Vaccine and Therapeutic Initiatives for COVID-19: an Investor Call with Patrick Soon-Shiong, M.D.

May 27, 2020

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FORWARD-LOOKING STATEMENTS

These slides and the accompanying oral presentation contain forward-looking statements within the meaning of the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, that are based on management's beliefs and assumptions and on information currently available to our management. Forward-looking statements include, but are not limited to:

- our ability to pioneer immunotherapy, harness the power of the innate immune system, implement precision cancer medicine and change the current paradigm of cancer care;
- any impact of the COVID-19 pandemic, or responses to the pandemic, on our business, clinical trials or personnel;
- details regarding our strategic vision, including our planned therapies for virally induced infectious diseases such as COVID-19;
- our expectations regarding the potential benefits of our strategy and technology;
- our ability to utilize multiple modes to induce cell death;
- our beliefs regarding the benefits and perceived limitations of competing approaches, and the future of competing technologies and our industry;
- our beliefs regarding the success, cost and timing of our product candidate development activities and clinical trials;
- the timing or likelihood of regulatory filings or other actions and related regulatory authority responses, including any planned investigational new drug (IND) filings or pursuit of accelerated regulatory approval pathways or orphan drug status and breakthrough therapy designations;
- our ability to implement an integrated discovery ecosystem and the operation of that planned ecosystem;
- our expectations regarding our ability to utilize the Phase I aNK clinical trial data to support the development our other product candidates;
- our ability to produce an "off-the-shelf" therapy;
- our beliefs regarding the potential manufacturing and distribution benefits associated with our product candidates, and our ability to scale up the production of our product candidates;
- our ability to obtain and maintain intellectual property protection for our product candidate and not infringe upon the intellectual property of others;
- the ability and willingness of strategic collaborators, including certain of our affiliates, to share our vision and effectively work with us to achieve our goals;
- the ability and willingness of various third parties to engage in research and development activities involving our product candidates, and our ability to leverage those activities; and
- regulatory developments in the United States and foreign countries.

Factors that could cause our results to differ materially from those expressed in forward-looking statements include, without limitation:

- the fact that our business is based upon the success of aNK cells as a technology platform and the success of N-803 and the other product candidates;
- our aNK platform and other product candidate families, including genetically modified taNK, haNK and t-haNK product candidates, will require significant additional clinical testing;
- even if we successfully develop and commercialize our aNK product candidates or N-803, we may not be successful in developing and commercializing our other product candidates either alone or in combination with other therapeutic agents;
- we may not be able to file INDs, to commence additional clinical trials on timelines we expect;
- we will need to obtain substantial additional financing to complete the development and any commercialization of our product candidates; and
- risks associated with our ability to enforce intellectual property rights.

Forward-looking statements include statements that are not historical facts and can be identified by terms such as "anticipates," "believes," "could," "seeks," "estimates," "expects," "intends," "may," "plans," "potential," "predicts," "projects," "should," "will," "would," or similar expressions and the negatives of those terms.

Forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause our actual results, performance, or achievements to be materially different from any future results, performance, or achievements expressed or implied by the forward-looking statements.

These and other risks regarding our business are described in detail in NantKwest's Securities and Exchange Commission filings. We encourage you to review NantKwest's SEC filings in order to understand these risks. These forward-looking statements speak only as of the date thereof, and we disclaim any obligation to update these statements except as may be required by law. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Also, forward-looking statements represent our management's beliefs and assumptions only as of the date of this presentation.

Except as required by law, we assume no obligation to update these forward-looking statements, 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. No representation or warranty, express or implied, is given as to the completeness or accuracy of the information or opinions contained in this document and we do not accept any liability for any direct, indirect or consequential loss or damage arising from reliance on such information or opinions. Past performance should not be taken as an indication or guarantee of future performance. You should read this presentation completely and with the understanding that our actual future results may be materially different from what we expect.

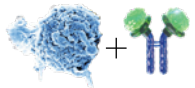
NantKwest & ImmunityBio: Driving to the Memory T Cell

NantKwest ImmunityBio

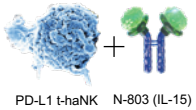
CANCER


N-803 (IL-15)

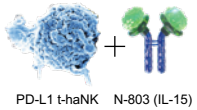
Non-Muscle Invasive Bladder Cancer
N-803 + BCG
- Breakthrough Therapy Designation Status
- Primary Endpoint Reached
- BLA Filing 2021


PD-L1 t-haNK N-803 (IL-15)

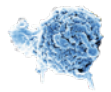
Metastatic Pancreatic Cancer
PD-L1 t-haNK + N-803
- Complete Response >6 Months
- IND Authorized 1st Line
- IND Authorized 2nd Line
- Activating Sites


PD-L1 t-haNK N-803 (IL-15)

3rd Line Triple Negative Breast Cancer
PD-L1 t-haNK + N-803
- Complete Response >12 Months
- IND Q3 2020


PD-L1 t-haNK N-803 (IL-15)

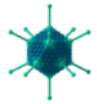
3rd Line Lung Cancer
PD-L1 t-haNK + N-803
- IND Filed Q2 2020


haNK (CD-16 NK)

3rd Line Merkel Cell Carcinoma
haNK (CD-16 NK)
- Complete Response >4 Years
- Trial Recruiting

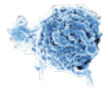
COVID-19

VACCINE


Human Adenovirus hAd5

COVID-19 Vaccine
Adenovirus (hAd5)
- IND Filed
- Phase Ib Trial (Anticipated June 2020)
- cGMP Manufacturing Ready
- 100 million doses by year end

THERAPEUTICS


haNK (CD-16 NK)

COVID-19 (Moderate Disease)
haNK + Convalescent Plasma
- Pre-IND Filed


N-803 (IL-15)

COVID-19 (Moderate Disease)
N-803
- IND Authorized


Mesenchymal Stem Cells

COVID-19 (Severe Disease)
Mesenchymal Stem Cell (MSC)
- NCT04397796, Phase I

COVID-19: From Prevention to Treatment

THE NANT SOLUTION

Green: Uninfected | **Yellow: Moderate Symptoms** | **Red: Severe & Critical**

Vaccine
Uninfected State

ImmunityBio

2nd Gen hAd5 Adenovirus Vaccine Program

T Cell Mediated Immunity
Humoral Immunity

IND Submitted to FDA
Operation Warp Speed

Therapeutic
Mild to Moderate State

ImmunityBio

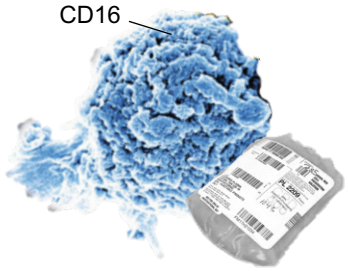
N-803: IL-15 Superagonist

Natural Killer & Memory T Cell Activation Enhanced ADCC

IND Authorized by FDA

NantKwest

Off-The-Shelf Natural Killer (NK)



