NanoViricides, Inc. (NNVC)

INITIATING COVERAGE

December 13, 2023

NNVC: Inflection Point Reached of Multi-Indications Platform; Re-Initiating With a Buy and $6.50 Price Target

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We are re-initiating coverage of NanoViricides, Inc. (NNVC) with a Buy rating and a price target of $6.50, which is based on a discounted cash flow model valuation (DCF) with a WACC discount rate of 15% and a terminal growth rate of 2%.

NanoViricides, Inc. is a biopharmaceutical company with a targeted anti-viral platform technology, which develops drugs to attack enveloped virus particles. Its modular and flexible platform approach allows NNVC to design nanoviricides to mimic a cell membrane, which causes a virus particle to latch on to it by replicating the human cellular receptor of the virus. This occurs without immune system assistance. By copying the receptor side of virus on the cell side, the virus lands on NNVC's design, stopping the virus from replicating and therefore not compromising the human immune system. NNVC's designed agent tricks a virus into attaching to this anti-viral nanomachine, trapping it and causing the virus to lose its coat proteins needed to bind to a cell. The nanoviricide encapsulates the virus particle after the virus binds to the high-density binding sites in the nanoviricide, which then engulfs the virus particle and destroys it. These direct attacks, on multiple points of the virus, prevent the virus from copying and spreading. Importantly, a nanoviricide can be designed to deliver anti-viral payload into infected cells, sparing uninfected cells to block the replication cycle, without toxicity.

In our view, NanoViricides has recently reached an inflection point of being able to apply its bind-encapsulate-destroy mechanism platform to multiple diseases. Its NV-387 anti-viral active agent is not solely for COVID-19 lifesaving drugs, but might also be applied to other indications including Influenza, Herpes (HSV Type 1 & Type 2), respiratory syncytial virus (RSV), Smallpox and Mpox (monkeypox). This pivot point towards a platform for multiple disease treatments and drug candidates, similar to what Moderna achieved (MRNA; not rated), is the marquee difference today compared to NNVC's prior business model two years ago. Lastly, the management estimates its total addressable market could be $8 billion (we conservatively assume a $5 billion total market size for now).

Given the rising trend of RSV in the United States, we would not be surprised if NNVC was granted FDA's accelerated approval phase program for RSV to pursue a combined Phase 2/Phase 3 trial in an expedited manner, which could shave two years off its development timeline. The FDA only approved the first RSV vaccine in May. A few years from now, NNVC's platform technology could also be applied to additional respiratory viruses, Shingles, Smallpox and possibly Alzheimer's disease. We believe that investors are not appreciating how NNVC's platform can go well beyond COVID-19 treatment as a potential competitor of the FDA-approved Remdesivir. NNVC's technology is not simply pigeon-holed for COVID-19, but instead has significant revenue-generating potential in more than a dozen other diseases or illnesses. NNVC is pursuing RSV and Smallpox, which we believe could be important catalysts for the stock over the next year.

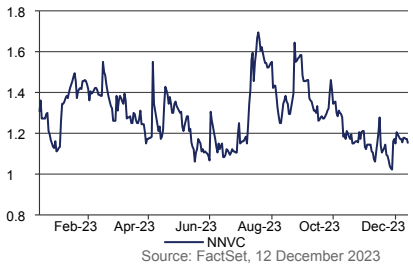
MARKET DATA

Rating	Buy
Price Target	$6.50
Price	$1.15
Average Daily Volume	37
52-Week Range	$1.00–$2.00
Market Cap ($M)	$13.5
Enterprise Value ($M)	$8.3
Dividend Yield	0.0%

ESTIMATES

		2022A	2023A	2024E	2025E
EPS --	Q1	(0.23)	(0.14)	(0.17)	-
	Q2	(0.17)	(0.15)	(0.19)	-
	prev:	-	-	*(0.17)*	-
	Q3	(0.16)	(0.15)	(0.19)	-
	prev:	-	-	*(0.17)*	-
	Q4	(0.15)	(0.31)	(0.20)	-
	prev:	-	*(0.17)*	*(0.17)*	-
	FY	(0.70)	(0.74)	(0.74)	(1.13)
	prev:	-	*(0.60)*	*(0.68)*	-

One Year Performance Chart



Source: FactSet, 12 December 2023

Please see analyst certification and important disclosures on page 15 of this report.

By blocking the reinfection cycle and dismantling the virus, NNVC's product appears to have potential to possibly perform better than some antibodies and immunotherapeutics. The management team believes its platform technology could be nearly as transformational as the breakthrough of penicillin and antibiotics a century ago.

NNVC is completing Phase 1a/1b human clinical trials of NV-387 for COVID-19 in India and expects to begin Phase 2 possibly in July. Licensing agreements and royalties would be NNVC's revenue model, and it could team up with big pharma players.

Customizable Platform Technology Reaches Pivot Point. Nanotechnology is the study and manipulation and alteration of matter at the molecular nanometer size scale (100 millionth of a millimeter or less size). Nanoviricides are unlike current vaccines and are instead engineered by humans to work similarly to an antibody, by selectively tagging a virus and attaching at several sites on the virus in a cluster-like mechanism. The current U.S. vaccine system is expensive and can sometimes be a lagging solution on virus strains, such as in some flu seasons missing the effectiveness mark. Studies have shown that broad-spectrum nanoviricides created could possibly bind to up to 90-95% of known viruses.

We are intrigued by NNVC's promising indications applications, while it employs the hybrid approach of engineering of nanotechnology with medical science. Every nanoviricide drug is designed as an antiviral agent specifically targeted for a particular type of virus or group of viruses. Like a chemical robot programmed to destroy virus particle. NNVC's versatile technology platform offers an alternative to the current vaccination system and rapidly mutating and evolving diseases. Its platform versatility recently reached a pivot point that makes it applicable beyond coronavirus and RSV.

Importantly, we like that nanoviricides lack toxicity and have biodegradability advantages, while also being advantaged with low cost of drug development and manufacturing. Whereas antibiotics depend on the human immune system for clearing the virus particle and are most costly to develop.

Phase 2 Trials Could Begin July. NNVC has nearly completed its Phase 1a/b human clinical trials in India through its collaborator, which involved both oral tablets and oral gummies, catering to various age groups, including pediatrics. The recent NV-387 data demonstrated broad-spectrum activity against multiple strains of coronaviruses, showcasing effectiveness up to possibly ten times greater than Remdesivir in preclinical studies. NNVC believes that its coronavirus lifesaving treatment development could begin Phase 2 in July if continued progress occurs. NNVC expects the trial to be compromised of possibly 300 patients at 10 different sites, followed by important initial data around February 2025. Several experts estimate that the coronavirus could exist in the U.S. into 2027 and possibly re-occur again several years later, which makes NV-387 useful even if FDA approval does not occur until 2026 if expedited by the FDA.

