"Bind-Encapsulate-Destroy"

NanoViricides Incorporated

NNVC *(NYSE American)*

NanoViricides' Topical Drug Candidate Against Shingles (VZV) Preparing for Regulatory Trials;

SARS-CoronaVirus-2 Therapeutics in Development

An Array of Indications in Herpecide™ Program Alone

Corporate Presentation
February 24, 2020

Presented by:
Anil R. Diwan, PhD
President & Exec. Chairman
Mobile: 203-606-9180
adiwan@nanoviricides.com

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Disclosure Statement

NanoViricides, Inc. is a NYSE-American listed publicly traded company (stock symbol: NNVC). This is not an offering memorandum and should not be construed as such. It is provided as a non-confidential document for informational purposes only.

NanoViricides, Inc.(www.nanoviricides.com) is a development stage company that is creating special purpose nanomaterials as therapeutics against a number of different viruses. The Company's novel nanoviricide® class of drug candidates are designed to specifically attack enveloped virus particles and to dismantle them. All of our drug candidates are based on broad and exclusive worldwide licenses in perpetuity from TheraCour Pharma, Inc. for the development of drugs to combat viral infections of Human Immunodeficiency Virus (HIV/AIDS), Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), Herpes Simplex Viruses (HSV-1 and HSV-2), Varicella-Zoster Virus (VZV), Influenza and Asian Bird Flu viruses, Dengue viruses, Ebola/Marburg viruses, Japanese Encephalitis virus, viruses causing viral Conjunctivitis (a disease of the eye). The Company anticipates obtaining a license for the coronaviruses field. Typically, the Company obtains a license for a virus field after initial studies demonstrate effectiveness against a virus in that field. TheraCour has not denied any licenses requested by the Company.

This document contains forward-looking statements that reflect the current expectation of NanoViricides, Inc. (the "Company) regarding future events. Actual events could differ materially and substantially from those projected herein and depend on a number of factors. Certain statements are "forward-looking statements" within the meaning of Section 27A of the Securities18 Act of 1933 and Section 21E of the Securities Exchange Act of 1934. You should not place undue reliance on forward-looking statements since they involve known and unknown risks, uncertainties and other factors which are, in some cases, beyond the Company's control and which could, and likely will, materially affect actual results, levels of activity, performance or achievements.

The Company assumes no obligation to publicly update or revise these forward-looking statements for any reason, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future. Important factors that could cause actual results to differ materially from the company's expectations include, but are not limited to, those factors that are disclosed under the heading "Risk Factors" and elsewhere in documents filed by the company from time to time with the United States Securities and Exchange Commission and other regulatory authorities.

Although it is not possible to predict or identify all such factors, they may include the following: demonstration and proof of principle in pre-clinical trials that a nanoviricide is safe and effective; successful development of our product candidates; our ability to seek and obtain regulatory approvals, including with respect to the indications we are seeking; the successful commercialization of our product candidates; and market acceptance of our products.

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Presentation Layout

- Developing Drugs that Virus May Not Escape due to Mutations
- Industry-Leading Platform Technology Exclusively Licensed from TheraCour Pharma, Inc.
- Our Own cGMP-Capable Manufacturing, R&D, and Nanomedicine Characterization Facility Enables Rapid Development and Potential for Early Commercialization Revenues On Our Own
- Broad Pipeline with Multi-Billion Dollar Markets
- SARS-CoV-2 Therapeutics Development Strategy and Status
- Current Focus on HerpeCide™ Program with a Franchise of Drugs
- Lead Drug Candidate - NV-HHV-101 for Shingles Rash Indication
- NV-HHV-101 - Shingles Rash - First Drug Candidate
- Technology Strategy, Other Programs
- Team

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- Current Focus on HerpeCide™ Program with a Franchise of Drugs
- Lead Drug Candidate - NV-HHV-101 for Shingles Rash Indication
- Investment Thesis - Company Valuation, cGMP Manufacturing Capabilities, Platform Technology, Multiple Candidates and Programs, Poised for a Strong Future
- NV-HHV-101 - Shingles Rash - First Drug Candidate
- Technology Strategy, Other Programs
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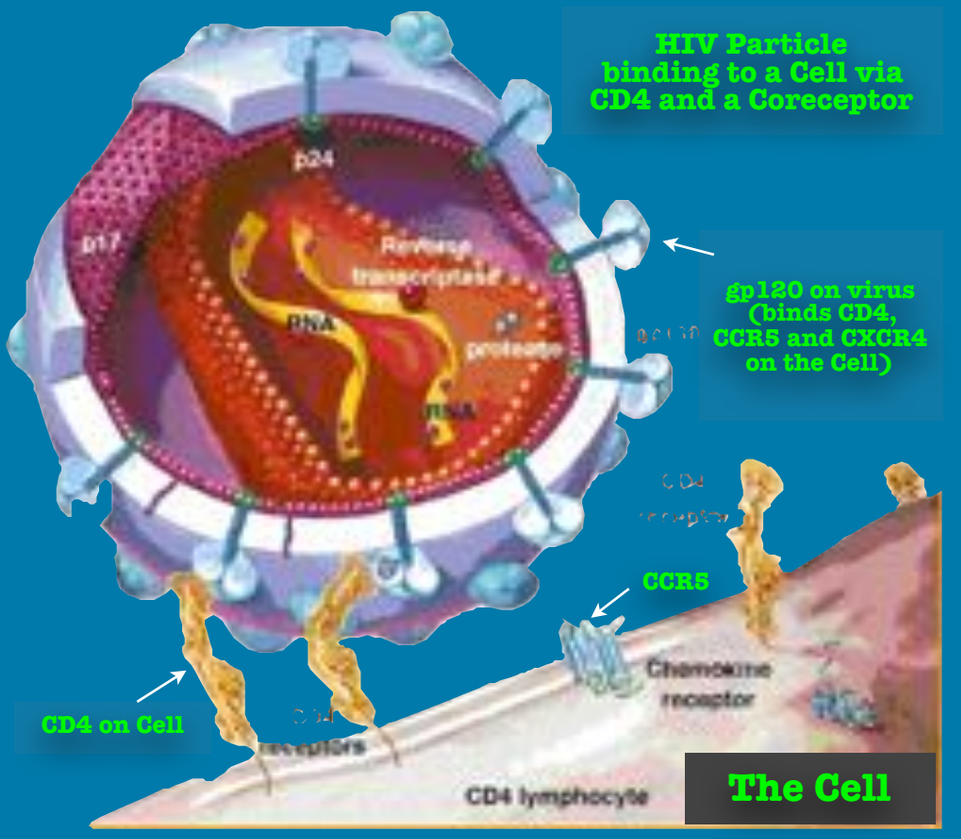
Novel Platform Technology: A nanoviricide® is a Cell Mimic

