

# INVESTOR PRESENTATION

NASDAQ: PDSB | May 2022



## PDS Biotechnology

Precision Designed Science For Immunotherapy



# Forward-Looking Statements

This presentation contains forward-looking statements about PDS Biotechnology Corporation (“PDSB”), and its businesses, business prospects, strategies and plans, including but not limited to statements regarding anticipated pre-clinical and clinical drug development activities and timelines and market opportunities. All statements other than statements of historical facts included in this presentation are forward-looking statements. The words “anticipates,” “may,” “can,” “plans,” “believes,” “estimates,” “expects,” “projects,” “intends,” “likely,” “will,” “should,” “to be,” and any similar expressions or other words of similar meaning are intended to identify those assertions as forward-looking statements. These forward-looking statements involve substantial risks and uncertainties that could cause actual results to differ materially from those anticipated.

Factors that may cause actual results to differ materially from such forward-looking statements include those identified under the caption “Risk Factors” in the documents filed with the Securities and Exchange Commission (“SEC”) from time to time, including its Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this presentation. Except to the extent required by applicable law or regulation, PDSB undertakes no obligation to update the forward-looking statements included in this presentation to reflect subsequent events or circumstances.

# Company Overview

- 1 Clinical-stage Company developing molecularly targeted immunotherapies to treat cancer and infectious disease
- 2 Versamune® and Infectimune™ platforms leverage the body's own defense systems to induce disease-specific killer T-cells and antibodies to combat cancer and infectious disease
- 3 The initial concept for Versamune® and Infectimune™ was developed by Prof. Leaf Huang PH.D., a world renowned pioneer in nanoparticle drug delivery
- 4 Data accepted for two poster presentations at ASCO – additional data anticipated in 2022
- 5 Clinical partnerships with Merck, MD Anderson Cancer Center, National Cancer Institute and Mayo Clinic
- 6 Debt free with approximately **\$58.9M** in cash (unaudited) as of March 31, 2022



A 3D molecular model of a protein complex, likely a receptor or enzyme, rendered in a light blue/teal color. The structure is highly detailed, showing various loops, helices, and beta-sheets. It is set against a dark teal background with several smaller, similar protein structures scattered around, suggesting a dynamic or multi-state system.

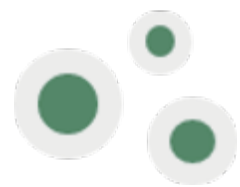
# Versamune® Oncology Platform



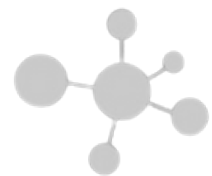
# The PDS Biotech Differentiation

Versamune® is designed to promote powerful, CD8+ killer T-cell responses *in vivo*

## Versamune®-based therapies also show promising potential to:



Generate the right type and quantity of effective CD8+ killer T-cells



Generate memory T-cells, to enhance durability of response



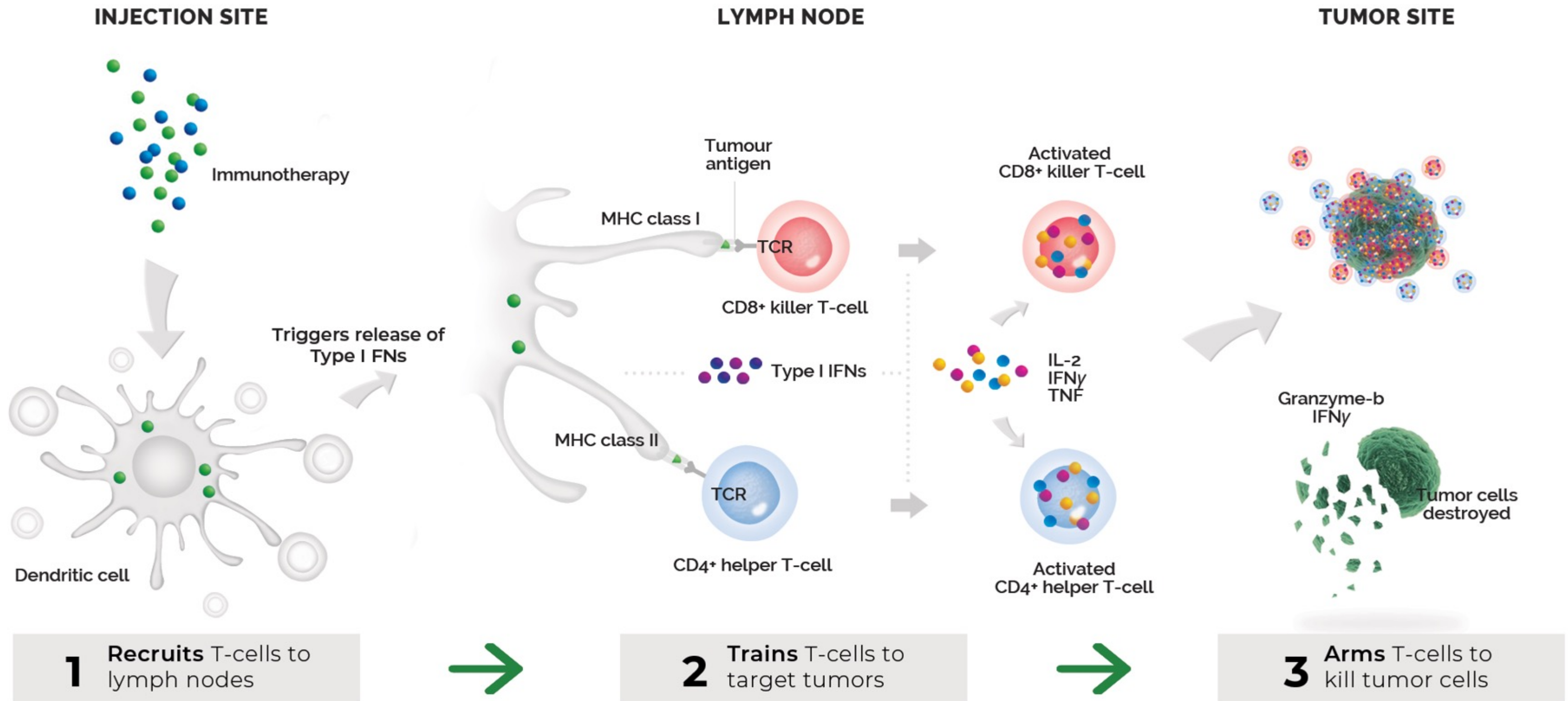
Generate potency without serious systemic side effects

