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POWERING DNA MEDICINES™

# DNA Medicines: From COVID-19 to Cancer

June 1, 2020



# Forward-Looking Statements

This presentation includes statements that are, or may be deemed, “forward-looking statement,” within the meaning of Section 27A of the Securities Act of 1933, as amended. All statements, other than statements of historical facts, included in this presentation regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans and objectives of management are forward-looking statements. In some cases, you can identify forward-looking statements by terms such as “may,” “might,” “will,” “objective,” “intend,” “should,” “could,” “can,” “would,” “expect,” “believe,” “anticipate,” “project,” “target,” “design,” “estimate,” “predict,” “opportunity,” “proposition,” “strategy,” “potential,” “plan” or the negative of these terms and similar expressions intended to identify forward-looking statements.

You should not place undue reliance on these forward-looking statements. Forward-looking statements include, but are not limited to, statements about: the timing and success of preclinical studies and clinical trials; the ability to obtain and maintain regulatory approval of our product candidates; the scope, progress, expansion and costs of developing and commercializing our product candidates; our expectations regarding the amount and timing of our expenses and revenue; the sufficiency of our cash resources, plans for the use of our cash resources and needs for additional financing; our ability to adequately manufacture our product candidates; our ability to obtain and maintain intellectual property protection for our product candidates; our expectations regarding competition; the size and growth of the potential markets for our product candidates and the ability to serve those markets; the rate and degree of market acceptance of any of our product candidates; our anticipated growth strategies; the anticipated trends and challenges in our business and the market in which we operate; our ability to establish and maintain development partnerships; our ability to attract or retain key personnel; our expectations regarding federal, state and foreign regulatory requirements; regulatory developments in the United States and foreign countries and other factors that are described in the “Risk Factors” and “Management's Discussion and Analysis of Financial Condition and Results of Operations” sections of our Annual Report on Form 10-K for the year ended December 31, 2019 and Form 10-Q for the quarter ended March 31, 2020, which have been filed with the Securities and Exchange Commission (SEC) and are available on the SEC's website at www.sec.gov.

In addition, the forward-looking statements included in this presentation represent INOVIO's views as of the date hereof. INOVIO anticipates that subsequent events and developments may cause its views to change. However, while INOVIO may elect to update these forward-looking statements at some point in the future, the company specifically disclaims any obligation to do so, except as may be required by law. These forward-looking statements should not be relied upon as representing INOVIO's views as of any date subsequent to the date of this presentation.

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# Today's Agenda

| | | |
|---|---|---|
| **10:00 – 10:25 AM ET** | **DNA Medicines: From COVID-19 to Cancer**<br>**J. Joseph Kim, Ph.D.,** INOVIO President, CEO, Director | **In Conversation with**<br>**David B. Weiner, Ph.D.,** Executive Vice President and Director, Vaccine Center, The Wistar Institute; Director, INOVIO |
| **10:25 – 11:15 AM ET** | **Advantages of DNA Vaccines in Response to the COVID-19 Outbreak**<br>**Kate E. Broderick, Ph.D.,** INOVIO Senior Vice President, R&D, Team Lead for COVID-19 Vaccine Development | **In Conversation with**<br>**Stanley A. Plotkin, M.D.,** Emeritus Professor, the Wistar Institute and University of Pennsylvania; INOVIO Scientific Advisory Board Member |
| **11:15 – 11:45 AM ET** | **DNA Immunotherapies in Hard-to-Treat Cancer: GBM**<br>**Jeffrey Skolnik, M.D.,** INOVIO Vice President, Clinical Development, Oncology | **In Conversation with**<br>**David Reardon, M.D.,** Clinical Director, Center for Neuro-Oncology, Dana-Farber Cancer Institute; Professor of Medicine, Harvard Medical School; Coordinating Principal Investigator of GBM-001/INO-5401 Phase 1/2 Investigator |
| **11:45 AM – 12:00 PM ET** | **Q & A and Closing Remarks** | |



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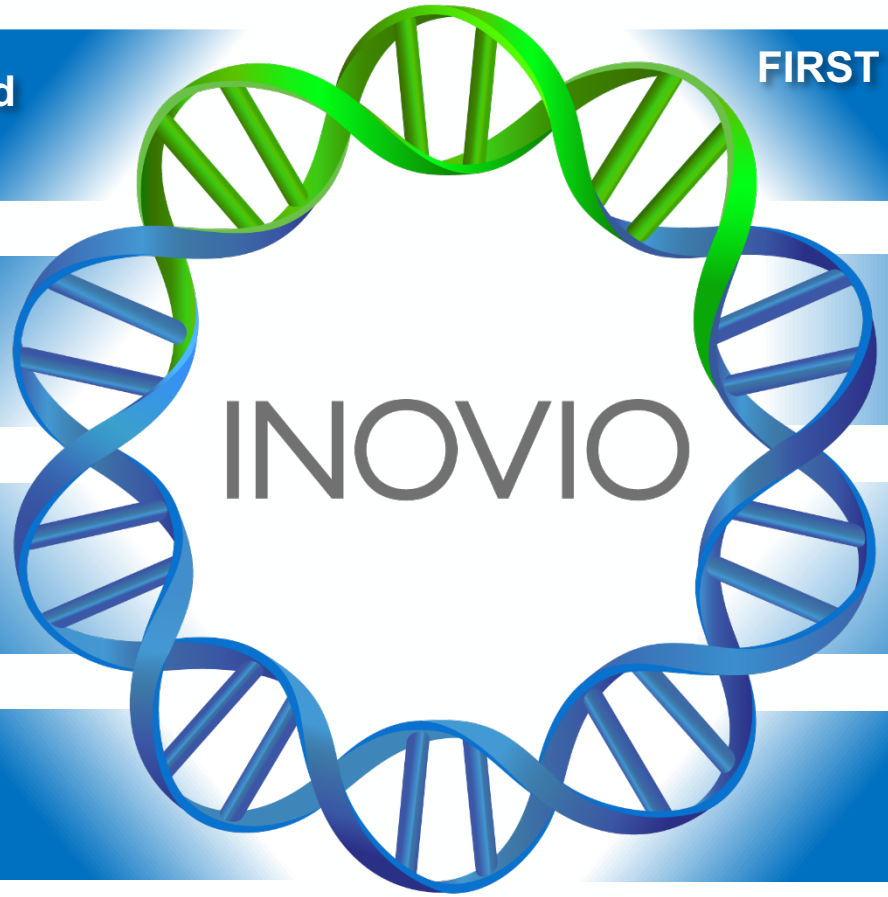
# Powering a New Decade of DNA Medicines

Precisely Designed Plasmids Delivered Through Proprietary Smart Device

Safe and Robust Immune Responses in More Than 2,000 Patients

*In Vivo* Immune Responses for "Off-the-Shelf" Speed, Efficiency

Extensive Patent Portfolio Protecting Technology Platform




FIRST DNA Medicine in Phase 3 Clinical Trials (VGX-3100) for Precancerous Cervical Dysplasia

FIRST to Show Clearance of High-Risk HPV 16/18 in Phase 2b Trial (VGX-3100)

FIRST to Show Complete Response in Phase 1 w/2 PD-1s for Head and Neck Cancer (MEDI0457)

FIRST dMAb™ plasmid in Phase 1 for Zika (INO-A002)



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# INOVIO Vision to Build the Leading DNA Medicines Company

## Founding Vision

- Create **precisely designed plasmids** that **target antigens** to address **urgent medical needs**
- Develop **proprietary device** to **deliver plasmid safely** *in vivo* directly into the cell to produce **robust immune response**
- Build **scientific, medical, and commercial team** and **outstanding partnerships** to drive value

