

## INSTITUTIONAL RESEARCH

# **Biotechnology**UPDATE REPORT

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### GeoVax Labs Inc. (GOVX) - Buy Rated

July 24, 2023

#### Patents on Ebola Add to a Strong IP Estate

GeoVax announced that the U.S. Patent and Trademark Office has issued Patent No. 11,701,418 B2 to GeoVax, pursuant to the Company's patent application No. 15/543,139 titled "Replication-Deficient Modified Vaccinia Ankara (MVA) and Matrix Protein (VP40)." This patent, in essence, covers the company's vector platform expressing Ebola antigens.

#### Press Release (adapted):

**Ebola History with GeoVax:** GeoVax previously demonstrated that a single intramuscular (IM) dose of its vaccine candidate, GEO-EM01, provided 100% protection in rhesus macaques challenged with a lethal dose of Zaire ebolavirus (EBOV). GEO-EM01 is based on the Company's novel MVA-VLP platform, which generates noninfectious VLPs in the individual being vaccinated. VLPs mimic a natural infection, triggering the body to produce a robust and durable immune response with both antibodies and T cells.

In July 2021, the Company announced results of preclinical efficacy studies of its Sudan ebolavirus (SUDV) vaccine candidate, in which a single dose of the vaccine protected 100% of small animals challenged with a lethal dose of SUDV. Dr. Jason Comer of Sealy Institute for Vaccine Sciences, University of Texas Medical Branch (UTMB), recently discussed GeoVax's Sudan virus vaccine efficacy. His presentation to the Global Health Preparedness Strategy and Priority Pathogens session at the 23rd Annual World Vaccine Congress demonstrated partial protection following lethal Sudan virus challenge in a rigorous cynomolgus macaque model.

The research has been funded in whole or in part with Federal funds under a Preclinical Services Contract from the National Institute of Allergy and Infectious Diseases, part of the National Institutes of Health.

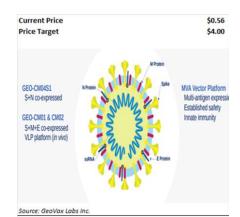
**GeoVax IP:** According to the company they now have over 115 granted or pending patent applications spread over 24 patent families.

**Valuation:** Our valuation is based on Gadeptin and Covid Vaccines (only). 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, 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.

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| Stock Data                |              |   |             |
|---------------------------|--------------|---|-------------|
| 52-Week Range             | \$0.53       | 100                                     | \$4.30      |
| Shares Outstanding (mil.) |              |   | 26.4        |
| Market Capitalization (mi | l.)          |   | \$15        |
| Enterprise Value (mil.)   |              |   | -\$9        |
| Debt to Capital           |              |   | 0%          |
| Book Value/Share          |              |   | -           |
| Price/Book                |              |   | 0.6         |
| Average Three Months Tr   | ading Volume | (K)                                     | 141         |
| Insider Ownership         |              | 111111111111111111111111111111111111111 | 1.2%        |
| Institutional Ownership   |              |   | 6.1%        |
| Short interest (mil.)     |              |   | 2.4%        |
| Dividend / Yield          |              |   | \$0.00/0.0% |
|                           |              |   |             |





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 1. 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 2. 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      |