# 15-30%

Success in checkpoint inhibitor treatments due to low CD8+ T-cell response\*

# Versamune® Platform







Designed to Recruit, Train and Arm T-cells in the Body





Versamune® Platform

Versamune®-based oncology pipeline is being developed in partnership with the leaders in immuno oncology

Candidate	Indication	Combination	PC	P1	P2	P3	R	Partner(s)
PDS0101 (HPV16) <i>VERSATILE-002</i>	Recurrent/metastatic HPV16-positive head and neck cancer <u>Arm 1</u> : CPI naïve 1st line treatment <u>Arm 2</u> : CPI refractory 2nd or 3rd line treatment	KEYTRUDA (standard of care)						
PDS0101 (HPV16) <i>NCI-led Triple Combination</i>	HPV-positive anal, cervical, head and neck, penile, vaginal, vulvar cancers <u>Arm 1</u> : CPI naïve 2nd line treatment <u>Arm 2</u> : CPI refractory 3rd line treatment	Bintrafusp and M9241						
PDS0101 (HPV16) <i>IMMUNOCERV</i>	1st line treatment of locally advanced (IB3-IVA) cervical cancer	Chemo-radiation (standard of care)						
PDS0101 (HPV16) <i>Mayo Clinic</i>	Pre-metastatic HPV-associated oropharyngeal cancer (OPSCC) <u>Arm 1</u> : PDS0101 monotherapy <u>Arm 2</u> : PDS0101 + KEYTRUDA	KEYTRUDA (standard of care)						
PDS0102 (TARP)	TARP-associated AML, prostate and breast cancers	TBD						
PDS0103 (MUC1)	MUC-1 associated breast, colon, lung, ovarian and other cancers	TBD						
PDS0104 (TRP2)	Melanoma	TBD						

# PDS0101: Lead Asset

Designed to treat human papillomavirus (HPV16)-associated cancers

**\$6B Market Opportunity<sup>1</sup>**

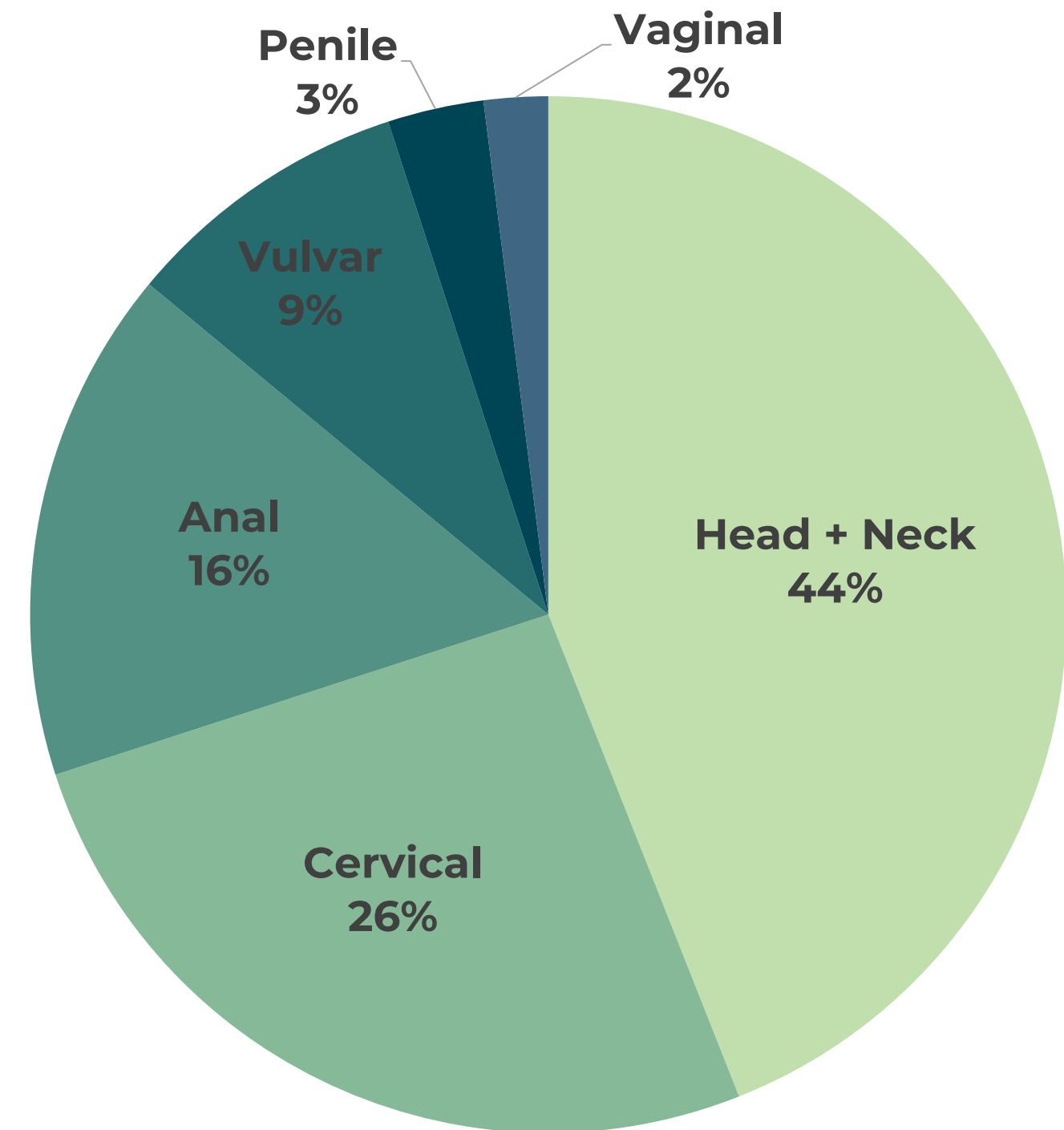
More than **46,000<sup>2</sup>** patients were estimated to have been diagnosed last year with HPV-associated cancers in the US<sup>1,2</sup>

