
SPRING BANK
Driven by a novel pharmaceutical
platform focused on
SELECTIVE IMMUNOMODULATION
spring bank
pharmaceuticals

Forward Looking Statements

This presentation includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include, among other things, statements, other than historical facts, regarding: the progress, scope, duration or results of clinical trials and preclinical studies of inarigivir soproxil (“inarigivir”), SB 9225, SB 11285 or any of our other product candidates or programs, such as the size, design, population, conduct, cost, objective or endpoints of any clinical trial, or the timing for initiation or completion of or availability of results from any clinical trial (including our Phase 2 clinical trial of inarigivir in patients with chronic Hepatitis B virus); the potential benefits that may be derived from any of our product candidates; our future operations, financial position, revenues, costs, expenses, uses of cash, capital requirements or our need for additional financing; or our strategies, goals, milestones, prospects, beliefs, intentions, plans, expectations, forecasts or objectives. Words such as “anticipates,” “believes,” “plans,” “expects,” “projects,” “future,” “intends,” “may,” “will,” “should,” “could,” “estimates,” “predicts,” “potential,” “continue,” “guidance,” and similar expressions sometimes identify forward-looking statements. Any forward-looking statement involves known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from those expressed or implied by such forward-looking statement, and, therefore, you are cautioned not to place undue reliance on any forward-looking statement. These factors include, but are not limited to: whether our cash resources will be sufficient to fund our continuing operations for the period anticipated; the components, timing, costs and results of our clinical trials, preclinical studies and other development activities involving our product candidates; whether certain top-line results from our clinical trials materially change as more information becomes available; whether results obtained in preclinical studies and clinical trials will be indicative of results obtained in future clinical trials; whether inarigivir, SB 9225, SB 11285 and any of our other product candidates will advance through the clinical trial process on a timely basis and receive approval from the United States Food and Drug Administration or equivalent foreign regulatory agencies; and whether, if inarigivir, SB 9225, SB 11285 or any of our other product candidates obtain regulatory approval, it will be successfully distributed and marketed. These and other risks and uncertainties that we face are described in our most recent Annual Report on Form 10-K, filed with the Securities and Exchange Commission (SEC) on March 11, 2019, and in other filings that we make with the SEC from time to time.

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This presentation also contains estimates and other statistical data generated by independent parties and by us relating to market size and statistics. These estimates involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates.

Spring Bank (NASDAQ: SBPH) Near-Term Investment Opportunity

- **Inarigivir demonstrated efficacy and tolerability superior to that reported for interferon therapies in chronic Hepatitis B (HBV) treatment in ACHIEVE Ph 2 Trial**
  - ACHIEVE produced important insights on markers for inarigivir responder populations
  - Just launched CATALYST trials with potential to demonstrate HBV functional cure in 2020
  - Potential for inarigivir to enter Phase 3 program in 2H 2020
- **Gilead conducting Ph 2 combination trial of inarigivir + Vemlidy® in chronic HBV**
  - Potential for SB 9225 to enter Phase 3 program in 2H 2020
- **2nd development program, STING agonist SB 11285 IV, entering the clinic in 3Q 2019**
  - Preclinical studies of IV delivery demonstrates potential advantages to intra-tumoral STING agonists
  - Ph 1 SB 11285 IV clinical data expected in 2020
- **SBPH antisense oligonucleotide compound for potential "triplet" HBV treatment advancing to pre-clinical POC studies in 2H 2019**
- **Multiple data readouts and potential catalysts over next 6 – 15 months**

Differentiated Pipeline in HBV, Immuno-Oncology, & Inflammation

Therapeutic Areas	Compound	Discovery/Lead Optimization	Preclinical	Phase 1	Phase 2	Phase 3
HBV	**Inarigivir**					
	Monotherapy					
	Co-Administration with Gilead's Vemlidy®				*Funded by Gilead*	
	Co-Administration with NUCs					
	SB 9225 (Inarigivir + tenofovir disoproxil fumarate) fixed-dose combination					
	HBV antisense oligonucelotide					
Cancers	**Second-Generation STING Agonists**					
	SB 11285 (intravenous, intratumoral)					
	ADCs with STING agonist					
	RIG-I agonist					
Inflammatory Diseases	**STING antagonist**					