Viral Resistance to the Nanoviricide Drug is Unlikely because Even as the Virus Mutates, It Still Binds to the Same Cell Surface Receptor(s), in the Same Fashion



A nanoviricide "Looks Like" a Human Cell to the Virus

A nanoviricide is large enough for a virus particle to latch onto it. Yet small enough to circulate readily in the body.

Rather than the virus particle entering into a nanoviricide, a nanoviricide wraps around the virus particle and encapsulates it, by using the virus particle's very same ability to enter a cell

Artificial Cell Bio-Mimicry Technology

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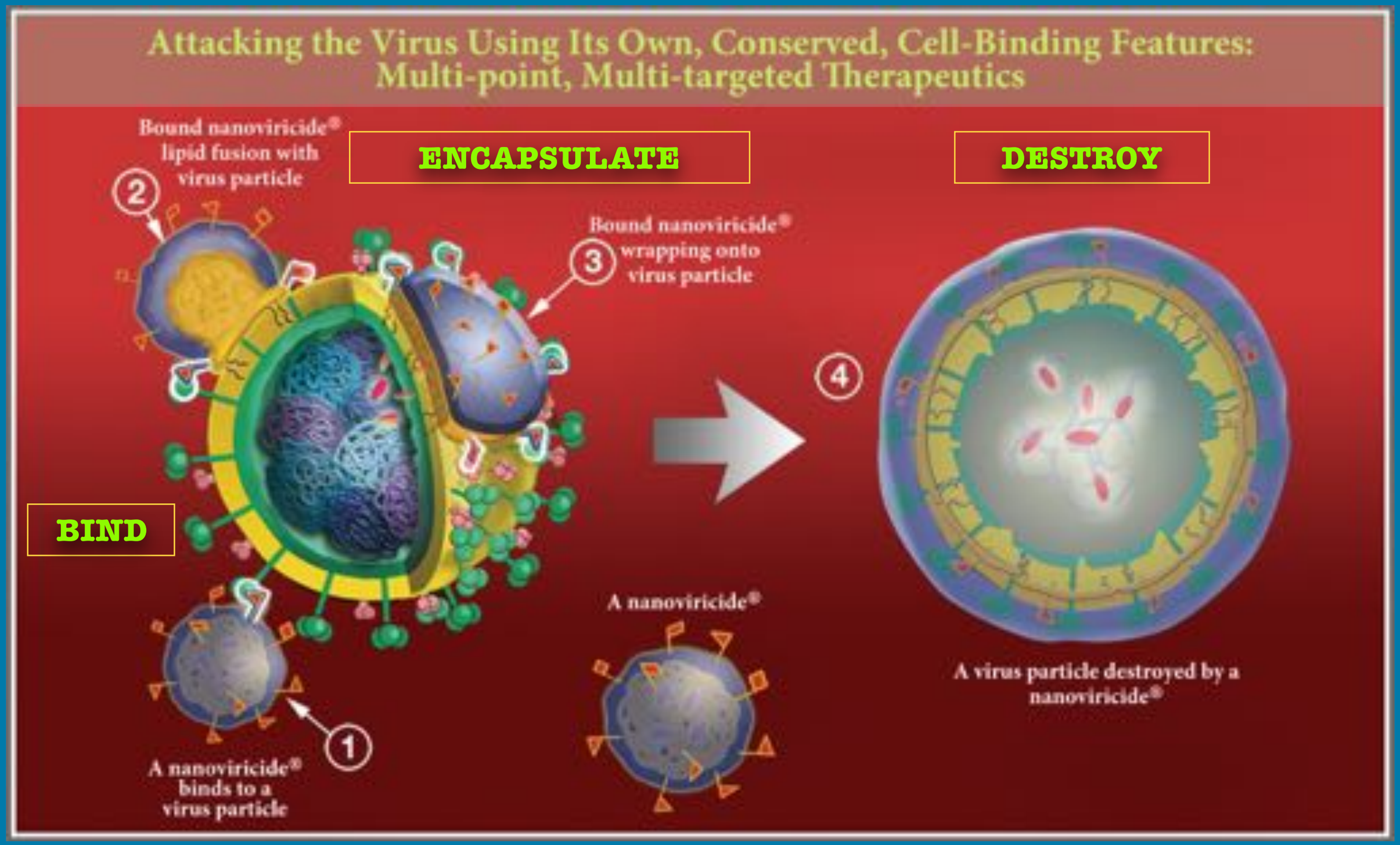
A NanoViricide® Attacking a Virus Particle: Unique, Novel, Nanotech Design



