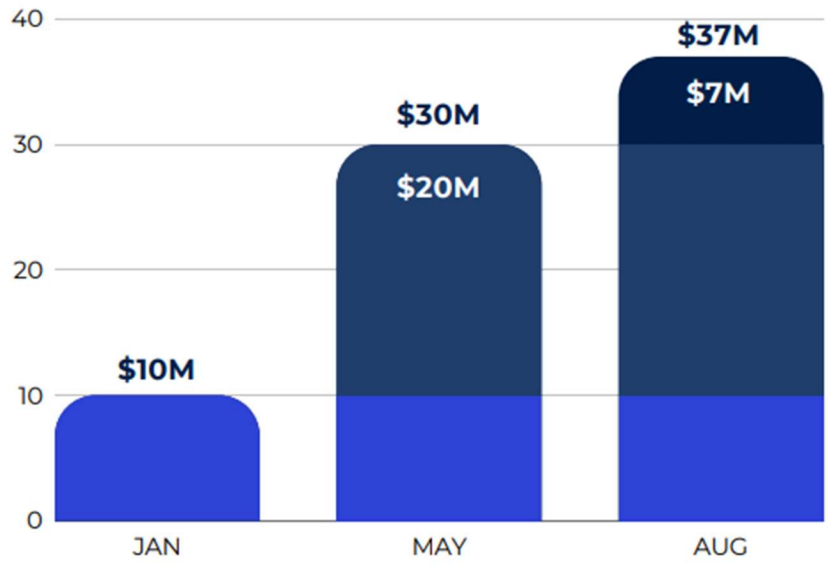


Company Description: (*adapted***):** GeoVax Labs Inc. is a clinical-stage biotechnology company that is focused on developing immunotherapies and vaccines against infectious diseases and cancers using novel vector vaccine platforms. GeoVax's lead product is currently in a proof-of-concept clinical trial in head and neck cancers. Success in this indication suggests we could see expansion to other cancer types. The other advanced product is a unique vaccine for immunocompromised patients at risk for COVID, as the current vaccines have shown themselves to be ineffective in many of these patient populations, who are most at risk. Additional research and development programs include preventive vaccines against hemorrhagic fever viruses (Ebola Zaire, Ebola Sudan, Marburg, and Lassa Fever) and malaria. GeoVax's core vaccine technology is built on the proven Modified Vaccinia Ankara (MVA) platform, which is a highly weakened poxvirus vector used to develop vaccines for infectious diseases. GeoVax's PIPE offering in May 2022 was incredibly important because it allowed GeoVax to accelerate patient enrollment for its Phase 2 clinical programs in support of GEO-CM04S1 (Covid-19 vaccine) and Gedeptin (gene therapy against Advanced Head & Neck cancers). As of September 30, 2022, cash was $34.7 million, providing enough runway to report updates on these studies throughout 2023.

Exhibit 1. GeoVax Overall Pipeline

Source: GeoVax Labs

Exhibit 2. Successful Capital Development in 2022 – We anticipate additional future capital raises



Source: GeoVax Labs Inc.

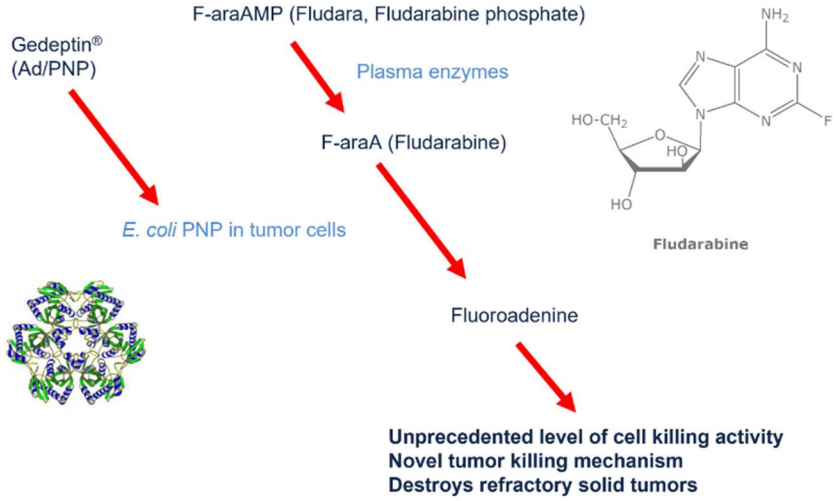
Exhibit 3. Strong IP for GeoVax Technology and Applications. GeoVax has over 115 granted or pending patent applications spread over 24 patent families. In recent news, the USPTO just issued GeoVax a notice of allowance for a Zika Vaccine Patent after finding that the Zika virus is linked to an increase in microcephaly in infants and neurodegenerative disease in adults.