We are most interested in NNVC's overall platform as a game-changer for other disease indications and development opportunities. We expect initial revenues could come from milestone payments beginning in 2026 from other indications such as Smallpox, Mpox, Herpes, RSV, Shingles or other non-coronavirus viruses or diseases. NV-387 has already been highly effective in an animal model for smallpox and mpox virus infections in humans.

Pipeline of Opportunities Could Exceed a Dozen Potential Drugs. NNVC's management team believes its platform could revolutionize the treatment of viral infections and also improve future pandemic preparedness responsiveness. Importantly, NNVC can ascertain the same structure and quality control, which helps prevent toxicity. Lacking toxicity is vital for success. NNVC notes that sialic acid (SA) is a common chemical signature that viruses use for attachment factors. The company has designed its SA-emulating candidate, which it believes can be used for other viruses besides coronavirus.

NNVC is developing additional emulating nanoviricides for three other types of chemical signatures. See Page 5 for its potential pipeline and opportunities set.

Encapsulation Format for Drug Delivery Opportunities. NNVC believes it has a program that can be highly effective for targeted deliveries of drugs and improve efficiency through nanoencapsulation, rather than needle injections of a drug or vaccine. Encapsulation, as a form of drug delivery, could benefit drugs with rapid cellular uptake or rapid tissue uptake. Furthermore, an oral pill's formulation of drug or therapeutic delivery, rather than injections, tends to have less side effects and could be more be cost-effective for the health insurance industry. We envision NNVC gaining interest from a couple big pharmaceutical players over the next two years and possibly earning a milestone payment of $5-10 million.

Manufacturing Facility with Flexible Multi-Product Drug Supply Capability. Importantly, NNVC has its own c-GMP capable manufacturing facility for the drug substance and drug products in Connecticut. This pilot plant is flexible for multi-product supply of drug products for any of its human clinical trial programs, while also enabling NNVC to achieve cost savings and speed in its drug development programs. Upon any drug approvals, we believe this plant could be capable of generating $300-400 million in annual product gross revenues before NNVC would have to outsource additional production or expand its plant.

Government Grants Could be Possible for Smallpox and Mpox. We note that the U.S. Department of Health and Human Services (HHS), the NIH, the CDC or other U.S. health agencies could provide NNVC with grants or financial support for

smallpox and other indications. Last year, the HHS announced that it would provide $11 million to JYNNEOS manufacturing for smallpox and monkeypox vaccine. Several other grants have also been passed out for smallpox over the past two decades to other companies. Earlier this year, there was more global cooperation with the World Health Organization (WHO) for smallpox eradication for disease control. NNVC could also become eligible for grants or funding for other drug indications besides smallpox and monkeypox.

Valuation. Our $6.50 price target is derived from our Discounted Cash Flow (DCF) model, plus cash and minus the drag of total spending. We assign a 15% WACC discount rate and 2% terminal growth rate. While we remain constructive on some possible revenues from a U.S. commercialization or milestone payments tied to NV-387 anti-viral solution for COVID-19 lifesaving treatment drug possible approval, we also focus on NNVC's other drug development programs. Our model is based on NNVC extending its platform to other potential diseases and viruses. For now, we are most hopeful for potential revenues from Herpes (HSV Type 1 & Type 2), RSV, Smallpox or Mpox (monkeypox).

We find the stock to be highly undervalued and underappreciated, despite its prospects and unique modular platform.

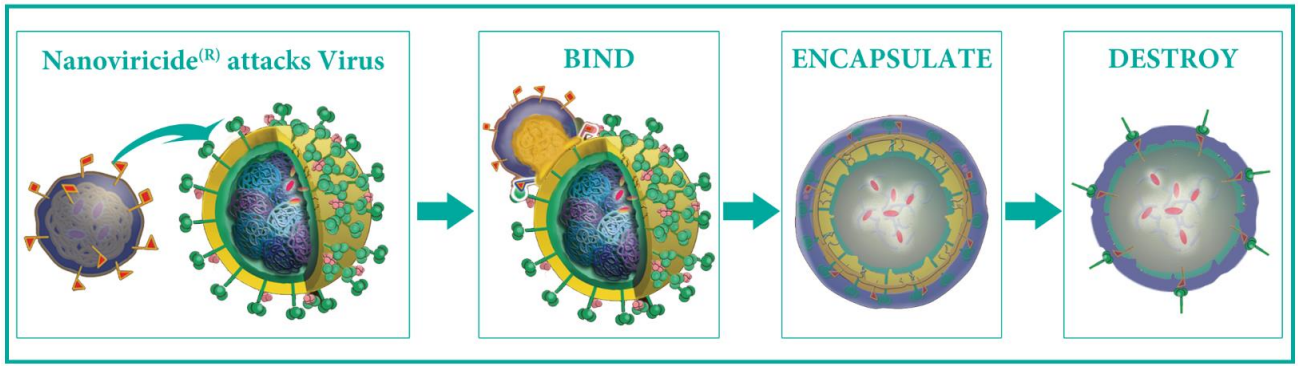
Investment Risks. Risks to the achievement of our price target and stock price performance include safety, efficacy, clinical challenges, operational, regulatory, equity dilution and competitive challenges that could negatively impact the commercial potential of NNVC's development drugs. The COVID-19 life-saving drug treatment market might be competitive and NNVC could encounter challenges in attracting enough patients for hospitalization trials of COVID-19 drug. The declining number of cases and illness severity of the COVID-19 virus, and any improved vaccine effectiveness, are also risks. Additionally, NNVC's technology could create development risk relative to more traditional drug candidates. There is likely to be higher cash burn between July 2024 and June 2025 from NNVC conducing any clinical trials, which also creates the risk of equity dilution from capital raising needs. Biotech stocks have a much higher-than-average risk and can fail. In addition, we strongly encourage investors to review regulatory filings for additional risk factors.