Changing the Chronic HBV Paradigm – From Suppression to Cure

Elevating the Functional Cure Rate - currently only 8 -10%* with interferon (IFN) + nucleos(t)ide (NUC)

A meaningful new therapy will need:

1. A good safety & tolerability profile
2. Ease of administration
3. Achieve finite course of treatment leading to functional cure rates >10%

- HBV is complex and heterogenous
- Combinatorial approach will be required
- Immunomodulation will need to be the backbone
- Today's treatments offer low potential for finite care

"Combination of antiviral and immune modulatory therapies will likely be needed to achieve functional hepatitis B virus cure."

– Lok A, Zoulim F, Dusheiko G, Ghany MG. Hepatitis B cure: from discovery to regulatory approval. *J Hepatol.* 2017;67:847-861.

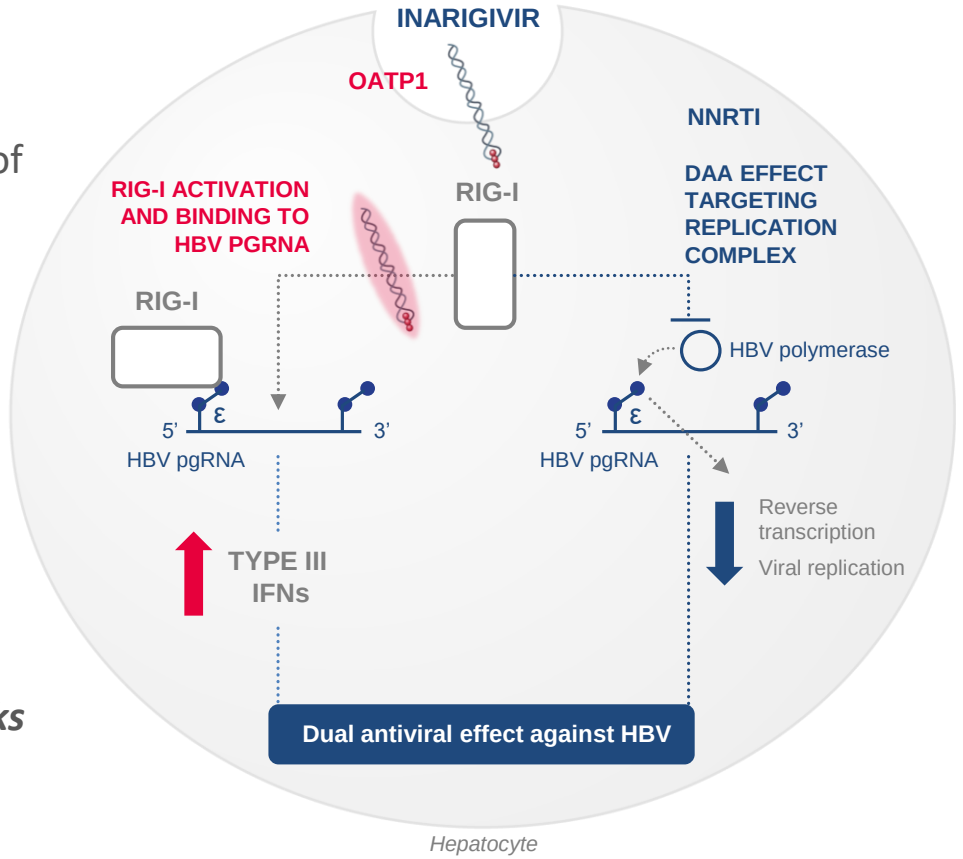
*Represents the approximate number of patients that achieved HBsAg clearance after 48 weeks of treatment with αIFN + Viread®. HBsAg, hepatitis B surface antigen; HBV, hepatitis B virus; IFN, interferon.

