



Targeting Tropical Diseases Through Accelerated Drug Development

CORPORATE PRESENTATION

2018

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Disclaimer

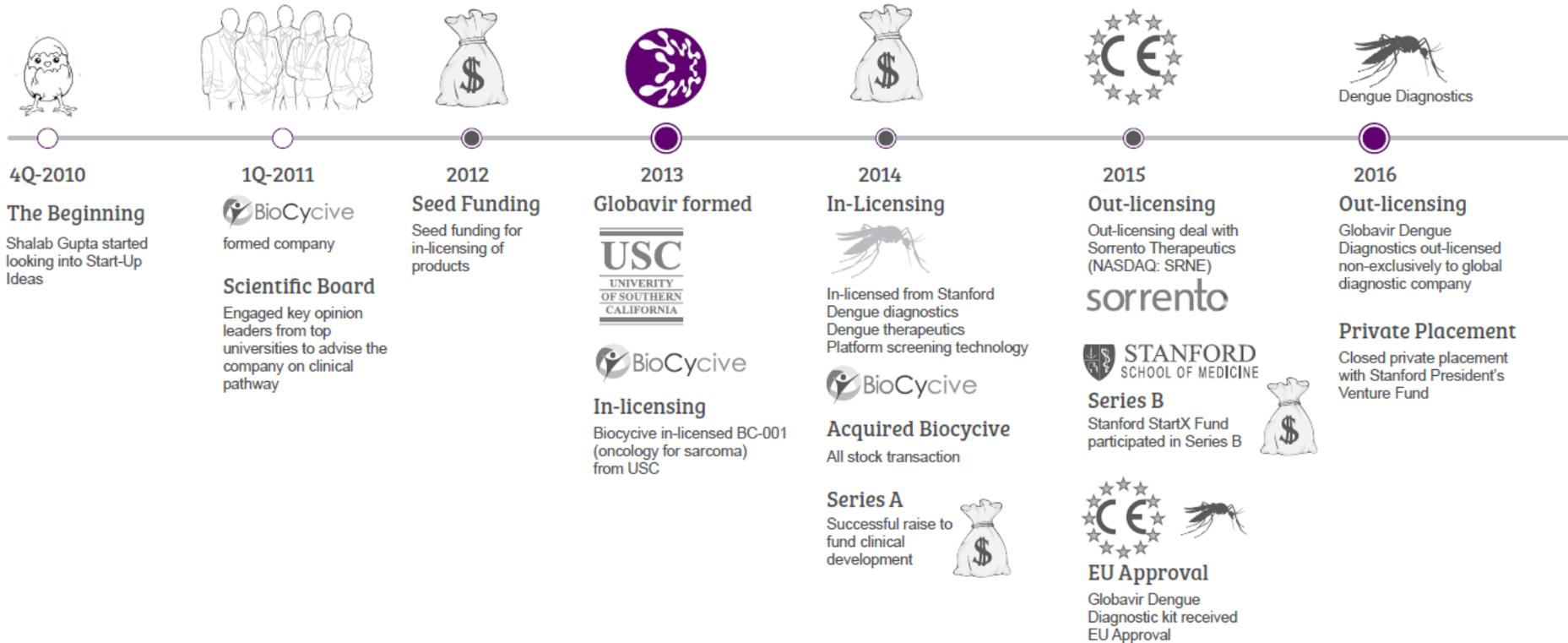
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- *GBV006 – A late stage drug with start of Phase IIa studies in Q2, 2018 utilizing de-risked, 505 (b)(2) regulatory pathway for treatment of dengue fever, exclusively licensed from Stanford University, and funded by Stanford University’s two different funds in the last two rounds of equity financing*
- *GBV 006 qualifies for both orphan disease, potentially for PRV (Priority Review Voucher)*
- *PanGlob is already generating revenue with the latest order of 10,000 test – which brings in \$78,000 gross revenue*
- *Pipeline of market ready tests such as MulGlob™ that can detect Dengue, Chikungunya, Malaria & Leptospira in one single test. One of the only and first test globally to identify these diseases in a molecular diagnostic platform*

Globavir's History (2010-2016)



Ability to Successfully In-license Assets Early & Out-license Strategically

- We have successfully in-licensed multiple programs from academia and other biotechs over the last six years
- We have closed two partnerships and we are in the process of closing another partnership
- One way we have differentiated ourselves is by creating either global, regional, or field of use specific partnerships. That has led to maximizing asset values for our investors and also to advancing our pipeline to commercial development

Multiple Recent Corporate Milestones



- Partnered Globavir's PanGlob with Bio-Rad for global non-exclusive license with upfront, milestone and royalty payments



- Closed two private financing rounds with, Stanford Start-X Fund², and Stanford President's Venture Fund



- Featured in Stanford's Office of Technology Licensing Department's Start Up of 2016

- Obtained CE mark and CDSCO (India) approval for PanGlob™, a RT-PCR diagnostic kit for Dengue

DUKE-NUS Collaboration

- Conduct advance preclinical studies
- Plan clinical trial studies in Singapore
- Assist in regulatory process involving HSA