## Near-Term Execution

- **Rapidly bring to market precisely designed DNA medicines to potentially treat and prevent diseases associated with HPV, cancer, and infectious diseases**
- **Maximize value of lead candidates** worldwide

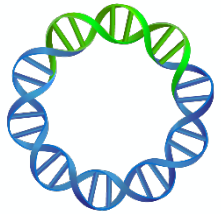
## Long-Term Strategy

- Create new market in safe, effective **DNA medicines**
- Aggressively **seek partners** to ensure **DNA medicines reach patients in need**
- **Strong financial position**
  - $270.0M cash/investments as of last reported earnings (3/31/20)
  - $121.7M net proceeds from new financing in 2Q20

# Vision Built on INOVIO Proprietary Technology

## OPTIMIZED PLASMID DESIGN AND DELIVERY TECHNOLOGY

**PRECISELY DESIGNED PLASMIDS**
**(SynCon®)**



**PROPRIETARY SMART DEVICE**
**(CELLECTRA®)**



***IN VIVO***





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# INOVIO's Technology Advantages



## Clinical Efficacy

- **Demonstrated clinical efficacy in Phase 2b study**
- **Lead candidate VGX-3100 in Phase 3 for cervical dysplasia**

## Safety

- **Favorable safety profile tested in over 2,000 patients in over 6,000 administrations**
- Carries no potential toxicity from viral vectors

## Versatility and Boosting

- Targets virtually any antigenic sequence; combining multi-antigens into single vial
- Initiated first-in-human study of optimized dMAb™ plasmid
- **No anti-vector response** – allows for effective boosting

## Rapid and Scalable Manufacturing

- "Off-the-shelf" product; **no frozen storage issues** (room temp storage >1 yr.)
- Rapid development from concept to human in <3 months (COVID-19 vaccine)
- Relatively inexpensive to manufacture; produce large quantities



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# INOVIO DNA Medicines Pipeline

| PRODUCT | INDICATION | ANTIGEN | PRECLINICAL | PHASE 1 | PHASE 2 | PHASE 3 | PARTNER/COLLABORATOR/FUNDER |
|---|---|---|---|---|---|---|---|
| **HPV-TARGETED** | | | | | | | |
| VGX-3100 | Precancerous Cervical Dysplasia (HSIL) | HPV 16 E6, E7/ HPV 18 E6, E7 | | | | | Apollobio (China; INOVIO maintains global rights) |
| | Precancerous Vulvar Dysplasia (HSIL) | | | | | | |
| | Precancerous Anal Dysplasia (HSIL) | | | | | | |
| INO-3107 | Recurrent Respiratory Papillomatosis (RRP) | HPV 6 E6, E7/ HPV 11 E6, E7 | | | | | |
| MEDI0457 | Head & Neck Cancer | HPV 16 E6, E7/ HPV 18 E6, E7 | | | | | AstraZeneca |
| | Cervical, Anal, Penile, Vulvar Cancers | | | | | | |
| **IMMUNO-ONCOLOGY (NON HPV-ASSOCIATED)** | | | | | | | |
| INO-5401 | Glioblastoma Multiforme (GBM) | WT1, PSMA, hTERT | | | | | REGENERON |
| INO-5151 | Prostate Cancer | PSA, PSMA | | | | | Cancer Research Institute; Parker Institute for Cancer Immunotherapy |

INTERNALLY FUNDED  EXTERNALLY FUNDED



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# INOVIO DNA Medicines Pipeline (Continued)

| PRODUCT | INDICATION | ANTIGEN | PRECLINICAL | PHASE 1 | PHASE 2 | PHASE 3 | PARTNER/COLLABORATOR/FUNDER |
|---|---|---|---|---|---|---|---|
| **INFECTIOUS DISEASES (NON HPV-ASSOCIATED)** | | | | | | | |
| PENNVAX-GP | HIV | Gag, pol, env | | | | | NIH NIAID; HIV VACCINE TRIALS NETWORK |
| INO-4201 | Ebola | Glycoprotein | | | | | DARPA |
| INO-4700 (GLS-5300) | MERS | Spike | | | | | GEMI; CEPI |
| INO-4600 (GLS-5700) | Zika | Glycoprotein | | | | | GEMI |
| INO-4500 | Lassa Fever | Glycoprotein | | | | | CEPI |
| INO-4800 | COVID-19 (Coronavirus) | Spike | | | | | CEPI; BILL & MELINDA GATES foundation |
| **dMAb™ (DNA-ENCODED MONOCLONAL ANTIBODIES)** | | | | | | | |
| INO-A002 | Zika | Glycoprotein | | | | | BILL & MELINDA GATES foundation |

INTERNALLY FUNDED  EXTERNALLY FUNDED



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# DNA Medicines Featured Publications

THE LANCET

[Safety, efficacy, and immunogenicity of VGX-3100, a therapeutic synthetic DNA vaccine targeting human papillomavirus 16 and 18 E6 and E7 proteins for cervical intraepithelial neoplasia 2/3: a randomised, double-blind, placebo-controlled phase 2b trial]
The Lancet
September 2015

The NEW ENGLAND JOURNAL of MEDICINE

[Safety and Immunogenicity of an Anti–Zika Virus DNA Vaccine — Preliminary Report]
The New England Journal of Medicine
October 2017

The Journal of Infectious Diseases

[Intradermal SynCon® Ebola GP DNA Vaccine Is Temperature Stable and Safely Demonstrates Cellular and Humoral Immunogenicity Advantages in Healthy Volunteers]
The Journal of Infectious Diseases
March 2019

THE LANCET Infectious Diseases

[Safety and immunogenicity of an anti-Middle East respiratory syndrome coronavirus DNA vaccine: a phase 1, open-label, single-arm, dose-escalation trial]
The Lancet Infectious Diseases
July 2019

nature COMMUNICATIONS

[Immunogenicity of a DNA vaccine candidate for COVID-19 Nature Communications]
Nature Communications
May 2020

*"The current trial represents a major breakthrough and proof-of-principle that therapeutic HPV vaccination is feasible. More broadly, the trial shows that it is possible to boost immune clearance of HPV among women who initially failed to control infection."*

**– Dr. Mark Schiffman and Dr. Nicolas Wentzensen**
*US National Cancer Institute Division of Cancer Epidemiology & Genetics*
*September 2015*

THE LANCET

***MORE THAN 150 PEER-REVIEWED PUBLICATIONS***



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# INOVIO is Pleased to Welcome Dr. David Weiner for a Conversation about DNA Medicines

**David B. Weiner, Ph.D.**

Executive Vice President,
Director Vaccine Center
The Wistar Institute;
Director, INOVIO





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# Advantages of DNA Vaccines in Response to the COVID-19 Outbreak

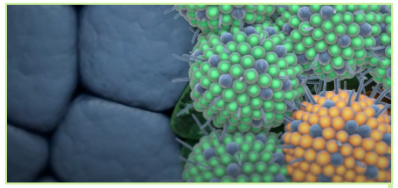
**Kate E. Broderick, Ph.D.,** Senior Vice President, R&D,
Team Lead for COVID-19 Development