Inarigivir – Hepatic-Selective Immunomodulator with a Dual Mechanism of Action

Inarigivir is a RIG-I Agonist designed to:

- **Restore hepatic-selective innate and adaptive immune response**[1] stimulating the production of type I and III IFNs without systemic toxicity
- Inhibit the HBV replication complex via a direct acting antiviral effect as an NNRTI
- Target cccDNA and is only oral agent to demonstrate reduction in HBV DNA, HBV RNA and HBsAg
- Potential backbone immunomodulator for combinatorial treatments of HBV

HBsAg patient responder rate at 12 and 24 weeks of treatment superior to IFN + Nuc with a significantly better tolerability profile

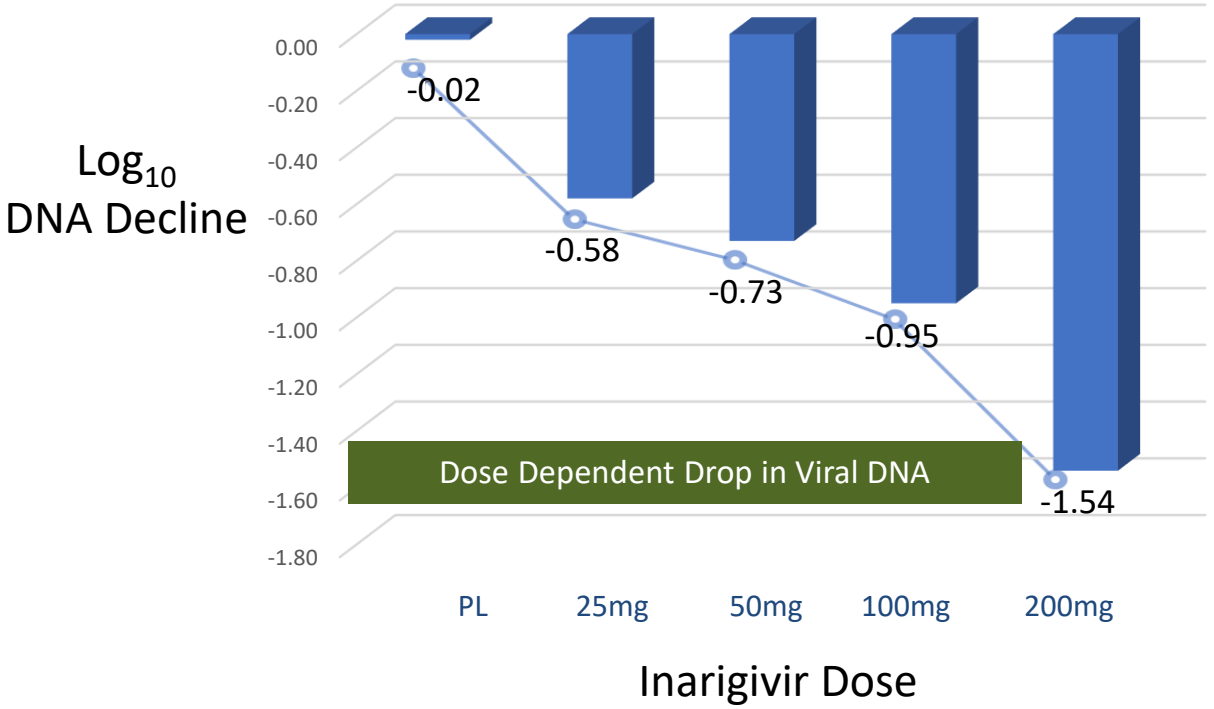


Inarigivir – Backbone Immunomodulator without Systemic Cytokine Toxicity

- Inarigivir 400mg rapidly increased the activation markers of innate immunity on circulating peripheral monocytes and dendritic cells
- Immune activation sustained over dosing period of inarigivir 400mg **without evidence of tolerance**
- Evidence of a potentially favorable adaptive immune profile for antiviral response
  - Associated activation of CD8+ t-cells and downregulation of NK cells
- Demonstrated a lack of systemic cytokine activation resulting in a favorable tolerability profile compared to interferon experience