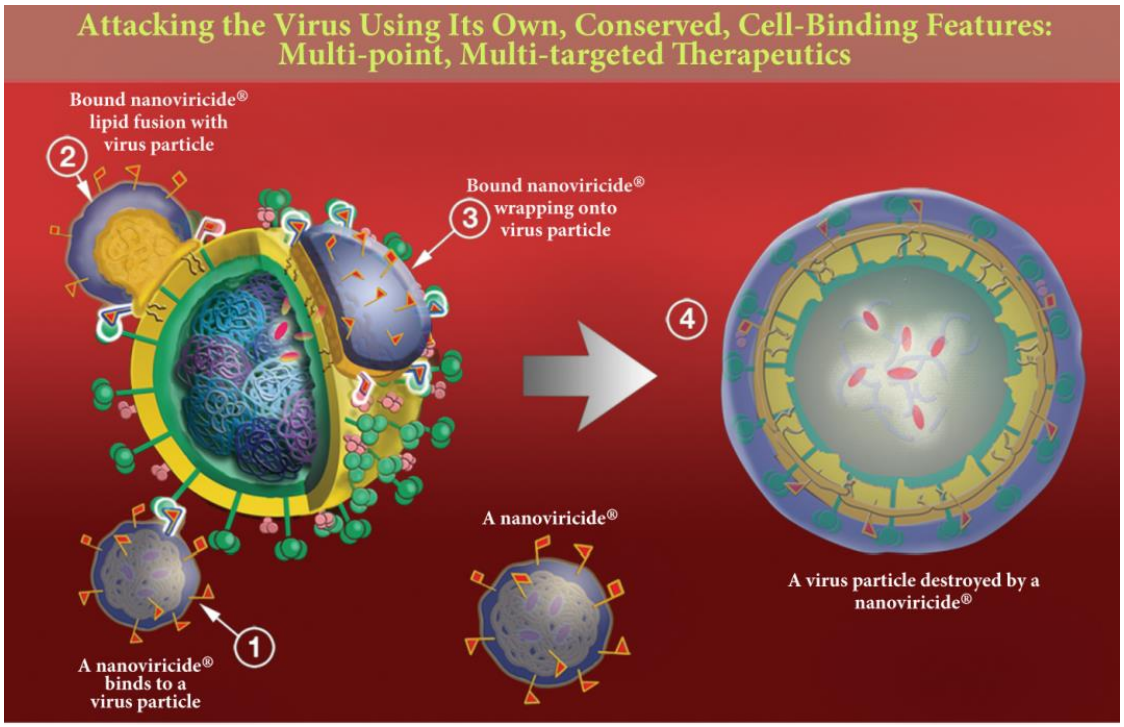
Overview

NanoVircides is a clinical stage company with its first drug (NV-387 nanoviricide active agent) in Phase 1a/1b clinical trial. It has several additional drug candidates in various stages of pre-clinical development, including IND-filing stage and late-stage IND-enabling non-clinical studies. NNVC is teamed with its Indian collaborator and drug sponsor, Karveer Meditech Pvt. Ltd., for the NV-387 trial.

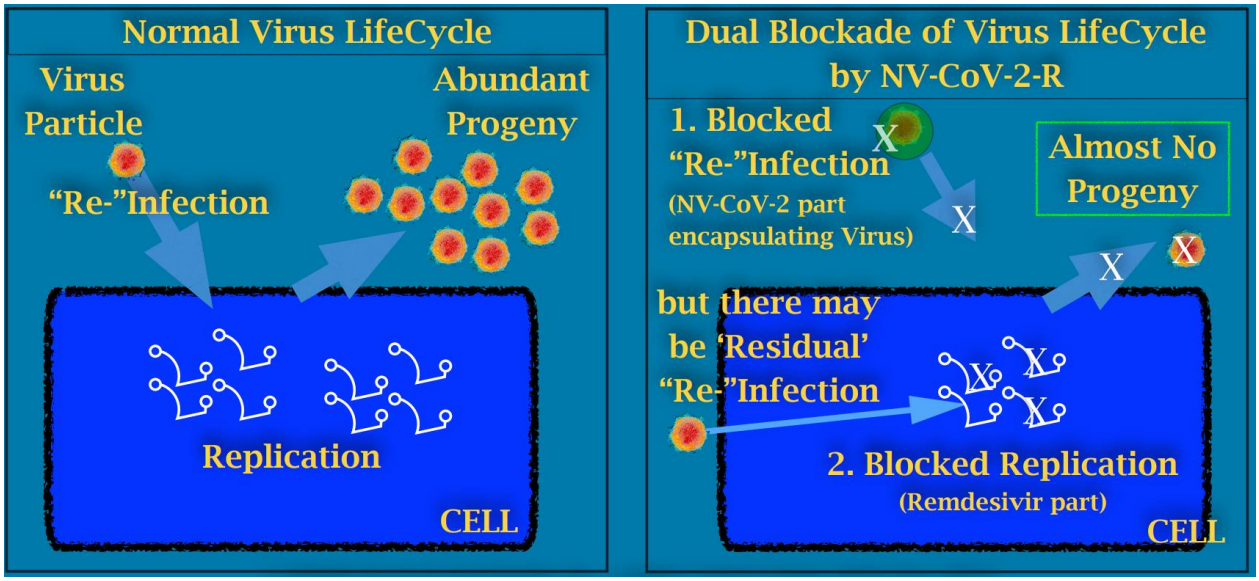
NNVC's proprietary platform has high density of binding sites on their surface, designed to prompt direct attacks on multiple points on a virus particle. Its architected nanoviricides envelope the virus, destabilize the virus and render it non-infectious. This unique biomimetic approach affirms that a virus cannot escape NNVC's nanoviricide drugs due to mutations, if the virus-binding ligands perform as designed. NNVC's platform provides for modalities that can result in potential cures for viruses that do not establish latent virus infection in humans. It focuses on infectious diseases and therapeutics.

NanoVircides was incorporated in April 2005 in Nevada and redomiciled to Delaware in May 2023. Its common stock began trading in September 2013 on the New York Stock Exchange American (formerly AMEX). The company is headquartered in Shelton, CT.



