



DRIVEN BY A NOVEL PHARMACEUTICAL PLATFORM FOCUSED ON  
**SELECTIVE IMMUNOMODULATION**



spring bank  
pharmaceuticals

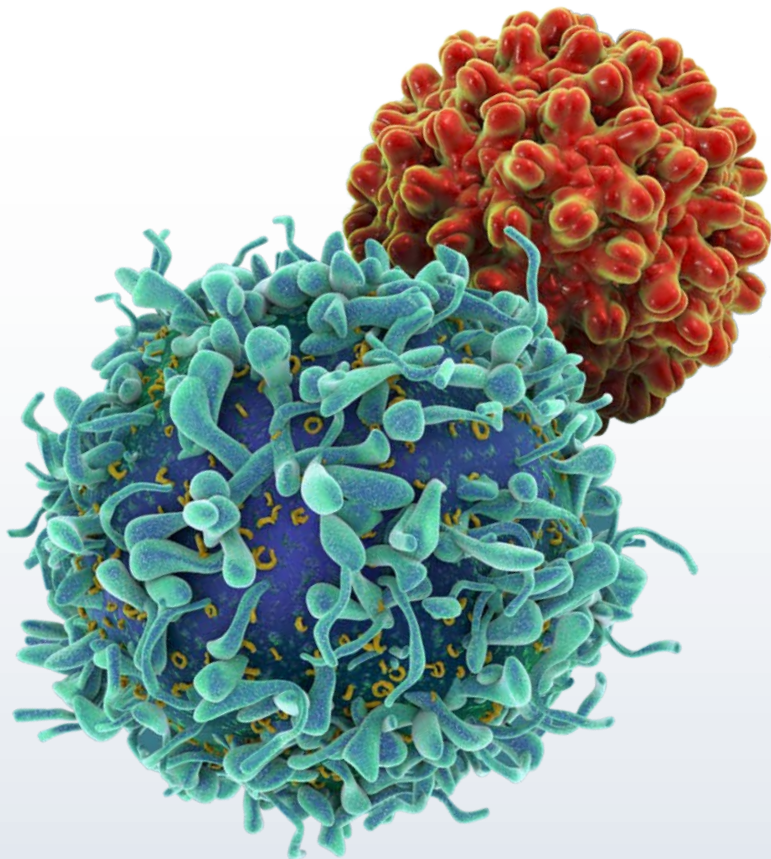
# FORWARD LOOKING STATEMENT

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 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 2a 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 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 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 February 20, 2018, and in other filings that we make with the SEC from time to time.

All forward-looking statements speak only as of April 25, 2018 and should not be relied upon as representing our views as of any other date. We specifically disclaim any obligation to update any forward-looking statement, except as required by applicable law. All trademarks, service marks, trade names, logos and brand names identified in this presentation are the properties of their respective owners.

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.



## A COMPANY WITH INNOVATIVE FOCUS

Clinical-stage biopharmaceutical company engaged in the discovery and development of a novel class of therapeutics using a proprietary small molecule nucleic acid hybrid (SMNH) technology

## ADDRESSING UNMET NEEDS USING OUR NOVEL SMNH PLATFORM

RIG-I Agonists: HBV, HIV latency and other viral infections

STING Agonists: immuno-oncology and autoimmune diseases

# PROGRESSIVE PIPELINE DESIGNED TO MEET SIGNIFICANT UNMET NEEDS

| SMNH Platform Targets | Compound  | Indication                                     | Research | Preclinical | Clinical | Status   |
|-----------------------|---|--|----------|-------------|----------|--|
| RIG-I                 | <b>Inarigivir (oral):</b>   |  |          |             | ●        |  |
|                       | Monotherapy   |  |          |             |          | ACHIEVE Phase II (Part A) clinical trial ongoing   |
|                       | Co-Administration with Gilead's Viread®   | <b>HBV</b>                                     |          |             |          | Phase II (Part B) expected to commence in 2H 2018  |
|                       | Co-Administration with Gilead's Vemlidy®  |  |          |             |          | Phase II study initiated by Gilead in 1Q 2018 under clinical trial collaboration agreement |
|                       | <b>SB 9225</b><br>inarigivir + tenofovir disoproxil fumarate fixed-dose combination | <b>HBV</b>                                     |          |             | ●        | Formulation development ongoing –<br>Planned initiation of Phase IIb/III trial(s) in 2019  |
|                       | <b>SB 9400</b>  | <b>HIV Latency, Other Viral Diseases</b>       |          | ●           |          |  |
| STING Agonists        | <b>SB 11285</b> (intravenous, intratumoral)   | <b>Immuno-oncology</b>                         |          |             | ●        | Anticipate commencing Phase Ib/II trial in multiple cancers in 2018                        |
|                       | <b>SB 11325 and SB 11396</b>  | <b>Multiple ADC Targets in Immuno-oncology</b> | ●        |             |          | Research collaboration with third party to combine with ADCs                               |