Source: GeoVax Labs Inc.

Gedeptin for Head & Neck Cancer: GeoVax took a transformational step forward with its oncology pipeline in late 2021, in-licensing Gedeptin from PNP Therapeutics and thereby acquiring an additional ongoing clinical program. Gedeptin is a gene-directed enzyme prodrug therapy (GDEPT) that forms the oncolytic agent within the tumor itself, resulting in tumor cell death while significantly limiting systemic exposure. Preclinical and early-stage human clinical data suggest that the GDEPT approach can safely and effectively destroy otherwise refractory cancer cells.

A strong mechanistic rationale exists today for the rationale for the intertumoral-injection concept of GDEPT. Replimune (REPL-Not Rated) provided an update on its Phase 1 IGNYTE program that showed intertumoral injections of the oncolytic virus, RP1, resulted in improved overall response and duration of response in patients with refractory metastatic melanoma. Moderna (MRNA-Not rated) and Merck (MRK-Not Rated) announced that intertumoral injections of Moderna's MRNA-4157, an mRNA cancer vaccine, on top of Merck's Keytruda, resulted in superior recurrence-free survival when compared to Keytruda alone.

Exhibit 4. Oncology - Use of Gedeptin plus fludarabine has potential advantages in comparison to the Standard of Care.

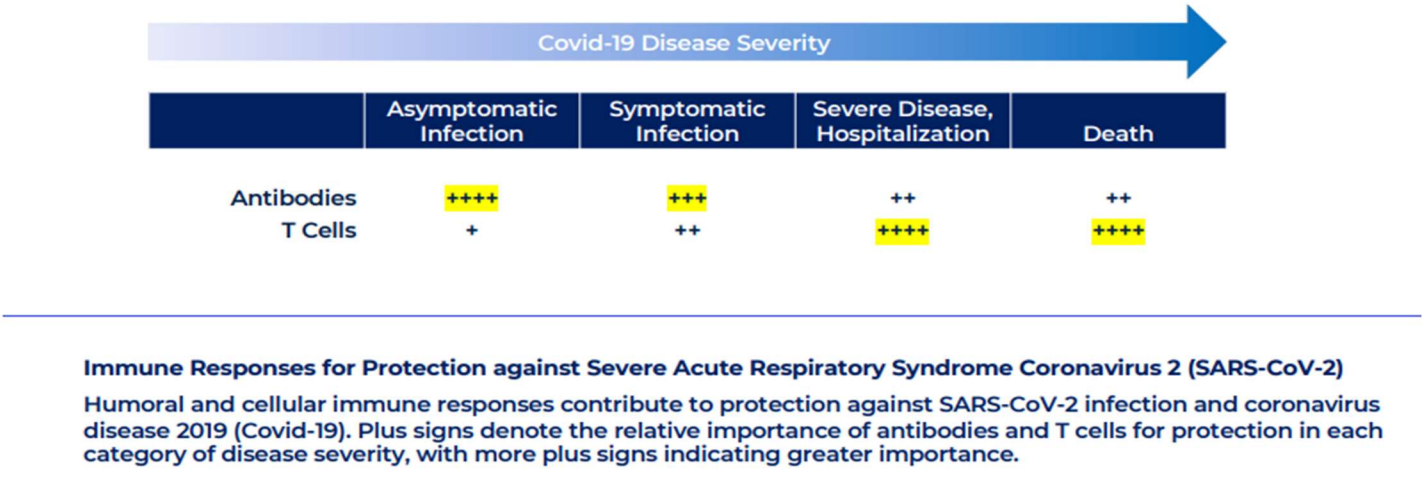


Source: GeoVax Labs Inc.