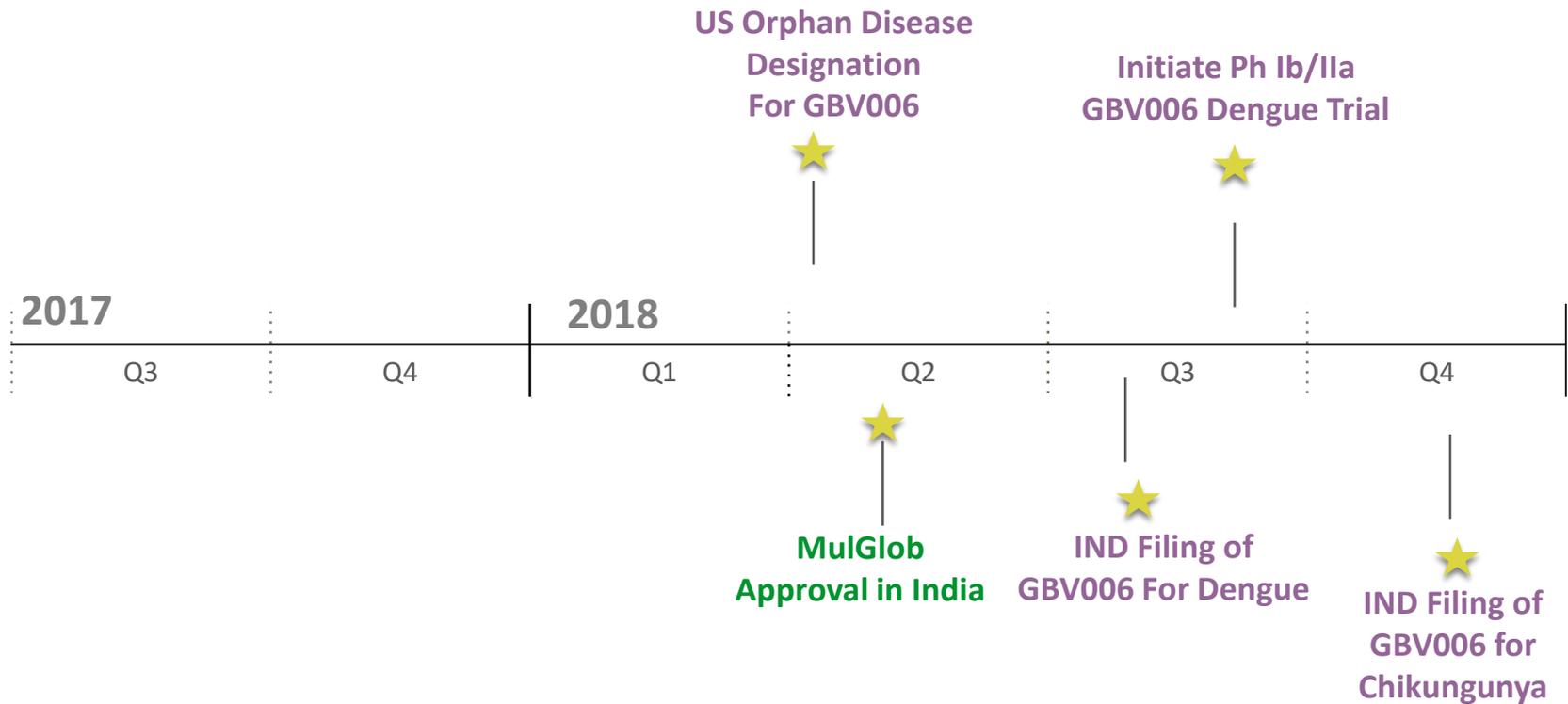


Stanford Partnership

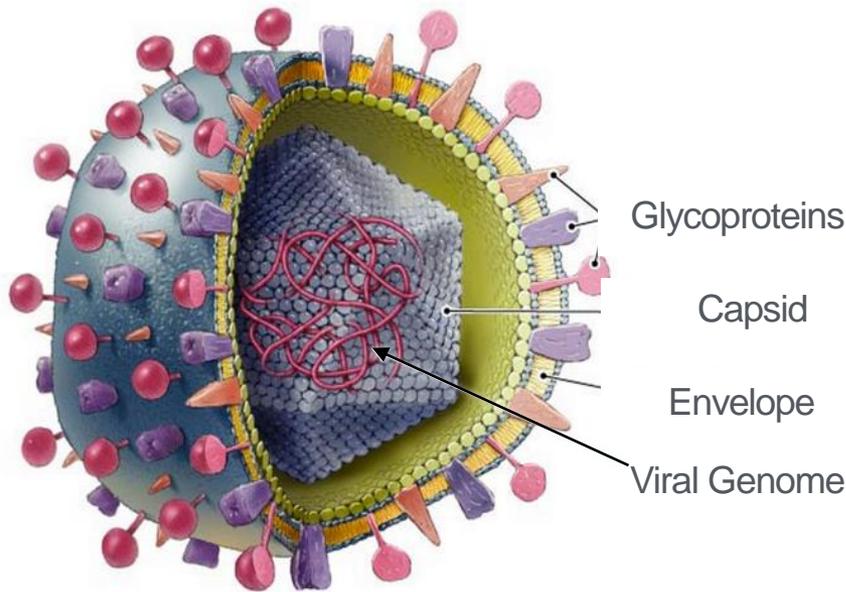
- Preclinical efficacy models
- IP filing & maintenance
- KOLs for conducting clinical trials