HPV vaccination is **not** expected to impact the rate of HPV-related cancer incidence for decades

Existing immunotherapies cost **\$150,000+** annually per patient<sup>1</sup>

<sup>1</sup>Company estimates based on CDC data. Assessments have not been adjusted to reflect HPV16-expression  
<sup>2</sup>CDC website

## US HPV-associated cancer incidence<sup>2</sup>



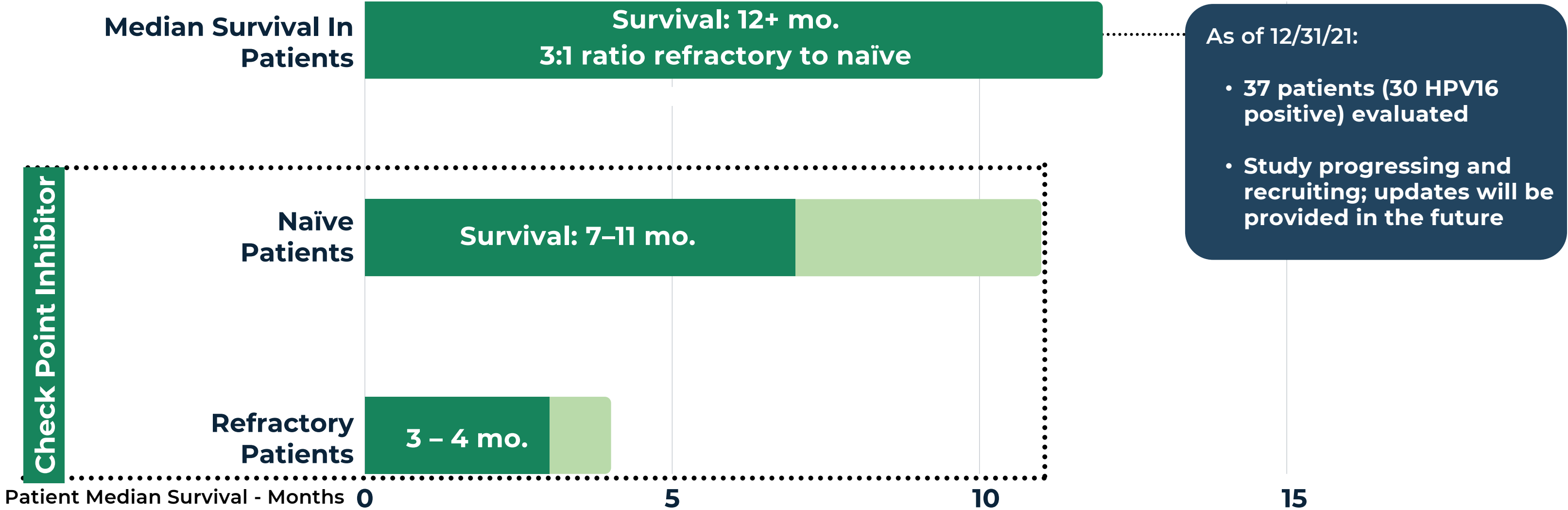


# PDS0101: Triple Combination

Promising survival of patients with advanced refractory HPV16-associated cancers

## PDS0101 + Bintrafusp alfa + M9241

Indications targeted in study—cervical, anal, head and neck, vaginal, penile

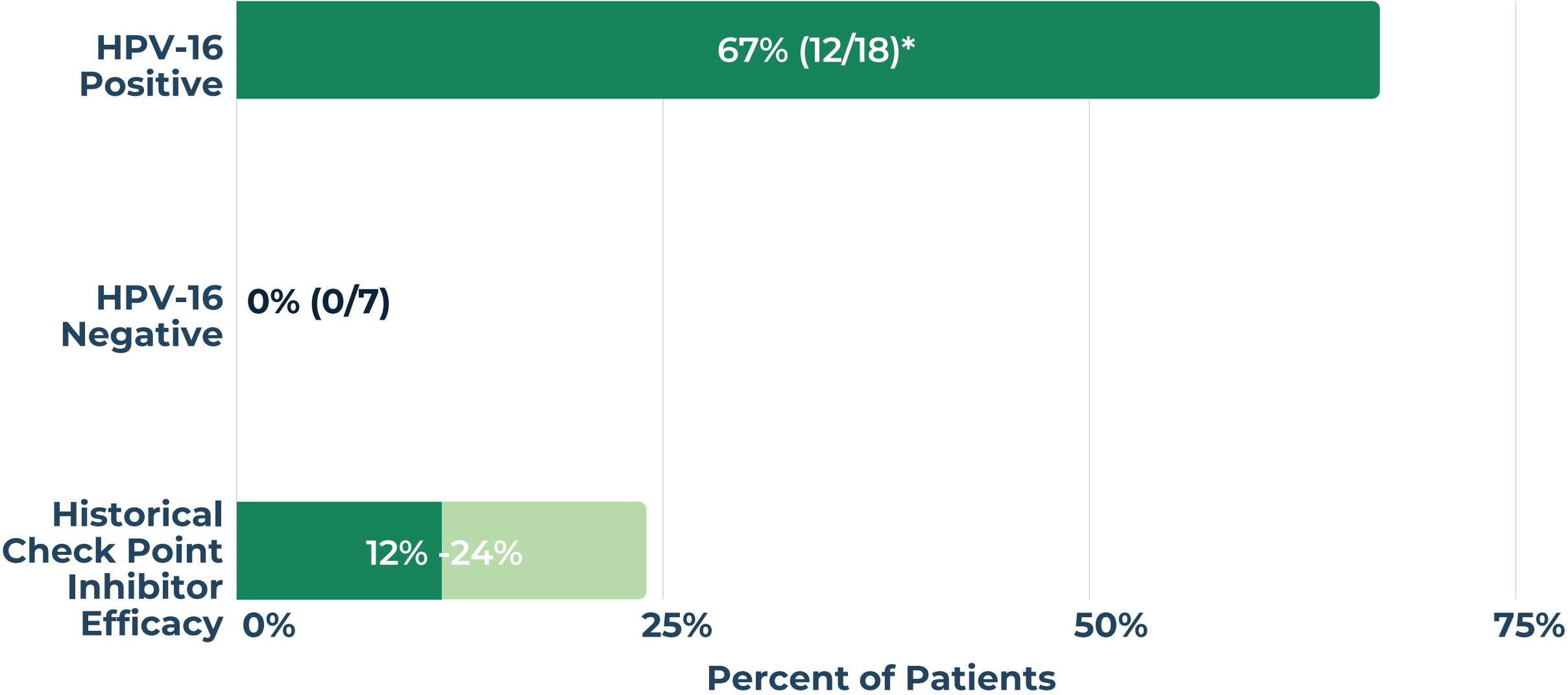


Data to be provided at ASCO 2022

# PDS0101: Triple Combo

Versamune® induced HPV-16  
CD8+ killer T-cells

Triple Combo: PDS0101 + bintrafusp alfa + M9241  
Advanced cancer patients with tumor shrinkage who had failed prior therapy




\*These numbers reflect data as of evaluation of 25 patients; numbers will change as more patients undergo evaluation, includes both CPI refractory and naïve patients.

Reference: Strauss J. et al. Phase II evaluation of the triple combination of PDS0101, M9241, and Bintrafusp alfa in patients with HPV 16 positive malignancies. Presented at: American Society of Clinical Oncology 2021 Annual Meeting; June 4-8, 2021; Virtual. Abstract: 2501.



# Phase 2: PDS0101 + KEYTRUDA®

Company-sponsored trial for the treatment of HPV16-positive metastatic/recurrent head and neck cancer (VERSATILE-002)

Indication	Treatment of patients with HPV16-positive head and neck cancer whose cancer has spread or returned