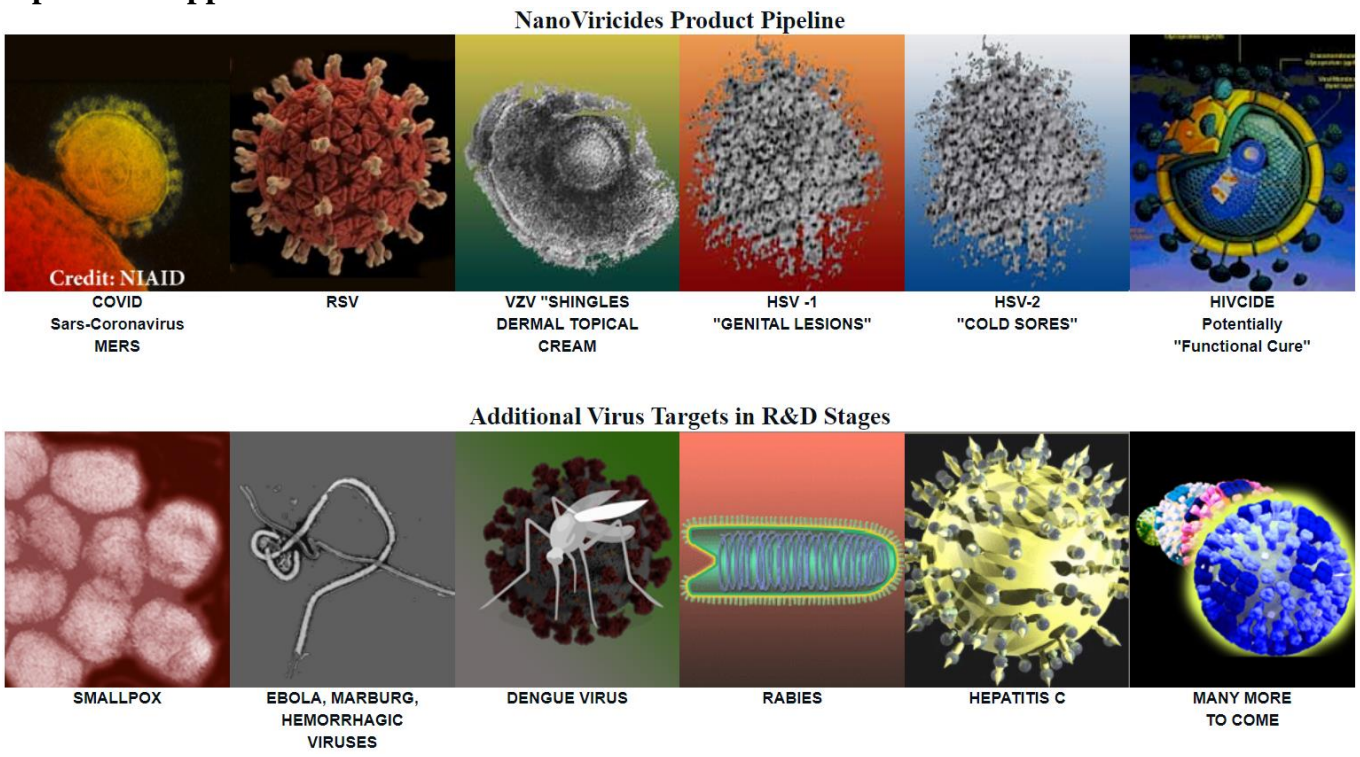


Source: Company Presentation & Website



Source: Company Presentation

Pipeline of Opportunities



Source: Company Website

Investment Thesis

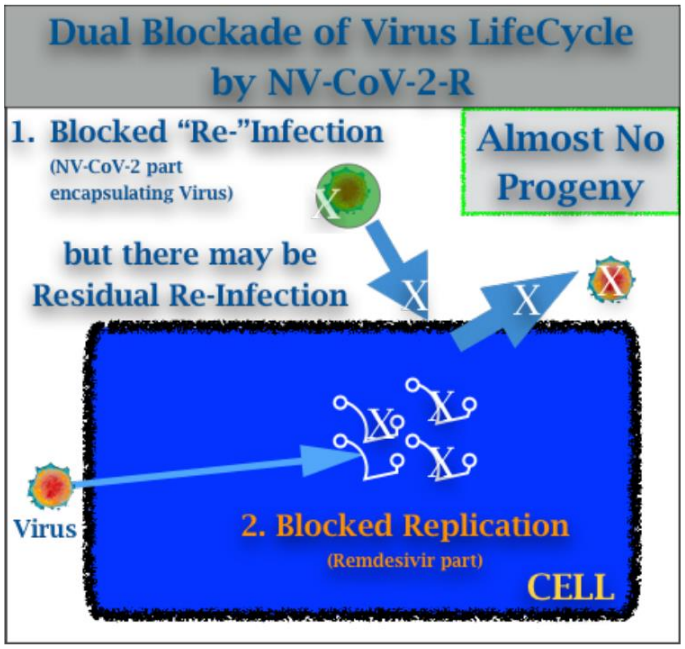
NanoViricides is uniquely positioned to benefit from leveraging its platform technology into many drug development opportunities. Its customizable and flexible platform has recently reached an inflection point to branch out to additional drug treatments and indications. Studies have shown that broad-spectrum nanoviricides created could bind to possibly up to 90-95% of known viruses. We believe NNVC will enlarge its opportunities beyond COVID-19 life-saving treatment and possibly also have success with RSV and Herpes during the next two years.

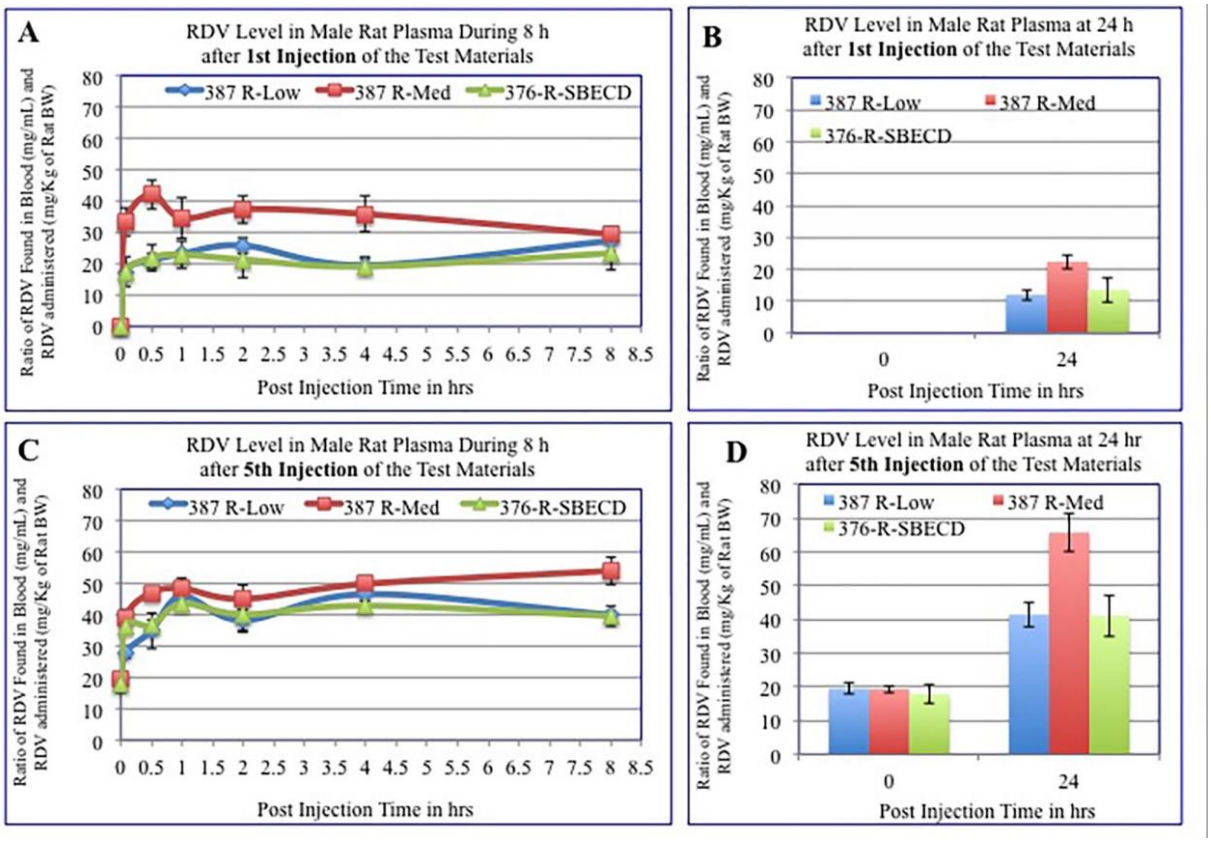
NNVC is a play on Herpes (HSV Type 1 & Type 2), RSV, COVID-19, Smallpox, Shingles, and other respiratory viruses with the potential to address $5 billon of addressable markets. Next summer, NNVC could begin its Phase 2 trials of NV-387 and become successful with that being possibly approved in 2026. There is an additional large opportunity for NNVC's involvement in encapsulation as a drug delivery format with big pharma players over the next several years. We also like NNVC's manufacturing facility and NNVC's overall broad-spectrum approach to simultaneously pursue multiple drug treatments, rather than solely being pigeon-holed on a single development for too long.