Inflection Points



GBV006: A Potent, Broad-Spectrum Anti-Infective



Combination of two FDA approved drugs
(GBV001 & GBV002)

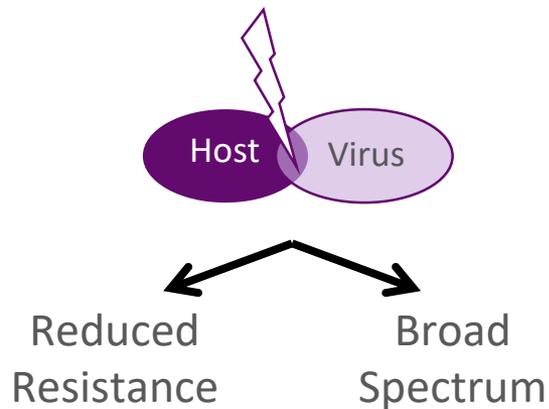
Targets host biological process, conferring
broad spectrum anti-infective activity

100% survival in Ebola and Dengue infected
mice when treated with GBV006

Exclusive worldwide development rights

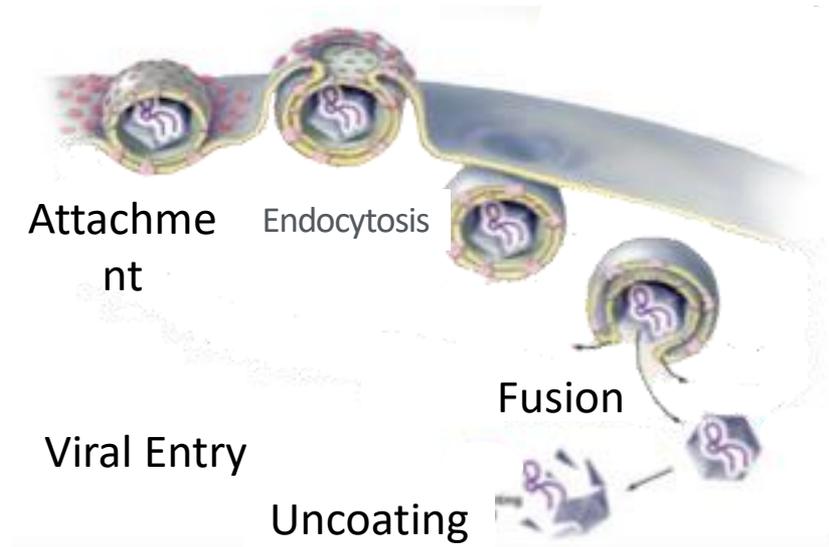
Host Vesicle Trafficking as a Antiviral Drug Target

Targeting the host-viral interface confers multiple advantages



By targeting host processes required by viruses, it is possible to create an anti-viral drug overcoming traditional limitations

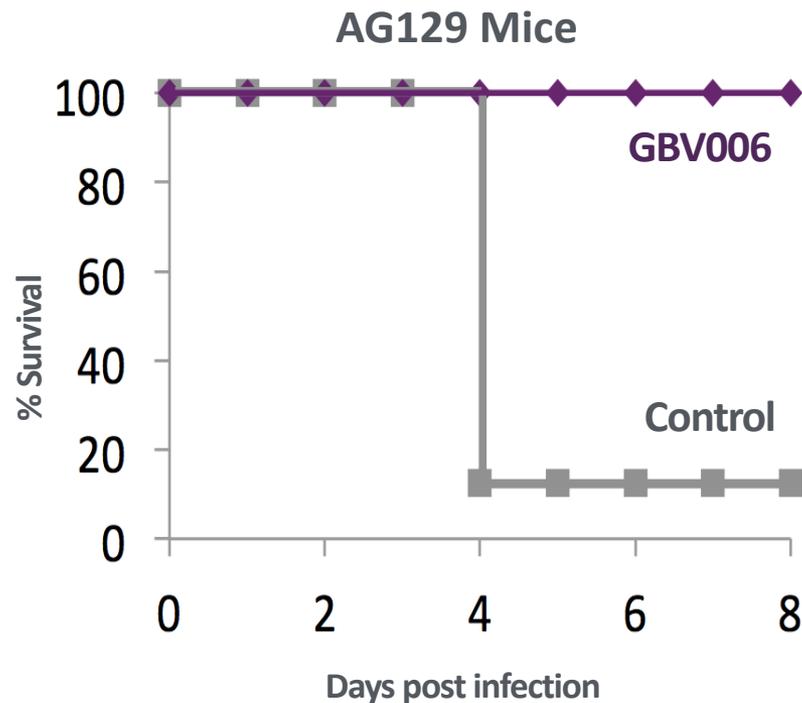
Host vesicle trafficking pathways are used in many stages of viral lifecycle



Enveloped viruses rely on vesicle trafficking events for entry into the cell, assembly within the cell, and exit from cell