Enhanced ADCC with Neutralizing Antibodies

IND Submitted to FDA

Therapeutic
Critical ICU State

NantKwest

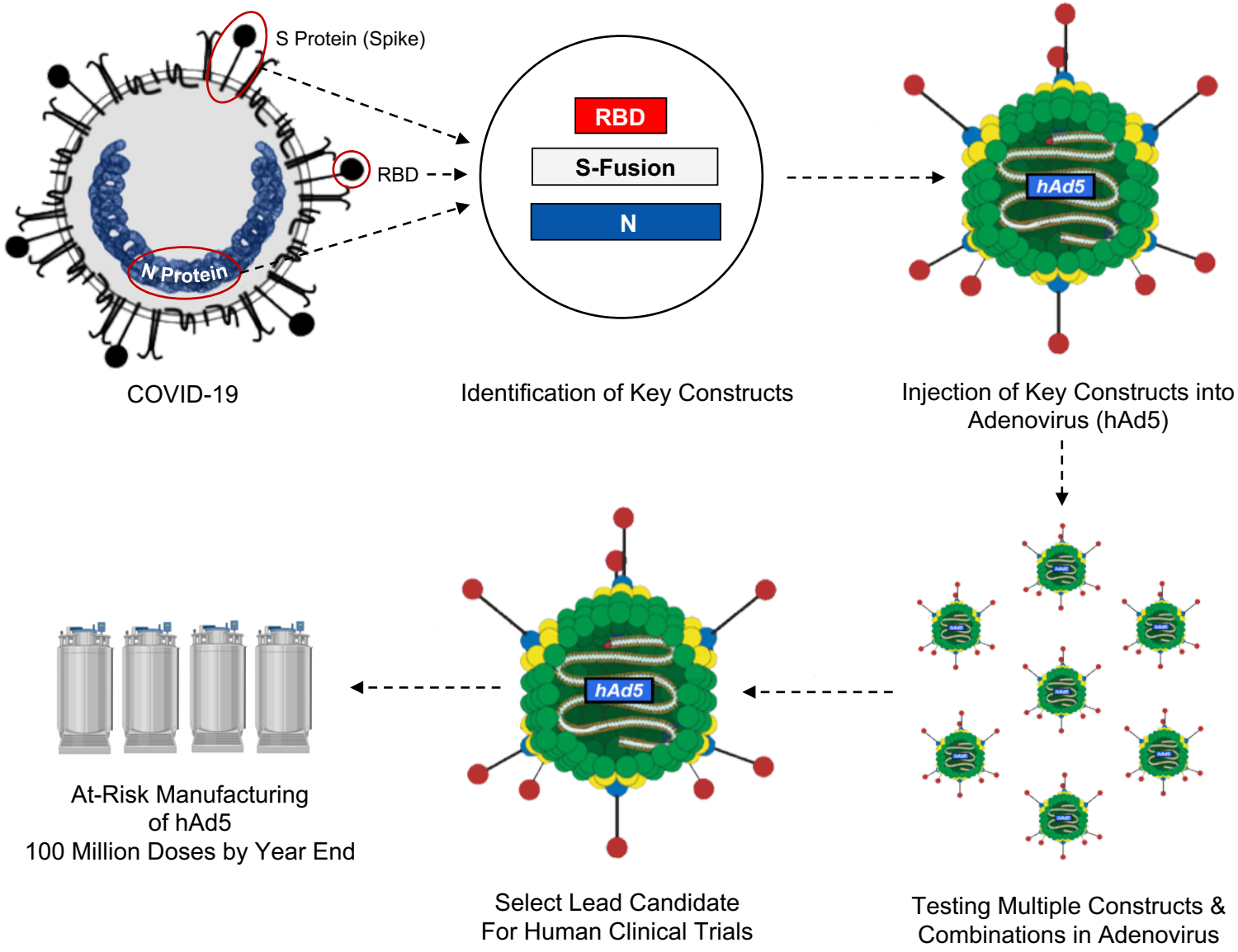
Bone Marrow Derived Mesenchymal Stem Cell

Overcoming Cytokine Storm
Reduction of Ventilator Time

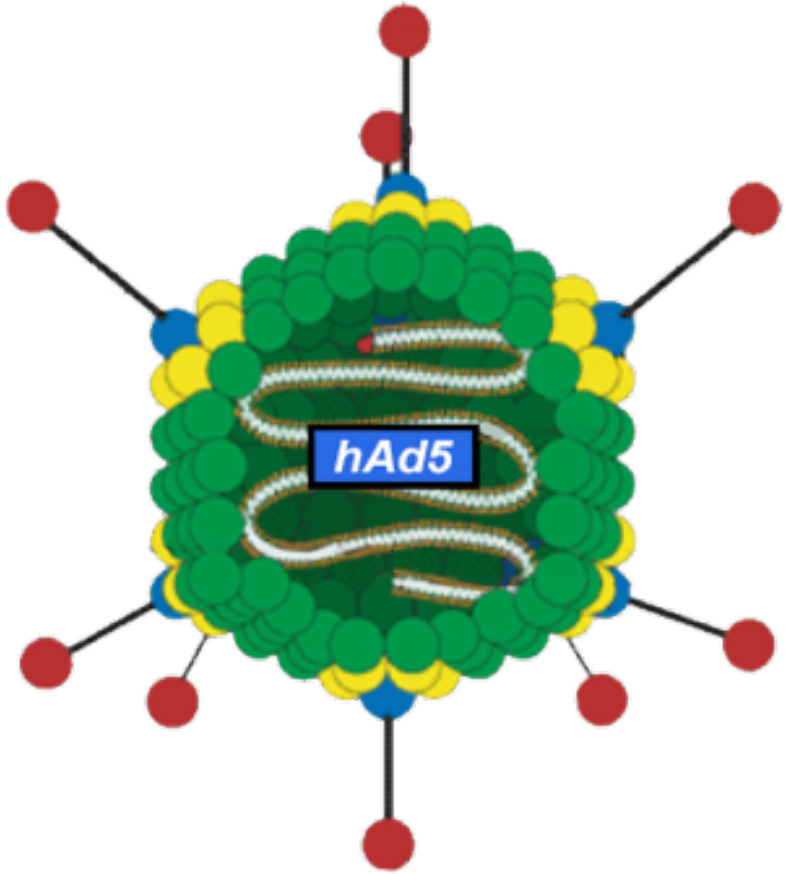
Phase I
NCT04397796

ImmunityBio & NantKwest: Operation Warp Speed
2nd Generation Human Adenovirus (hAd5)

- January 2020: SARS-CoV-2 sequence available
- Feb 2020: Vaccine design commences
- Feb 2020: SARS-CoV-2 spike protein inserted into hAd5 vector
- March 2020: Multiple vaccine candidates constructed, small animal studies initiated
- March 2020: Validated with pre-clinical testing to identify lead candidate
- April 2020: Finished dosage form of S + N vaccine
- May 2020: Confirmation of correct protein expression using antibodies from recovered COVID-19 patients
- May 2020: At-risk large scale manufacturing begins in USA
- June 2020: Human Clinical Trials

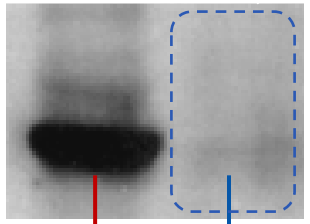


A Unique Vector: 2nd Generation Human Adenovirus (hAd5)



1st Generation Ad Lysate From Infected Cells

Immunogenically Stealth 2nd Gen Human Adeno NANT's hAd5 [E1-, E2b-, E3- Deleted]



1st Generation Ad Viral Fiber 66kD

CanSino, Oxford, J&J →

← **2nd Generation Immunologically Quiet No Fiber (Stealth)**

ImmunityBio / NantKwest

Intracellular generation of adeno fibers by 1st generation adenoviral vector

No generation of adeno fibers By unique vector (hAd5)

Limitations of 1st Gen:

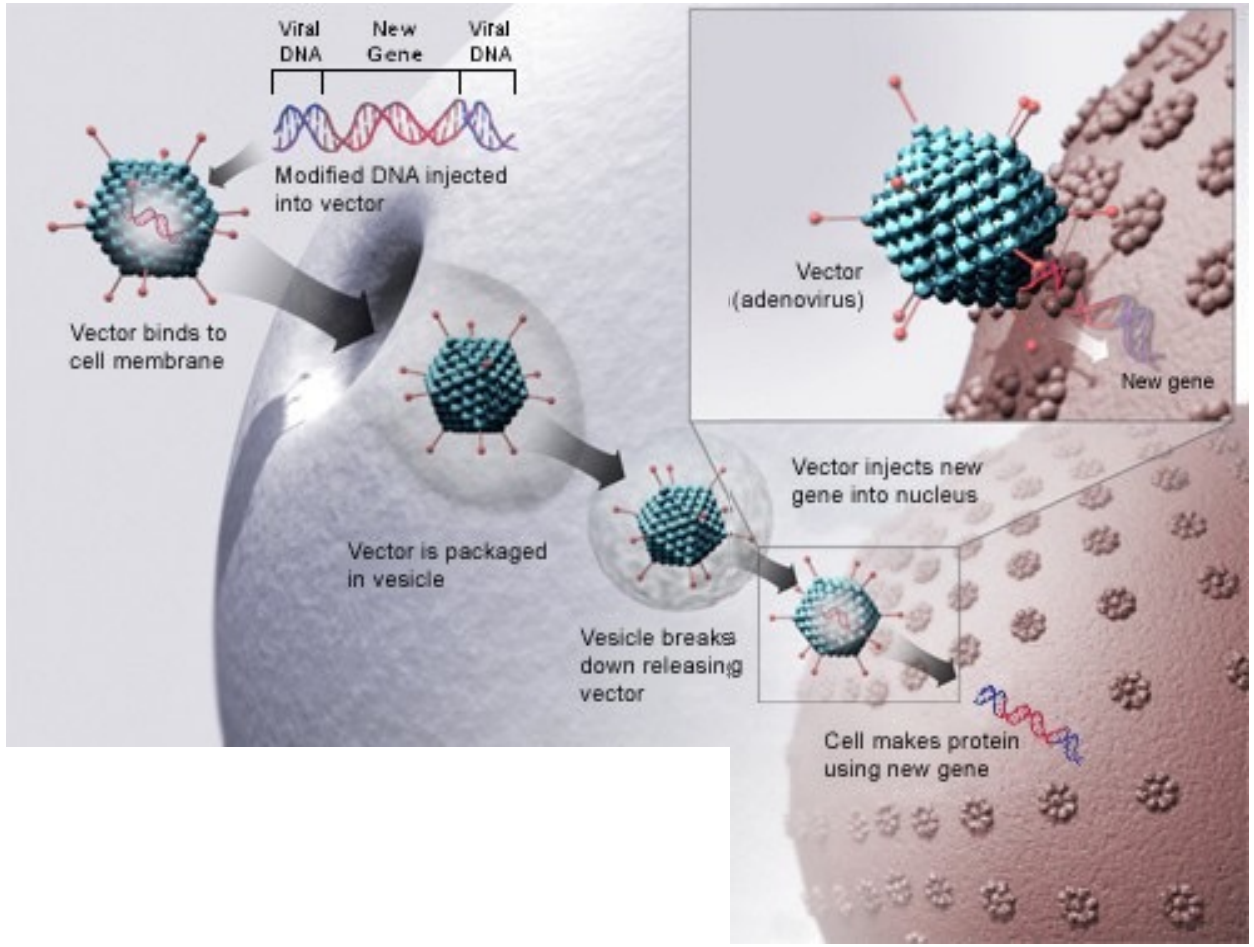
- Exposed Dendritic cells
- Early Killer T Cells Attack
- Reduced Immunogenicity

Superiority of 2nd Gen:

- Stealth Dendritic Cells
- Hidden From T Cell Attack
- Enhanced Immunogenicity

ImmunityBio Proprietary 2nd Gen Adenovirus Platform Overcoming Ad Immunity
A Decade of Development History

- **Adenovirus serotype 5** viral backbone- Medium sized (90-100nm), non-enveloped, icosahedral, ds DNA as a 1st generation
- Developed for use in gene therapy applications
- **ImmunityBio's 2nd Gen hAd5 (E1-, E2b-, E3) Deletion** Overcoming Ad Immunity
- Manufactured using **patented E.C7 human cell line**
- Administered via **subcutaneous injection** to patient
- **Proven rapid development** of product candidates – (e.g. H1N1) insert disease gene of choice into hAd5 vector backbone



H1N1 Pandemic - 2009

NIH Public Access
Author Manuscript
Vaccine. Author manuscript; available in PMC 2013 November 26.

Published in final edited form as:
Vaccine. 2012 November 26; 30(50): 7265–7270. doi:10.1016/j.vaccine.2012.09.058.

Control of SIV infection and subsequent induction of pandemic H1N1 immunity in rhesus macaques using an Ad5 [E1-, E2b-] vector platform

Elizabeth S. Gabitzsch[a,*], Joseph P. Balint-Junior[a], Younong Xu[a], Stephanie Balcaitis[a], Brigitte Sanders-Beer[b], Julie Karl[c], Kent J. Weinhold[d], Slobodan Paessler[e], and Frank R. Jones[a]
[a]Etubics Corporation, Seattle, WA 98119

HIV - 2009

Published in final edited form as:
Vaccine. 2009 October 30; 27(46): 6394–6398. doi:10.1016/j.vaccine.2009.06.028.

Novel Adenovirus type 5 vaccine platform induces cellular immunity against HIV-1 Gag, Pol, Nef despite the presence of Ad5 immunity

Elizabeth S. Gabitzsch[1,*], Younong Xu[1], Lois H. Yoshida[1], Joseph Balint[1], Andrea Amalfitano[2], and Frank R. Jones[1]
[1] Etubics Corporation, Seattle, WA

SIV - 2011

NIH Public Access
Author Manuscript
Vaccine. Author manuscript; available in PMC 2013 November 26.

Induction and Comparison of SIV immunity in Ad5 Naïve and Ad5 Immune Non-human Primates using an Ad5 [E1-, E2b-] based vaccine

Elizabeth S Gabitzsch[1], Younong Xu[1], Joseph P Balint Jr.[1], Stephanie Balcaitis[1], Brigitte Sanders-Beer[2], and Frank R Jones[1]
[1]Etubics Corporation, Seattle, WA, USA
[2]BIOQUAL, Inc, Rockville, MD, USA

H1N1 Pandemic - 2009

Contents lists available at ScienceDirect
Vaccine
journal homepage: www.elsevier.com/locate/vaccine

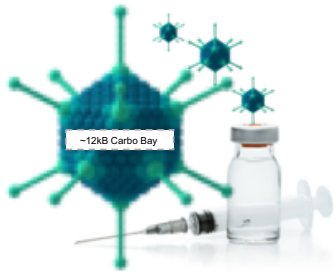
Prevention of influenza virus shedding and protection from lethal H1N1 challenge using a consensus 2009 H1N1 HA and NA adenovirus vector vaccine

Frank R. Jones[a], Elizabeth S. Gabitzsch[a,*], Younong Xu[a], Joseph P. Balint[a], Viktoriya Borisevich[b], Jennifer Smith[b], Jeanon Smith[b], Bi-Hung Peng[b], Aida Walker[b], Magda Salazar[b], Slobodan Paessler[b]
[a] Etubics Corporation, Seattle, WA 98190, USA
[b] Galveston National Laboratory, Department of Pathology, Sealy Vaccine Center, University of Texas Medical Branch, Galveston, TX, USA

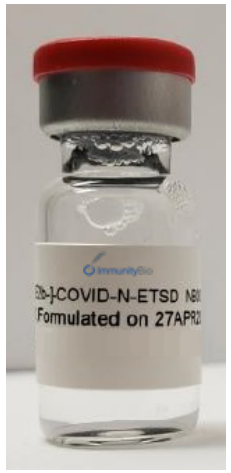
ImmunityBio

2nd Generation hAd5 Human Adenovirus COVID-19 Vaccine

Non-Replicating Viral Vaccine



Eliciting T Cell Mediated Immunity & Humoral Immunity



S-Fusion + N-ETSD

Lassa Fever - 2019

Contents lists available at ScienceDirect
Vaccine
journal homepage: www.elsevier.com/locate/vaccine

Adenoviral vector-based vaccine is fully protective against lethal Lassa fever challenge in Hartley guinea pigs

Junki Maruyama[a,2], Elizabeth J. Mateer[a,2], John T. Manning[a], Rachel Sattler[a], Alexey V. Seregin[a,1], Natalya Bukreyeva[a], Frank R. Jones[b], Joseph P. Balint[b], Elizabeth S. Gabitzsch[b], Cheng Huang[a], Slobodan Paessler[a,*]
[a] Department of Pathology, University of Texas Medical Branch, Galveston, TX, USA
[b] Etubics Corporation, Seattle, WA, USA

Cancer – 2009-2013

Published in final edited form as:
Immunol Lett. 2009 January 29; 122(1): 44–51. doi:10.1016/j.imlet.2008.11.003.

