

CORPORATE FACT SHEET

INOVIO MISSION

To rapidly bring to market **revolutionary, live-saving DNA medicines** to meet urgent global health needs

INOVIO DNA MEDICINES FIRSTS

HPV-TARGETED

FIRST DNA medicine in Phase 3 clinical trials (VGX-3100 for precancerous cervical dysplasia caused by high-risk HPV 16/18)

FIRST to show destruction/clearance of high-risk HPV 16/18 in Phase 2b trial (VGX-3100)

FIRST DNA medicine as a potential non-surgical treatment for rare, debilitating, and potentially life-threatening recurrent respiratory papillomatosis (RRP) caused by HPV 6/11 (INO-3107)

FIRST to show complete remission in Phase 1 with two PD-1s for head and neck cancer caused by high-risk HPV 16/18 (MEDI0457, licensed out to Astra Zeneca)

IMMUNO-ONCOLOGY (NON HPV-ASSOCIATED)

FIRST DNA medicine to show potential for efficacy in glioblastoma multiforme (GBM), the most deadly brain cancer and one of the most aggressive cancers overall

FIRST DNA medicine to show a break in tolerance against self-antigens such as WT-1 (Wilms Tumor-1), a protein important in attacking cancer cells

FIRST DNA medicine to create anti-prostate cancer-specific T cells

INFECTIOUS DISEASES (NON HPV-ASSOCIATED/EXTERNALLY FUNDED)

FIRST Lassa fever vaccine to enter clinic (INO-4500), funded by CEPI

FIRST MERS vaccine to progress to Phase 2 clinical testing (INO-4700), funded by CEPI

FIRST dMAb plasmid in Phase 1 for Zika (INO-A002), funded by Bill & Melinda Gates Foundation

KEY CONTACTS

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POWERING A NEW DECADE OF DNA MEDICINES

ABOUT INOVIO

INOVIO is a biotechnology company committed to powering a new way forward in DNA medicines to save and protect lives worldwide. The company is focused on rapidly bringing to market **precisely designed and delivered DNA medicines** to potentially treat and protect people from **diseases associated with HPV, cancer, and infectious diseases**.

With **15 current clinical programs**, INOVIO's DNA medicines have consistently activated safe, robust, and fully functional T cell and antibody responses against targeted pathogens and cancers.

OUR PROPRIETARY OPTIMIZED PLASMID DESIGN AND DELIVERY TECHNOLOGY

INOVIO's **first-of-their-kind DNA medicines** are precisely designed DNA plasmids delivered through INOVIO's proprietary smart device — CELLECTRA® — directly into the body's cells to produce an immune response robust enough to potentially treat or prevent diseases.

PRECISELY DESIGNED
PLASMIDS (SynCon®)



PROPRIETARY SMART
DEVICE (CELLECTRA®)



IN
VIVO



INOVIO'S TECHNOLOGY ADVANTAGES

Clinical Efficacy

- Demonstrated clinical efficacy in Phase 2b study
- Lead candidate in Phase 3 evaluation for precancerous cervical dysplasia

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

Safety

- Favorable safety profile tested in over 2,000 patients and over 6,000 administrations
- Carries no potential toxicity from plasmid vector

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

OUR FOCUS: SERVING PATIENTS WITH URGENT HEALTH NEEDS

“ I know HPV 16/18 can lead to cancer and that a scalpel can't destroy a virus. I want a medicine that can destroy and clear the virus inside my body exactly where it is hiding.

— Precancerous cervical dysplasia patient, female, age 57

“ Having surgery every four months to remove HPV growths in my throat has defined my life. Having a medicine to clear and destroy HPV would change everything...

— Recurrent respiratory papillomatosis patient, male, age 43

INOVIO FAST FACTS

EMPLOYEES: ~200'
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DNA MEDICINES FOR HPV-ASSOCIATED DISEASES, CANCER, AND INFECTIOUS DISEASES

Based on clinical results, INOVIO's technology has the potential to advance the standard of care for treating and preventing diseases associated with HPV, cancer, and infectious diseases.