# Key Characteristics of INOVIO's COVID-19 DNA Vaccine Platform

**Rapid & Scalable Manufacture**





**Robust Immune Responses**
(Neutralizing antibodies/ B cells and Killer T cells)



**No Anti-Vector Response**
(effective boosting)

**Room Temp (25°C) Storage >1 year; 37°C >2 months**




SynCon®



CELLECTRA®

Host DNA Plasmids



**Non-replicating, Non-integrating**

**Refrigerated (2-8°C) Storage >4 years**



**SynCon® Rapid Design**





**Multi-antigen Immunotherapy/ Protection in Single Vial**



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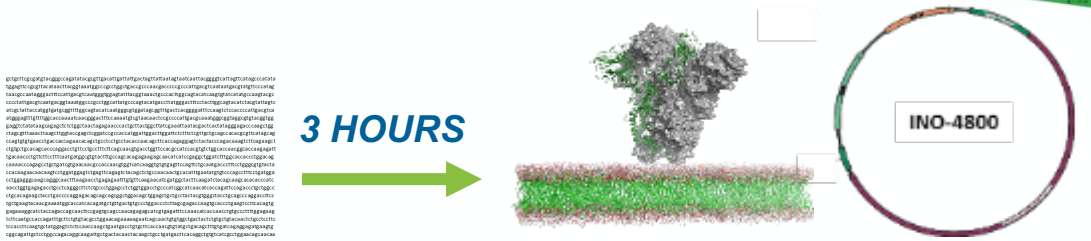
# Applying INOVIO's Platform to Emerging Infectious Disease

## SPEED

- Design of vaccine candidate
- Rapidity of manufacture
- Ability to harness established regulatory platform




## SAFETY PROFILE

- Over 2,000 subjects treated in the clinic with INOVIO DNA + delivery technology
- Over 6,000 doses of DNA delivered



## BREADTH OF IMMUNE RESPONSE

- Ability to generate broad and robust B and T cell responses
- Generation of neutralizing antibodies

## DURATION OF RESPONSE

- Immune responses detected 3 years post immunization
- Demonstration of protection 12 months+ following immunization




## EFFICACY

- First group to demonstrate clinical efficacy of a DNA vaccine combined with delivery technology
- Multiple published reports of protection from challenge (MERS, Lassa, Influenza, Ebola, Zika)
- Ability to generate immune responses in an elderly population

## STABILITY OF PRODUCT

- DNA product stored in optimized buffer is long term non-frozen
- Stable at room temp for >1 year and at 37°C for >2 months



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# INOVIO's COVID-19 DNA Vaccine INO-4800 Development Timeline

## DECEMBER 2019

INOVIO coronavirus experts learn about a novel coronavirus (SARS-CoV-2) which caused an outbreak of respiratory disease in Wuhan, China, now referred to as COVID-19

## JANUARY 10/11, 2020

Chinese researchers share the genetic sequence of the novel coronavirus on 1/10

INOVIO designs DNA vaccine INO-4800 in three hours after receiving the genetic sequence late in the evening on 1/10 using its proprietary DNA medicines platform technology

INO-4800 was designed to precisely match the DNA sequence of the virus just after midnight on 1/11

## JANUARY 10 - JANUARY 23, 2020

INOVIO coronavirus experts race to manufacture INO-4800 and begin preclinical testing and clinical trial design

## JANUARY 23, 2020

INOVIO receives a grant of up to $9 million from the Coalition for Epidemic Preparedness Innovations (CEPI) to fund ongoing preclinical and initial clinical development of INO-4800

CEPI

## JANUARY 23 - FEBRUARY 29, 2020

Preclinical testing continues, with immune responses generated in animal models; initial preclinical data submitted to peer-reviewed journal; human clinical trial designs developed and shared with regulators

## MARCH 2020

Ongoing preclinical studies, including challenge studies; initial preclinical data "under consideration" at peer-reviewed journal; human clinical trial designs finalized; 3,000 human trial doses prepared for clinical trials in the U.S., China, and South Korea; large-scale manufacturing plans developed

## MARCH 12, 2020

INOVIO announces $5 million grant from the Bill & Melinda Gates Foundation to continue advancing the development of INO-4800, specifically to accelerate the testing and scale up of INOVIO's proprietary smart device CELLECTRA® 3PSP

BILL & MELINDA GATES foundation

## MARCH 26, 2020

INOVIO announces the Department of Defense (DOD) awarded Ology Bioservices an $11.9 million contract to work with INOVIO on DNA technology transfer to rapidly manufacture INO-4800 for the DOD for upcoming clinical trials

## APRIL 6 - APRIL 23, 2020

INOVIO announces initiation of Phase 1 human clinical trial in the U.S. following authorization by the U.S. Food and Drug Administration of its Investigational New Drug (IND) application

U.S. study fully enrolled 40 healthy volunteers; study sites are the University of Pennsylvania and a clinic in Kansas City, MO

## MAY 2020

Preclinical data published in peer-reviewed journal Nature Communications

nature COMMUNICATIONS

## JUNE - JULY 2020

In June, U.S. Phase 1 trial results to be announced

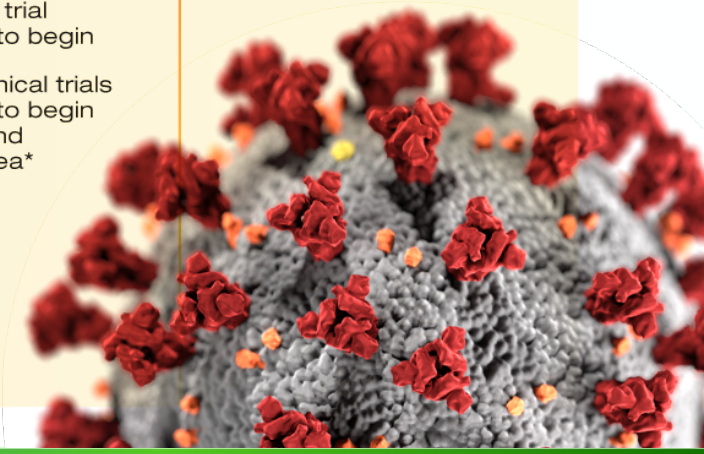
Phase 2/3 trial expected to begin

Human clinical trials expected to begin in China and South Korea*

## ONGOING

INO-4800 COVID-19 DNA vaccine production and scale up underway*

Clinical trials and preclinical challenge studies continue



*Pending appropriate regulatory guidance and external funding

# INOVIO Strategy for COVID-19 Program

## Achieve INO-4800 licensure using dual strategy of emergency use authorization (EUA) and traditional approval pathway by:

- Move rapidly into human Phase I studies to **demonstrate safety, tolerability, and immunogenicity** ✓
- **Generating preclinical** (immunogenicity & neutralization assay) package along with **animal challenge data that supports the clinical program** and enables potential EUA ✓
- **Aiming to be** a leader (first or fast follower) **to human proof of concept efficacy data**
- **Leveraging external funding** to conduct rapid clinical development and accelerate CELLECTRA® 3PSP development and initial scale up of manufacturing ✓
- **Expanding manufacturing capacity** aimed at delivering 100's of millions of doses
- **Expanding global partnerships**
  - To enable further manufacturing scale up
  - Generate additional Phase 1 supportive data outside of the US (Korea & China)







**CELLECTRA®**



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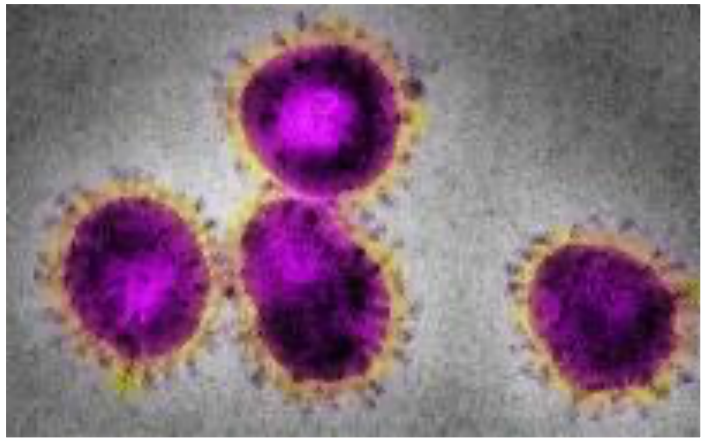
# INOVIO Response to Novel Coronavirus COVID-19 Outbreak Builds Upon Prior Experience in Developing a MERS Vaccine

We designed our COVID-19 vaccine candidate, named INO-4800, based upon studies **targeting the MERS coronavirus family members**.