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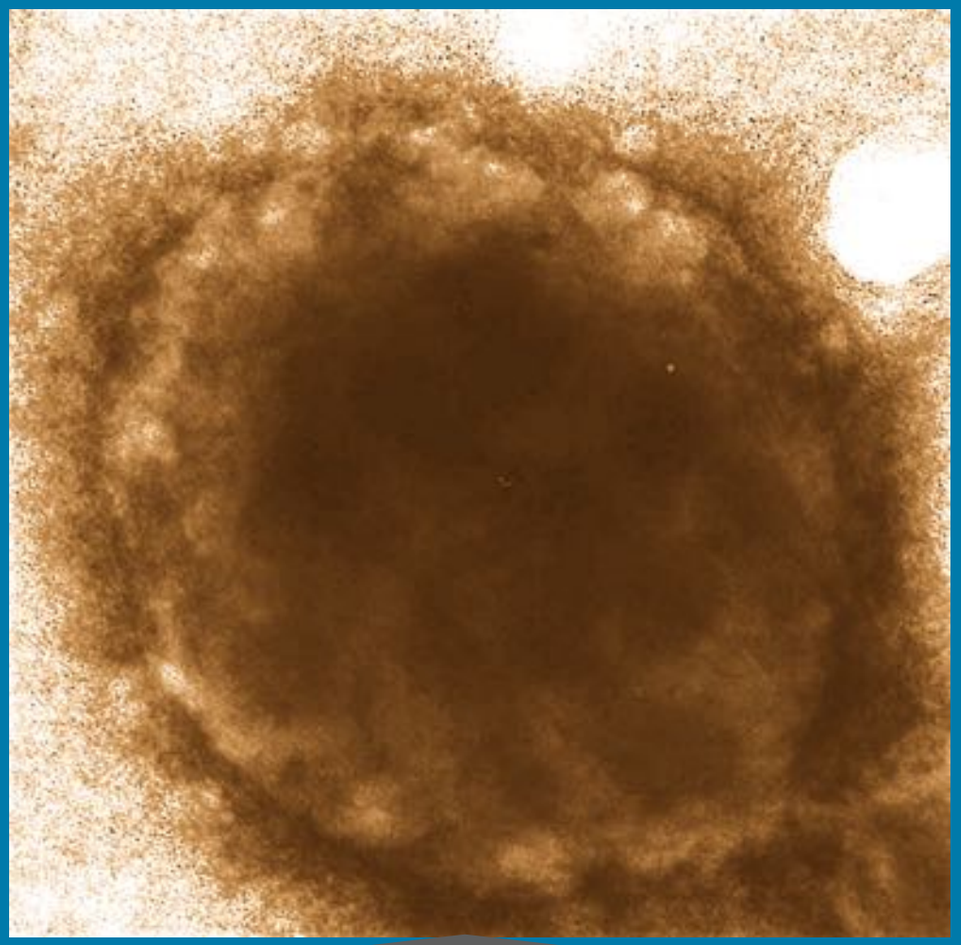
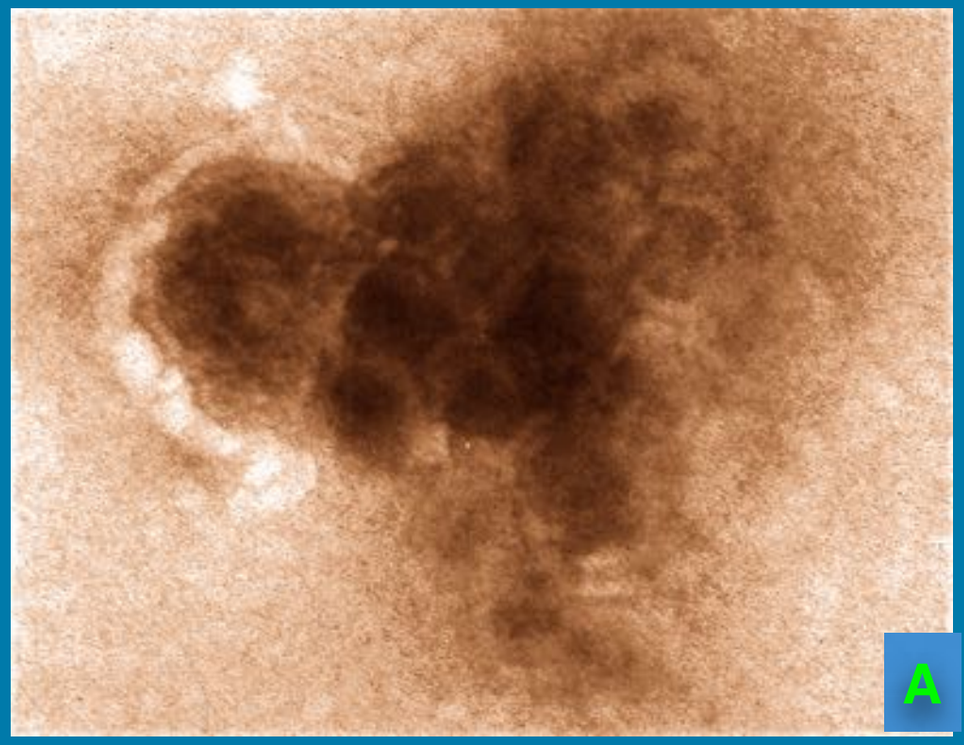
Nanoviricides Dismantling MCMV Virus Particle