Clinical Agents	<u>KEYTRUDA®</u> (Standard of Care): Anti-PD1 checkpoint inhibitor (ORR ~20%) <u>PDS0101</u> : Versamune®-based immunotherapy generating HPV-specific CD8+ and CD4+ T-cells
Study Goals	<u>Group 1</u> : Objective response rate (ORR) as first-line treatment in checkpoint inhibitor (CPI) naïve patients <u>Group 2</u> : ORR in patients who have failed checkpoint inhibitor therapy (CPI refractory)
Achieved	Safety data presented at Head and Neck Symposium Q1 2022 Preliminary efficacy data released; achieved initial efficacy milestone Q1 2022 in Group 1
Timing	Detail preliminary safety and efficacy data to be presented at ASCO 2022
Trial Partner	

Confirmation that PDS0101 enhances the therapeutic benefit of checkpoint inhibitors could expand evaluation of Versamune®-based therapies in multiple cancer indications

# Phase 2: PDS0101 + Chemoradiotherapy

Investigator-led trial evaluating the combination in patients with locally advanced cervical cancer (IMMUNOCERV)


Indication	Treatment of patients with locally advanced cervical cancer–Stages IB3-IVA
Clinical Agents	<u>Chemoradiotherapy (CRT –Standard of Care)</u> : Cisplatin and radiation therapy <u>PDS0101</u> : Versamune®-based immunotherapy generating HPV-specific CD8+ and CD4+ T-cells
Study Goals	Safety, rate of regression and local control in patients with primary tumor ≥5cm (n=35 patients)
Timing	Preliminary data anticipated late Q3 2022
Trial Partner	<div><small>THE UNIVERSITY OF TEXAS</small> <b>MD Anderson</b> <del>Cancer</del> Center</div>

If successful, this study could support further investigation of Versamune®-based immunotherapies in combination with chemotherapy or CRT to treat multiple cancers