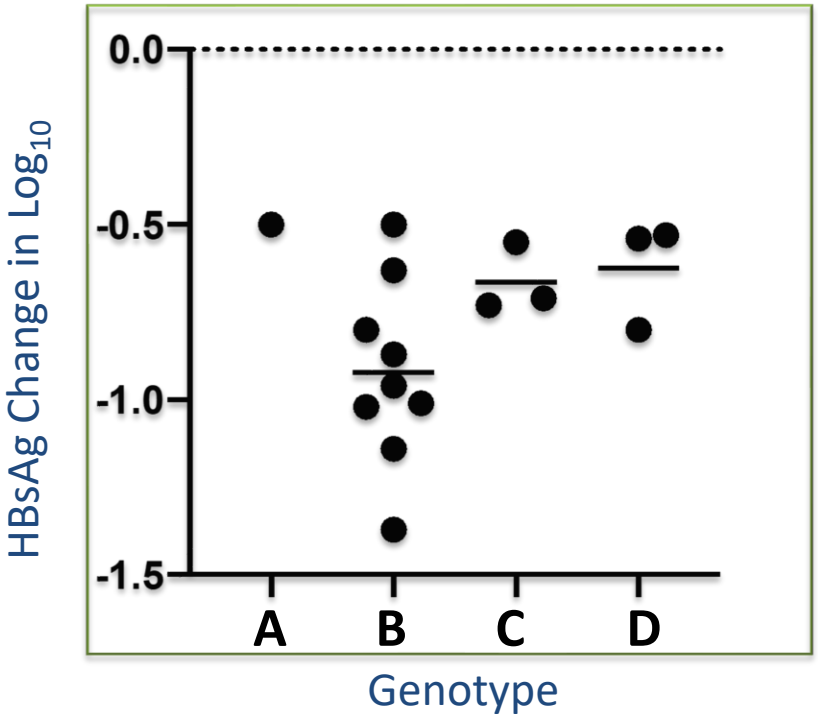
Inarigivir, a RIG-I agonist, activates innate immunity in healthy volunteers. Nina Le Bert[1], Kamini Kunasegaran[1], Meiyin Lin[1], Kevin Leach[2], Radhakrishnan Iyer[2], Antonio Bertoletti[1], Nezam Afdhal[2]; [1]*Duke-NUS Medical School, Emerging Infectious Diseases Program, Singapore, Singapore*; [2]*Spring Bank Pharmaceuticals, Hopkinton, United States*

ACHIEVE Trial Primary Antiviral Endpoint: Impressive HBV DNA Dose Dependent Response at Week 12



- *Similar dose dependent antiviral response HBV RNA*
- *Differential response in HBeAg-negative versus HBeAg-positive*
- *Baseline HBsAg, IP-10 and HBV genotype all predictive of antiviral response*

ACHIEVE Trial - Role of Genotype on HBsAg Response: 26% of Inarigivir Patients with HBsAg Response ($\geq 0.5 \log_{10}$)



Percentage of responders within each genotype:	
GT A*	100%
GT B	33%
GT C	10%
GT D*	75%

**** Genotypes A & D are common U.S. and European genotypes***

Inarigivir genotype response consistent with that seen with interferon therapy

Major Findings from Inarigivir Phase 2 ACHIEVE Trial

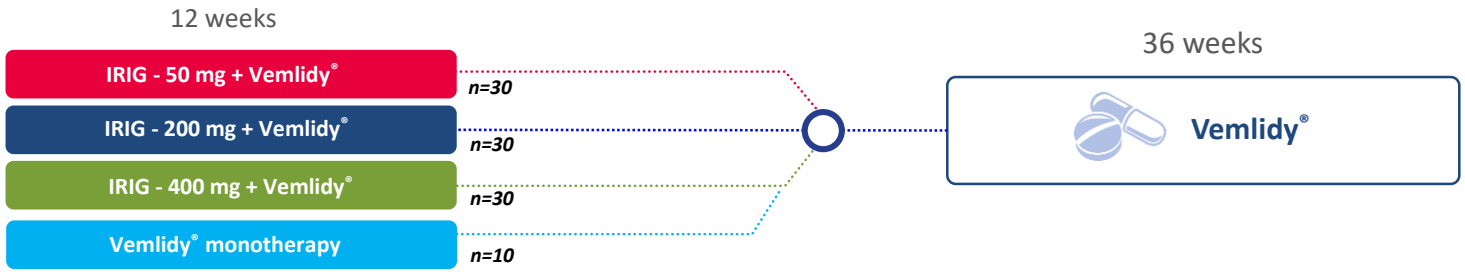
- Inarigivir demonstrated dose dependent responses for HBV DNA and HBV RNA
  - *Baseline HBsAg / IP-10 predict HBV DNA and HBV RNA response*
- HBsAg response ($\geq 0.5\log_{10}$) observed in 26% of patients at either 12 or 24 weeks – numerically superior to historical data of IFN plus NUC*
  - *HBsAg response superior in HBV genotypes A, B and D and similar in genotype C compared to that reported for IFN*
- Inarigivir well-tolerated at doses of 25mg – 200mg with no systemic interferon-like effects
  - *Inarigivir could be a safe, oral backbone immunomodulator for HBV combinatorial treatment*
- Identified heterogeneity of population for both HBeAg-positive and -negative patients
  - *Important for Phase 2b/3 clinical trial program design and patient stratification*