Clinical Status: Gedeptin is now in a clinical trial for patients with recurrent head and neck cancers and is now actively enrolling patients at three major research centers -- Stanford University, Emory University, and Thomas Jefferson University. The trial is a Phase 1/2 trial evaluating the 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. The protocol entails up to five treatment cycles, each consisting of three intra-tumoral injections of Gedeptin over two days followed by infusion of a prodrug, fludarabine phosphate, once a day for three days. A Phase 1 dose-ranging study evaluating the safety of a single cycle of Gedeptin therapy found the therapy to be well-tolerated, with evidence of a reduction in tumor size in patients with solid tumors.

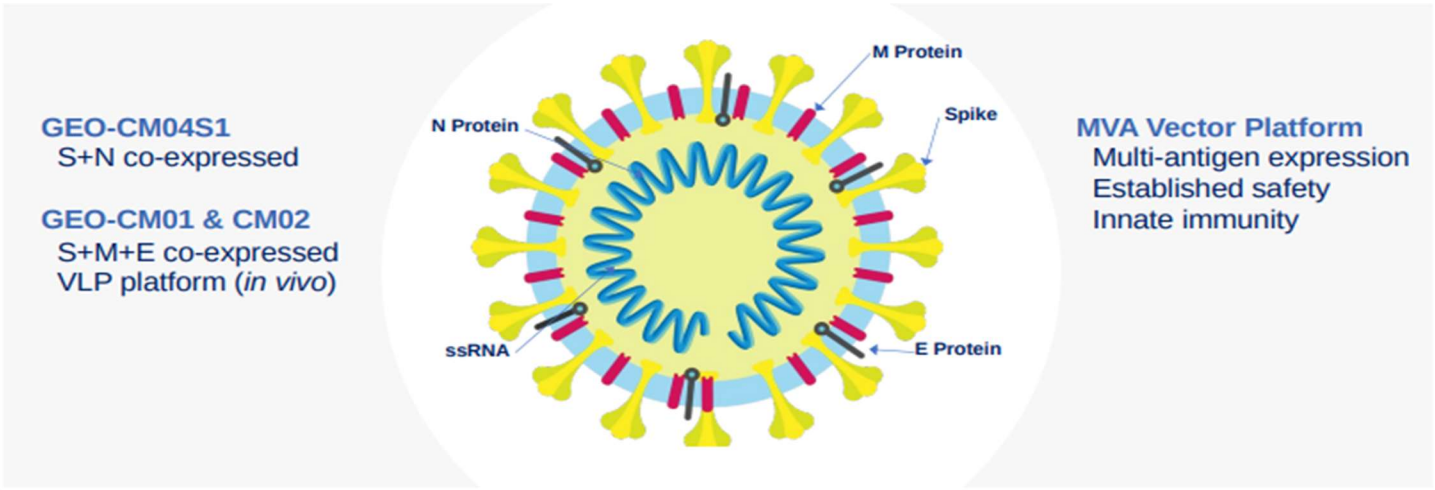
The study is being funded in part by the FDA pursuant to its Orphan Products Clinical Trials Grants Program. The FDA has also granted Gedeptin orphan drug status for the intra-tumoral treatment of anatomically accessible oral and pharyngeal cancers, including cancers of the lip, tongue, gum, floor of the mouth, salivary gland, and other oral cavities.

Exhibit 5. COVID Vaccine – Product Profile: A vaccine that addresses populations most at risk, immune-compromised individuals. More robust, durable booster for 1st generation of COVID-19 vaccines. Broader, more durable protection than existing authorized vaccines as it induces both antibody and cellular immune responses.



Source: GeoVax Labs Inc.

Exhibit 6. Advancing a Next-generation Covid-19 Vaccine. Spike (S) protein as both the antibody ad T cell immunogen. Neutralizing antibodies were induced after two doses. Nucleocapsid (N) as an additional T cell immunogen. Responses were induced with a single dose. Epitopes are conserved from Wuhan to Omicron. Antibodies specific to N also were induced. Other vaccine platforms are unable to encode multi-antigens into a single vaccine.



Source: GeoVax Labs Inc.