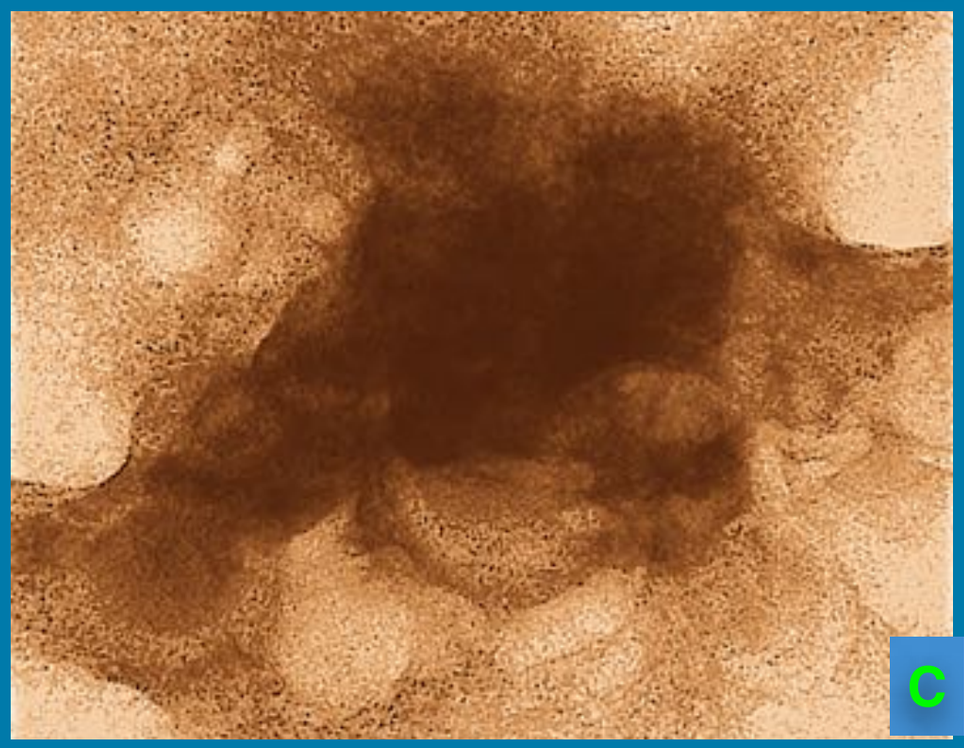
Control



MCMV Virus Particle Containing Multiple Capsids

Treated





**Virus Dismantled;
Capsids Spilling Out
A: intermediate state;
C: total dismantling**

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NanoViricides is a Unique Drug Developer Company with Its Own cGMP-Capable Manufacturing Capability

- **Clinical Product Supply Capability for Mostly All of Our Nanoviricides**
- **Significant Time and Cost Savings**
- **Potential for Manufacturing Commercial Product - Market Entry & Early Revenues**

- Nanomedicines Characterization Facility
- Virology BSL-2 Certified Lab
- Protect Proprietary Technology & Intellectual Property
- Rapid Transfer from Lab Bench to cGMP Manufacture
- Highly Customizable and Flexible Pharma Manufacturing Capability
- Skin Creams, Eye Drops, Gels, Injectables, Oral…

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NanoViricides Platform Technology Has Enabled Several Drug Programs for a Broad Drug Pipeline

Pre-Clinical Successes Achieved in Several Programs

FluCide™ a. Injectable

FluCide™ b. Oral

HivCide™ "Functional Cure?"

DengueCide™ Avoid ADE

FluCide™ Injectable	FluCide™ Oral	HIVCide™	DengueCide™	Other Programs: Platform Technology
Potentially One Drug for All Influenzas	Potentially One Drug for All Influenzas	Potentially "Functional Cure"	Avoid ADE Effect	Select Ligand for Different Virus
Injectable for High Potency	Oral for Ease of Use by Out-Patients	Possibly the Only Technology Platform that Can Enable Total Cure of HIV by Hunting Out Latent Infection	NanoViricides has Orphan Drug Benefits in US & EU	Select Polymer Backbone for Desired Route of Administration

Many More Possibilities for the Platform

The overall anti-viral market addressed by our programs was estimated to be $40 billion in 2018 and $65.5 billion in 2023[a]

a. Jain Pharma Biotech - Antivirals Report, 2014

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SARS-Cov-2 NanoViricide Drug Development Using Biomimetic Technology

- **NanoViricides Has Already Designed Multiple Small Chemical Ligands to Mimic ACE-2 Epitope at which SARS-Cov S1 Binds**
  - **Angiotensin Converting Enzyme 2 (ACE2) Serves as Receptror for the 2002 SARS-CoV as well as the 2019 SARS-CoV-2**
- Backbone Polymer is in our Inventory
- Backbone Polymer Already Produced in Multi-Kilogram Quantities Under c-GMP Processes
- Covalent Attachment of Ligands to Polymer in Progress
- Circulating Human Coronavirus Strains Have Been Expanded
- Cell Culture Based CoronaVirus Inhibition Assay is Being Implemented in Our Own BSL-2 Virology Lab
- Multi-Kg cGMP-capable Manufacturing On Our Own Site Can be Performed Once Lead is Identified and Validated
- One Platform-Based Drug Candidate (NV-HHV-101) is in IND Application Stage - Has Already Successfully Completed Safety/Toxicology Studies

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Our Current Focus is on the HerpeCide™ Program Regulatory Development

NanoViricides Leveraging Herpecide Program Developments into Multiple Drugs Franchise

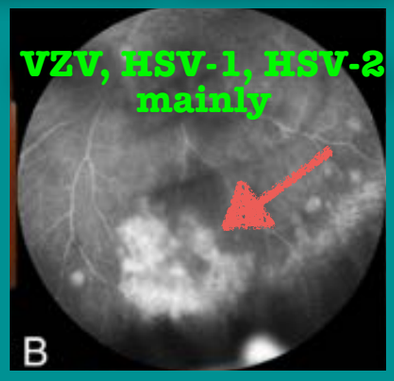
VZV Shingles

HSV-2 Genital Lesions

HSV-1 Cold Sores

Herpes Keratitis

"ARN" Acute Retinal Necrosis



VZV Lead Drug Candidate NV-HHV-101	HSV-2	HSV-1	Herpes Keratitis	Acute Retinal Necrosis
Shingles Rash Treatment	Genital Ulcers Treatment	Cold Sores Treatment	Herpes Keratitis Treatment	Acute Retinal Necrosis Treatment
IND-Enabling Studies; Pre-Clinical	Pre-Clinical Optimization	Pre-Clinical Optimization	Pre-Clinical	Pre-Clinical
Dermal Topical Skin Cream	Dermal Topical Skin Cream	Dermal Topical Skin Cream	Eye Drops	Injectable
Additional Future Indications in HerpeCide Program				
Chickenpox (Possibly Orphan Drugs)	PHN (Post-Herpetic Neuralgia)	Recurrent Herpes Labialis		

Market Size for HerpeCide™ Program Drugs estimated at Over $3-$5 Billion
Lead Indication Shingles Rash Market Size estimated at $1 Billion or More
(takes into account impact of Shingrix and other Vaccines)

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NanoViricides' Regulatory Strategy

- Dermal Topical Drug as First Candidate -> Quicker Path
  - rather than systemic therapeutics
- Multiple Indications with Same Drug Candidate or its Derivatives to Maximize Shareholder Value and ROI
  - VZV Shingles
  - HSV-2 Genital Herpes
  - HSV-1 Herpes Labialis "Cold Sores"
  - Herpes Keratitis (HSV-1 >95%) (External Eye)
  - Also: Ocular Herpes; Acute Retinal Necrosis; Other Indications