GBV006 Treatment Yields 100% Survival in Infected Mice

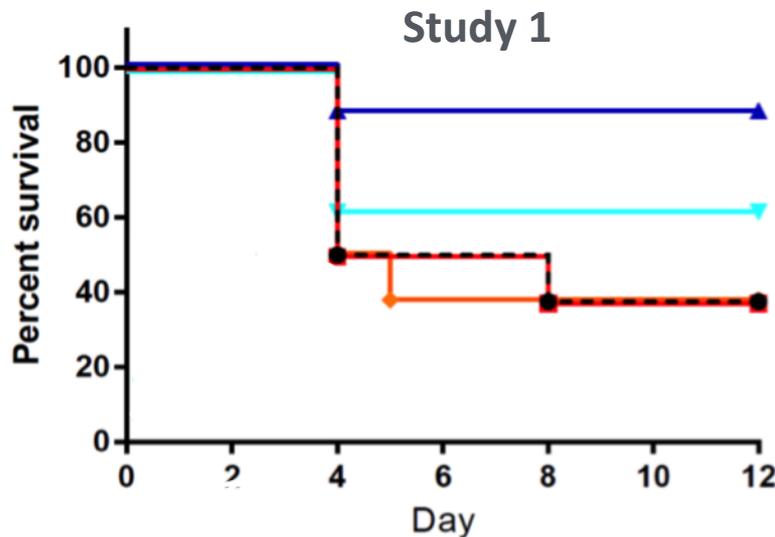
When AG129 mice, the gold standard DENV *in vivo* model, were infected with a lethal dose of DENV are treated with GBV006, up to 100% survival is achieved.



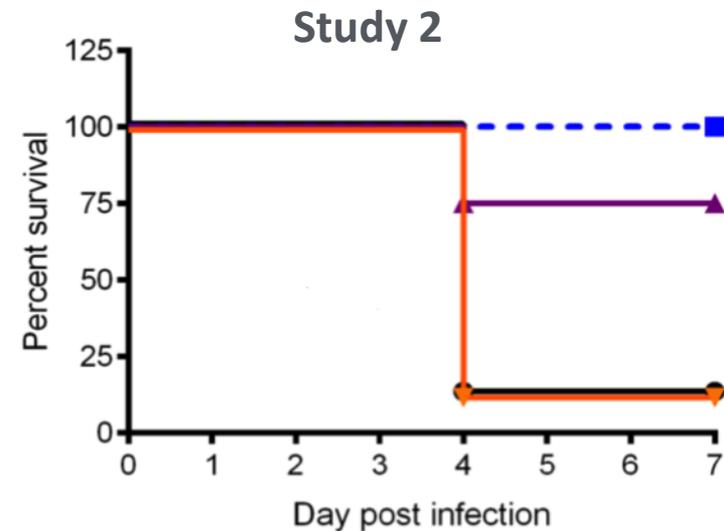
Inoculation of AG129 mice with a lethal dose of mouse adapted DENV was performed 1 hour prior to treatment with drugs by ip injection. GBV006 was administered every 24 hours at 30 mg/kg/day for a maximum of 5 days.

GBV001 and GBV002 Act Synergistically *In Vivo*

Antiviral activity of the combination therapy GBV006 *in vivo* is supra-additive in comparison to treatment with GBV001 or GBV002 alone



- Vehicle
- 10 mg GBV001/30 mg GBV002
- ▲ 30 mg GBV001/30 mg GBV002
- ▼ 10 mg GBV001
- ◆ 30 mg GBV002