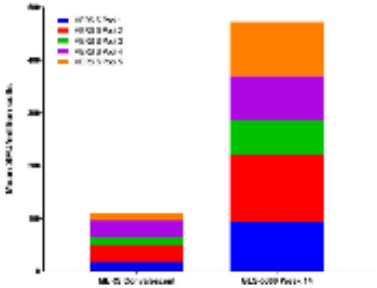
CEPI





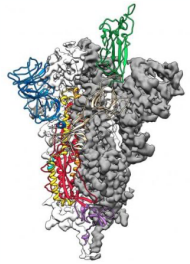
## *Track Record of Success with MERS DNA Vaccine – Preclinical*

- **100% protection** from clinical disease in primate model after 2 immunizations
- **75% protection** after a single immunization
- Strong cellular and humoral responses after **1 or 2 doses** (NHP, camels and mice)



## *Track Record of Success with MERS DNA Vaccine – Clinical*

- **Phase 1 (US) and Phase 2 (Korea)** data generated
- **76% seroconversion** after single immunization
- Over **80% seroconversion** after two immunizations
- **Strong and broad cellular responses** noted at all time points



Spike protein is the main target of **neutralizing antibodies**

- Considered a key component for vaccines
- Codon and RNA optimized



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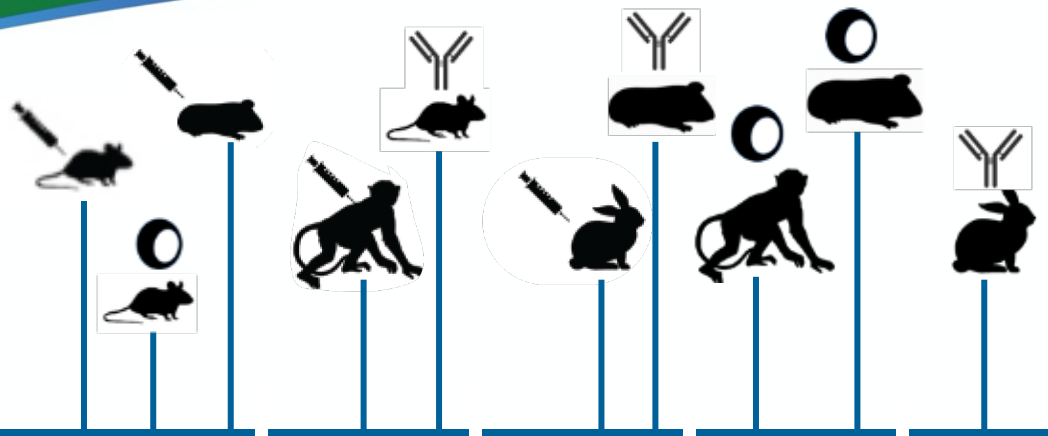
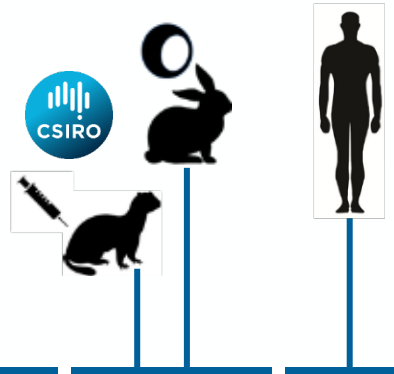
# INOVIO INO-4800 Rapid Response



## Species

- Mouse
- G. Pig (ID delivery)
- Rabbit (full human dose)
- NHP (immunogenicity/challenge)
- Ferret (challenge)




nature COMMUNICATIONS
Published

| 2/02 | 2/09 | 2/16 | 2/23 | 3/01 | 3/08 | 3/15 | 3/22 | 3/29 | 4/06 | 4/10 | 5/20 |
|---|---|---|---|---|---|---|---|---|---|---|---|

Feb 4th
In vitro expression data

nature COMMUNICATIONS
Submitted

ACE2/Spike blocking

Biodistribution

Pseudovirus neut.

Public Health England
Live virus neut.

THE WISTAR INSTITUTE

T cell data
Ab data
Immunization

**First Subject Treated in Phase 1 Trial – April 6th, 2020**

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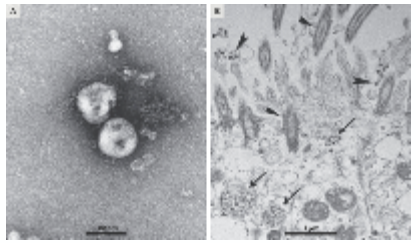
# INO-4800: DNA Vaccine Targeting SARS-CoV-2 Spike Protein

nature COMMUNICATIONS

## Rapid design of INO-4800

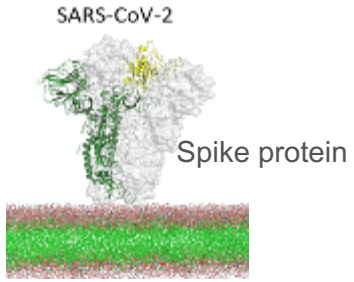
Isolation of virus



*Zhu, N et al. 2020 NEJM*

Virus sequence published



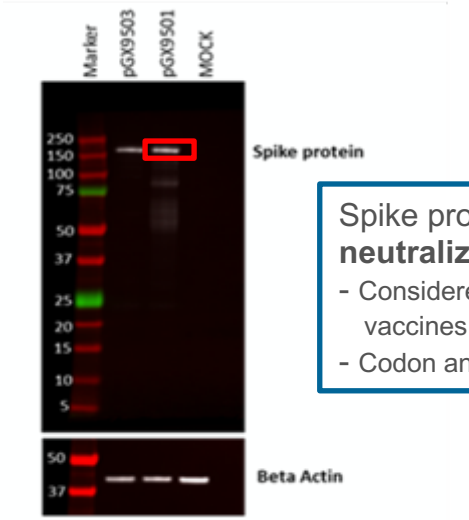



Gene Optimization Algorithm

Cloned into expression vector



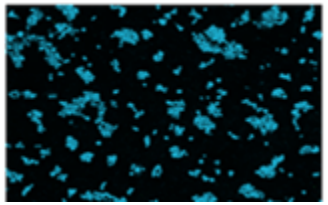

## INO-4800 instructs expression of Spike protein



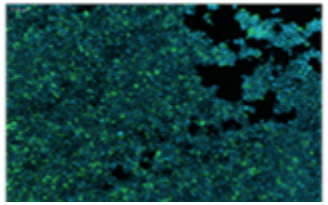

Spike protein is the main target of **neutralizing antibodies**

- Considered a key component for vaccines
- Codon and RNA optimized

Control



INO-4800



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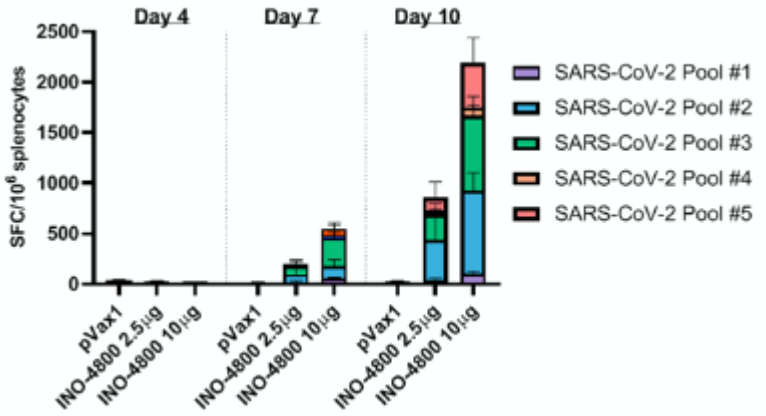
# Robust Cellular and Humoral Immune Responses Measured After Immunization with INO-4800 in Mice and Guinea Pigs