Distribute Development Costs over Multiple Indications

Shingles Rash
from img.webmd.com

Herpes Keratitis
Stromal vascularization,
Lipid keratopathy

Herpes Cold Sores
from www.removecoldsores.com

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Lead Drug Candidate NV-HHV-101: Business Case

- **Potentially Billion+ Dollar Market for Topical Shingles Rash Treatment alone, even after the new vaccine Shingrix® has been introduced**
  - **500,000 to 1,000,000 Cases Annually in the USA Alone**
- Additionally, NV-HHV-101 is Expected to Lead into Dermal Topical Treatments for:
  - HSV-1 “Cold Sores”, and
  - HSV-2 “Genital Ulcers”
- Open Multi-Billion Dollar Additional Markets
- Many Additional Indications
- Expanding Indications means Improving ROI and Maximizing Shareholder Returns

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Lead Drug Candidate NV-HHV-101 Status - Getting Ready for IND Filing

- Indication: Shingles Rash Treatment. Form: Topical Skin Cream
- Anticipate Human Clinical Trials to Begin in CY 2020 Q1/Q2
  - FDA Response "Generally Adequate" on Pre-IND Filed with FDA
  - Non-Clinical Safety/Toxicology Studies Complete - except certain analyses
  - Awaiting GLP Safety/Toxicology Study Reports
  - External Collaborations for IND Write-ups, Clinical Trial Design, eCTD Conversion, and FDA Submission in Progress
  - Clinical Trial Site Selection in Progress
  - Proposed Adaptive Protocol Phase I Plus Phase IIa Combined
- IND Filing - Major Milestone
- Program Expected to Provide Value-Driving Data Reads As the Trials Progress

Shingles Rash
from img.webmd.com

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Investment Thesis:
NanoViricides Platform Technology and Facility

- Platform Technology - A “Venus-Fly-Trap” for Viruses - “Bind-Encapsulate-Destroy” - Drugs that Viruses Cannot Escape by Mutations
- Multiple Drug Programs with Many Candidates having demonstrated Successful Animal Model Effectiveness and Safety
- Enable Continuing Future Growth
- Own cGMP Manufacturing Facility Supplying Clinical Product Needs
  - Saves Money, Time, and Minimizes IP Exposure
  - May Enable Production for Early Commercial Market Entry
- Early Successes - Strong Effectiveness in Influenza, HIV
- Now Focused on Regulatory Development of Drugs in HerpeCide™ Program
- IND-Enabling Safety and Effectiveness of First Drug Candidate Demonstrated
- Validate Platform Substantially as First Drug Goes Through Clinical Trials

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Investment Thesis:
NanoViricides Valuation

- Company Founded and taken public (reverse shell merger) in 2005 - Platform Technologies Licensed from TheraCour Pharma, Inc.
- Market Cap Historically Around $100~150M
- Uplisted to NYSE-American in September 2013
- Moved to Integrated cGMP Manufacturing & R&D Facility in 2015
- Fully Owned Facility Asset Value ~$10M Net-of-Depreciation
- Focused on Regulatory Development of HerpeCide Program
- “Valley of Death” Phenomenon
- Valuation May be Anticipated to Go Substantially Higher with First Drug Entering Clinical Trials
- Large Market Sizes Enable Strong Future Potential

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Shingles Rash breakouts - HHV-3 aka VZV

- **Unmet Medical Need : Available drugs in use not very effective (vaccines exist)**
- The chickenpox virus surviving in ganglia causes Shingles in adults
  - About 500,000 to 1 Million Cases Per Year in the USA Alone
  - Risk Increases with Age
- Triggered by Reduced Immune Function
  - Stress, Age, Immune Compromised/Suppressed
- Severe Stinging Pain & Zosteriform Rash
  - Pain May Persist for Months or Years After Resolution of Outbreak - PHN
  - Virus Damaged Nerves Continue to Signal Sharp, Debilitating Pain
  - Pain Could be Avoided/Minimized if Virus is Controlled
- Broad-Spectrum HerpeCide™ Could be a Highly Effective Drug

Shingles Rash
from img.webmd.com

Potential Billion+ Dollar Market Size projected even after the new vaccine introduction

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Lead Drug Candidate NV-HHV-101
Dermal Topical Skin Cream for Treating Shingles Rash

Risk is Minimized for Human Clinical Studies,
Since Efficacy and Safety Data are Obtained in Human Skin Itself

- Standard of Care, Valtrex® Oral, is Not Very Effective
  - Because viral TK enzyme activity required for converting Acyclovir class of drugs to active form is very poor in VZV compared to HSV-1 or HSV-2
- 5x More Effective than Acyclovir in Cell Culture
- Human Skin Patch Organ Culture Studies ->
  - Highly Effective
  - Very Safe - No Histological Changes
  - Studies in Professor Jennifer Moffat Lab, Upstate Medical Center, SUNY, Syracuse, NY
  - Professor Moffat is a Leading Researcher in VZV Infection