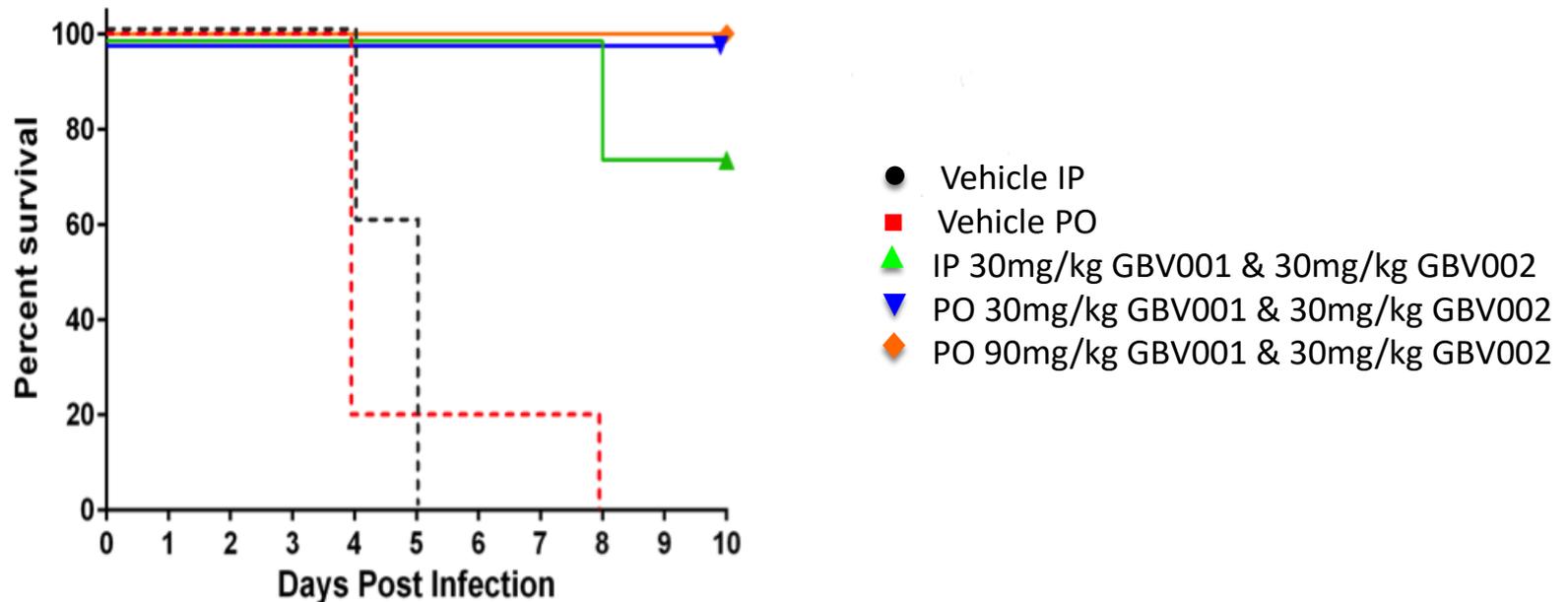


- Vehicle
- 30 mg GBV001/30 mg GBV002
- ▲ 30 mg GBV001
- ◆ 30 mg GBV002

Inoculation of AG129 mice with a lethal dose of mouse adapted DENV was performed 1 hour prior to treatment with drugs by IP injection. GBV001, GBV002, or GBV006 was administered every 24 hours at the indicated doses for a maximum of 5 days.

GBV006 Is Effective When Delivered Both PO and IP

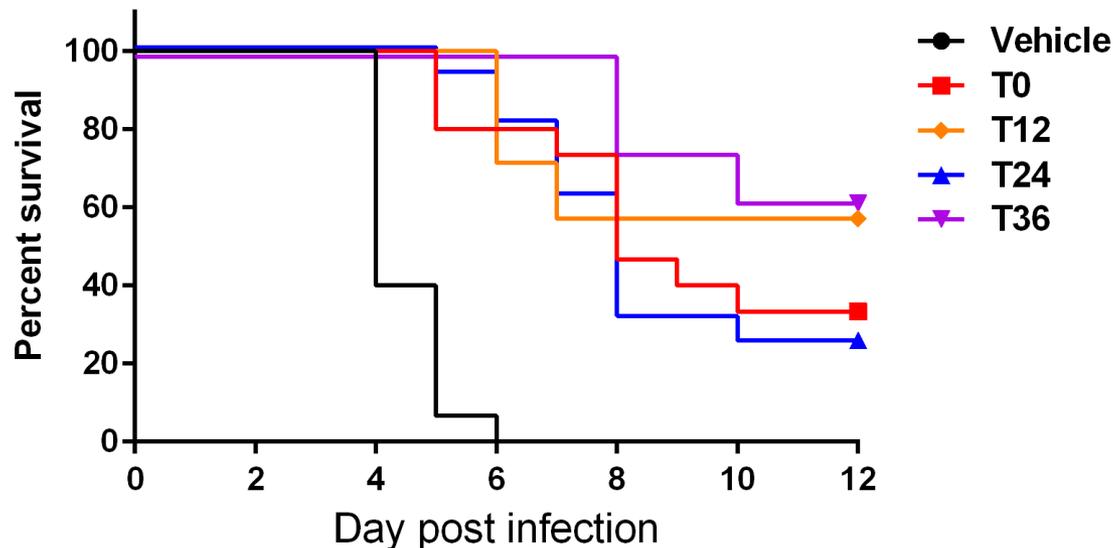
The potent antiviral activity of GBV006 *in vivo* is achieved whether the drugs are dosed orally or through intraperitoneal injection



Inoculation of AG129 mice with a lethal dose of mouse adapted DENV was performed 1 hour prior to treatment with drugs by ip injection or oral gavage. GBV006 was administered every 24 hours at indicated doses for a maximum of 5 days.

GBV006 is Active When Administered Post-Inoculation

GBV006 protects mice from a lethal DENV infection at least 36 hours post-inoculation, which is important in consideration of real-world DENV management scenarios.