# CHRONIC HBV: A GLOBAL PROBLEM

Chronic HBV infection  
prevalence (approximate)

**~257MM**

GLOBALLY

**~17MM**

US AND EUROPE

Estimated  
Deaths

**870,000**

(IN 2017)

HBV global  
therapeutics sales

**\$2.4B**

(IN 2016)

## LOW TREATMENT RATES OF CHRONIC HBV PATIENTS TODAY

- Estimated 12-15% in the US and Europe
- Estimated 1% in the Asia-Pacific region

## LOW FUNCTIONAL CURE RATES WITH CURRENT STANDARD OF CARE

# AN OPPORTUNITY TO CHANGE THE CHRONIC HBV PARADIGM BY **ELEVATING THE FUNCTIONAL CURE RATE**

## A new therapy with:

- 1** An excellent safety profile
- 2** Ease of administration
- 3** An improved finite course of treatment leading to functional cure rates greater than 8-10%\*



## SUBSTANTIAL COMMERCIAL OPPORTUNITY

- Immediate addition to current NUC-suppressed patients
- Expansion of treatment opportunities for chronic HBV patients
- Finite care can yield substantial pharmacoeconomic value

\*Represents the approximate number of patients that achieved HBsAg clearance after 48 weeks of treatment with  $\alpha$ IFN + Viread®

HBsAg, hepatitis B surface antigen; HBV, hepatitis B virus; IFN, interferon.

# INARIGIVIR:

A NOVEL, ORAL, SELECTIVE IMMUNOMODULATOR WITH A DUAL MECHANISM OF ACTION



Orally bioavailable

Favorable safety  
profile to date

Small molecule  
nucleic acid  
hybrid (SMNH)

Hepatic-selective  
immunomodulator

Potent, selective  
RIG-I agonist

Physical properties allow for potential fixed-dose  
combination with DAAs

# INARIGIVIR: A NOVEL, ORAL, SELECTIVE IMMUNOMODULATOR WITH A DUAL MECHANISM OF ACTION

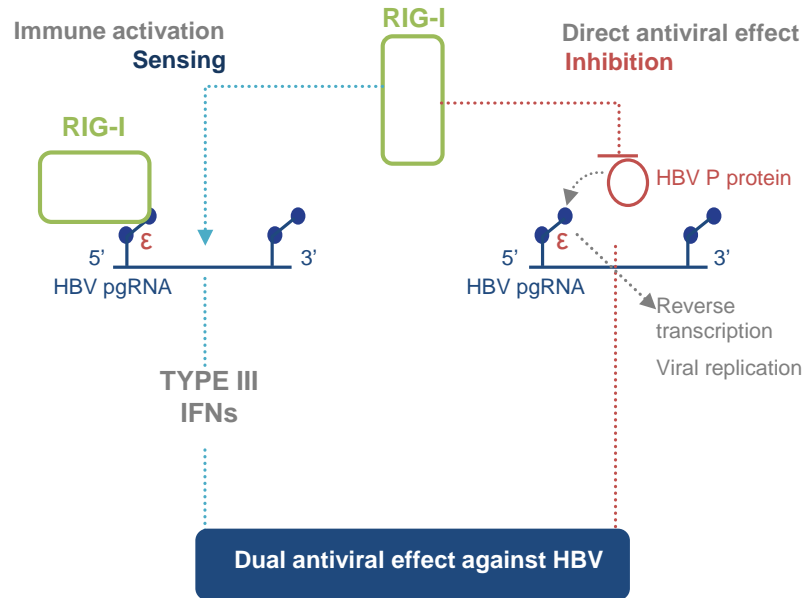
**RIG-I is a sentinel protein that plays a crucial role in recognition and defense of HBV**

## Viral sensing/immune activation:

Type III IFNs are predominantly induced in human hepatocytes in response to HBV infection, through RIG-I-mediated sensing of the 5'- $\epsilon$  region of HBV pgRNA

## Viral inhibition/direct antiviral effect:

RIG-I inhibits the interaction of HBV polymerase with pgRNA in a RNA-binding dependent manner, resulting in direct suppression of HBV replication



HBV, hepatitis B virus; IFN, interferon; pgRNA, pregenomic RNA; P protein, HBV polymerase; RIG-I, retinoic acid-inducible gene-I.

Sato et al. *Immunity*. 2015;42:123-132.