We expect the stock to re-rate to our $6.50 price target as milestones are achieved. We find the stock to be highly undervalued and underappreciated despite its prospects and unique modular platform.

Source: EF Hutton analysis

Unmet Need With NV-387 Blocking the Re-Infection Cycle



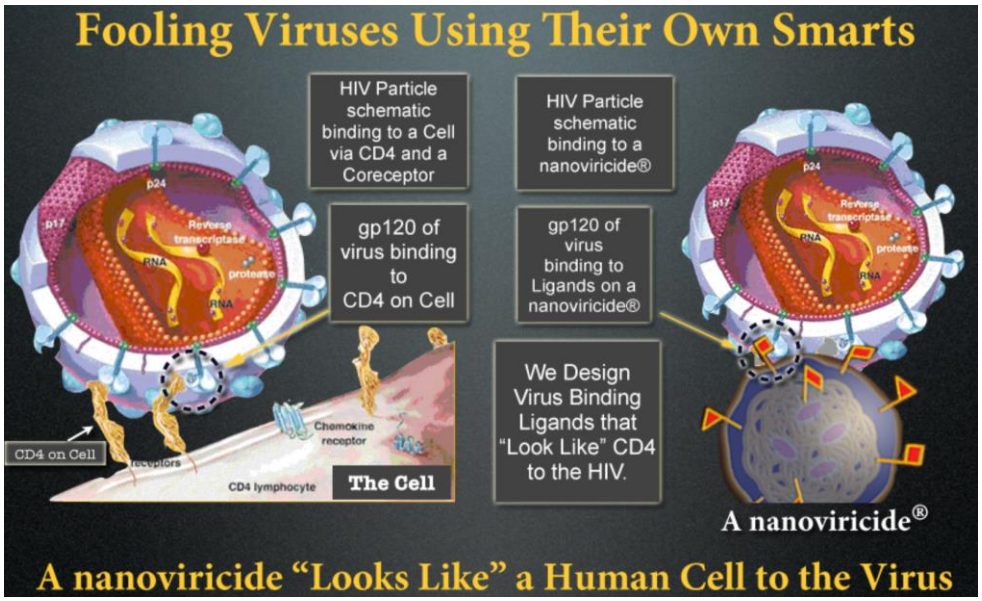


Source: Company Presentation & Fact Sheet

Collaborations & Licensing Agreements

In April 2023, NNVC signed a license agreement with Karveer Meditech, based in India, for Karveer to commercialize the NNVC's COVID drugs (NV-CoV-2 and NV-Co-V-2-R) in India. In September 2021, a proposed master services agreement and intent occurred, followed by regulatory approvals and licenses delayed during the ongoing pandemic. Karveer sponsored the two drugs for clinical development and trials in India. NanoViricides will reimburse Karveer for all direct and indirect costs and a development fee of 30% of such costs, and any applicable taxes. Upon any successful commercialization, NanoViricides will receive a 70% royalty of invoiced sales from India. However, NNVC is allowed to find additional partners and collaborators for commercialization in the United States and other countries.

NNVC also has a material license agreement with TheraCour Pharma (Anil Diwan owns a majority stake of stock) for which NNVC has exclusive licenses, in perpetuity, for technologies developed by TheraCour for the virus types: Human Immunodeficiency Virus (HIV/AIDS), Influenza including Asian Bird Flu, Herpes Simplex Virus (HSV-1 & HSV-2), Hepatitis C Virus (HCV), Hepatitis B Virus (HBV), Rabies, Dengue viruses, Ebola/Marburg viruses, Japanese Encephalitis, viruses causing viral Conjunctivitis (eye disease), Ocular Herpes, SARS, and coronavirus-derived variants.



Source: Company Website

Outlook

Last month, NNVC reported that Phase 1a Single-Ascending-Dose human clinical trial of NV-CoV-2 study was completed successfully. Additionally, this NV-387 drug with NNVC's nanoviricide active agent, showed antiviral activity against RSV and in a model for Smallpox therapeutics.

NNVC does not provide guidance and is unlikely to generate product revenues in the near-term. However, NNVC could receive a milestone payment in calendar 2026 and possibly an additional one in calendar 2027 if progress is made with RSV, encapsulation or Shingles. We forecast a cash burn rate of $5 million this fiscal year and $9 million next year due to anticipated clinical trial costs. Then, $5-8 million cash burn the following year, depending on if a milestone payment is received.

Valuation

Our $6.50 price target is based on our Discount Cash Flow (DCF) model with a WACC discount rate of 15% and a terminal growth rate of 2%. We assume milestone payments in 2026, followed by licensing royalty revenues from partners. Our revenue forecasts are based on NNVC possibly winning 10-15% market share of either RSV or Herpes ($2.5 billion markets each), along with some minor potential revenues from coronavirus.

See page 14 for risks to our investment thesis and price target.