A Preliminary and Comparative Evaluation of a Novel Ad5 [E1-, Eb2-] Recombinant Based Vaccine Used to Induce Cell Mediated Immune Responses

Elizabeth S. Gabitzsch*, Younong Xu*, Lois H. Yoshida*, Joseph Balint*, Richard B. Gayle*, Andrea Amalfitano^, and Frank R. Jones*
* *Etubics Corporation, Seattle WA*

Multiple Antigens - 2019

The Oncologist
Clinical Trial Results

A Phase I Trial Using a Multitargeted Recombinant Adenovirus 5 (CEA/MUC1/Brachyury)-Based Immunotherapy Vaccine Regimen in Patients with Advanced Cancer

Margaret E. Gatti-Mays[a,†], Jason M. Redman[b,†], Renee N. Donahue[a], Claudia Palena[a], Ravi A. Madan[b], Fatima Karzai[b], Marijo Bilusic[b], Houssein Abdul Sater[b], Jennifer L. Marté[b], Lisa M. Cordes[b], Sheri McMahon[b], Seth M. Steinberg[c], Alanvin Oripa[d], Andrea Burmeister[d], Jeffrey Schlom[a,*], James L. Gulley[b,*], Julius Strauss[a]
[a]Laboratory of Tumor Immunology and Biology and [b]Genitourinary Malignancies Branch, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, Maryland, USA; [c]Biostatistics and Data Management Section, National Cancer Institute, National Institutes of Health, Bethesda, Maryland, USA; [d]Leidos Biomedical Research, Inc., Frederick, Maryland, USA

Neoepitope - 2019

Research Article
Cancer Immunology Research

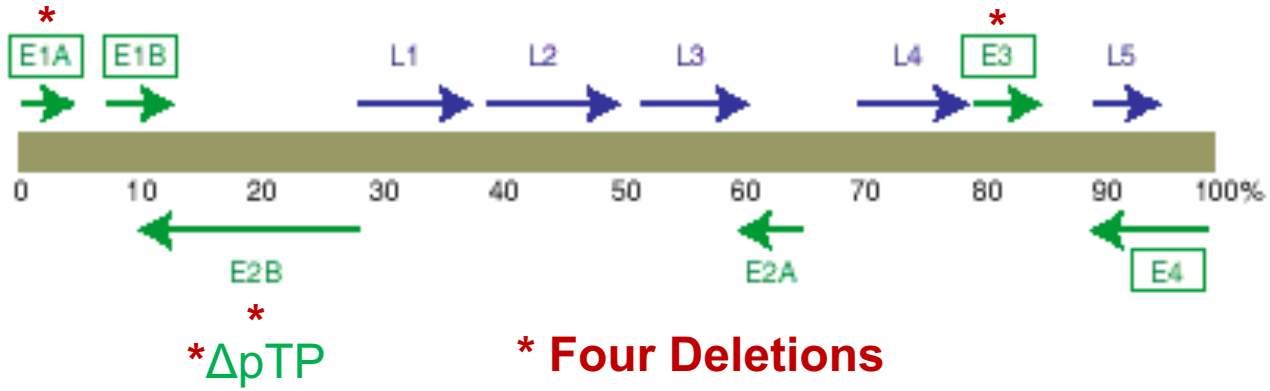
Efficient Tumor Clearance and Diversified Immunity through Neoepitope Vaccines and Combinatorial Immunotherapy

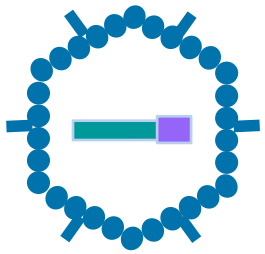
Karin L. Lee[1], Stephen C. Benz[2], Kristin C. Hicks[1], Andrew Nguyen[2], Sofia R. Gameiro[1], Claudia Palena[1], John Z. Sanborn[2], Zhen Su[3], Peter Ordentlich[4], Lars Rohlin[5], John H. Lee[6], Shahrooz Rabizadeh[2,5], Patrick Soon-Shiong[2,5], Kayvan Niazi[5], Jeffrey Schlom[1], and Duane H. Hamilton[1]

ImmunityBio Proprietary 2nd Gen hAd5 Viral Vector with Four Deletions to Enable "Immunologically Quiet" Transfection

2nd Generation Adeno hAd5 [E1-, E2b- E3-] Vector

Adenovirus serotype 5 virus gene carrier with 4 separate deletions within the adenoviral genome:





4 Deletions
2nd Gen hAd5
[E1-, E2b-, E3-]

- **E1** genes, necessary for expression of E2 and late genes required for Ad DNA synthesis, capsid protein expression, and viral replication
- **E2**: Δpol- Adenovirus DNA polymerase, required for replication of the adenovirus genome.
- **ΔpTP**- pre-terminal Protein, required for viral replication
- **E3**: anti-host immunity

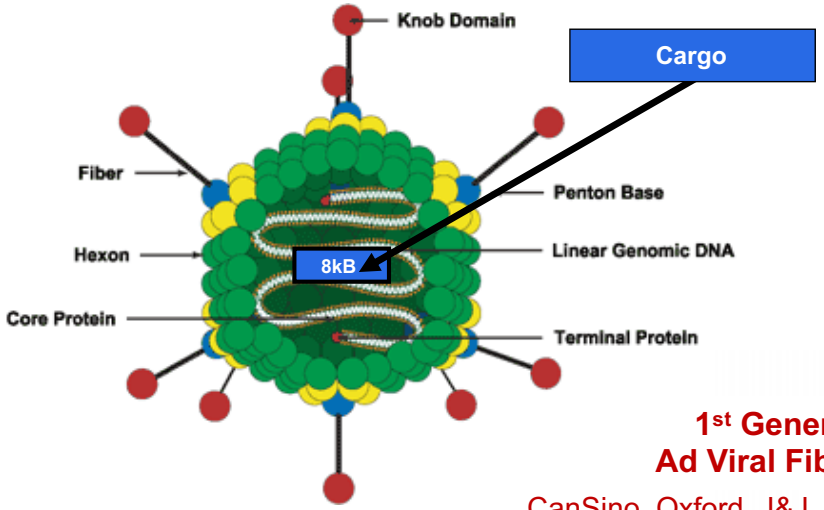
1st Generation vs. 2nd Generation hAd5

1st Generation Ad
(CanSino, J&J, Oxford)

[E1-, E3-]

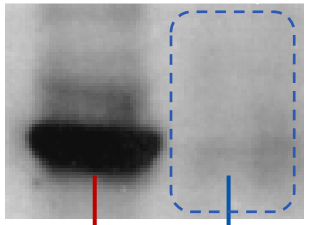
2nd Generation Ad
(ImmunityBio / NantKwest)