Data and Clinical Status: Data from a Phase 1 study of GEO-CM04S1 were published in The Lancet Microbe. This peer-reviewed publication reports data showing that GEO-CM04S1 produced robust neutralizing antibodies and T cells against SARS-CoV-2 with no significant side effects. These data confirm the powerful dual action of the GeoVax vaccine, an important feature given the multiple spike antigen mutations, leading to variants of concern and inconsistent protection from existing FDA-approved vaccines. Should a new mutation arise in the spike antigen that interferes with antibody recognition, a person vaccinated with GEO-CM04S1 may still have substantial T-cell immunity against both the nucleocapsid and spike antigens.

GeoVax has been focused on advancing its two Phase 2 clinical studies of GEO-CM04S1 against COVID-19, one as a primary vaccine for immunocompromised cancer patients, in direct comparison to the Pfizer (PFE-Not rated) mRNA vaccine and the second as a booster for healthy patients who have previously received either the Pfizer or Moderna vaccine as their initial inoculation.

MVA Manufacturing – Transformation to High-Yield, High-Capacity Continuous Cell Line System:

Currently, MVA vaccines are manufactured in cells cultured from chicken embryonic fibroblasts (CEF), a suboptimal and time-consuming process useful primarily for niche markets and stockpile reserves. Now, after exploring various approaches to growing MVA in continuous cell lines in bioreactors more suitable for high-yield, commercial-scale manufacturing, GeoVax will accelerate activities towards fully implementing a proprietary, continuous cell line manufacturing system that will provide lower-cost, scalable versatility for broad MVA vaccine and immunotherapy applications. GeoVax has the goal of advancing MVA manufacturing to a modern, interchangeable process. The company is on track to expand MVA applications from stockpile-based solutions for niche medical markets to respond to world needs on a timely basis, whenever and wherever they arise. The company is working to be the first supplier of MVA-based vaccines to implement such a "transformative" manufacturing process. The company is also working to be the first U.S.-based supplier of the MVA vaccine to prevent MPOX (monkeypox), Smallpox, and other pox-related viruses.

GeoVax has focused on evaluating existing avian cell lines related to clinical experience and MVA use, as well as providing the ability to address epidemics and pandemics on a low-cost, scalable basis for broad MVA-vaccine and immunotherapy applications.

Exhibit 7. Pipeline Focused on Near-term Value Drivers

	Product Candidate	Status
Coronavirus		
COVID-19 (Immunocompromised)	GEO-CM04S1	Phase 2
COVID-19 (Booster to mRNA)	GEO-CM04S1	Phase 2
Pan Coronavirus	GEO-CM02	IND-Enabling
Cancer Immunotherapy		
Solid Tumors (Advanced Head & Neck Cancer)*	Gedeptin®	Phase 1/2
Solid Tumors (MUC1)	MVA-VLP-MUC1	IND-Enabling
Infectious Disease		
Ebola, Marburg, Sudan**	GEO-EM01	IND-Enabling
Zika Virus**	GEO-ZM02	IND-Enabling
Lassa Fever**	GEO-LM01	Exploratory
Malaria**	GEO-MM02	Exploratory

*: Orphan Drug status granted; **: Indication within FDA Priority Review Voucher program

Source: GeoVax

Our valuation for GeoVax is based on Gadeptin and the Covid vaccine programs only. We do this for conservatism with the understanding that proof of concept in either of the programs has broader implications for the market opportunity for the products and expansion of the platform. We provide our "simplified" product models and assumptions as follows:

Gadeptin

1. We assume a treatable patient population of 22,000.
2. We assume orphan-like drug pricing at $125,000 per complete therapeutic course.
3. We apply just a 30% probability of success given the early nature of the program.

Covid – Immune Compromised Patients

1. We assume 10% of the total population is treatable for a multitude of reasons for a Covid vaccine that is effective in immune-compromised patients. Our thinking considers patients undergoing cancer treatment, organ transplants, and patients taking therapies such as those for psoriasis, arthritis, and other related therapies that put these groups at risk.
2. We assume a modest cost of therapy of just $50.00.
3. We apply just a 30% probability of success given the early nature of the program.