# Phase 2: PDS0101 Monotherapy and in Comb. with KEYTRUDA®

Investigator-led trial evaluating treatments in patients with HPV-associated oropharyngeal cancer with high risk of recurrence

Indication	Treatment of patients with oropharyngeal cancer prior to transoral robotic surgery
Clinical Agents	<u>KEYTRUDA®</u> : Cisplatin and radiation therapy <u>PDS0101</u> : Versamune®-based immunotherapy generating HPV-specific CD8+ and CD4+ T-cells
Study Goals	Safety, rate of regression and local control in patients transoral robotic surgery
Timing	Approved by the IRB and anticipate enrollment will begin in Q2
Trial Partner	 MAYO CLINIC

If successful, this study could support the expansion of PDS0101 to earlier stage disease

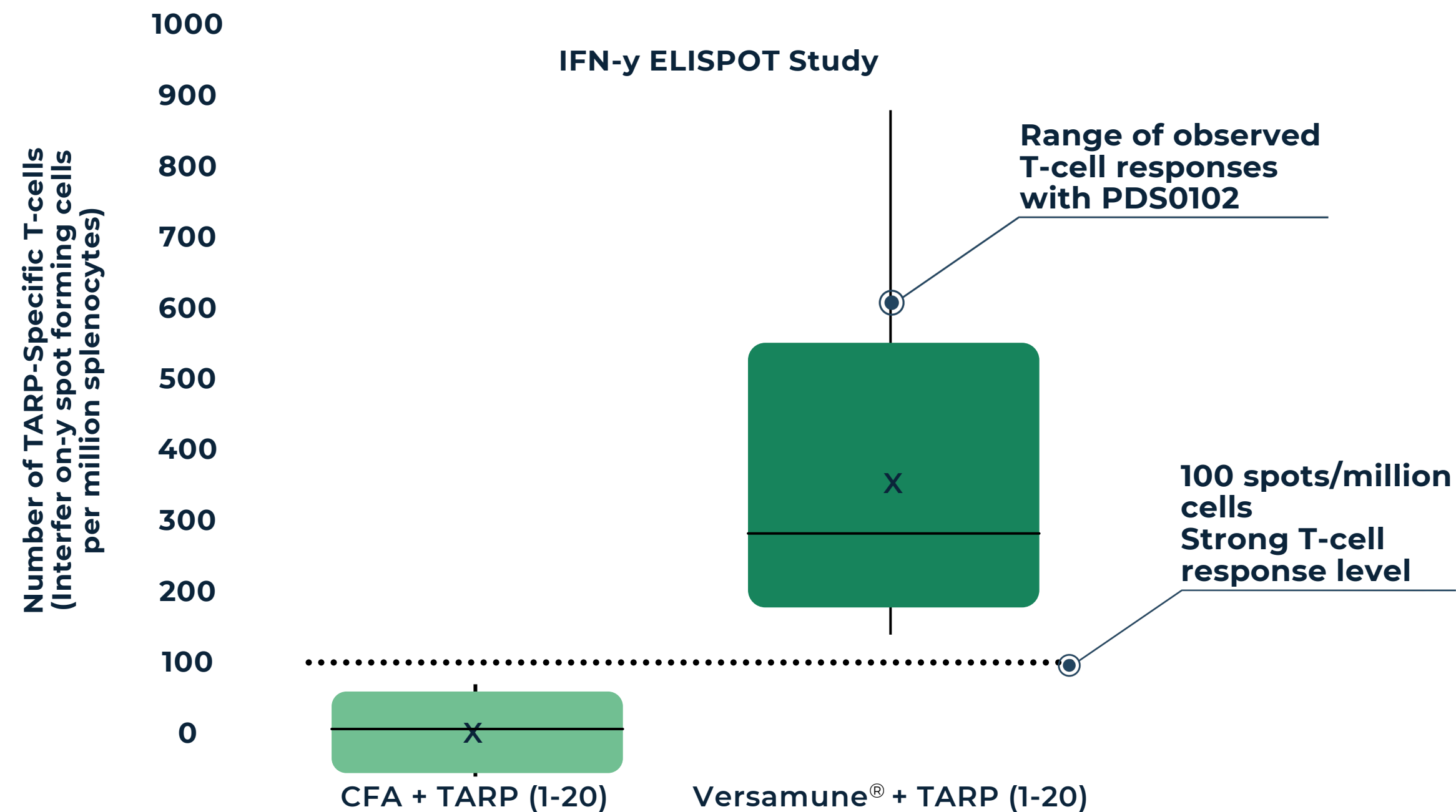
# PDS0102: TARP Antigen

Versamune®-induced CD8+ killer T-cells may result in the ability to treat TARP positive AML and prostate cancers

**\$40B** TARP Total Market Opportunity\*

Announced license with NCI  
TARP antigens

## Pre-Clinical Optimization Studies<sup>1</sup>: TARP-Specific T-cell Induction after 2 injections of PDS0102



<sup>1</sup> Reference: Wood LV et al, Oncoimmunology, 2016, Vol. 5 (8)  
CFA –Complete Freund's Adjuvant a highly potent immune activator not used in humans due to potentially lethal toxicity

\*Reference: Surveillance Research Program, National Cancer Institute SEER  
Assumes \$150K for annual course of therapy; in line with current immunotherapy treatment. Assessments have not been adjusted to reflect TARP expression, which is currently unknown by tumor type