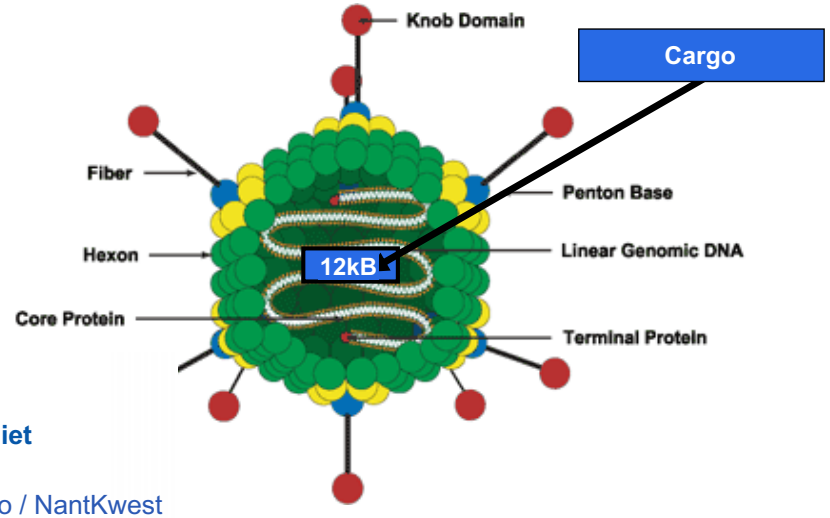
[E1-, E2b-, E3-]



1st Generation Ad Lysate From Infected Cells

Immunogenically Stealth 2nd Gen Human Adeno NANT's hAd5 [E1-, E2b-, E3- Deleted]





1st Generation Ad Viral Fiber 66kD

CanSino, Oxford, J&J →

← **2nd Generation Immunologically Quiet No Fiber (Stealth)**

← ImmunityBio / NantKwest

- Limited Cargo Bay (8kB)
- Induces potent anti-adeno vector immunity
- Replication defective
- Requires heterologous* prime boost
- Reduced immunogenicity with Ad immunity
- Failed trials in infectious disease

Intracellular generation of adeno fibers by 1st generation adenoviral vector

Limitations of 1st Gen:
- Exposed Dendritic cells
- Early Killer T Cells Attack
- Reduced Immunogenicity

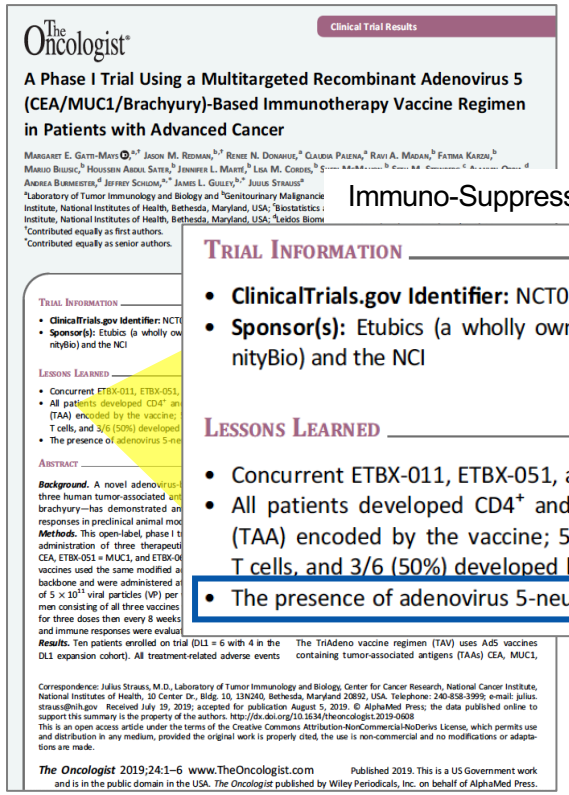
No generation of adeno fibers By unique vector (hAd5)

Superiority of 2nd Gen:
- Stealth Dendritic Cells
- Hidden From T Cell Attack
- Enhanced Immunogenicity

- Large Cargo Bay (12kB)
- Immunogenically Quiet Platform (Stealth)
- Safe: Completely Replication Incompetent
- Homologous Boosting, Multiple Doses
- Active Even with Pre-Existing Adeno Immunity
- Specific T Cell Mediated Immunity in Patients with Cancer, CMI in H1N1, Lassa Fever, Chikunga, Zika, SIV

Oct 2019

Novel "Immunogenically Quiet" 2nd Gen hAd5 Platform Reduction of hAd5 Protein Expression Enabling Multiple Doses



The Oncologist

Clinical Trial Results

A Phase I Trial Using a Multitargeted Recombinant Adenovirus 5 (CEA/MUC1/Brachyury)-Based Immunotherapy Vaccine Regimen in Patients with Advanced Cancer

Margaret E. Gatti-Mays, Jason M. Redman, Renee N. Donahue, Claudia Palena, Ravi A. Madan, Fatima Karzai, Mario Bilusic, Houssein Abdul Sater, Jennifer L. Marte, Lisa M. Cordes, Andrea Burmeister, Jeffrey Schlom, James L. Gulley, Julius Strauss

Immuno-Suppressed Cancer Patients Receiving 2nd Generation hAd5 Platform

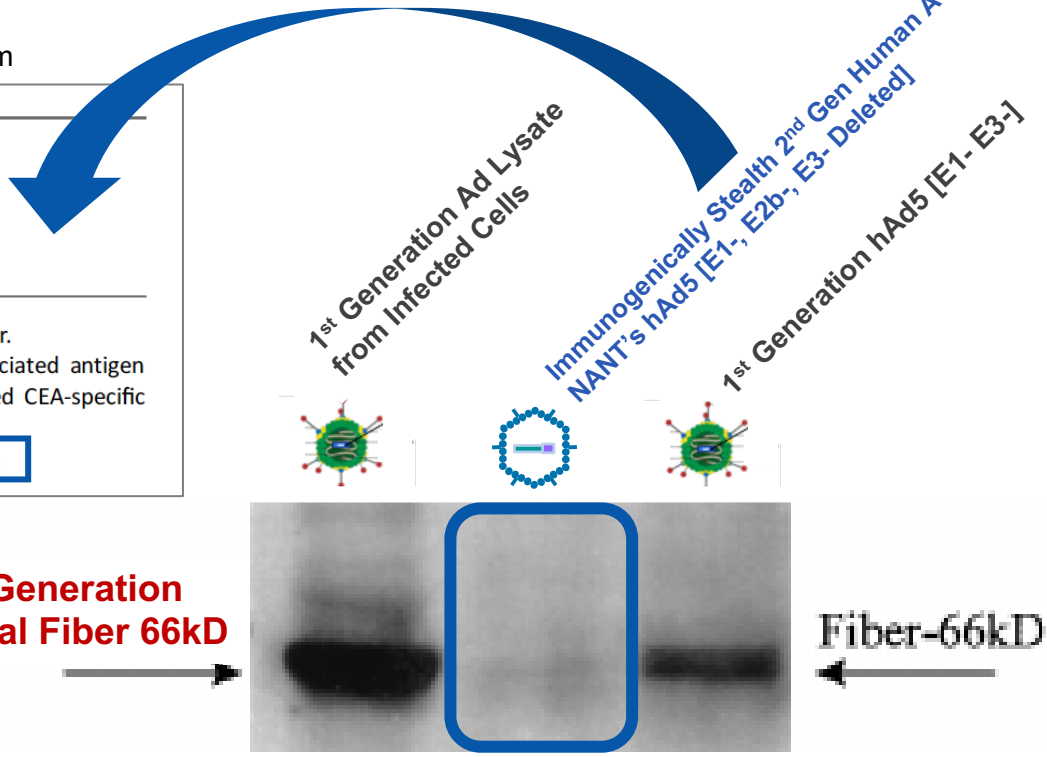
Trial Information

- **ClinicalTrials.gov Identifier:** NCT03384316
- **Sponsor(s):** Etubics (a wholly owned subsidiary of ImmunityBio) and the NCI
- **Principal Investigator:** Julius Strauss
- **IRB Approved:** Yes