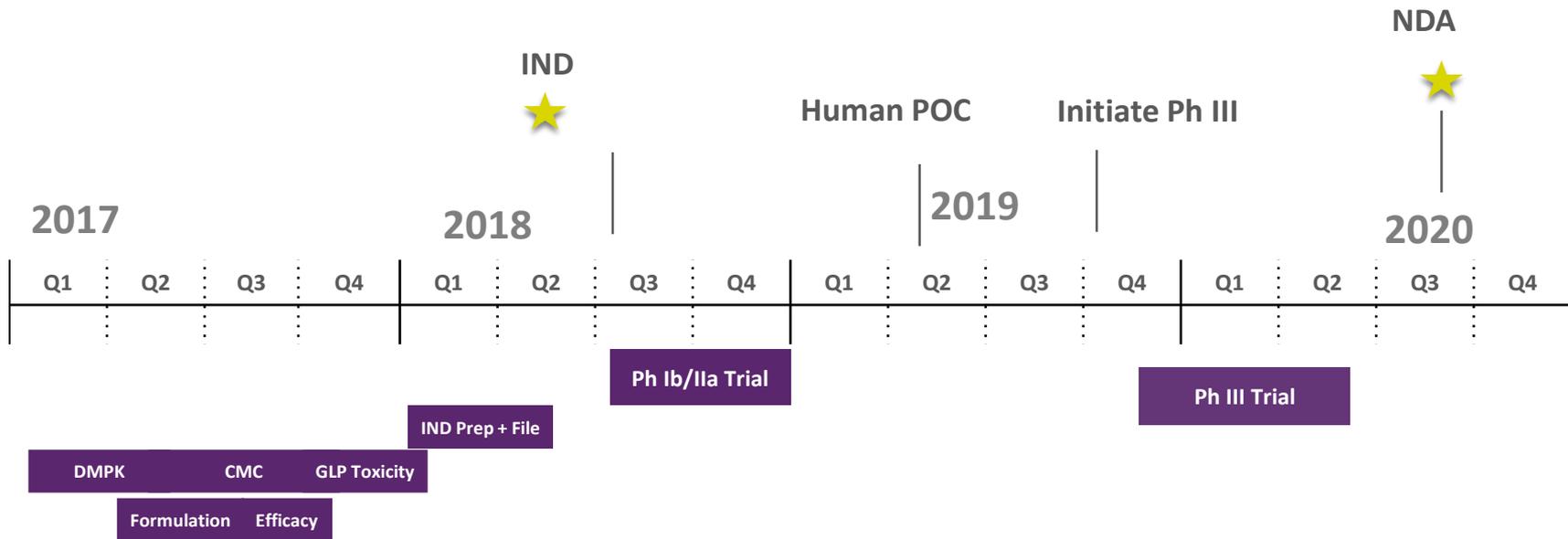


Inoculation of AG129 mice with a lethal dose of mouse adapted DENV was performed prior to treatment with drugs by ip injection at the indicated time points. GBV006 was administered every 24 hours at 30 mg/kg/day for a maximum of 5 days.

Dengue Clinical Trial Overview

Phase	Number of Patients	Enrollment Start	Read out	Estimated costs
Phase Ib/IIa	40-50	Q2 2018	Safety, Tolerability, Pharmacokinetics and Preliminary efficacy of ascending doses of GBV006	\$ 2 MM
Phase III	200	Q2 2019	Randomized, Double-Blind, Placebo Controlled Trial to establish the efficacy of GBV006	\$ 6 MM

GBV 006 Timeline for Approval



	Title	Status	Type	Countries filed
1	Treatment of Viral Diseases	<u>Granted (USPTO)</u> Issued: 6/14/2016 Expiration: 12/06/2032	Method of Use	EU, Brazil, China, Thailand, Australia, India, Singapore, Mexico, Colombia
2	Fixed Dose Combination of GBV006 for treatment of viral infections	Pending	Composition of Matter	“
3	Oral and Injectable formulations of GBV006 for treatment of viral Infections	Pending	Composition of Matter	“



Yes/No test for Dengue infection with better sensitivity across all four serotypes than other tests currently available on the market



Globavir's PanGlob Test Receives Approval for Sales and Distribution in India

January 25, 2017 07:00 AM Eastern Standard Time

LOS ALTOS, Calif.--(BUSINESS WIRE)--Globavir Biosciences, Inc., a California-based biotechnology company developing dengue diagnostics and small molecule drugs to treat cancer and infectious diseases, has announced the approval of their PanGlob™ Dengue rRT-PCR kit from the Ministry of Health & Family Welfare in India. Globavir and its Indian distribution partner, Suyog Diagnostics Private Limited, a Mumbai-based diagnostic technologies distribution company, are working to launch the test this upcoming monsoon season (May–September) when dengue is most prevalent and problematic.



**CDSCO, India
Approved**



DenGlob™

A first-in-class Dengue test that provides both identifies serotype and viral load information

MulGlob™

A test that can detect Dengue fever, Malaria (including Plasmodium falciparum) and Chikungunya & Leptospirosis in one test, with the capability to include various other infectious diseases

CE: Conformité Européene

CDSCO: Central Drugs Standard Control Organization

Globavir Licensed the PanGlob Assay to BioRad



YAHOO!
Finance

Globavir Announces Licensing Agreement with Bio-Rad for Globavir's Dengue Detection Technology

 October 17, 2016

LOS ALTOS, Calif., Oct. 17, 2016 /PRNewswire/ -- Globavir Biosciences, Inc., a biotechnology company that develops therapeutics for infectious diseases and oncology, and diagnostics for infectious diseases, announced a partnership with Bio-Rad Laboratories, Inc., a global provider of life science research and clinical diagnostics products. Under the terms of the agreement, Bio-Rad will license Globavir's PanGlob™ dengue detection technology for use in an assay that includes dengue virus detection. Financial terms of the agreement were not disclosed.