nature COMMUNICATIONS

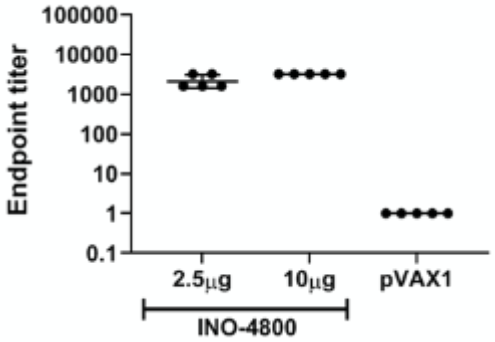
Single dose




IFN-γ+ T cells



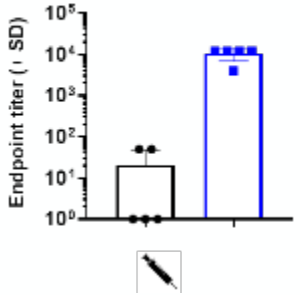

SARS-CoV-2 S protein (RBD) serum IgG binding



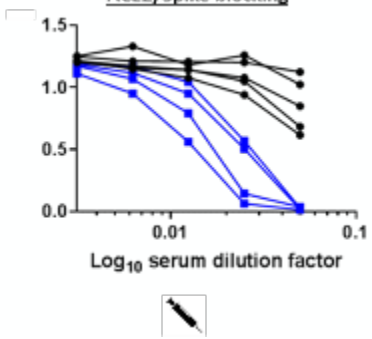



ID CELLECTRA®
delivery

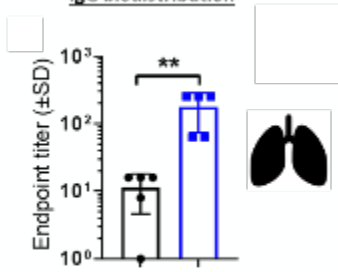
SARS-CoV-2 Spike binding



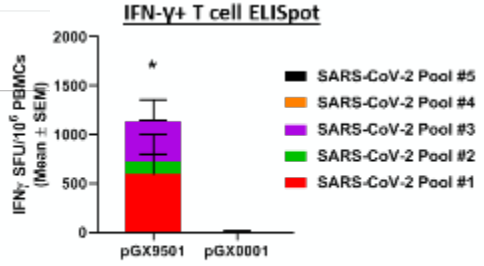

ACE2/Spike blocking



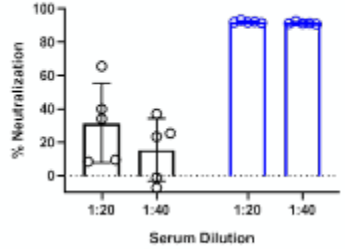

IgG biodistribution




IFN-γ+ T cell ELISpot




Pseudovirus neut.

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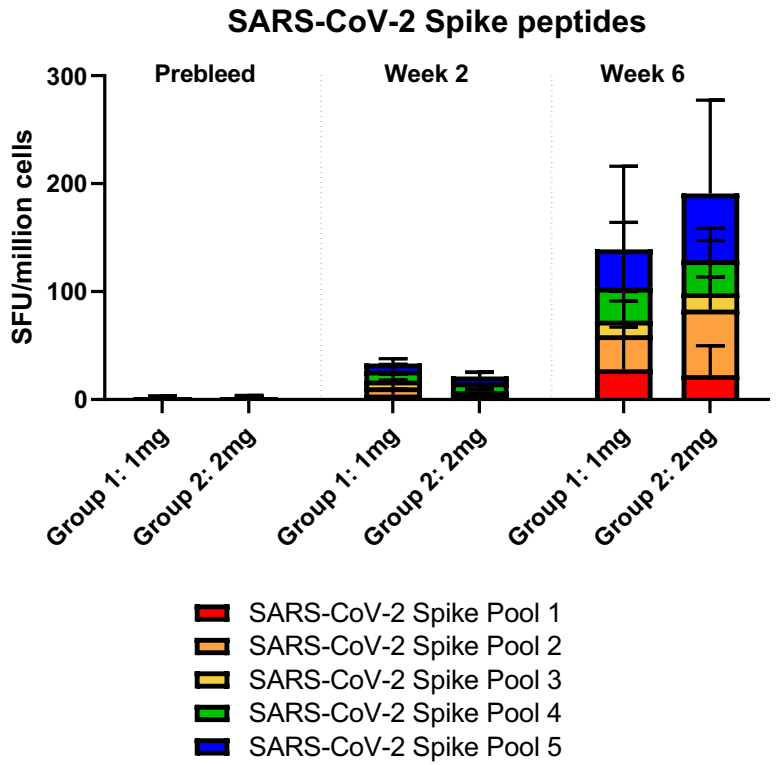
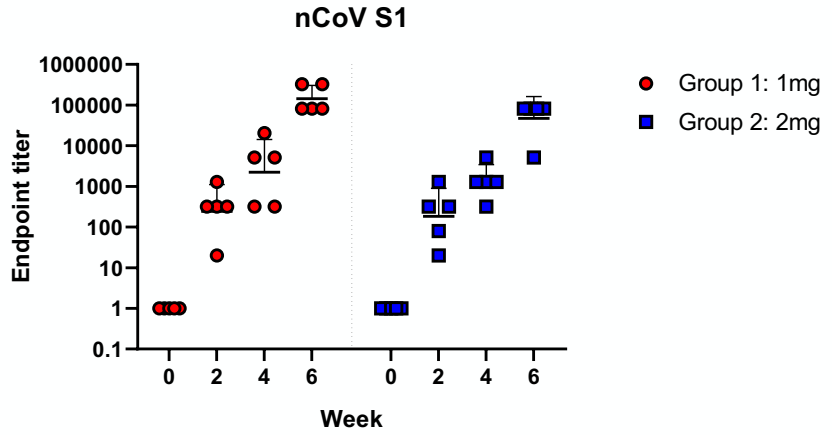
# Robust Cellular and Humoral Immune Responses Following Immunization of INO-4800 in Rhesus Monkeys

**Animal:**
**Rhesus macaque**

**Treatment:**
**Day 0 and 28 ID delivery of pDNA**

| Group | Vaccine | Delivery | Dose per immunization | n |
|---|---|---|---|---|
| 1 | pGX9501 | ID, 1 site | 1 mg | 5 |
| 2 | pGX9501 | ID, 2 sites | 2 mg | 5 |