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 3. Income Statement**

| 2. Van de la contra dela contra de la contra de la contra de la contra de la contra dela contra de la contra del la contra de la contra de la contra dela contra del la contra del |          |         |         |         |         |          |         |         |         |         |          |          |         |         |         |         |         |         |         |         |
|---|----------|---------|---------|---------|---------|----------|---------|---------|---------|---------|----------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| GeoVax: Income Statement '000<br>000 .: YE December 31  | 2022A    | 1Q23A   | 2023E   | 3Q23E   | 4Q23E   | 2023E    | 1Q24E   | 2Q24E   | 3Q24E   | 4Q24E   | 2024E    | 2025E    | 2026E   | 2027E   | 2028E   | 2029E   | 2030E   | 2031E   | 2032E   | 2033E   |
| Risk Adjusted Product sales Projections   | 2022A    | TQZSA   | 2Q23E   | 3Q23E   | 4Q23E   | 2023E    | TQ24E   | 2Q24E   | 3Q24E   | 4Q24E   | 2024E    | 2025E    | 2026E   | 2027E   | 2026E   | 2029E   | 2030E   | 2031E   | 2032E   | 2033E   |
| Gadeptin  |          |         |         |         |         |          |         |         |         |         |          |          | 84.749  | 102,716 | 121,034 | 157,171 | 194,019 | 231,588 | 296,877 | 318,019 |
| Gadepiin  |          |         |         |         |         |          |         |         |         |         |          |          | 04,749  | 102,716 | 121,034 | 157,171 | 194,019 | 231,300 | 290,077 | 310,019 |
| COVID Immuno-compromised  |          |         |         |         |         |          |         |         |         |         |          |          | 48,750  | 107,250 | 175,500 | 253,500 | 341,250 | 372,938 | 380,250 | 387,563 |
| Grant Revenue   | 82       |         |         |         |         |          |         |         |         |         |          |          |         |         |         |         |         |         |         | ì       |
| Total Product Sales   | 82       |         |         |         |         |          |         |         |         |         |          | -        | 422 400 | 200.000 | 296,534 | 440.074 | E3E 3C0 | 604,525 | 677,127 | 705,581 |
|   | 82       | -       | •       | •       |         |          | •       | •       | •       | -       | -        | •        | 133,499 | 209,966 | 290,534 | 410,671 | 535,269 | 604,525 | 6//,12/ | 705,561 |
| Expenses  |          |         |         |         |         |          |         |         |         |         |          |          |         |         |         |         |         |         |         |         |
| COGS  |          |         |         |         |         |          |         |         |         |         |          |          | 26,700  | 41,993  |         | 82,134  |         | 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  | 9,123    | 2,819   | 2,737   | 2,737   | 2,655   | 10,948   | 3,153   | 3,284   | 3,284   | 3,416   | 13,138   | 15,765   | 18,918  | 22,702  | 22,929  | 25,222  | 30,266  | 36,320  | 43,584  | 52,300  |
|   |          |         |         |         |         |          |         |         |         |         |          |          |         |         |         |         |         |         |         |         |
| General and Administrative  | 4,987    | 1,451   | 1,259   | 1,259   | 1,067   | 5,036    | 1,221   | 1,272   | 1,272   | 1,323   | 5,087    | 10,000   | 22,000  | 30,000  | 30,300  | 30,603  | 30,909  | 31,218  | 31,530  | 31,846  |
| Total Operating Expenses  | 14,110   | 4,271   | 3,996   | 3,996   | 3,722   | 15,985   | 4,374   | 4,556   | 4,556   | 4,738   | 18,225   | 25,765   | 67,618  | 94,695  | 112,536 | 137,959 | 168,229 | 188,443 | 210,540 | 225,262 |
| Loss from Operations  | (14,029) | (4,271) | (3,996) | (3,996) | (3,722) | (15,985) | (4,374) | (4,556) | (4,556) | (4,738) | (18,225) | (25,765) | 65,881  | 115,271 | 183,998 | 272,712 | 367,039 | 416,082 | 466,588 | 480,319 |
| Other (income) Expenses   |          |         |         |         |         |          |         |         |         |         |          |          |         |         |         |         |         |         |         |         |
| Interest Income   | 7        | 233     | -       | -       | -       | 233      | -       | -       | -       | -       | -        |          |         |         |         |         |         |         |         | i       |
| Interest Expense  |          |         |         |         |         |          |         |         |         |         |          |          |         |         |         |         |         |         |         |         |
|   |          | -       | -       | -       | -       | -        | -       | -       | -       | -       | -        |          |         |         |         |         |         |         |         | 1       |
|   |          |         |         |         |         |          |         |         |         |         |          |          |         |         |         |         |         |         |         | 1       |
| Total other (income) expense  | 7        | 233     | -       | -       | -       | 233      | -       | -       | -       | -       | -        | -        | -       | -       | -       | -       | -       |         |         |         |
| Net Loss  | (14,021) | (4,038) | (3,996) | (3,996) | (3,722) | (15,752) | (4,374) | (4,556) | (4,556) | (4,738) | (18,225) | (25,765) | 65,881  | 115,271 | 183,998 | 272,712 | 367,039 | 416,082 | 466,588 | 480,319 |
|   | -        | -       | -       | -       | -       | -        | -       | -       | -       | -       | -        | -        | 6,588   | 23,054  | 55,199  | 95,449  | 139,475 | 158,111 | 177,303 | 182,521 |
| 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)  | (14,021) | (4,038) | (3,996) | (3,996) | (3,722) | (15,752) | (4,374) | (4,556) | (4,556) | (4,738) | (18,225) | (25,765) | 59,293  | 92,216  | 128,798 | 177,262 | 227,564 | 257,971 | 289,285 | 297,798 |
| GAAP-EPS  | (0.83)   | (0.15)  | (0.15)  | (0.11)  | (0.10)  | (0.52)   | (0.12)  | (0.10)  | (0.10)  | (0.10)  | (0.42)   | (0.55)   | 1.26    | 1.96    | 2.72    | 3.73    | 4.77    | 5.39    | 6.02    | 6.17    |
| GAAP EPS (dil)  | (0.83)   | (0.15)  | (0.15)  | (0.09)  | (0.08)  | (0.43)   | (0.09)  | (0.08)  | (0.08)  | (0.08)  | (0.34)   | (0.45)   | 1.04    | 1.61    | 2.24    | 3.07    | 3.93    | 4.44    | 4.95    | 5.08    |
| Wgtd Avg Shrs (Bas) ' 000   | 16,973   | 26,339  | 26,365  | 36,391  | 36,428  | 31,381   | 36,464  | 46,501  | 46,547  | 46,594  | 44,026   | 46,710   | 46,897  | 47,085  | 47,274  | 47,463  | 47,653  | 47,844  | 48,036  | 48,228  |
| Wgtd Avg Shrs (Dil) '000  | 16,973   | 26,339  | 26,365  | 46,391  | 46,438  | 36,383   | 46,484  | 56,531  | 56,587  | 56,644  | 54,061   | 56,785   | 57,013  | 57,241  | 57,471  | 57,701  | 57,932  | 58,164  | 58,397  | 58,631  |
|   |          |         |         |         |         |          |         |         |         |         |          |          |         |         | •       |         |         |         | .,      |         |