 **Globavir**
Globavir Biosciences, Inc.

- Non-exclusive Global License
- Upfront Payments and Milestone Payments
- Global Launch Funding provided by Bio-Rad

Management

Shalabh Gupta, MD, MPA

President & CEO

Genentech/Roche Commercial Strategy,
SPARK @ Stanford School of Medicine, Advisor
Stanford's StartX Med Accelerator Program, Member
University of Maryland Medical Center, Advisory
Board, Past experience in Venture Capital
Equity research analyst at UBS, and Rodman &
Renshaw

Gilad Gordon, MD, MBA

Chief Medical Officer

Former CMO of Inviragen
VP Medical Affairs at FeRx
Director Clinical Research, and Ribozyme
Pharmaceuticals

Sumit Mahajan, PhD

*Director, Drug Development &
Diagnostics*

Scientific Advisory Board

Vijay Pande, PhD

Inventor of Globavir's therapeutic pipeline portfolio; Associate Professor of Chemistry and, by courtesy of Structural Biology and Computer Science, Stanford University

Bogdan Olenyuk, PhD

Inventor of BC001; Assistant professor of Pharmacology and Pharmaceutical Sciences at University of Southern California; recipient of the National Science Foundation Career Award

Benjamin Pinsky, MD, PhD

Inventor of Globavir's diagnostic platform technology, Assistant Professor of Medicine (Infectious Diseases), Assistant Professor (Microbiology), Stanford University School of Medicine

Strategic Advisory Board

Mahendra Shah, PhD

Venture Partner at Vivo Ventures

Founder, Nextwave Pharma (sold to Pfizer in November 2012 for \$700M); Chairman and CEO of First Horizon Pharma (sold to Shionogi for \$1.48B); Past Board Member at Introgen Therapeutics (INGN), Unimed Pharmaceuticals (UMED), Inpharmakon, Protomed, and others

Jeff Guise, JD, PhD

Partner at Wilson Sonsini Goodrich & Rosati

Practices in the area of intellectual property law and has extensive experience in all aspects of intellectual property acquisition, licensing, and enforcement; Intellectual property litigation experience includes pre-trial and trial experience, interference proceedings, and litigation counseling.

Board of Directors

Shalabh Gupta, MD, MPA

President & Chief Executive Officer

John Ryan, MD, PhD

Currently CMO of Kadmon Pharmaceuticals

Formerly CMO of Cerulean Pharma and Aveo Pharmaceuticals

Formerly Senior VP Translational Medicine at Wyeth

Formerly Professor of Internal Medicine at Pennsylvania School of Medicine and Yale School of Medicine

Sandeep Laumas, MD

Founder and CEO of Bearing Circle Capital

Board member at BioXcel

Former Managing Director at North Sound Capital, responsible for global healthcare investments, formerly at Goldman Sachs healthcare investment banking

Recent Acquisition of ID Focused Biotech Companies



Company	Founded	Summary of Acquisition		Key Products/Lead Programs
Pharmasset	1998	2011	Gilead acquired for \$11B	Sofosbuvir – antiviral (HCV); PIII at time of acquisition; FDA-approved (2013)
Cubist Pharma	1992	2015	Merck acquired for \$9.5B	Daptomycin – antibacterial; FDA-approved (2003) Fidaxomicin – antibacterial (<i>C.diff.</i>); FDA-approved (2011); from Optimer Pharma Tedizolid – antibacterial (<i>C.diff.</i>); FDA-approved (2014) Ceftolozane – antibacterial; FDA-approved (2015)
> Trius Thera	2004	2013	Cubist acquired for up to \$818MM	Tedizolid – antibacterial (<i>C.diff.</i>); FDA-approved (2014)
> Optimer Pharma	1998	2013	Cubist acquired for up to \$801MM	Fidaxomicin – antibacterial (<i>C.diff.</i>); FDA-approved (2011)
Inhibitex	1994	2012	BMS acquired for \$2.5B	INX-189 – antiviral (HCV); Ph II at time of acquisition; discontinued FV-100 – antiviral (shingles); Ph II at time of acquisition; out-licensed by BMS
Rempex Pharma	2011	2013	Medicines Company acquired for up to \$464MM	Carbavance – antibacterial; Ph I at time of acquisition, Ph III now RPX-602 – antibacterial; new formulation of miocin IV; FDA-approved (2015)