Discounted Cash Flow Model (millions USD $)

	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33	6/30/34
Gross Revenues		**0.0**	**0.0**	**3.0**	**7.0**	**14.0**	**42.0**	**84.0**	**142.8**	**221.3**	**316.5**	**417.8**
Net Revenues after 30% Royalties Paid		**0.0**	**0.0**	**2.1**	**4.9**	**9.8**	**29.4**	**58.8**	**100.0**	**154.9**	**221.6**	**292.5**
Cost of Goods Sold		0.0	0.0	0.0	0.0	2.9	8.8	17.6	30.0	46.5	66.5	87.7
Gross Profit		**0.0**	**0.0**	**2.1**	**4.9**	**6.9**	**20.6**	**41.2**	**70.0**	**108.5**	**155.1**	**204.7**
Research & Development Expense		6.3	11.9	8.9	10.3	11.8	13.6	15.6	18.0	21.6	26.3	32.1
Selling, General & Administrative Expense		2.8	3.3	3.0	3.3	4.1	6.0	8.6	12.5	17.5	24.5	31.9
Operating Income (EBIT)		**(9.0)**	**(15.2)**	**(9.8)**	**(8.7)**	**(9.1)**	**1.0**	**16.9**	**39.5**	**69.4**	**104.3**	**140.7**
Tax Expense		0.0	0.0	0.0	0.0	0.0	0.1	2.0	7.1	12.5	21.9	29.6
NOPAT		**(9.0)**	**(15.2)**	**(9.8)**	**(8.7)**	**(9.1)**	**1.0**	**14.9**	**32.4**	**56.9**	**82.4**	**111.2**
Depreciation & Amortization		0.8	0.8	0.8	0.8	1.5	2.0	2.5	3.0	3.5	4.0	4.5
Changes in Working Capital & Other Non-Cash Items		2.5	3.0	1.3	1.2	(4.0)	(10.6)	(19.1)	(25.9)	(32.1)	(36.8)	(38.8)
Capital Eexpenditures		(0.0)	(0.0)	(0.0)	(0.0)	(3.0)	(3.0)	(3.0)	(3.0)	(2.5)	(2.0)	(2.0)
Free Cash Flow to Firm		**(5.8)**	**(11.5)**	**(7.8)**	**(6.7)**	**(14.6)**	**(10.6)**	**(4.7)**	**6.5**	**25.8**	**47.6**	**74.9**
Terminal Value	**587.1**											
Discounted Cash Flow		**(5.1)**	**(8.7)**	**(5.1)**	**(3.8)**	**(7.2)**	**(4.6)**	**(1.8)**	**2.1**	**7.3**	**11.8**	**16.1**
NPV of Future Cash Flows	**1.0**											
NPV of Terminal Value	**109.6**											
Enterprise Value - Firm	**110.7**											
Plus: Cash and Securities	0.0	forecast for June 2027 after cash burn										
Less: Total Debt	8.0	forecast for June 2027 after cash burn										
Implied Value of Equity	**102.7**											
Fully Diluted Shares (millions)	15.7	forecast for June 2027 after likely equity raises (4m more shares)										
Intrinsic Value per Share (DCF Value)	**$6.54**											

Growth Rate	**2.0%**
WACC	**15.0%**
Capitalization Rate	13.0%

WACC Calculation:		
Total Capital (in millions)	**$15.2**	
Share price	**$1.17**	12/11/23
Shares Outstanding	**11.7**	9/30/23
Market Value (Mkt Cap)	**$13.7**	
Debt	**$1.5**	
Debt %	10%	
Equity %	90%	
Cost of Equity:		
Risk-free Rate of Return	4.6%	
Market Premium	10.3%	
Expected Market Risk Premium	5.7%	
Beta	**2.00x**	adjusted for risk-profile
Cost of Equity	**16.0%**	
Cost of Debt:		
Effective Interest Rate	7.5%	adjusted for risk-profile
Tax Rate	21.0%	
Cost of Debt	**5.9%**	
WACC	**15.0%**	

Source: EF Hutton estimates, Company Reports & Filings

Management Team & Board of Directors

Dr. Anil Diwan, PhD, President and Chairman

Dr. Diwan has also served as the Chief Executive Officer and Director of AllExcel, Inc. (from 1995 to present) and TheraCour Pharma, Inc. (from 2004 to present) and is the original inventor of the technologies licensed to NanoViricides Inc., as well as the TheraCour polymeric micelle technologies and products based on them. He has researched and developed TheraCour nanomaterials since 1992. He has won over 12 NIH SBIR grants. Dr. Diwan holds several issued patents, and two recent PCT international patent applications in various stages of prosecution in a number of countries, and has several additional patentable discoveries. He has held several scholastic distinctions, including an All-India 9th rank on the Joint Entrance Examination of all IIT's. He holds a Ph.D. in Biochemical Engineering from Rice University (1986) and B.S. in Chemical Engineering from Indian Institute of Technology (IIT) Bombay (1980). Mr. Diwan owns approximately 90% of the stock of TheraCour.

Meeta Vyas, Chief Financial Officer, Board Member

Ms. Vyas has served as the Chief Financial Officer since May 2013 and has over twenty-five years of experience in performance and process improvement of both publicly listed companies and non-revenue producing entities, in areas ranging from Finance and Operations to Strategy and Management. Meeta holds the distinction of being the first Indian woman to be named CEO of a publicly listed U.S. corporation, Signature Brands, Inc., best known for "Mr. Coffee" and "Health-O-Meter" brand products. As CEO, acting COO and Vice Chairman of the Board of Signature Brands, Inc., she was responsible for the development and implementation of a turnaround plan, resulting in Signature's return to profitability and growth. Later, as the CEO of the World-Wide Fund for Nature - India (WWF-India) and then as a Vice President of the National Audubon Society (USA), both not-for-profit, non-revenue generating entities. Earlier in her career, she was responsible for designing the strategy and initiating the implementation plan for the highly successful information technology outsourcing program at General Electric ("GE"). Prior to that, as a management consultant with McKinsey and Company, she served publicly listed companies in chemicals, industrial, and technology markets, primarily focusing on growth strategies, valuations, post-merger integrations, and logistics operations. Ms. Vyas holds an MBA in Finance from Columbia University's Graduate School of Business, and a SB in Chemical Engineering from the Massachusetts Institute of Technology.

Randall Barton, PhD, Chief Scientific Officer - Consulting

Dr. Barton has experience in drug discovery and development of both small molecule and biological drug candidates in virology, immunology, inflammation, and cardiovascular diseases in the pharmaceutical and biotech industry, as well as academic research. He has more than 30 years of pharmaceutical industry experience in drug development and pre-clinical regulatory development.

Jayant Tatake, PhD, Vice President of Research & Development

Dr. Tatake is an organic chemist with over 25 years of experience in Research and Process Development of fine chemicals. His experience encompasses production scale-up, and large-scale manufacture of raw materials for pharmaceuticals. Before joining NanoViricides, Inc., he was Assistant Director of Analytical R&D at Interpharm, Inc. Prior to that, he was Director of Analytical Services at Pharmax Group, Inc.

John Dulko, CPA, Accounting Manager

John has been involved with SEC reporting processes, audit support, compliance with internal controls policies and accounting functions since 2015.