Lessons Learned

- Concurrent ETBX-011, ETBX-051, and ETBX-061 can be safely administered to patients with advanced cancer.
- All patients developed $CD4^+$ and/or $CD8^+$ T-cell responses after vaccination to at least one tumor-associated antigen (TAA) encoded by the vaccine; 5/6 patients (83%) developed MUC1-specific T cells, 4/6 (67%) developed CEA-specific T cells, and 3/6 (50%) developed brachyury-specific T cells.
- The presence of adenovirus 5-neutralizing antibodies did not prevent the generation of TAA-specific T cells.

https://www.ncbi.nlm.nih.gov/pubmed/31594913

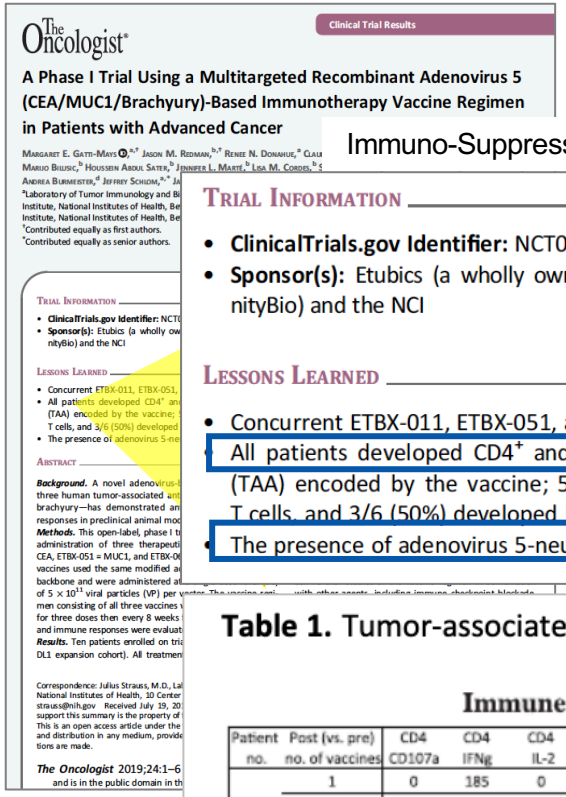


Human cells infected with infected with 1st generation hAd5 [E1-] platform **VS.** ImmunityBio hAd5 [E1-, E2b, E3] platform to measure differences in production of Adeno viral fiber, which **are responsible for adeno neutralizing antibodies**

- The **1st** generation Ad platform **produced large amounts of adenoviral fiber, the cause of adenovirus neutralizing antibodies resulting in diminished immune response and preventing multiple doses.**
- In contrast, **2nd generation platform hAd5** was "immunologically quiet" **enabling immune response even in the face of adenoviral neutralizing antibodies**.
- Reduced antigenic competition when using the **ImmunityBio Platform** between vector and target antigens which results in **longevity of disease target protein expression.**
- Reduced adverse effects of vector-viral proteins with ImmunityBio 2nd Gen hAd5 Platform

Dramatic **reduction of hAd5 viral protein expression** when using the hAd5 [E1-, E2b- E3-] platform

2nd Generation hAd5: Advanced Solid Tumors



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Clinical Trial Results

A Phase I Trial Using a Multitargeted Recombinant Adenovirus 5 (CEA/MUC1/Brachyury)-Based Immunotherapy Vaccine Regimen in Patients with Advanced Cancer

Immuno-Suppressed Cancer Patients Receiving 2nd Generation hAd5 Platform

Trial Information

- **ClinicalTrials.gov Identifier:** NCT03384316
- **Sponsor(s):** Etubics (a wholly owned subsidiary of ImmunityBio) and the NCI
- **Principal Investigator:** Julius Strauss
- **IRB Approved:** Yes

Lessons Learned

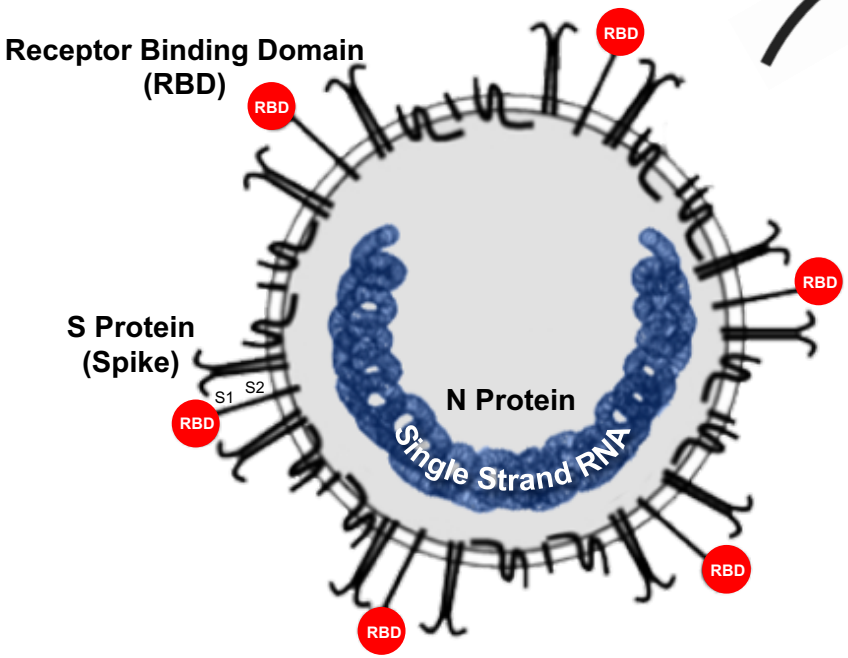
- Concurrent ETBX-011, ETBX-051, and ETBX-061 can be safely administered to patients with advanced cancer.
- All patients developed $CD4^+$ and/or $CD8^+$ T-cell responses after vaccination to at least one tumor-associated antigen (TAA) encoded by the vaccine; 5/6 patients (83%) developed MUC1-specific T cells, 4/6 (67%) developed CEA-specific T cells, and 3/6 (50%) developed brachyury-specific T cells.
- The presence of adenovirus 5-neutralizing antibodies did not prevent the generation of TAA-specific T cells.

Table 1. Tumor-associated antigen T-cell responses developed after treatment with the TriAdeno vaccine regimen

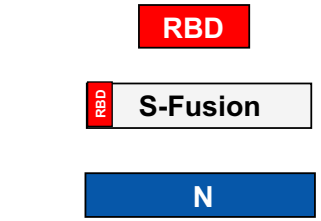
Patient no.	Post (vs. pre) no. of vaccines	Immune responses to MUC1								Immune responses to CEA								Immune responses to brachyury							
		CD4 CD107a	CD4 IFNg	CD4 IL-2	CD4 TNF	CD8 CD107a	CD8 IFNg	CD8 IL-2	CD8 TNF	CD4 CD107a	CD4 IFNg	CD4 IL-2	CD4 TNF	CD8 CD107a	CD8 IFNg	CD8 IL-2	CD8 TNF	CD4 CD107a	CD4 IFNg	CD4 IL-2	CD4 TNF	CD8 CD107a	CD8 IFNg	CD8 IL-2	CD8 TNF
PT3	1	0	185	0	0	0	543	3	0	0	0	0	0	0	0	43	0	0	0	0	44	0	362	0	0
	2	0	0	0	83	0	0	0	0	0	0	93	0	0	872	0	0	0	0	0	43	0	0	0	0
	3	97	7,331	3,866	12,531	133	425	49	2609	0	0	0	0	156	36	0	0	1,915	526	0	167	4,043	749	0	3,524
PT4	2	4,953	71,357	15,069	97,145	44,851	19,578	148	39,117	18	81	35	172	0	0	0	0	99	103	0	0	0	0	0	0
	3	9,439	178,943	22,691	223,919	22,480	10,343	0	16,598	0	0	0	0	0	0	0	0	192	25	146	0	0	0	0	0
PT5	1	0	0	2,057	1,435	0	0	140	0	13	0	1,881	1,300	0	0	30	0	0	0	0	0	0	0	172	0
	2	0	0	634	585	0	0	47	0	41	0	274	529	0	332	0	0	0	0	0	0	0	0	0	0
	3	134	0	0	0	0	228	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4	810	381	1,603	4,002	1,219	0	0	0	0	0	0	0	3,962	781	0	0	0	0	0	0	0	0	0	0
PT8	2	0	0	0	0	620	0	0	390	0	2	0	0	166	0	0	86	0	112	0	0	281	0	0	216
	3	50	0	0	0	0	0	0	0	170	0	0	0	0	0	0	0	72	0	0	0	0	0	0	0
PT10	2	81	0	0	0	0	703	8	0	0	438	0	0	69	656	132	2,563	0	0	0	0	1,446	1,075	0	13,882
PT11	2	0	0	0	0	0	0	14	0	0	484	44	241	343	0	42	0	0	0	0	0	0	0	0	0