# INARIGIVIR'S DUAL MECHANISM OF ACTION: A UNIQUE, POTENTIAL BACKBONE AGENT FOR COMBINATION CURE STRATEGIES

Evidence suggests host immune response is necessary for

## VIRAL CLEARANCE & FUNCTIONAL CURE

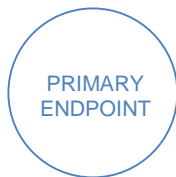
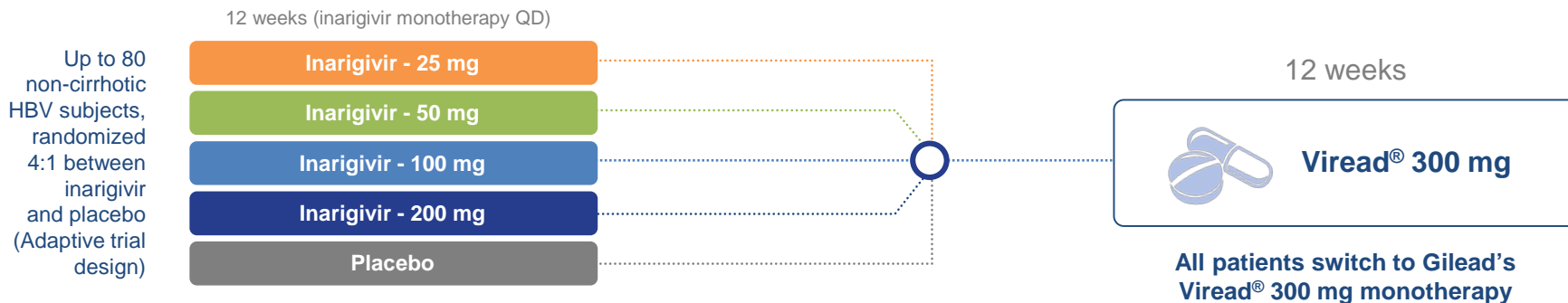
**“Combination of antiviral and immune modulatory therapies will likely be needed to achieve functional hepatitis B virus cure.”**

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

# CLINICAL STUDIES OF INARIGIVIR IN HBV

## ACHIEVE PHASE II (Part A) Study

Clinical trial collaboration with Gilead to evaluate inarigivir with nucleotide analog Viread® 300 mg



**PRIMARY  
ENDPOINT**

Safety and antiviral activity at 12 weeks



**SECONDARY  
ENDPOINT**

PK, change in serum HBV DNA, HBsAg, HBV RNA and HBeAg from baseline to weeks 6, 12, 14, 16, and 24

Full results for all patients treated with inarigivir monotherapy anticipated in 2H 2018

DNA, deoxyribonucleic acid; HBeAg, hepatitis B e antigen; RNA, ribonucleic acid; HBsAg, hepatitis B surface antigen; HBV, hepatitis B virus; QD, once daily.

# CLINICAL STUDIES OF INARIGIVIR IN HBV

## ACHIEVE PHASE II (Part B) Study

inarigivir co-administered with Viread® (tenofovir disoproxil fumarate) 300 mg

12 weeks

Inarigivir - 100 mg + Viread®

Viread® monotherapy



12 weeks Viread® monotherapy



Viread®

Anticipated  
initiation in 2H 2018

## Gilead Phase II HBV Study

inarigivir co-administered with Vemlidy® (tenofovir alafenamide) 25 mg

12 weeks

Inarigivir - 50 mg + Vemlidy®

Vemlidy® monotherapy



12 weeks Vemlidy®



Vemlidy®

Initiated by Gilead  
in 1Q 2018

# ANTI-VIRAL EFFECT AT WEEK 12 AFTER INARIGIVIR MONOTHERAPY (25 MG AND 50 MG DAILY)

| Mean                               | Placebo (n=8) | Inarigivir 25 mg<br>HBeAg +ve (n=9) | Inarigivir 25 mg<br>HBeAg -ve (n=7) | Inarigivir 50 mg<br>HBeAg +ve (n=10) | Inarigivir 50 mg<br>HBeAg -ve (n=4) |
|------------------------------------|---------------|-------------------------------------|-------------------------------------|--------------------------------------|-------------------------------------|
| Baseline HBV DNA log <sub>10</sub> | 6.36          | 7.86                                | 5.69                                | 7.79                                 | 4.55                                |
| Change in DNA log <sub>10</sub>    | +0.33         | <b>-0.37*</b>                       | -0.86                               | <b>-0.61#</b>                        | -1.05                               |
| Baseline HBsAg log <sub>10</sub>   | 3.75          | 4.31                                | 3.17                                | 4.12                                 | 2.96                                |
| Change in HBsAg log <sub>10</sub>  | -0.18         | -0.08                               | -0.34                               | -0.07                                | 0                                   |
| Baseline HBV RNA log <sub>10</sub> | 4.23          | 6.36                                | 4.20                                | 6.58                                 | 3.15                                |
| Change in HBV RNA                  | +0.99         | -0.32                               | <b>-1.84<sup>§</sup></b>            | -0.46                                | <b>-3.15<sup>&amp;</sup></b>        |