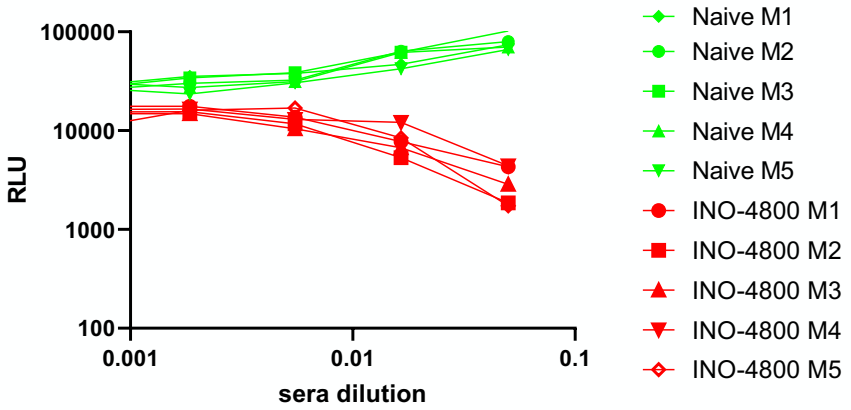



**Robust and rapid B and T cell responses in NHPs**

# Detection of Neutralizing Antibodies






Public Health England



| Group | PRNT result (ND50) |
|---|---|
| pVAX | <1:10, 1:25, 1:20, 1:21, 1:14 |
| **INO-4800** | **>1:320, >1:320, >1:320, >1:320, >1:320** |

**Critical neutralizing antibodies detected in mice and guinea pig (NHP samples being tested) in both a pseudo and live viral neut assay**



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# Demonstration of Preclinical Efficacy – SARS-CoV-2 Challenge Studies



CSIRO

**Ferret Challenge at CSIRO, Australia**



Public Health England

**Primate Challenge at Porton Down, PHE, UK**



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# INO-4800 US Phase 1 Progress

- An open label **study design** in a small sample size – 40 healthy volunteers – to gain preliminary assessment on safety, tolerability and immunogenicity
- Utilize **historical experience** with clinical trial sites to quickly complete start-up activities
- **Front load preparatory** activities at the operational level for subjects to be dosed as soon as the clinical investigational product is available
- **Motivated** study sites and volunteers
- Supportive DSMB members to make rapid decision

Penn
University of Pennsylvania

The Center for Pharmaceutical Research
An AMR Company



***Unprecedented speed*** in starting the study (**83** days from plasmid design to clinical testing) and completing enrollment (**17** working days)



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# Grateful Thanks to Our Team and Our Global Coalition to Date for Supporting INOVIO's COVID-19 Program




CEPI

BILL & MELINDA GATES foundation

Public Health England

CSIRO

IVI International Vaccine Institute

DEPARTMENT OF DEFENSE · UNITED STATES OF AMERICA

DEFENSE THREAT REDUCTION AGENCY · UNITED STATES OF AMERICA

CHINESE ACADEMY OF MEDICAL SCIENCES · PEKING UNION MEDICAL COLLEGE

Advaccine

THE WISTAR INSTITUTE

Perelman School of Medicine University of Pennsylvania



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# INOVIO is Pleased to Welcome Dr. Stanley Plotkin for a Conversation about DNA Vaccines and COVID-19

**Stanley A. Plotkin, M.D.**

Emeritus Professor,
Wistar Institute and University of Pennsylvania;
Principal, Vaxconsult;
Member, INOVIO Scientific Advisory Board





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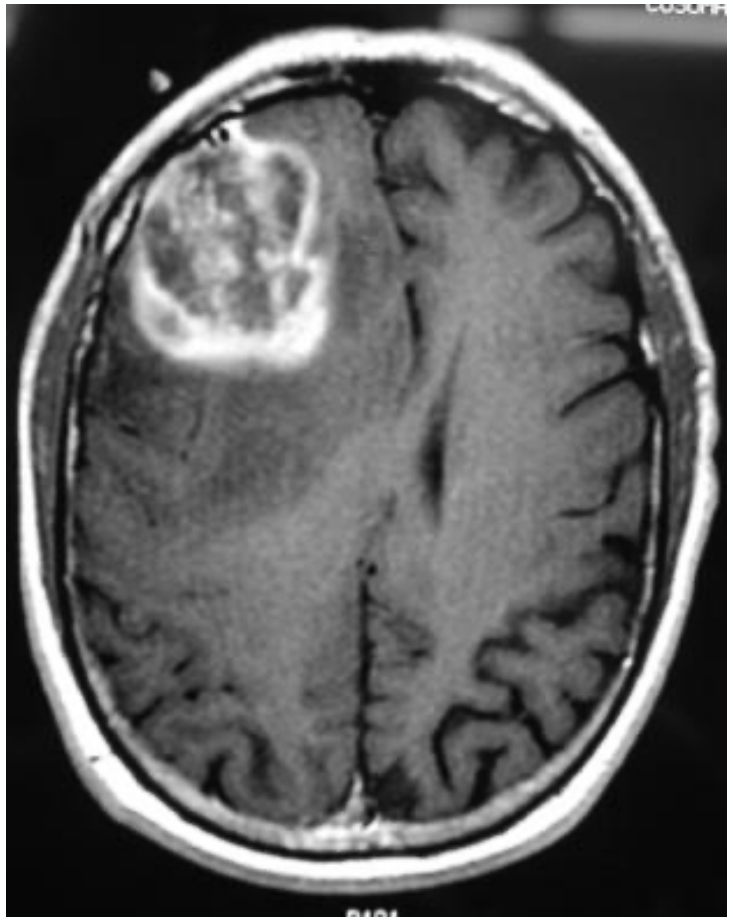
# INOVIO DNA Immunotherapies