Immune responses reported in this table are calculated by comparing the absolute number of $CD4^+$ or $CD8^+$ T cells producing cytokine (IFN, IL-2, TNFa) or positive for CD107a per 1×10^6 PBMCs plated at the start of the in vitro stimulation at the specified time points after vaccine. Background (obtained with the negative control peptide pool, human leukocyte antigen [HLA]) and any response prior to vaccine are subtracted: [TAA after vaccine – HLA after vaccine] – [TAA before vaccine – HLA before vaccine]. Positive immune responses are defined as >250 (highlighted).
Abbreviations: IFNg, interferon gamma; IL-2, interleukin-2; PT, patient; TNF, tumor necrosis factor.

A Unique Construct: SARS-CoV-2 (COVID-19)

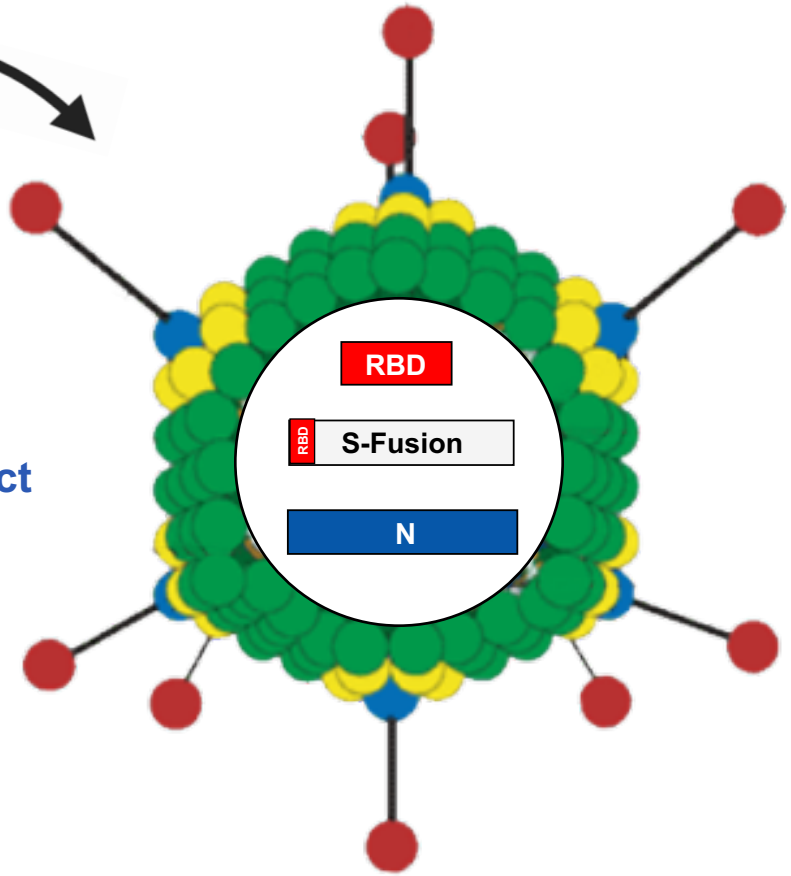


COVID-19



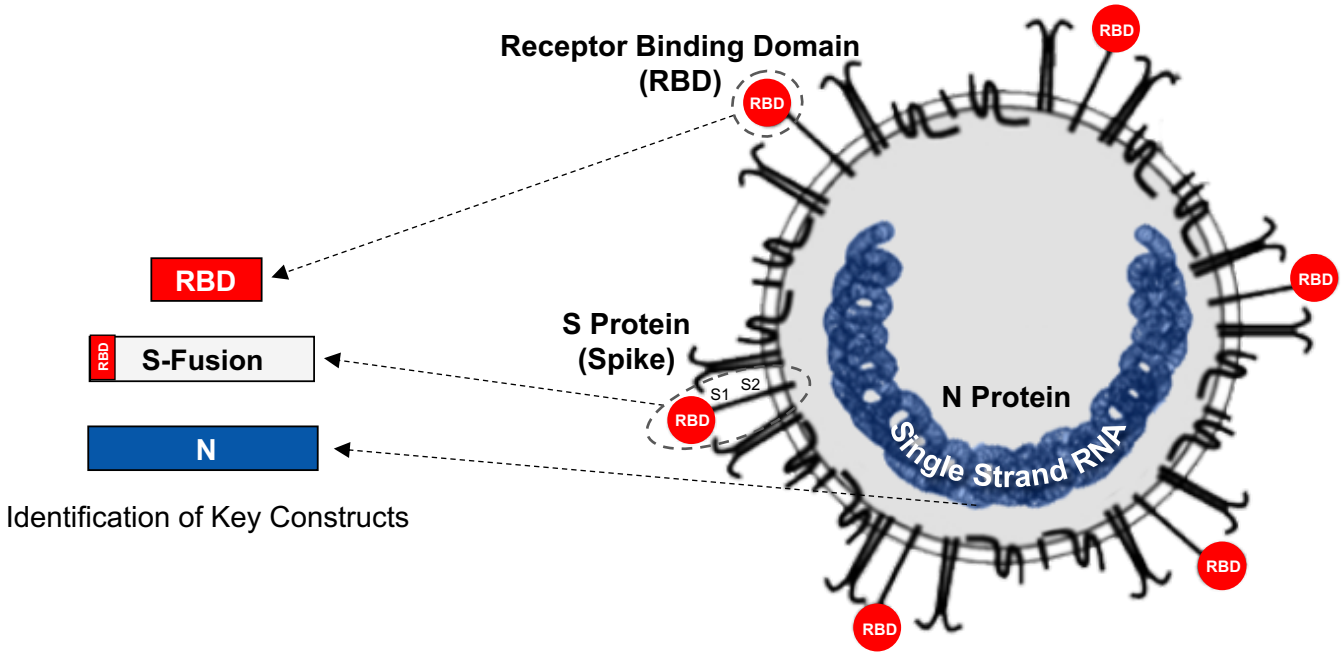
Identification of Key Constructs

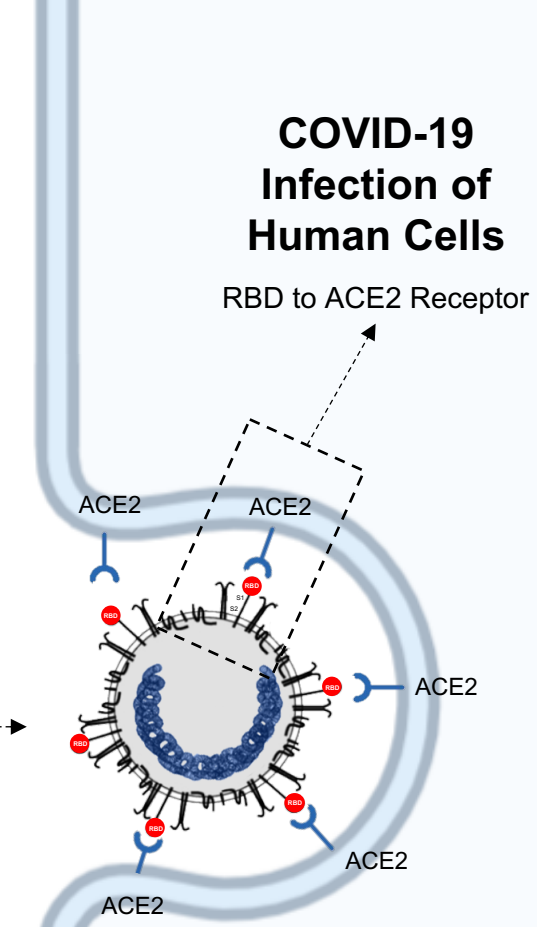
Unique Vector + Unique Construct



2nd Generation
Human Adenovirus
hAd5

The Importance of RBD for Neutralization



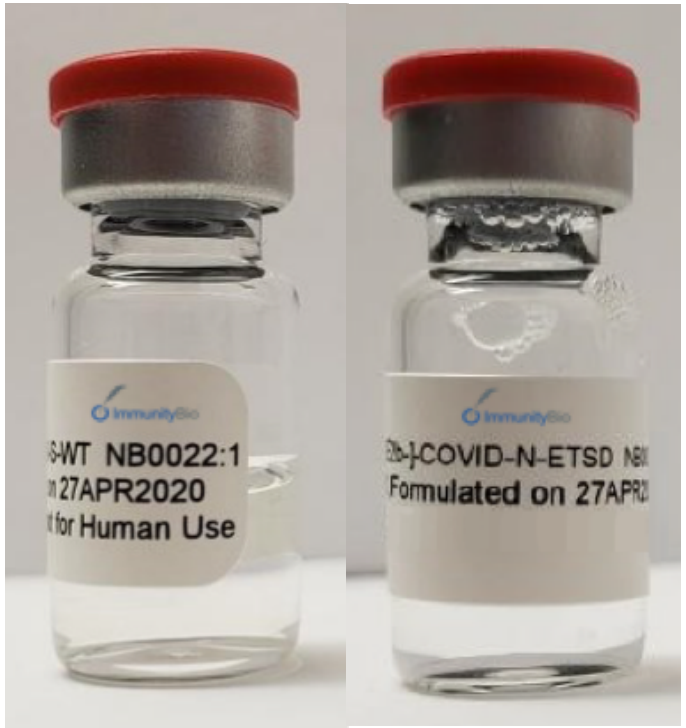


NANT 2nd Generation Human Adenovirus (hAd5) Vaccine Construct	RBD	S-Fusion	N

Finished Dosage Form at Small GMP Scale Manufactured in cGMP Facility April 27, 2020

2nd Gen hAd5 Adenovirus Vaccine Program

T Cell Mediated Immunity
Humoral Immunity



NANT 2nd Generation Human Adenovirus (hAd5) Vaccine Construct

Key Attributes of ImmunityBio/NantKwest Vaccine Platform Position us for Leadership

First Adenoviral Vector Delivering S Fusion + RBD + Nucleocapsid (N) Protein COVID-19 Construct

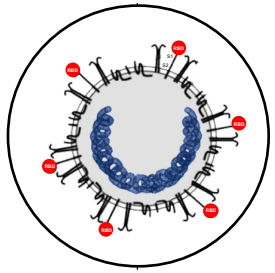
- Unique and only clinically available human Adenovirus (hAd5) vector technology without adenoviral fiber production (E1-, E2b-, E3- Deleted): potent, long-lasting protein production for maximal cellular and humoral immunity
- Homologous prime + boost capability
- Proven safety profile of hAd5 in 13 Phase I / II clinical trials in over 125 elderly and immuno-compromised cancer patients
- Proven antigen specific $CD4^+$ and CD8+ T cell generation in patients even with previous adenoviral immunity
- Unique vaccine construct maximizing cell mediated immunogenicity and reducing the risk of antibody dependent enhancement