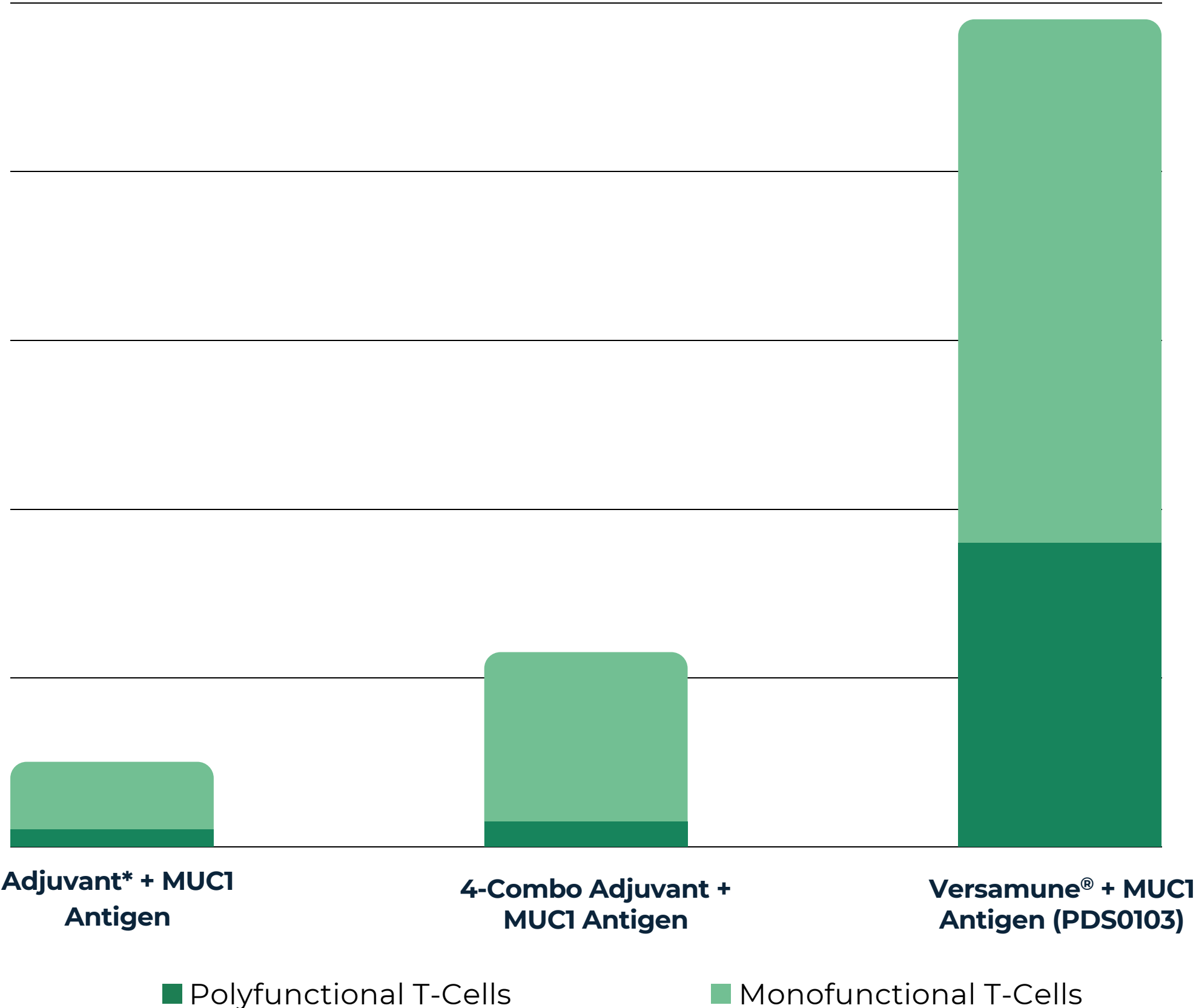
# PDS0103: MUC1 Antigen

Greater quantity and quality of Versamune<sup>®</sup>-induced CD8+ killer T-cells may result in the ability to treat breast, ovarian, lung, and colon cancers

**\$100B** MUC1 Total Market Opportunity\*

Induced a >10-fold number of polyfunctional (highly potent) MUC1 specific CD8+ T-cells

# of Antigen-Recognizing CD8+ T-Cells  
IFN-γ Spot Forming Cells/1X10<sup>6</sup>Spleen Cells



\*References: Surveillance Research Program, National Cancer Institute SEER, Cancer Institute SEER, Assumes \$150K for annual course of therapy; in line with current immunotherapy treatment, Assessments have not been adjusted to reflect MUC1-expression, which is currently unknown by tumor type  
Adjuvant = cytokine GMCSF  
J. Immunology, 2019 (202),1215; Studies in TC-1 tumor model with other immunotherapies reported in: Vaccine 2009, January 14, 27 (3): 431; Science Translational Medicine 2016, 13 April, Vol 8 Issue 334; Vaccine 2009, September 25, 27 (42):5906.

# Projected Milestones Through 1Q 2023\*

	1H21	2H21	1Q22	2Q22	3Q22	4Q22	1Q23
PDS0101	Interim data from HPV-associated cancer trial ASCO - (NCI)	✓					
	Preliminary data from VERSATILE-002 (KEYTRUDA® combo) (go, no go)		✓				
	Completed enrollment of HPV-associated cancer trial CPI refractory arm (NCI)		✓				
	Updated preliminary safety and updated efficacy data from NCI trial accepted at ASCO			✓			
	Preliminary safety and efficacy data (KEYTRUDA® combo) accepted at ASCO			✓			
	Anticipated preliminary data from IMMUNOCERV (MD Anderson)						
PDS0103	Anticipate preliminary efficacy data from Mayo Clinic IIT						
	Estimated IND filing in MUC1-related cancers						

A 3D molecular model of a protein complex, likely a viral capsid or a large enzyme, rendered in a light blue/teal color. The structure is highly detailed, showing the surface topology and internal components. It is surrounded by several smaller, similar-looking molecular structures, suggesting a dynamic or multi-part assembly. The background is a dark teal gradient.