*Comparisons are not based on head-to-head studies and therefore conclusions should not be drawn about comparative effect

Global HBV Clinical Collaboration With Gilead

Gilead Phase 2 HBV Study

Inarigivir co-administered with Vemlidy® (tenofovir alafenamide) 25 mg in ***naïve patients***



Inarigivir monotherapy in ***virally suppressed patients***

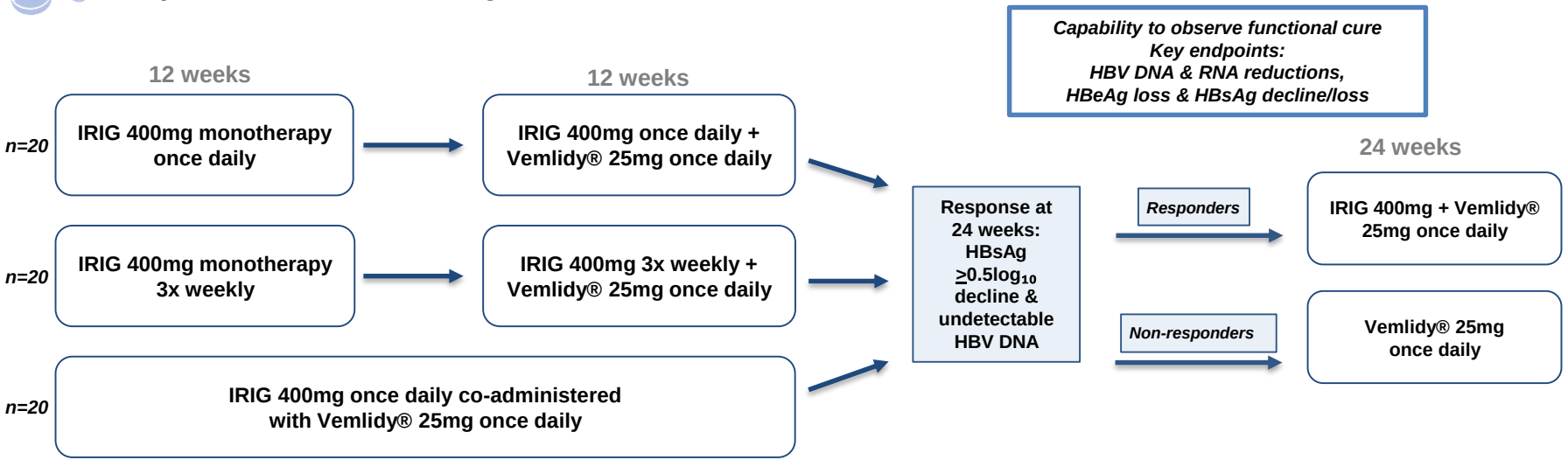
Patients remain on current oral antiviral therapy

Executed and Funded by Gilead
Inarigivir – part of the expanding Gilead HBV development program

CATALYST 1 - Global Inarigivir HBV Phase 2b Trial

Inarigivir 400mg monotherapy & co-administration with Vemlidy® (tenofovir alafenamide) 25mg HBeAg –ve and +ve non-cirrhotic treatment naïve HBV patients

Response-Guided Trial Design



Together with data from Gilead's trial of inarigivir + Vemlidy®, will inform Phase 3 treatment-naïve strategy for SB 9225 (IRIG + tenofovir disoproxil fumarate) fixed-dose combination