**Jeffrey Skolnik, M.D.,** Vice President, Clinical Development, Oncology

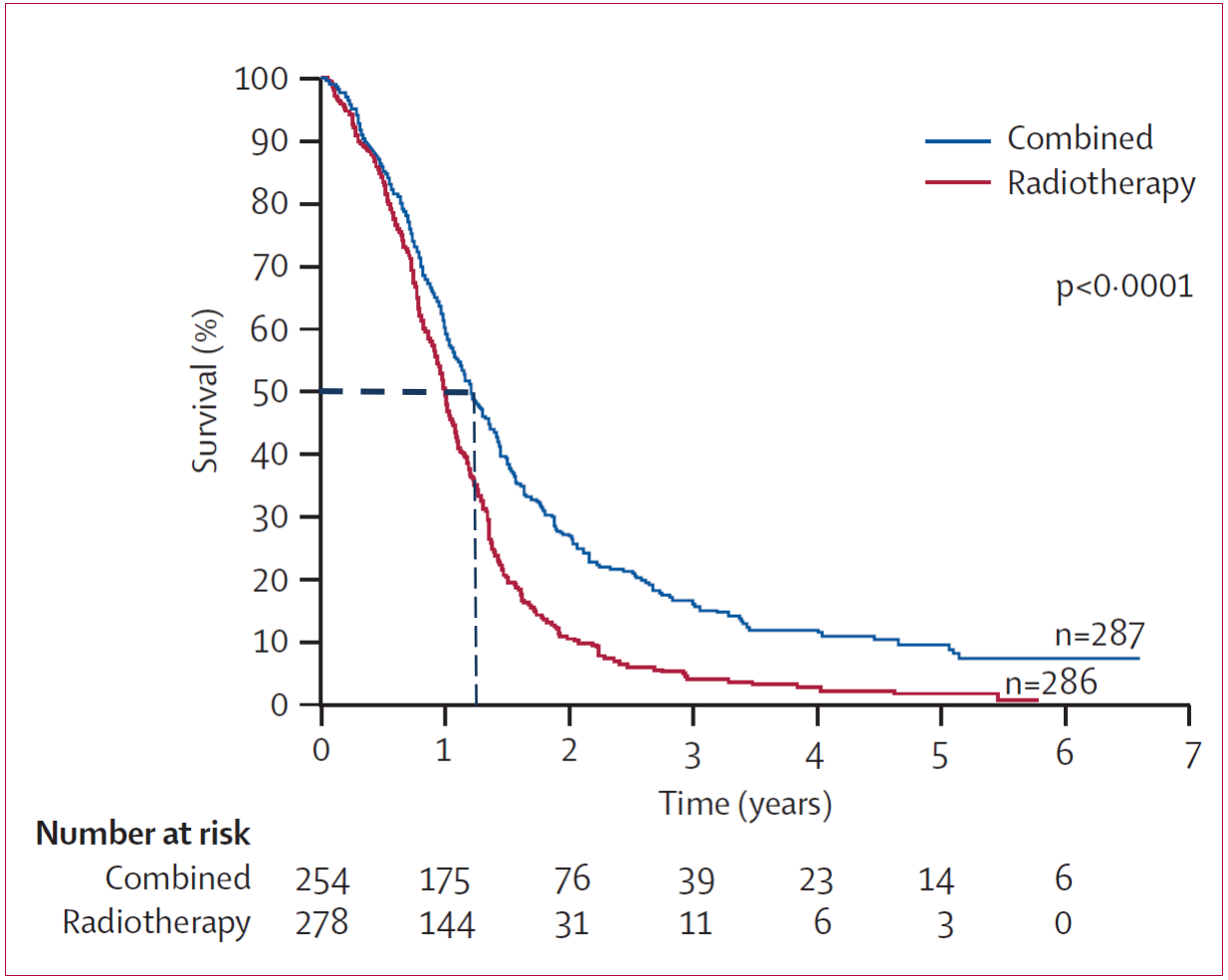


# What is Glioblastoma?



- **Glioblastoma (GBM)** is an aggressive, fast-growing tumor of the supportive cells of the brain, called glial cells. Glioblastoma is also called Grade IV astrocytoma.
- Patients with GBM can present with headaches, nausea and vomiting, seizures, memory loss, weakness, or other neurological symptoms related to the location of the tumor. Symptoms can appear very quickly, because GBM is very fast growing and aggressive.
- GBM is diagnosed at resection, which is the diagnostic procedure of choice. Standard therapy is surgery, radiation and often, chemotherapy (temozolomide).
- Prognosis for patients remains very poor, and GBM is almost always fatal. There have been few, if any changes, in treatment for over twenty years. Survival after diagnosis for most patients is just over a year, and is rarely more than three years.

# The Prognosis of GBM is Very Poor




**Chemotherapy (temozolomide) plus radiation extended overall survival by approximately two months**

Stupp R. et al. Lancet Oncol 2009; 10: 459–66



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# INO-5401 for Newly Diagnosed GBM in Phase 1/2 Study in Collaboration with Regeneron

## TRIAL: **INO-5401** (encoding tumor-associated antigens: hTERT, WT1, PSMA)

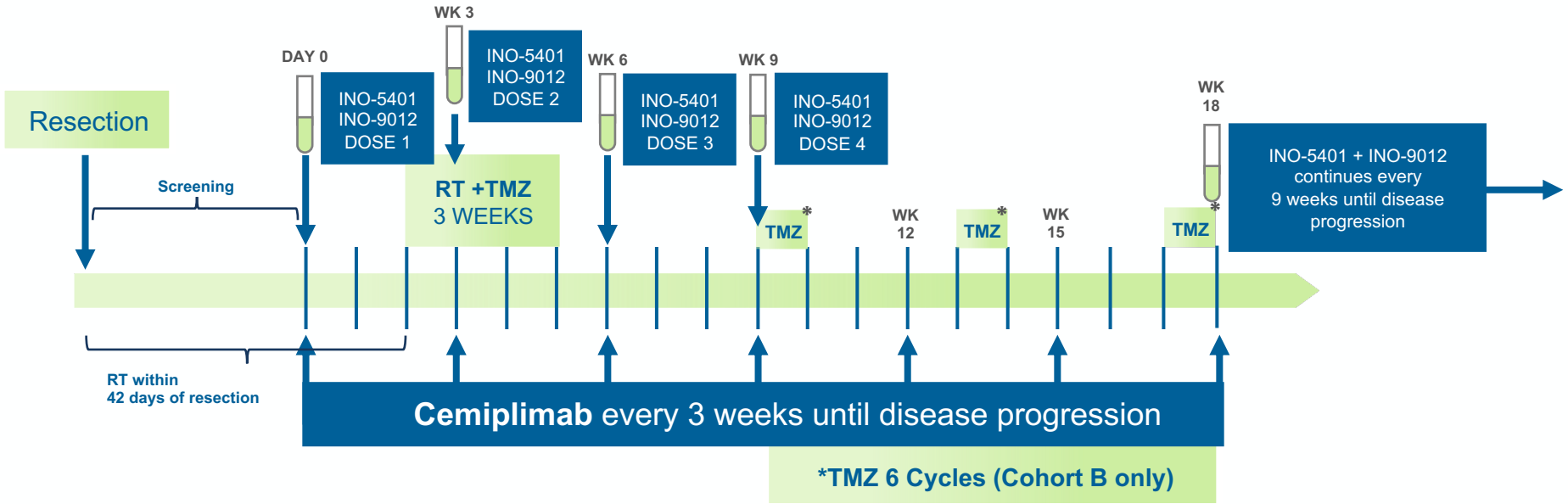
Phase 1b/2 open label study for **newly diagnosed glioblastoma (GBM)**

Combination with Regeneron's PD-1 checkpoint inhibitor cemiplimab (Libtayo®)

**Primary Endpoints:**
Safety, tolerability
**Secondary Endpoints**:
Immunological impact,
**PFS and OS**

x32
**Cohort A:**
MGMT Promoter Unmethylated:
32 patients

x20
**Cohort B:**
MGMT Promoter Methylated:
20 patients



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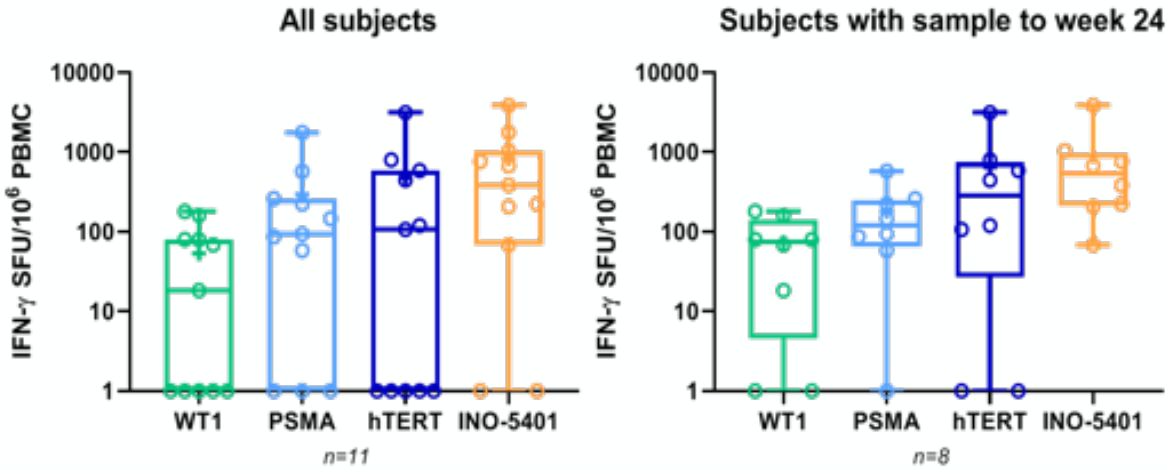
# INO-5401 Results: Six-month Progression-Free Survival