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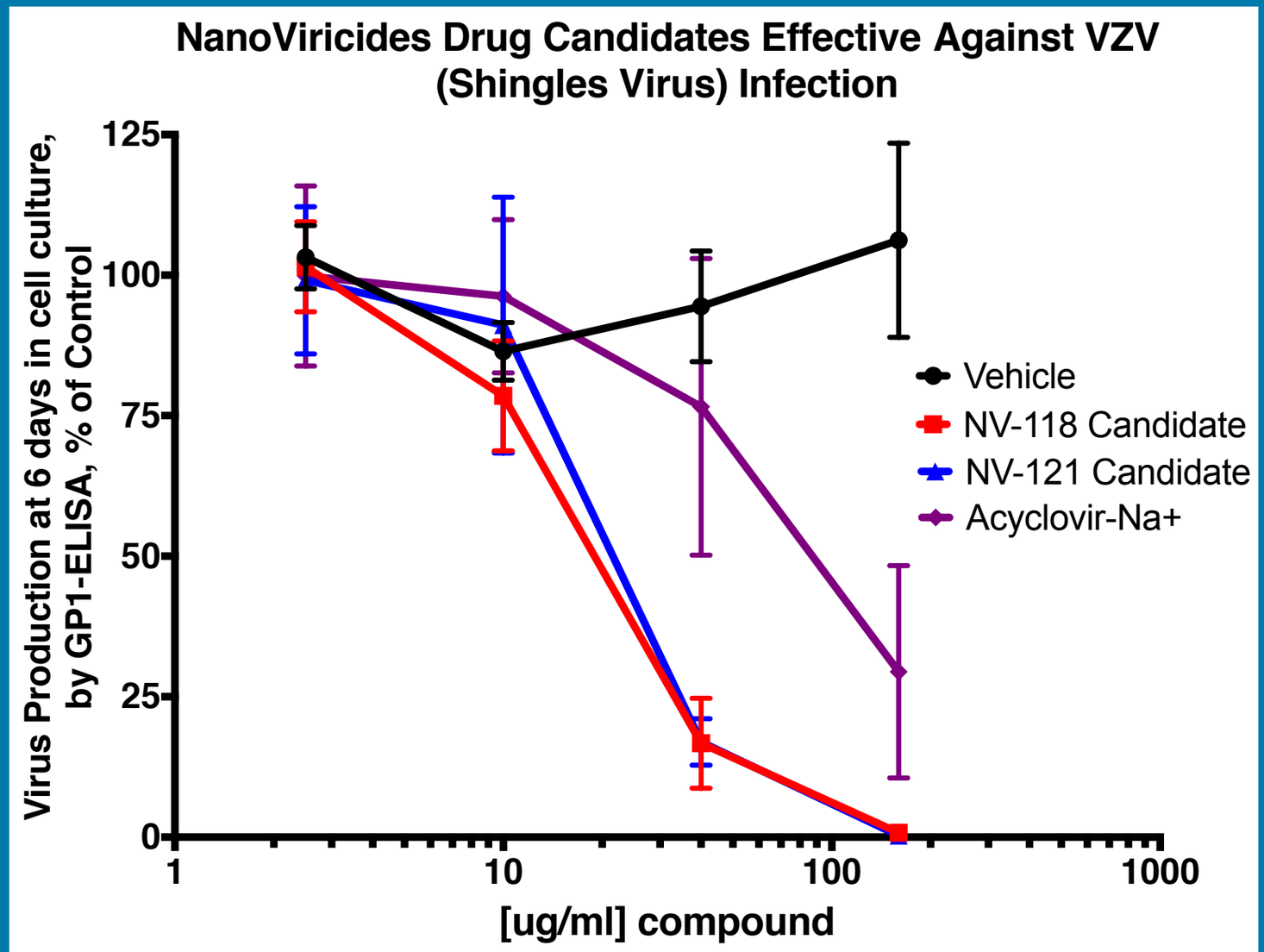
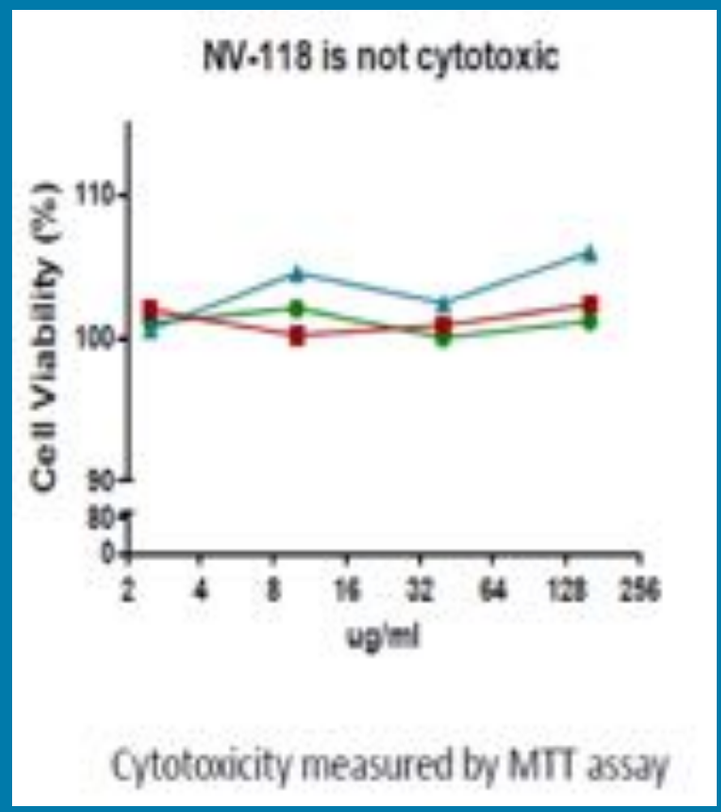
Optimization Studies
VZV (Shingles) Topical Candidates Highly Effective - Five Times More Effective against VZV than Acyclovir in Cell Cultures (Pre-Clinical)





Also, Against HSV-1 and HSV-2, Found Similar Strong Effectiveness in Cell Cultures using multiple virus strains and multiple cell lines

Poster Presented by NanoViricides at the American Society of Virology Annual Meeting, 2018, Madison, WI.