Dr. Makarand Jawadekar, Independent Board Member

Dr. Jawadekar has served as an independent Director of the Company since February 2020. He has over 35 years of experience in the pharma industry spanning both business and research activities. Dr. Jawadekar has extensive experience in joint ventures, alliance management, contracting, outsourcing, benchmarking, performance metrics, pharmaceutical research and development, drug delivery technologies, formulations, clinical supply manufacturing and packaging, clinical trial materials, pharmaceutics, and pharmaceutical sciences. He also has deep knowledge and global experience working across the United States, Europe, India, and other parts of Asia, including Japan and China. He has helped create several pharma R&D partnerships, joint ventures, and collaborations during his career.

Todd Rokita, Independent Board Member

Mr. Rokita has been an independent Director of NanoViricides, Inc. since May 2020. Honorable Mr. Rokita currently serves as the Attorney General of the State of Indiana, a publicly elected position. He is also a co-owner of and was General Counsel and Vice President of External Affairs, of Apex Benefits Group, Inc. where he served as a member of the executive team and the corporate board. He was responsible for legal strategies, including litigation, acquisitions and other matters, primarily involving ERISA and employment laws, and was responsible for the regulatory compliance of Apex's clients. In his role, he served as the public face of Apex and was responsible for external messaging, events, and other outreach functions. Previously, Mr. Rokita was elected to the United States Congress as a Representative from the State of Indiana, serving four terms from 2011 to 2019. Prior that, Mr. Rokita served as the Secretary of State, Indiana, from 2003 to 2011 and as Chief Operating Officer and General Counsel, Office of Indiana Secretary of State from 2000-2002.

Brian Zucker, Independent Board Member

Mr. Zucker has been an independent Director of NanoViricides, Inc. since November 2020. Since October 2011, Mr. Zucker has been a Partner at CFO Financial Partners, LLC, a firm that provides outsourced CFO (Chief Financial Officer), Controller and Financial Operations services as well as back office reporting and bookkeeping services for public and private companies, broker dealers, hedge funds, and family offices and high net worth individuals, among others. Mr. Zucker also serves as the CFO and Financial Operations Principal for numerous broker dealers and hedge funds. In addition to and simultaneously therewith, Mr. Zucker has served as a Partner at RRBB Accountants & Advisors, (aka Rosenberg Rich Baker Berman & Co.), a full-service accounting, advisory and consulting firm located in Central New Jersey. Mr. Zucker has over thirty years of experience as a CPA specializing in the securities industry. From 1983 through 1986, Mr. Zucker was a Senior Consultant at Deloitte Haskins and Sells and at Price Waterhouse from January 1987 through September 1989. He has previously served as the President and Chairman of Atlantis Business Development Corp. (ABDV), CFO of Natcore Solar Technology, Inc. (NTCXF) and as a Managing Director of American Frontier Financial Corp. (EVIS). Brian holds a CPA in States of New Jersey and New York, and holds several FINRA licenses. He is on the Board of Directors of National Investment Banking Association (NIBA). Mr. Zucker obtained a B.S. in Public Accounting from Pace University.

Top Shareholders

Top Shareholders	Common Stock Shares	% of Shares Outstanding
Theracour Pharma, Inc	470,959	4.0%
The Vanguard Group, Inc.	458,416	3.9%
BlackRock, Inc. (NYSE:BLK)	160,948	1.4%
Lombard Odier Darier Hentsch & Cie Asset Management	150,000	1.3%
Geode Capital Management, LLC	109,489	0.9%
Renaissance Technologies LLC	76,100	0.6%
Bridgeway Capital Management, LLC	59,039	0.5%
State Street Global Advisors, Inc.	41,906	0.4%
City National Rochdale, LLC	30,535	0.3%
Susquehanna International Group, LLP, Asset Management	29,412	0.3%
Jawadekar Ph.D., Makarand (Independent Director)	22,542	0.2%
Edward Rokita Esq., J.D., Theodore (Independent Director)	22,015	0.2%
Stifel Asset Management Corp.	21,200	0.2%
Zucker CPA, Brian F. (Independent Director)	20,792	0.2%
Northern Trust Global Investments	18,494	0.2%
Wharton Business Group, LLC	15,736	0.1%
XTX Holdings Limited, Asset Management Arm	10,214	0.1%
Vyas B.S., M.B.A., SB, MBA, Meeta R. (Chief Financial Officer)	6,057	0.1%
NBC Securities, Inc., Asset Management Arm	3,400	0.0%
Woodbury Financial Services, Inc, Securities Investments	2,000	0.0%
Asset Dedication, LLC	1,450	0.0%
Connect Capital LLC	1,072	0.0%
Wells Fargo & Company, Securities and Brokerage Investments	1,043	0.0%

Source: S&P Capital IQ (as of 9/30/23 13F filing & Annual Report)

Balance Sheet & Liquidity

(US Dollars in Millions)

Assets	9/30/23
Current Assets	
Cash & Cash Equivalents	7.0
Prepaid Expenses & Other Current Assets	0.2
Non-Current Assets	
Property & Equipment (net)	7.9
Intangible Assets (net)	0.3
Other Non-Current Assets	0.0
Total Assets	**15.4**

Liabilities	9/30/23
Current Liabilities	
Accounts Payable	0.2
Accounts Payable - Related Party	0.4
Accrued Expenses	0.3
Other Current Liabilities	0.0
Non-Current Liabilities	
Convertible Promissory Note - Related Party	1.5
Other Non-Current Liabilities	0.0
Total Liabilities	**2.4**
Shareholder's Equity	
Series A Convertible Preferred Stock	0.0
Common Stock	0.0
Additional Paid-in Capital	146.0
Accumulated Deficit	-133.0
Total Shareholder's Equity	**13.0**
Total Liabilities & Shareholder's Equity	**15.4**

Source: Company Reports & Filings

- The company has a history of funding operating losses and working capital through capital raises. We expect capital raises, including dilution from equity issuance, to continue in the medium-term.