HPV-Associated Diseases

INOVIO's lead product candidate, **VGX-3100**, is in development to treat multiple conditions associated with HPV, the human papillomavirus. Nearly 80 million Americans are infected with HPV,² and approximately **7 million HPV infections** occur each year with **high-risk HPV genotypes 16/18**, which can lead to cervical, anal, and head and neck cancers, as well as other cancers.³ **VGX-3100** targets high-risk HPV 16/18 and is **currently in Phase 3 trials for precancerous cervical dysplasia (REVEAL 1 and 2)**. **MEDI0457**, also targeting high-risk HPV 16/18, is in Phase 2 trials for head and neck, and other cancers in partnership with AstraZeneca. Data readouts from REVEAL 1 and **MEDI0457** trials are expected in 2020.

Other strains of HPV can cause debilitating conditions such as recurrent respiratory papillomatosis (RRP), a rare and potentially life-threatening disease requiring multiple surgeries throughout life to remove tumors that obstruct the airway. A pilot study with INOVIO's **INO-3107** for RRP showed a significant **delay in surgery** due to lack of tumor recurrence in two (of two) patients; INOVIO is moving rapidly to advance trials under an **orphan eligible regulatory path**.













Cancer

INOVIO also has several clinical programs aimed at treating specific cancers, including **glioblastoma multiforme (GBM)**, an aggressive malignancy of the brain (**INO-5401** in partnership with REGENERON), as well as **prostate cancer (INO-5151)** in partnership with the **Cancer Research Institute** and the **Parker Institute for Cancer Immunotherapy**.

Infectious Diseases

For infectious diseases, INOVIO's DNA medicines are being developed with funding from leading government agencies and global public health organizations, including CEPI and DARPA, for **COVID-19**, **HIV**, **Zika**, **Ebola**, **Lassa fever**, and **MERS** (both **COVID-19** and **MERS** are caused by coronaviruses). And, INOVIO is pioneering the first-ever dMAb plasmid in Phase 1 trials for Zika (**INO-A002**), in partnership with the **Bill & Melinda Gates Foundation**.

DNA MEDICINES PIPELINE

DNA MEDICINE PIPELINE			INTERNALLY FUNDED				EXTERNALLY FUNDED
PRODUCT	INDICATION	ANTIGEN	PRE-CLINICAL	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	<div></div>				 Apollobio (China; INOVIO maintains global rights)
	Precancerous Vulvar Dysplasia (HSIL)		<div></div>				
	Precancerous Anal Dysplasia (HSIL)		<div></div>				
INO-3107	Recurrent Respiratory Papillomatosis (RRP)	HPV 6 E6, E7/ HPV 11 E6, E7	<div></div>				
MEDI0457	Head & Neck Cancer	HPV 16 E6, E7/ HPV 18 E6, E7	<div></div>				AstraZeneca 
	Cervical, Anal, Penile, Vulvar Cancers		<div></div>				
IMMUNO-ONCOLOGY (NON HPV-ASSOCIATED)							
INO-5401	Glioblastoma Multiforme (GBM)	WT1, PSMA, hTERT	<div></div>				REGENERON
INO-5151	Prostate Cancer	PSA, PSMA	<div></div>				 
INFECTIOUS DISEASES (NON HPV-ASSOCIATED)							
PENNVAX-GP	HIV	Gag, pol, env	<div></div>				 
INO-4201	Ebola	Glycoprotein	<div></div>				
INO-4700 (GLS-5300)	MERS	Spike	<div></div>				 
INO-4600 (GLS-5700)	Zika	Glycoprotein	<div></div>				
INO-4500	Lassa Fever	Glycoprotein	<div></div>				CEPI
INO-4800	COVID-19 (Coronavirus)	Spike	<div></div>				 
dMAb™ (DNA-ENCODED MONOCLONAL ANTIBODIES)							
INO-A002	Zika	Glycoprotein	<div></div>				Bill & Melinda Gates Foundation

1. As of January 2020. 2. Centers for Disease Control and Prevention. Human Papillomavirus (HPV) – About HPV. Available at: https://www.cdc.gov/hpv/about/about-hpv.html?CD_C_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fhpv%2Fparents%2Fwhatshp.html. Accessed January 22, 2020. 3. Saraiya M, Unger ER, Thompson TD, Lynch CF, Hernandez BY, Lyu CW, Steinau M, Watson M, Wilkinson EJ, Hopenhayn C, Copeland G, Cozen W, Peters ES, Huang Y, Sabar MS, Altekruse S, Goodman MT. HPV Typing of Cancers Workgroup. US assessment of HPV types in cancers: implications for current and 9-valent HPV vaccines. J Natl Cancer Inst. 2015 Apr 29;107(8):dv086.

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