Market Comparables: ID Focused Biotechs

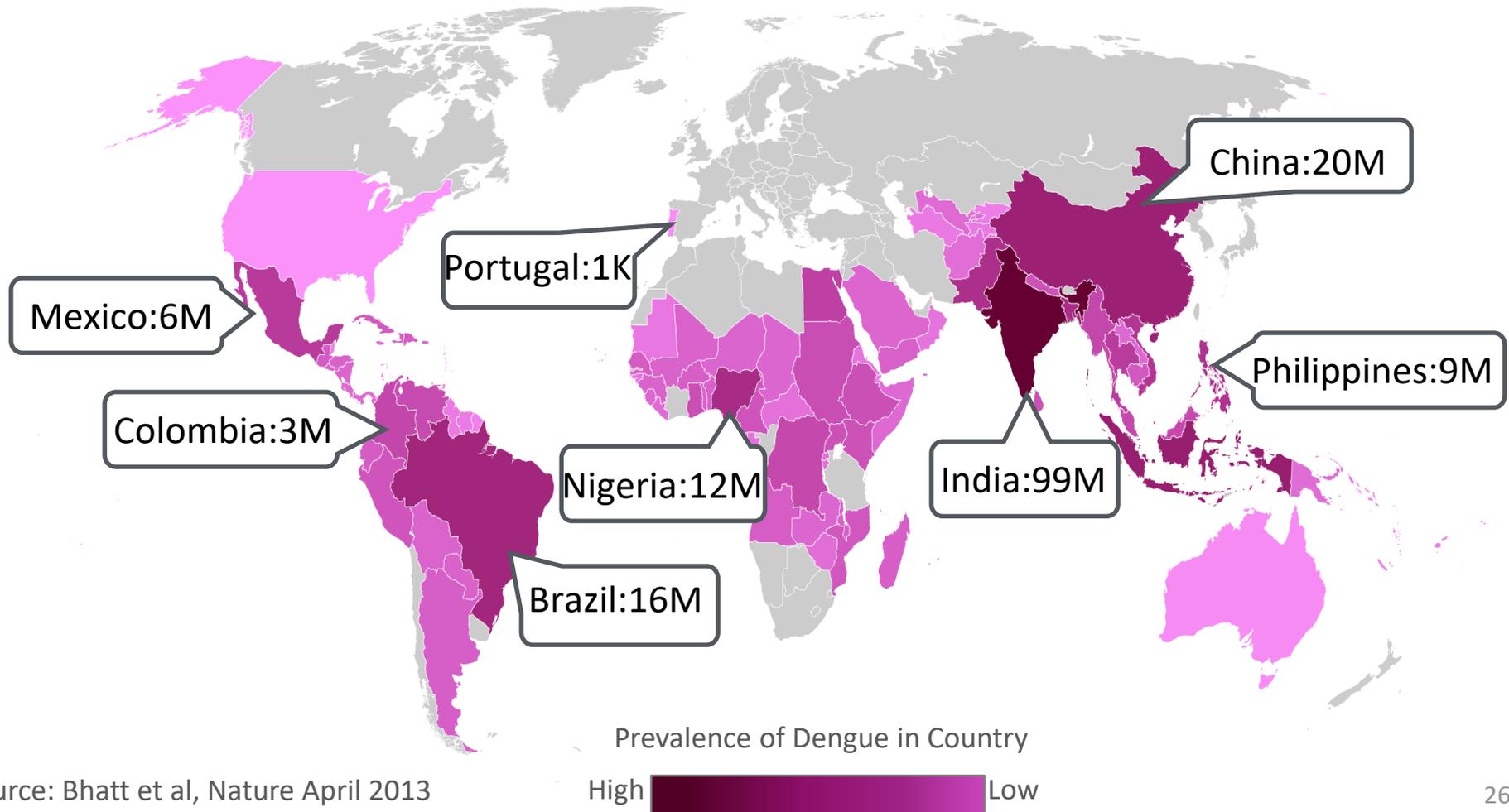


Company	Symbol	Market Cap (\$ MM)	Key Products/Lead Programs	Other Products and Platform
NanoViricides	NNVC	79	Most advanced preclinical program is topical treatment for Shingles. Multiple other anti-viral programs for HSV and HIV are also at preclinical stage.	Preclinical candidates for rabies and ebola/marburg
Arrowhead Pharma	ARWR	164	Developing siRNA based drugs for variety of diseases such as HepB, Renal Cell Carcinoma & Thrombosis.	Preclinical assets for cardiovascular and genetic disorders
Tetraphase Pharma	TTPH	307	Eravacycline – Phase III for complicated abdominal infections	TP-6076 – MDR gram-negative, IND-enabling
Cidara Thera	CDTX	113	CD101 – antifungal; Ph II	Cloudbreak Immunotherapy Platform
Chimerix	CMRX	208	Brincidofovir – antiviral (CMV, adenovirus, small pox);	Chemical library tailored for antiviral therapeutics
BioCryst Pharma	BCRX	355	Peramivir injection – influenza; licensed 6/2015, FDA-approved (2014) BCX4430 – antiviral; Ph I	Clinical and pre-clinical stage treatments for hereditary angioedema

As of 08-23-2017

Appendix

Dengue Virus Is A Global Epidemic With An Estimated 390 Million Annual Infections



GBV001 and GBV002 Exhibits potent *In Vitro* Antiviral Activity in Chikungunya and other viruses

Virus	Family	GBV001 EC ₅₀ μM	GBV002 EC ₅₀ μM
CHIKV	Togaviridae	4.7	0.7

Virus	Family	GBV001 EC ₅₀ μM	GBV002 EC ₅₀ μM
EBOV	Flioviridae	2.2	4.2
RSV	Paramyxoviridae	<0.12	<0.12
SARS-CoV	Coronaviridae	7.8	NE
TACV	Arenaviridae	3.2	7.2
HIV	Retroviridae	0.8	2
WNV	Flaviviridae	0.5	NE
Junin	Arenaviridae	4.8	1.7