CATALYST 2 - Global Inarigivir HBV Phase 2b Trial

Inarigivir 400mg in virally suppressed HBeAg –ve, non-cirrhotic chronic HBV patients

Cohort 1 – "Stop & Shock"

n=20

Stop NUC therapy

24 weeks

"Shock" with inarigivir

IRIG 400mg monotherapy once daily

Up to week 96

No treatment – follow to observe sustained HBsAg loss

Capability to observe functional cure

Key endpoints:
- ***ALT Flare***
- ***HBsAg loss***
- ***Intra-hepatic virology & immunology with Liver Fine Needle Aspirase (FNA)***

Cohort 2 – "Suppress & Shock"

n=40

Continue NUC therapy

24 – 48 weeks

IRIG 400mg monotherapy once daily added to NUC therapy

Up to week 96

No treatment – follow to observe sustained HBsAg loss

Will inform Phase 3 program in virally-suppressed patients in 2020

Key endpoint:
- ***HBsAg loss/reduction***

SB 9225 – Novel Fixed-Dose Combination for Treatment-Naïve HBV Patients

- SB 9225 (inarigivir + tenofovir disoproxil fumarate)
- Planned Phase 3 program in US, EU and ASIA in 2020
- Trial Design: SB 9225 once-daily vs. NUC alone for 48 weeks
- Primary endpoints: Sustained HBV DNA negativity and/or durable HBsAg loss at week 72 (off treatment)

Competitive / Collaborative Landscape for HBV Cure

NUCs

Gilead HBV clinical collaboration – multiple IRIG doses + a NUC in progress; data expected 2H 2019

CATALYST trials launched in treatment-naïve and NUC suppressed patient populations

TLR-8 agonist (GS-9688)

Data expected 2H 2019

Potential complimentary immune activation to IRIG

EU proposal for combination studies with IRIG submitted with INSERM France (PI: Fabien Zoulim)

siRNA/Antisense

Multiple compounds with HBsAg reduction but, to date, universal rebound on stopping treatment

Evidence emerging for need to combine with immuno-modulator for sustained HBsAg reduction

HBV antisense oligonucleotide in development at SBPH

CpAMs/Capsid Inhibitors

Multiple type 1 and 2 CpAMs in development

No clinically meaningful effect reported on HBsAg at week 12 or 24

MOA and potential for functional cure needs to be better elucidated

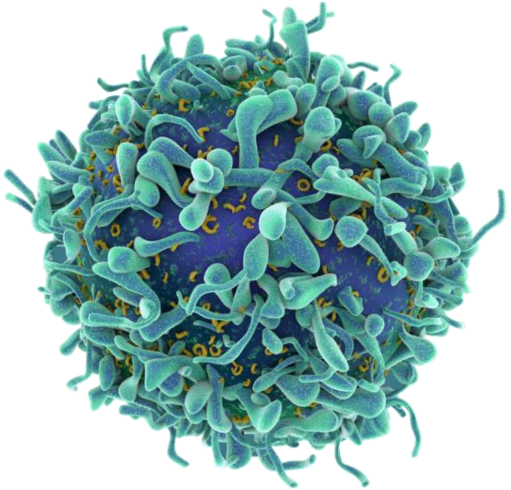
LEAD COMPOUND

SB 11285

A NOVEL SYNTHETIC

STING AGONIST

Spring Bank's Second-Generation STING Agonist Platform



Differentiated cyclic dinucleotide

IV STING agonist differentiated from IT delivery of first-generation STING compounds

Observed to turn "cold" tumors "hot" in preclinical studies

Shown to be highly potent & efficacious across multiple preclinical cancer models with associated abscopal and tumor memory responses

Distinctive chemistry allows for potential nanoparticle formulation and conjugation with ADCs for targeted delivery

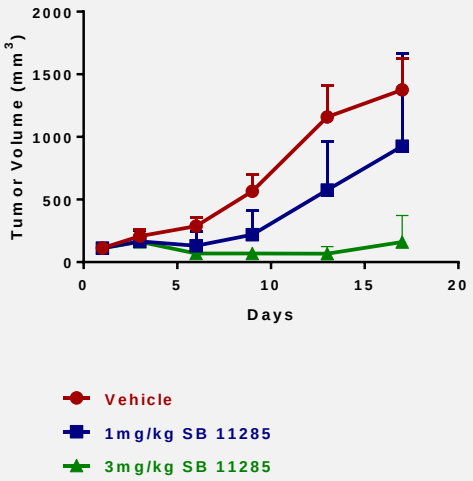
Unique chemistry allows for "self assembly" could enhance immune cell recruitment via IV administration

ADC, antibody-drug conjugates; IV, intravenous; ; IT, intratumoral; STING, STimulator of INterferon Genes.