# Infectimmune™

## Infectious Disease Platform



# PDS Biotech's Infectimune™ Pipeline

Developed in partnership with leaders in infectious disease

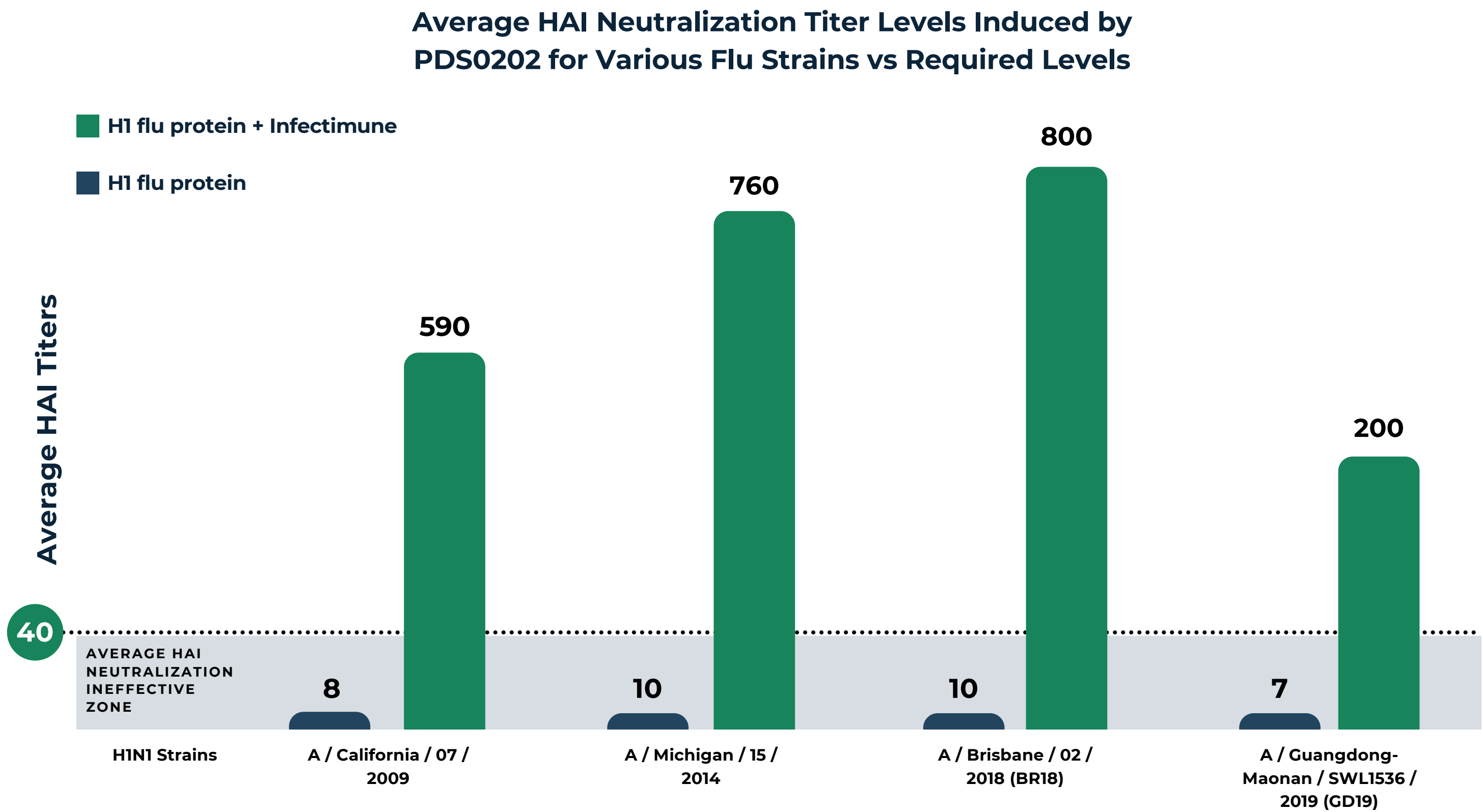
Candidate	Indication	PC	P1	P2	P3	R	Partner(s)
PDS0202 (influenza)	Universal prevention of influenza	<div></div>					 National Institute of Allergy and Infectious Diseases
PDS0203 (SARS-CoV-2)	Prevention of COVID-19	<div></div>					
PDS0201 (M-tuberculosis)	Prevention of tuberculosis	<div></div>					