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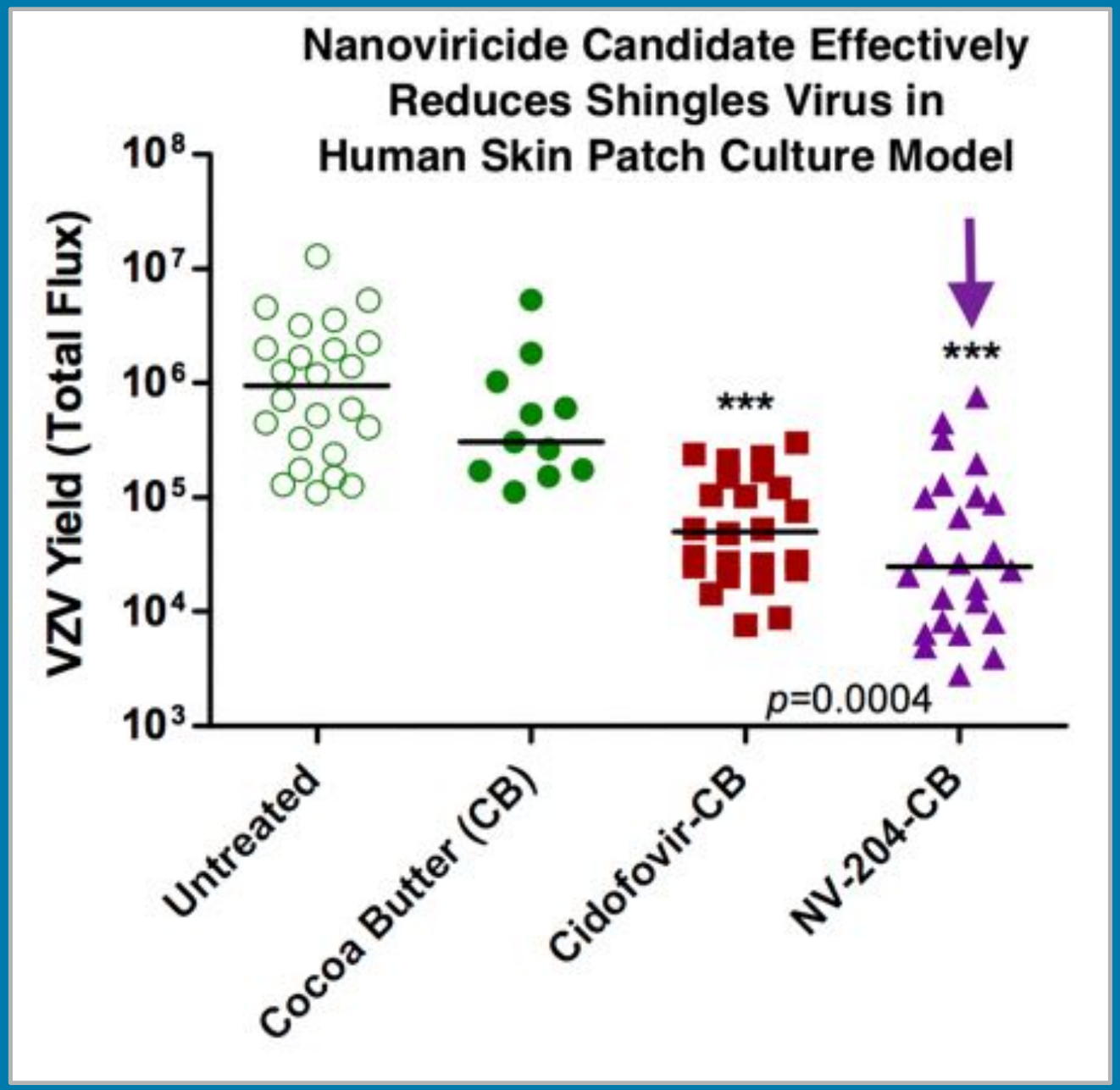
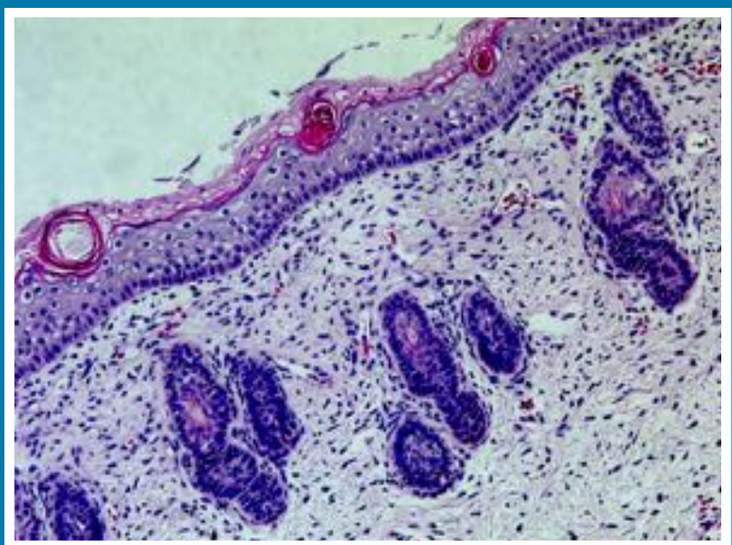
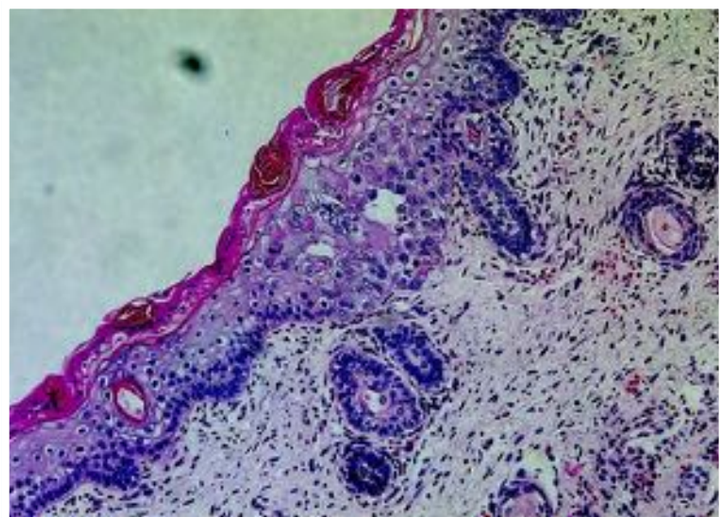
VZV (Shingles) Topical Drug Candidates Are Highly Effective

Match Efficacy of Cidofovir in Human Skin Organ Culture Model of VZV Infection (Pre-Clinical)





NV-118 Treated VZV Infected Skin
Normal Dermis and Epidermis.
No viral infiltration or lesions seen



VZV Infected Skin -
Basal Layer Breaches seen, Also,
Multinucleated Giant Cells seen