Exhibit 8. Gadeptin Model

Head & Neck Cancers	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
Disease Prevalance	66,470	67,135	67,806	68,484	69,169	69,861	70,559	71,265	71,977	72,697	73,424
3rd line	21,935	22,154	22,376	22,600	22,826	23,054	23,285	23,517	23,753	23,990	24,230
Market Share				10%	12%	14%	18%	22%	26%	33%	35%
Cost of Therapy				$ 125,000	$ 125,000	$ 125,000	$ 125,000	$ 125,000	$ 125,000	$ 125,000	$ 125,000
Revenue ($) - M				282	342	403	524	647	772	990	1,060
Probability of Success				30%	30%	30%	30%	30%	30%	30%	30%
Risk Adjusted U.S. Revenue ($M)				**$ 85**	**$ 103**	**$ 121**	**$ 157**	**$ 194**	**$ 232**	**$ 297**	**$ 318**

Exhibit 9. Gadeptin Model

Covid - Immune Compromised Patients	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
Population	325,000,000	325,000,000	325,000,000	325,000,000	325,000,000	325,000,000	325,000,000	325,000,000	325,000,000	325,000,000	325,000,000
Immune Compromised				10%	11%	12%	13%	14%	15%	15%	15%
Cost of Therapy	$50	$50	$50	$50	$50	$50	$50	$50	$50	$50	$50
Market Share	10%	10%	10%	10%	20%	30%	40%	50%	51%	52%	53%
Revenue ($) - M				$ 163	$ 358	$ 585	$ 845	$ 1,138	$ 1,243	$ 1,268	$ 1,292
Probability of Success				30%	30%	30%	30%	30%	30%	30%	30%
Risk Adjusted U.S. Revenue ($M)				**$ 49**	**$ 107**	**$ 176**	**$ 254**	**$ 341**	**$ 373**	**$ 380**	**$ 388**

Valuation: Our valuation for GeoVax Labs is based on revenue projections to 2033. We apply a 30% risk cut in our therapeutic models. The subsequent revenues are then fed into our income statement. To the income statement metrics, we then model a target valuation. We assume the company does raise additional capital, and as such, our valuation math is based on 2033 fully diluted share count. We assume rising SG&A and R&D as the company commercializes its products and expands its pipeline. Our valuation models: Free Cash Flow to the Firm (FCFF), discounted EPS (dEPS), and Sum-of-the-Parts (SOP), use a 30% discount rate. This is in addition to the 30% risk cut in our revenue models. We select 30% for micro-capitalized growth companies, and this represents our highest risk rate. The result of these three models is then equal-weighted and averaged, and rounded to the nearest whole number to provide a 12-month target price.

Exhibit 10. Free Cash Flow Model

Average	$ 4

Price Target	$ 5
Year	2023

DCF Valuation Using FCF (mln):

units ('000)	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
EBIT	(11,866)	(13,580)	(15,621)	(24,444)	67,466	117,173	185,919	274,825	369,576	419,126	470,240	484,702
Tax Rate	0%	0%	0%	0%	10%	20%	30%	35%	38%	38%	38%	38%
EBIT(1-t)	(11,866)	(13,580)	(15,621)	(24,444)	60,720	93,738	130,143	178,636	229,137	259,858	291,549	300,515
CapEx												
Depreciation												
Change in NWC												
FCF	(11,866)	(13,580)	(15,621)	(24,444)	60,720	93,738	130,143	178,636	229,137	259,858	291,549	300,515
PV of FCF	(15,426)	(13,580)	(12,016)	(14,464)	27,638	32,820	35,051	37,009	36,517	31,856	27,493	21,799

Discount Rate	30%	
Long Term Growth Rate	1%	
Terminal Cash Flow	1,046,621	
Terminal Value YE2033	75,920	
NPV	286,043	
NPV-Debt	-	
Shares out (thousands)	58,105	2033E
NPV Per Share	$ 4.92	

Source: Dawson James estimates

Exhibit 11. Discounted EPS Model

Current Year		2023
Year of EPS		2033
Earnings Multiple		10
Discount Factor		30%
Selected Year EPS	$	5.17
NPV	$	3.75