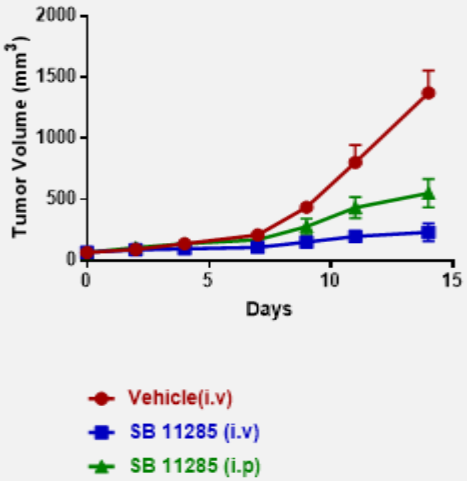
SB 11285 Significantly Inhibited Tumor Growth in Relevant Oncology Models

Efficacy in relevant oncology animal models observed with intravenous (IV), intraperitoneal (IP) and intratumoral (IT) delivery

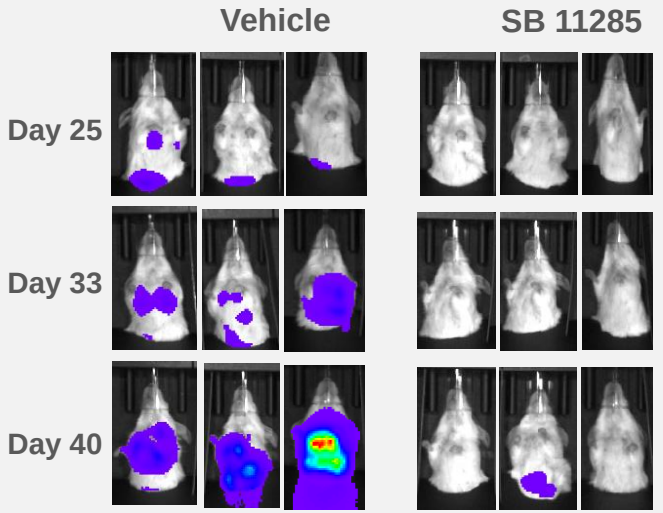
CT26 Colon Cancer (IV)