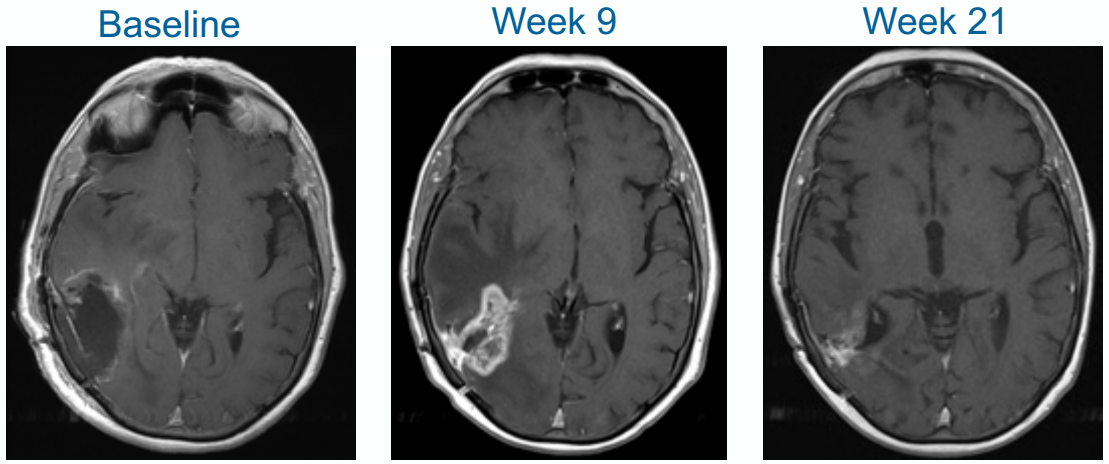
## PREVIOUSLY REPORTED PFS6 AT SITC 2019

- MGMT Promoter Unmethylated **PFS6 of 75%**
- MGMT Promoter Methylated **PFS6 of 80%**
- Compares favorably with historical value of **40-60%**

| Cohort | N Total | N Event-free | PFS6 (95% CI) |
|---|---|---|---|
| Cohort A (MGMT Unmethylated) | 32 | 24 | 75.0 (56.6-88.5) |
| Cohort B (MGMT Methylated) | 20 | 16 | 80.0 (56.3-94.3) |
| Both Cohorts Combined | 52 | 40 | 76.92 (63.2-87.5) |

## ELISpot Data from Subjects to Date




Several patients have experienced pseudo-progression, with progression by RANO criteria and radiographic evidence of progression on MRI, without evidence of tumor on repeat biopsy



Stupp et al. N Eng J Med 2005; Hegi et al. N Eng J Med 2005; Stupp et al. Lancet Oncol 2009

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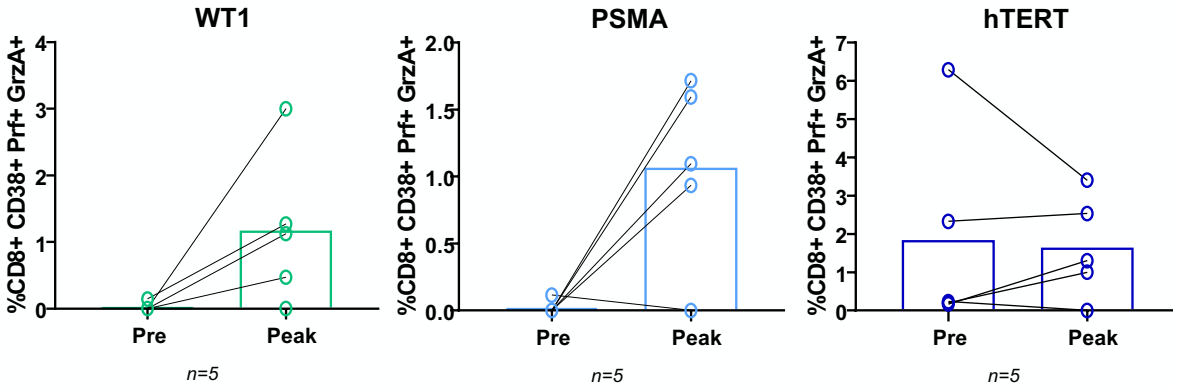
# INO-5401 Results: Promising 12-Month Overall Survival Data; OS18 Data in 4Q2020

**OVERALL SURVIVAL AT 12 MONTHS (OS12) TO BE PRESENTED AT ASCO 2020 ANNUAL MEETING**

- MGMT Promoter Unmethylated OS12 of **84.4%**
- MGMT Promoter Methylated OS12 of **85%**
- Compares favorably with historical value **of 65%**

**MAJORITY OF PATIENTS TESTED HAD A T CELL IMMUNE RESPONSE TO ONE OR MORE TUMOR-ASSOCIATED ANTIGENS ENCODED BY INO-5401**

**COMBINATION OF INO-5401 + INO-9012 WITH CEMIPLIMAB, WITH RADIATION AND TEMOZOLOMIDE, IS PROMISING**

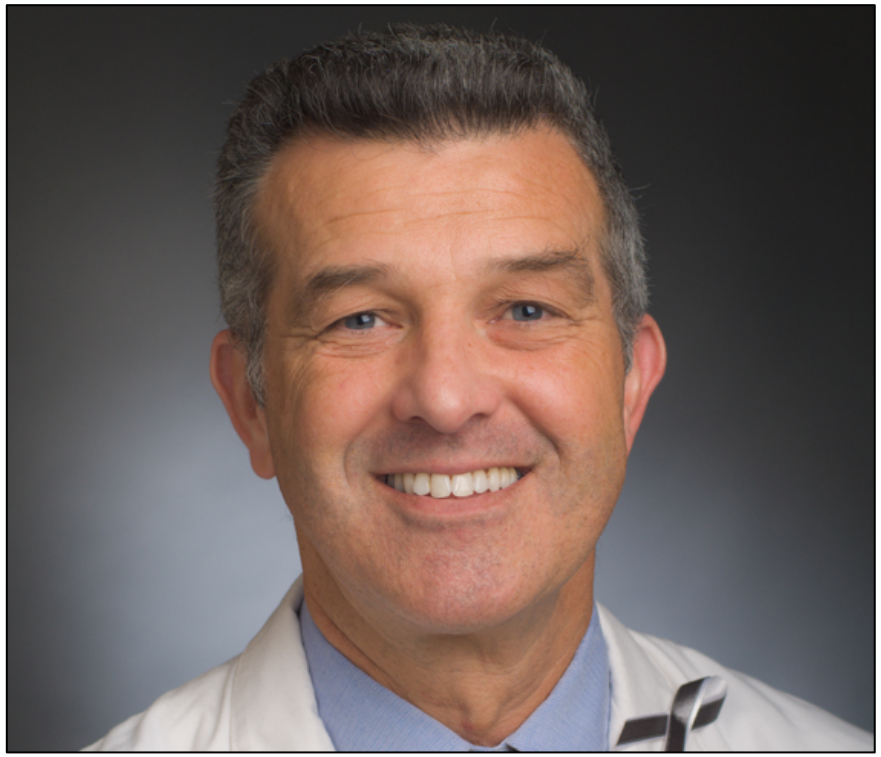



| Overall Survival at 12 Months | N Alive/N Total | OS12 (95% CI) |
|---|---|---|
| MGMT Unmethylated | 27/32 | 84.4 (67.2-94.7) |
| MGMT Methylated | 17/20 | 85.0 (62.1-96.8) |
| Combined | 44/52 | 84.6 (71.9-93.1) |

# INOVIO is Pleased to Welcome Dr. David Reardon for a Conversation about DNA Immunotherapy and GBM

**David Reardon, M.D.**

Clinical Director
Center for Neuro-Oncology
Dana Farber Cancer Institute;
Professor of Medicine
Harvard Medical School;
Coordinating Principal Investigator
of GBM-001/INO-5401
Phase 1/2 Investigator





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# Q & A



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# Closing Remarks

**J. Joseph Kim, Ph.D.,** President, Chief Executive Officer, Director



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# THANK YOU



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