Source: Dawson James estimates

	Discount Rate and Earnings Multiple Varies, Year is Constant 2033 EPS						
Earnings Multiple	3.8	5%	10%	15%	20%	25%	30%
	5	$15.88	$9.97	$6.39	$4.18	$2.78	$ 1.88
	10	$31.75	$19.94	$12.78	$8.35	$5.55	$ 3.75
	15	$47.63	$29.91	$19.18	$12.53	$8.33	$ 5.63
	20	$63.50	$39.88	$25.57	$16.71	$11.11	$ 7.50
	25	$79.38	$49.85	$31.96	$20.88	$13.88	$ 9.38
	30	$95.25	$59.82	$38.35	$25.06	$16.66	$ 11.25
	35	$111.13	$69.79	$44.74	$29.24	$19.44	$ 13.13
	40	$127.01	$79.76	$51.14	$33.41	$22.21	$ 15.01

Exhibit 12. Sum-of-the-Parts Model

GeoVax Labs Inc.	LT Gr	Discount Rate	Yrs. to Mkt Peak	% Success	Peak Sales MM's	Term Val
Gadeptin	1%	30%	5	30%	$1,060	$3,655
NPV						$3.05
COVID Immuno-compromised	1%	30%	5	30%	$1,292	$4,455
NPV						$3.72
Platform - Other Indication						
NPV						
						60%
MM Shrs OS (2030E)						58
Total						$4.06

Source: Dawson James estimates

Risks to our thesis include 1. Regulatory Approvals; 2. Capital Requirements 3. Adoption Rates 4. Intellectual Capital 5. Dilution.

- **Regulatory Approvals**. The company's products require regulatory approvals, and there can be no assurances that the requirements to achieve these approvals can be met.
- **Capital Requirements:** The business requires continued funding; there can be no assurances that the company will be able to raise the needed capital to continue operations.
- **Adoption Rates**: There are no assurances that the projected market share can be met. A combination of factors from pricing and reimbursement to competitive performance are expected to be key factors in driving users to administer these drugs.
- **The Competitive Landscape & IP**. The company does have intellectual property and knows how to preserve its competitive position. However, the company may face competition from well-financed competitors who are already in position in the target markets.
- **Dilution**: The company is likely to incur losses for the foreseeable future until it is able to generate sufficient revenue from product sales. Our model assumes a rising share count. There can be no assurances that the company can successfully raise the capital required to execute its business strategy.

Exhibit 13. Income Statement

GeoVax: Income Statement '000																				
000 .: YE December 31	2022E	1Q23E	2Q23E	3Q23E	4Q23E	2023E	1Q24E	2Q24E	3Q24E	4Q24E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
Risk Adjusted Product sales Projections																				
Gadeptin													84,749	102,716	121,034	157,171	194,019	231,588	296,877	318,019
COVID Immuno-compromised													48,750	107,250	175,500	253,500	341,250	372,938	380,250	387,563
Grant Revenue																				
Total Product Sales	-	-	-	-	-	-	-	-	-	-	-	-	133,499	209,966	296,534	410,671	535,269	604,525	677,127	705,581
Expenses																				
COGS													26,700	41,993	59,307	82,134	107,054	120,905	135,425	141,116
COGS %		0%	0%	0%	0%		0%	0%	0%	0%			20%	20%	20%	20%	20%	20%	20%	20%
Research and Development	8,359	2,407	2,508	2,508	2,608	10,031	2,889	3,009	3,009	3,130	12,037	14,444	17,333	20,800	21,008	23,108	27,730	33,276	39,931	47,918
General and Administrative	3,514	852	887	887	923	3,549	860	896	896	932	3,584	10,000	22,000	30,000	30,300	30,603	30,909	31,218	31,530	31,846
Total Operating Expenses	11,873	3,259	3,395	3,395	3,531	13,580	3,749	3,905	3,905	4,061	15,621	24,444	66,033	92,793	110,614	135,846	165,693	185,399	206,887	220,879
Loss from Operations	(11,873)	(3,259)	(3,395)	(3,395)	(3,531)	(13,580)	(3,749)	(3,905)	(3,905)	(4,061)	(15,621)	(24,444)	67,466	117,173	185,919	274,825	369,576	419,126	470,240	484,702
Other (income) Expenses																				
Interest Income	6	-	-	-	-	-	-	-	-	-	-									
Interest Expense		-	-	-	-	-	-	-	-	-	-									
Total other (income) expense	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Net Loss	(11,866)	(3,259)	(3,395)	(3,395)	(3,531)	(13,580)	(3,749)	(3,905)	(3,905)	(4,061)	(15,621)	(24,444)	67,466	117,173	185,919	274,825	369,576	419,126	470,240	484,702
	-	-	-	-	-	-	-	-	-	-	-	-	6,747	23,435	55,776	96,189	140,439	159,268	178,691	184,187
Tax Rate	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	20%	30%	35%	38%	38%	38%	38%
GAAP Net Income (loss)	(11,866)	(3,259)	(3,395)	(3,395)	(3,531)	(13,580)	(3,749)	(3,905)	(3,905)	(4,061)	(15,621)	(24,444)	60,720	93,738	130,143	178,636	229,137	259,858	291,549	300,515
GAAP-EPS	(0.81)	(0.13)	(0.13)	(0.09)	(0.10)	(0.45)	(0.10)	(0.08)	(0.08)	(0.09)	(0.36)	(0.53)	1.31	2.01	2.78	3.80	4.86	5.49	6.14	6.30
GAAP EPS (dil)	(0.69)	(0.13)	(0.13)	(0.07)	(0.08)	(0.38)	(0.08)	(0.07)	(0.07)	(0.07)	(0.29)	(0.43)	1.07	1.65	2.29	3.12	3.99	4.51	5.04	5.17
Wgtd Avg Shrs (Bas) '000	17,275	25,834	25,859	35,885	35,921	30,875	35,957	45,993	46,039	46,085	43,519	46,200	46,386	46,571	46,758	46,945	47,133	47,322	47,512	47,702
Wgtd Avg Shrs (Dil) '000	17,275	25,834	25,859	45,885	45,931	35,877	45,977	56,023	56,079	56,135	53,554	56,276	56,501	56,727	56,955	57,183	57,412	57,642	57,873	58,105