Financial Model & Cash Burn Forecasts

	6/30/21	6/30/22	6/30/23	9/30/23	12/31/23	3/31/24	6/30/24		6/30/25	6/30/26	6/30/27	
(In Millions USD, June Year-End)	FY21	FY22	FY23	1Q	2QE	3QE	4QE	FY24E	FY25E	FY26E	FY27E	
Revenues, Grants & Milestone Paym	-	-	-	-	-	-	-	-	-	3.0	7.0	Milestone Payment assumption March 2026
Research & Development	6.1	5.8	6.4	1.5	1.6	1.6	1.6	6.3	11.9	8.9	10.3	Phase 2 July '24-July '25 increase R&D for trials
General & Administrative Expense	2.6	2.3	2.6	0.6	0.7	0.7	0.8	2.8	3.3	3.0	3.3	Phase 2 July '24-July '25 increase G&A a bit up
Operating Loss/Income	**(8.7)**	**(8.1)**	**(8.9)**	**(2.0)**	**(2.3)**	**(2.3)**	**(2.4)**	**(9.0)**	**(15.2)**	**(8.9)**	**(6.6)**	
Interest Income	0.0	0.0	0.4	0.1	0.1	0.1	0.1	0.4	0.4	0.4	0.4	
Interest Expense	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	0.0	
Other Expense/Income (net)	-0.1	0.0	0.4	0.1	0.1	0.1	0.1	0.3	0.3	0.4	0.4	
Loss Before Taxes	(8.8)	(8.1)	(8.6)	(2.0)	(2.2)	(2.2)	(2.3)	(8.8)	(15.0)	(8.5)	(6.2)	
Income Taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Net Loss	**(8.8)**	**(8.1)**	**(8.6)**	**(2.0)**	**(2.2)**	**(2.2)**	**(2.3)**	**(8.8)**	**(15.0)**	**(8.5)**	**(6.2)**	
EPS	**-$0.81**	**-$0.70**	**-$0.74**	**-$0.17**	**-$0.19**	**-$0.19**	**-$0.20**	**-$0.74**	**-$1.13**	**-$0.58**	**-$0.39**	
Share Count (diluted; weighted ave)	10.9	11.5	11.6	11.7	11.7	11.8	11.8	11.8	13.3	14.8	15.7	assumes more shares issued However, could be less if some debt is raised
Depreciation	0.7	0.7	0.7	0.2	0.2	0.2	0.2	0.7	0.7	0.7	0.8	
Growth Rates:												
Research & Development	30.2%	-5.4%	10.5%	31.8%	36.7%	33.8%	-45.1%	-2.0%	711.8%	458.1%	63.9%	
General & Administrative	-20.3%	-11.4%	9.5%	10.8%	5.5%	13.9%	4.8%	8.4%	487.3%	273.3%	18.8%	
Cash Remaining & Cash Burn												
Cash & Equivalents (debt if negative)	20.5	14.1	8.1	7.0	5.8	4.5	3.0	3.0	(5.8)	(11.0)	(14.9)	Needs to raise possibly $15m by June 2027 (4m
Cash Outflow from Operations	(8.2)	(5.9)	(5.7)	(1.2)	(1.2)	(1.3)	(1.4)	(5.1)	(8.8)	(5.2)	(3.8)	Government grants $2m could help next yr
Capital Expenditures	(0.2)	(0.3)	(0.2)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	Debt raising possible 2026 instead of only equit
Free Cash Flow (Cash Burn)	**(8.5)**	**(6.2)**	**(5.8)**	**(1.2)**	**(1.2)**	**(1.3)**	**(1.4)**	**(5.1)**	**(8.9)**	**(5.2)**	**(3.8)**	

Source: EF Hutton estimates, Company Reports & Filings

Net Operating Loss (NOLs) Carryforwards

Future taxes, if income is generated, could be partially offset by the NOLs. Although we do not expect much NOLs benefit based on the expiration dates below per the recent 10-K filing:

At June 30, 2023 and 2022, the Company has recorded a full valuation allowance against its net deferred tax assets of $37,390,846 and $36,506,779, respectively, since in the judgment of management, these assets are not more than likely than not to be realized. The increase in the valuation allowance during the years ended June 30, 2023 and 2022 were $884,067 and $1,240,080, respectively.

As of June 30, 2023, the Company has approximately $104 million of gross net operating loss carryforwards available to reduce future taxable income, if any for federal and state tax purposes. Aggregate federal net operating losses generated after June 30, 2018 of approximately $35 million can be carried forward indefinitely. Net operating losses incurred in tax years beginning prior to June 30, 2018, of approximately $69 million, is limited to 80% of annual taxable income. Net operating losses generated in years ended June 30, 2018 and prior have a 20-year carryforward and will begin expiring in 2025. As of June 30, 2023 and 2022, research and development credit carryforwards for federal and state purposes are $7,868,816, and $7,774,567, respectively. The state net operating loss and credit carryforwards begin to expire in 2025.

Risks to Our Buy Rating & Price Target

In addition to the risks mentioned below, we strongly encourage investors to review the regulatory filings for additional risk factors.

- Clinical trial challenges
- Efficacy
- Safety and toxicity
- Operational challenges or mis-execution by NNVC or its partners
- Reliance on third parties for suitable testing facilities and running the clinical trials
- Regulatory and competitive challenges that could negatively impact the commercial potential of NNVC's development drugs
- Lack of commercial success, failure of a creating successful drug treatment or lack of FDA approval
- The COVID-19 life-saving drug treatment market could be competitive and NNVC might encounter challenges in attracting enough patients for hospitalization trials of COVID-19 drug. The declining number of cases number and illness severity of COVID-19 virus and any improved vaccine effectiveness are also risks.
- Potential equity dilution from capital raising
- Higher cash burn possibly in late calendar 2024 and 2025 if NNVC conducts any clinical trials
- TheraCour Pharma, Inc. holds 33% of voting power (from combined ownership of common shares and Series A preferred shares)
- License Agreement with TheraCour Pharma
- Related party transactions and funding; specifically, by the founder and President (Anil Diwan)
- Executive team quantity of members and related-parties (CEO & CFO)
- Patents expiration
- Auditor changes

Important Disclosures

Analyst Certification

I, Tim Moore, CFA, certify that all of the views expressed in this research report accurately reflect my personal views about the subject security(ies) and subject company(ies). I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this research report.

Company-Specific Disclosures

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EF Hutton rating definitions are expressed as the total return relative to the expected performance of S&P 500 over a 12-month period.

BUY (B) - Total return expected to exceed S&P 500 by at least 10%

HOLD (H) - Total return expected to be in-line with S&P 500

SELL (S) - Total return expected to underperform S&P 500 by at least 10%

Distribution of Ratings/IB Services

EF Hutton

			IB Serv./Past 12 Mos.	
Rating	**Count**	**Percent**	**Count**	**Percent**
BUY	**34**	**97.14**	**7**	**20.59**
HOLD	**1**	**2.86**	**0**	**0.00**
SELL	**0**	**0.00**	**0**	**0.00**


NanoViricides, Inc. Rating History as of 12/11/2023
I:BUY:$8.75
10/19/2021
BUY:$8.50
04/14/2022
BUY:$5.25
02/27/2023
D:BUY:$5.25
08/14/2023
7
6
5
4
3
2
1
Jan 21
Apr 21
Jul 21
Oct 21
Jan 22
Apr 22
Jul 22
Oct 22
Jan 23
Apr 23
Jul 23
Oct 23
Price (USD)
Closing Price