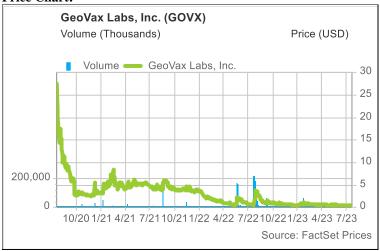
Source: Dawson James estimates, company reports



#### Companies mentioned in this report:

#### **Important Disclosures:**





Price target and ratings changes over the past three years:

Initiated – Buy – March 3, 2023 – Price Target \$4.0

Update Report – Buy – March 24, 2023 – Price Target \$4.0

Update Report – Buy – April 6, 2023 – Price Target \$4.0

Update Report – Buy – April 11, 2023 – Price Target \$4.0

Update Report – Buy – April 19, 2023 – Price Target \$4.0

Update Report – Buy – May 5, 2023 – Price Target \$4.0

Update Report – Buy – May 25, 2023 – Price Target \$4.0

Update Report – Buy – July 11, 2023 – Price Target \$4.0

Update Report – Buy – July 21, 2023 – Price Target \$4.0

Update Report – Buy – July 24, 2023 – Price Target \$4.0

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- 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.
- 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.

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Current as of 17-Jul-23

|                            | Company<br>Coverage |            | Investment<br>Banking |        |
|----------------------------|---------------------|------------|-----------------------|--------|
|                            |                     |            |                       | % of   |
| Ratings Distribution       | # of Companies      | % of Total | # of Companies        | Totals |
| Market Outperform (Buy)    | 25                  | 69%        | 2                     | 5.50%  |
| Market Perform (Neutral)   | 11                  | 31%        | 2                     | 5.50%  |
| Market Underperform (Sell) | 0                   | 0%         | 0                     | 0.00%  |
| Total                      | 36                  | 100%       | 4                     | 11.00% |

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