- Established cell line: high yields, scalable, fully industrialized. GMP plant activated
- Favorable thermostability profile (2-8°C)

Key Attributes	NANT 2nd Gen hAd5
Unique Human Adenovirus (E1-, E2b-, E3- Deleted) Vector	
Human adenovirus vector without adenoviral fiber production	✓
Homologous prime & boost capability	✓
Proven safety in immuno-suppressed and elderly cancer patients	✓
Proven demonstration of CD4 and CD8 T cell generation in patients	✓
Proven demonstration of CMI in the presence of previous adeno immunity in patients	✓
Reduced risk of antibody dependent enhancement	✓
Long duration of expression of S, RBD, and N	✓
Speed of development	✓
Capability to scale up	✓
GMP plant activated with capacity of 100m drug substance doses of S+N	✓
Duration of immunity	✓
Vaccine stability	✓
Cost/dose	✓
Unique COVID-19 Construct	
COVID-19 Sequences with maximum # of B & T cell epitopes	✓
hAd5 vaccine combining S + N + surface exposed RBD	✓
Nucleocapsid (N) construct demonstrating Th1 cell mediated immunity	✓
Intracellular trafficking platform for MHC-II presentation	✓
Surface expression of RBD in Spike (S)	✓
Confirmed proper folding of RBD construct on surface of living cells	✓
1 dose regimen possible	✓

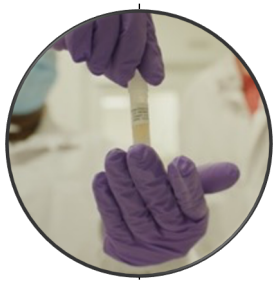
Operation Warp Speed: COVID-19 Vaccine

Accelerating R&D and Manufacturing in Parallel to Achieve >1 Billion Doses

Select Candidate → R&D, Scale-Up Manufacturing, Clinical Trials → Vaccine Available



January 2020
SARS-CoV-2 Sequence Shared



March 2020
Selection & Construction of Lead Vaccine Construct

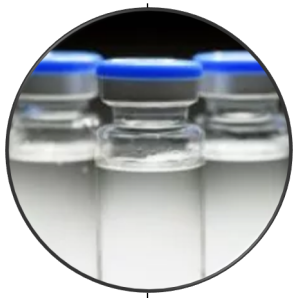
May 2020
Submission of IND Manufacturing Scale-Up Begins

June-July 2020
Anticipated FIH Study Phase Ib

August 2020
Anticipated Phase II

September 2020
Two (2) Drug Substance Adenovirus Plants Fully Active

January 2021
Anticipated Phase III

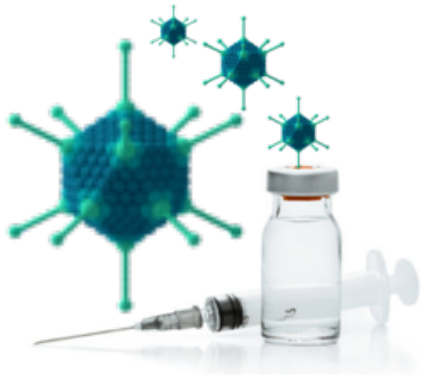


January – December 2021
On the Path to >1 Billion Doses

1st Human Adenovirus Construct with Fusion S + Nucleocapsid (N)	**NANT 2nd Generation Human Adenovirus (hAd5) Vaccine Construct**	RBD	S-Fusion	N

NantKwest & ImmunityBio Manufacturing, Development and Marketing Partnership

2nd Gen hAd5 Adenovirus Vaccine Program



T Cell Mediated Immunity
Humoral Immunity