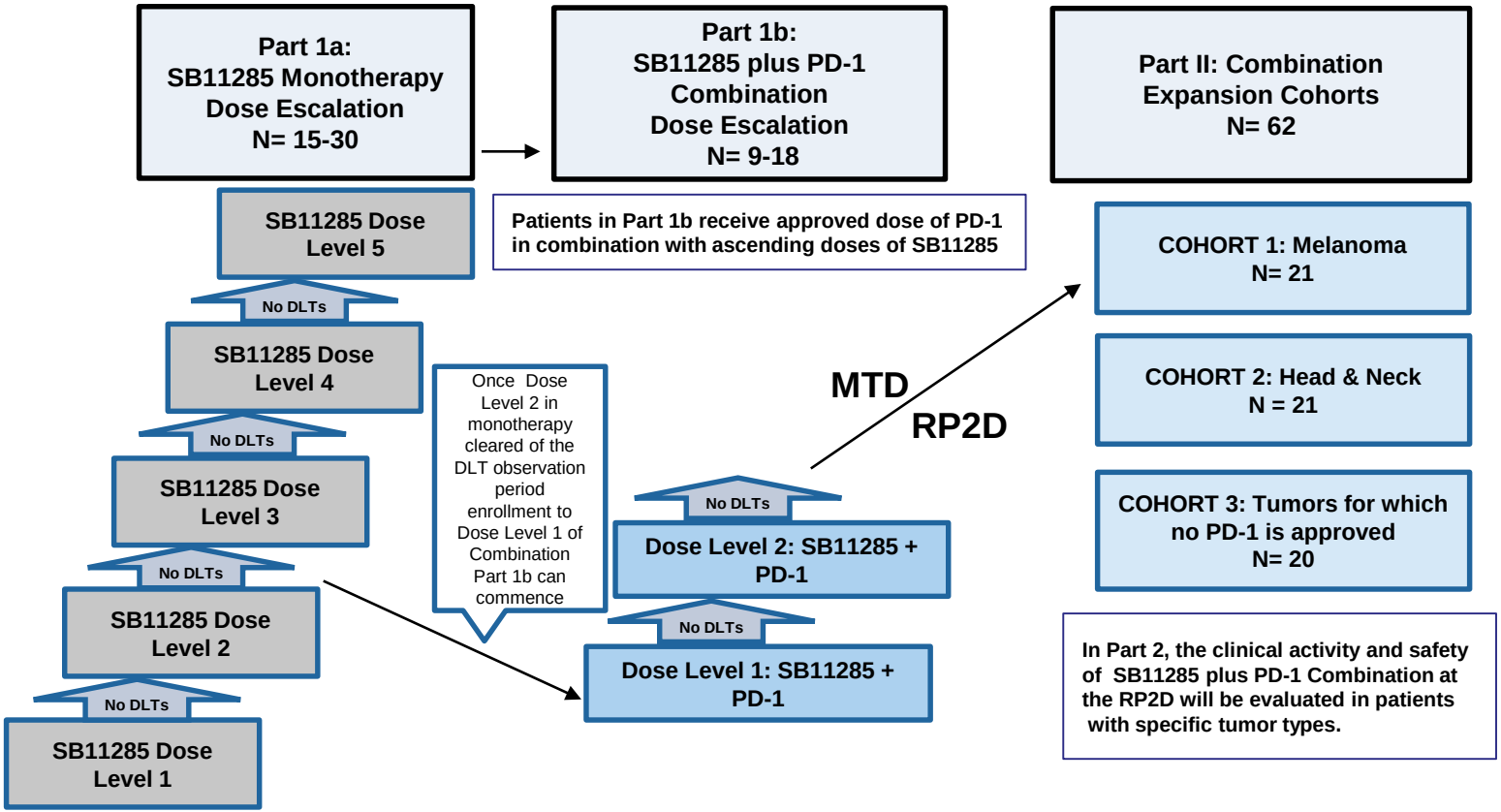
B16 Melanoma (IV)



4T1 Metastatic Breast Cancer (IP)



SB 11285 Development Plan - Phase I Trial Design



Multiple Catalysts for Spring Bank in 2019 - 2020

SBPH Q2 2019 cash position of $49M – company funded into Q2 2021

Key Milestones & Catalysts Anticipated

2H 2019

- Additional inarigivir data anticipated at AASLD in November
- Advance lead HBV antisense oligonucleotide compound into *in vivo* POC studies
- Report initial data from inarigivir 400mg liver biopsy study

1H 2020

- Report data from inarigivir + NUC combination study (Gilead data)
- Report initial data (12 weeks) from Catalyst 2 (NUC suppressed patients)
- Report initial data (12 weeks) from Catalyst 1 (treatment naïve patients)
- Report initial data from IV administered SB 11285 Ph 1 study

2H 2020

- Report initial data (24 week) from Catalyst 2
- Report initial data (24 week) from Catalyst 1
- Planned end of Ph 2 discussions with regulatory bodies
- Potential to initiate inarigivir and/or SB 9225 Ph 3 clinical trial program

Spring Bank Pharmaceuticals, Inc.

A Focus on Simplicity, Safety, and Selectivity

Unique in-house platform

Focused on small molecule nucleotide hybrid immunomodulatory molecules

World class expertise in HBV

Deep clinical collaboration in HBV with Gilead

Orally administered inarigivir has clinically shown potent antiviral activity in HBV

Favorable safety profile to date with no related SAEs observed

SB 9225

(inarigivir + TDF)

Simplifies combination therapy

Next-generation STING agonist program:

Lead candidate SB 11285 entered Ph 1 in multiple cancers in mid 2019

Anticipate **multiple data points for potential valuation enhancements** in the next 6 – 15 months