PDS Biotech Funded

Partner Co-Funded

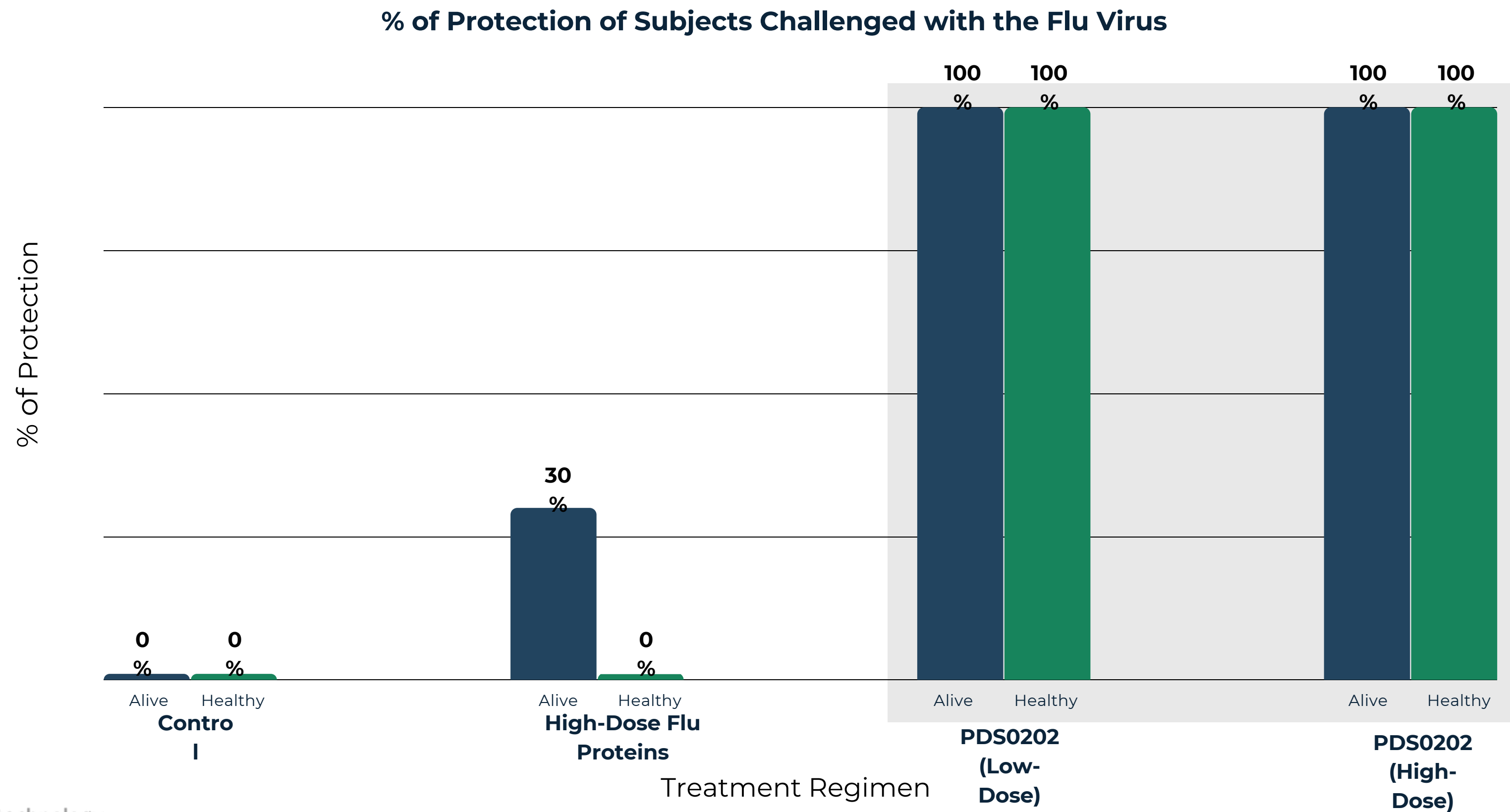
# PDS0202: Universal Prevention of Influenza

Provided Effective Neutralization Against Multiple Strains of Flu Viruses in Preclinical Study



# PDS0202: Universal Prevention of Influenza

Provided Protection in Preclinical Study in Keeping Subjects Alive and Healthy Against Challenge with Flu Virus





# Infectimune™ Pipeline Highlights

## Universal Influenza Vaccines

- License agreement with University of Georgia for proprietary influenza antigens
- Positive top-line preclinical data announced; effective delivery of flu proteins activate the critical immune signals necessary to generate powerful neutralizing antibody responses to all flu strains tested
- Preclinical data submitted for peer-reviewed publication

## COVID

- Decided to strategically shift focus to Universal Influenza Vaccines
- Farmacore licensing agreement expires May 31, 2022, and will not be extended

PDS Biotech Management

Historical success in the development and commercialization of leading pharmaceutical products

<div>Frank Bedu-Addo, PHD</div> <div>Chief Executive Officer</div>	<ul style="list-style-type: none"> <li>Senior executive experience with management of strategy and execution at both large pharma and biotechs</li> <li>Notable drug development: <ul style="list-style-type: none"> <li>Abelcet® (Liposome Company/ Elan)</li> <li>PEG-Intron® (Schering-Plough/ Merck)</li> </ul> </li> </ul>	<div> <div>   </div> <div>   </div> </div>
<div>Matthew Hill</div> <div>Chief Financial Officer</div>	<ul style="list-style-type: none"> <li>20 years of financial and operational leadership roles for life sciences companies</li> <li>Former Chief Financial Officer of several publicly traded companies</li> </ul>	<div> <div>   </div> <div>  </div> </div>
<div>Lauren V. Wood, MD</div> <div>Chief Medical Officer</div>	<ul style="list-style-type: none"> <li>30 years of translational clinical research experience</li> <li>Former Director of Clinical Research at National Cancer Institute Center for Cancer Research (Cancer Vaccine Branch)</li> </ul>	<div> <div>   </div> </div>
<div>Gregory Conn, PHD</div> <div>Chief Scientific Officer</div>	<ul style="list-style-type: none"> <li>Co-founder</li> <li>35 years of drug development experience</li> <li>In-depth experience with biotech drug discovery, product development and manufacturing</li> </ul>	<div> <div>   </div> <div>  </div> </div>

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