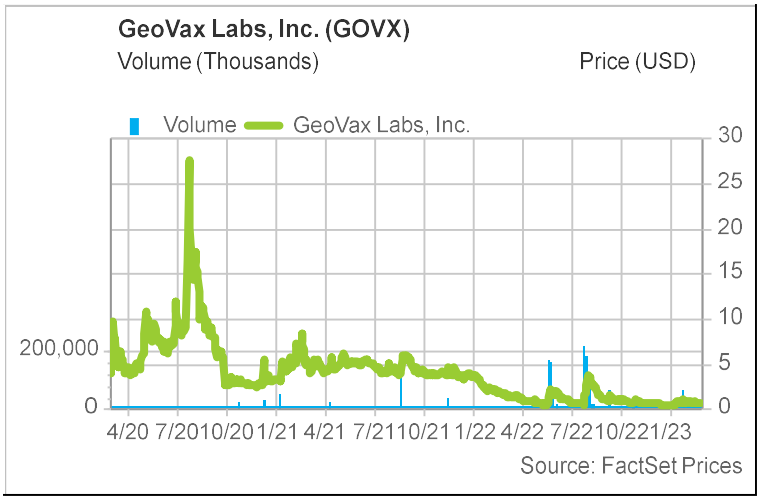
Source: Company reports and Dawson James

Source: Dawson James estimates, company reports

Companies mentioned in this report:

Important Disclosures:

Price Chart:



Price target and ratings changes over the past three years:
Initiated – Buy – March 3, 2023 – Price Target $4.0

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Ratings Definitions:

1) **Buy**: The analyst believes the price of the stock will appreciate and produce a total return of at least 20% over the next 12-18 months.
2) **Neutral**: The analyst believes the price of the stock is fairly valued for the next 12-18 months.
3) **Sell**: The analyst believes the price of the stock will decline by at least 20% over the next 12-18 months and should be sold.

The following chart reflects the range of current research report ratings for all companies, followed by the analysts of the Firm. The chart also reflects the research report ratings relating to those companies for which the Firm has performed investment banking services.

Current as of 3-Mar-23

	Company Coverage		Investment Banking	
Ratings Distribution	# of Companies	% of Total	# of Companies	% of Totals
Market Outperform (Buy)	24	69%	1	3%
Market Perform (Neutral)	11	31%	2	6%
Market Underperform (Sell)	0	0%	0	0%
Total	35	100%	3	9%

Analyst Certification:

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