Note: Cidofovir is higly toxic (https://reference.medscape.com/drug/vistide-cidofovir-342606#5)

Poster Presented by Moffat Group, SUNY Syracuse Upstate Medical Center, at the International Conference on Antiviral Research, June 11-15, 2018, Porto, Portugal

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VZV (Shingles) Topical Candidate Moving Rapidly To Clinical Trials

Preliminary Non-GLP Safety/Tolerability Studies in Rats Successful (2018)

- No clinically observable adverse safety and toxicology effects in topical administration
- No clinically observable adverse safety and toxicology effects in systemic administration (IV or IP)
- No observable direct effects on the primary organ functions whether the drug was administered to the skin or systemically
  - liver and kidney function is unaffected, among other organs
- Consistent with Strong Safety Observed in Human Skin Patch Efficacy Model Studies

Thereupon Undertook Manufacturing Scale-up,
Final Drug Candidate Optimization,
Final Drug Product Formulation, and
Entry into IND-enabling Safety/Toxicology Studies (“Tox Package”)

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VZV (Shingles) Topical Drug Candidate : IND-Enabling Safety/Toxicology Package Studies Non-GLP Studies

- Non-GLP Portion of IND-Enabling Safety/Toxicology Studies Completed by BASi, IN ca. February, 2019
- Excellent Safety Profile Observed
- cGMP Manufacture for GLP Safety/Toxicology Studies Completed
  - GLP Studies began in May, 2019, at BASi, IN

GLP Safety/Toxicology Studies

- In-life Portion of GLP Studies completed in July 2019, at BASi, IN
- Excellent Safety Profile Observed in Clinical Observations
- Toxicokinetics Studies In Progress - Almost Complete
- Histological Studies Complete
- Awaiting Reports

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HerpeCide™ Program Future Expansion

Drug Candidates in Current HerpeCide Program

May Have Applications Against Other HerpesViruses:

- Epstein-Barr Virus:
  - Mononucleosis
  - Monoclonal Gammopathy
  - other B-cell diseases, etc.
- Cytomegalovirus: Retinitis, Organ Transplant etc.
- HHV-6A, HHV-6B, HHV-7
  - several diseases are associated
  - encephalopathy, epilepsy
  - sialoadenopathy, Sicca syndrome
  - T-cell diseases

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Strong Executive Team

Anil R. Diwan, PhD
President & Exec. Chairman

Co-Founder
Led Uplisting to NYSE-American Exchange in 2013
Raised $65M
Co-Inventor of Nanoviricides® & of TheraCour ®
25+ years Leadership & Entrepreneurial experience
Key Patents, Several NIH SBIR Awards
PhD (Biochem Eng - Rice), BTech (ChemEng - IITB)

Randall W. Barton, PhD
CSO and Acting CRO

30+ Years of Pharmaceutical Industry Experience in Drug Discovery and Pre-clinical Regulatory Development
Former Director of In-Vitro Cardiovascular Research at Boehringer Ingelheim
Nevirapine (Virammune™) Development
Visiting Faculty at the University of Connecticut Medical School, Farmington, CT

Meeta R. Vyas, MBA
CFO

30+ years Experience in Corporate Performance Improvement, Finance, M&A, EBITDA Growth...
Previously: Principal, The Gores Group; Director, Kamylon Capital; CEO, Signature Brands, Inc. (a public company, known for “Mr. Coffee”); Ran $1B GE Appliances Division; Consultant, McKinsey & Company
MBA (Fin.) Columbia, BS (ChemEng) MIT

Jayant Tatake, PhD
VP, R&D

30+ Years of Pharmaceutical Industry Experience in Drug Discovery, Manufacturing, QA/QC, CRO
Synthesis, Scale-up, Formulations, and Pharmaceutical cGMP Expertise
Former Asst. Director, Pharma. Analytics, InterPharm, Inc.
Co-Inventor of Nanoviricides® & TheraCour®
PhD UICT, Bombay

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Board of Directors

Anil R. Diwan, PhD
President & Exec. Chairman

Co-Founder, Led Uplisting to NYSE-Amer. in 2013, Raised $65M+, Co-Inventor of Nanoviricides® & of TheraCour ®
25+ years Leadership & Entrepreneurial experience

Not an Independent Board Member
Director and Chairman Since Founding in 2005

Stanley Glick, CPA ✔
Chairman, Audit Committee

Auditing, Accounting, Tax, & Mgmt. Advisory Services
Financial Management Oversight, Civic Leader

Independent Board Member and
Chair of Audit Committee since June 2012

Mak Jawadekar, PhD ✔

35+ Years of Pharmaceutical Industry Experience, Pharma Strategic Consultant. Previously at Pfizer, Inc., as Director, Portfolio Management & Analytics, and as Vice President, Asia Colleague Resource Group, in Pfizer Global R&D. Business and Research experience in joint ventures, alliance management, contracting, pharma R&D, drug delivery, clinical supply manufacture, etc. Global experience working with United States, Europe, India, Japan, China.

Independent Board Member since February, 2020

Mark Day, PhD ✔

16+ Years of Pharmaceutical Industry Experience. Associate Professor, Translational Neuroscience (Adjunct) at Yale University. Ex-CEO of Bioasis (OTC: BIOAF). Previously Exec VP of Ext. Research & Scouting at Alexion. Global Lead Bus. Dev. and Head of Virology and CNS Diseases at BMS. Head, Translational Imaging & Biomarkers at Abbott Labs. Discovery Head, CNS Transl. Medicine at Wyeth Research.

Independent Board Member since June, 2019

✔ = Independent Board Member

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Recap

- “Resistance is Futile” - Antiviral Nanomachines Designed to Destroy Viruses Despite Viral Mutations
- Broad and Deep Pipeline based on Platform Technology
- In-house cGMP Manufacture Enabling Early Commercial Revenues On Its Own
- Major Regulatory Progress and Milestones to Occur Throughout Next Several Years
- Starting with Upcoming IND for NV-HHV-101 Shingles Rash
- Human Skin Pre-clinical Studies De-risk Clinical Development
- Strong Asset Position
- Expert team
- Valuation

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