t-test vs placebo

\*p<0.03, #p<0.005, §p<0.01, &p<0.01

| Patients with responses of                            | Placebo (n=8) | HBeAg +ve (n=19) | HBeAg -ve* (n=11) |
|---|---------------|------------------|-------------------|
| HBV DNA > 1 log <sub>10</sub>                         | 0             | 2                | 6                 |
| HBV DNA > 0.5 log <sub>10</sub> < 1 log <sub>10</sub> | 1             | 5                | 5                 |
| qHBsAg > 0.5 log <sub>10</sub>                        | 1#            | 1                | 4                 |
| qHBeAg > 0.5 log <sub>10</sub>                        | 1             | 2                | N/A               |
| HBV RNA > 3 log <sub>10</sub> or undetectable         | 0             | 0                | 5                 |
| HBV RNA > 1 log <sub>10</sub> < 3 log <sub>10</sub>   | 0             | 3                | 1                 |
| HBV RNA > 0.5 log <sub>10</sub> < 1 log <sub>10</sub> | 2             | 4                | 3                 |

N/A = Not Applicable; \* 2 HBeAg NEG HBV RNA not detected at baseline; # Excludes flare patient

# ANTI-VIRAL EFFECT AT WEEK 24 COMPARED TO WEEK 12 AFTER TENOFOVIR SWITCH

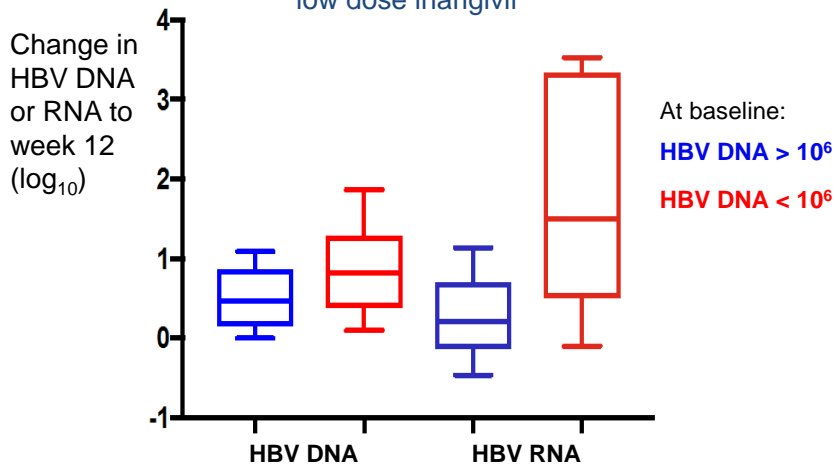
| Mean                                      | Placebo (n=8) | Inarigivir 25 mg<br>HBeAg +ve (n=9) | Inarigivir 25 mg<br>HBeAg -ve (n=7) | Inarigivir 50 mg<br>HBeAg +ve (n=10) | Inarigivir 50 mg<br>HBeAg -ve (n=4) |
|---|---------------|-------------------------------------|-------------------------------------|--------------------------------------|-------------------------------------|
| <b>Week 12 HBV DNA log<sub>10</sub></b>   | 6.69          | 7.49                                | 4.83                                | 7.24                                 | 3.50                                |
| <b>Change in DNA log<sub>10</sub></b>     | -4.14         | -4.11                               | -4.20                               | -3.84                                | -3.10                               |
| <b>Week 12 HBV RNA log<sub>10</sub></b>   | 5.23          | 6.04                                | 2.27                                | 6.13                                 | All LLOQ                            |
| <b>Change in HBV RNA log<sub>10</sub></b> | -1.36         | -0.55 (1<LLOQ)                      | -0.92 (5<LLOQ)                      | +0.10 (1<LLOQ)                       | N/A                                 |

| Patients with responses of     | Placebo (n=8) | HBeAg +ve (n=19) | HBeAg -ve* (n=11) |
|--------------------------------|---------------|------------------|-------------------|
| HBV DNA undetectable           | 1             | 1                | 9                 |
| qHBsAg > 0.5 log <sub>10</sub> | 1             | 5                | 4                 |
| HBV RNA undetectable (<LLOQ)   | 3*            | 2                | 9                 |
| HBV RNA > 1 log <sub>10</sub>  | 0             | 1                | 0                 |

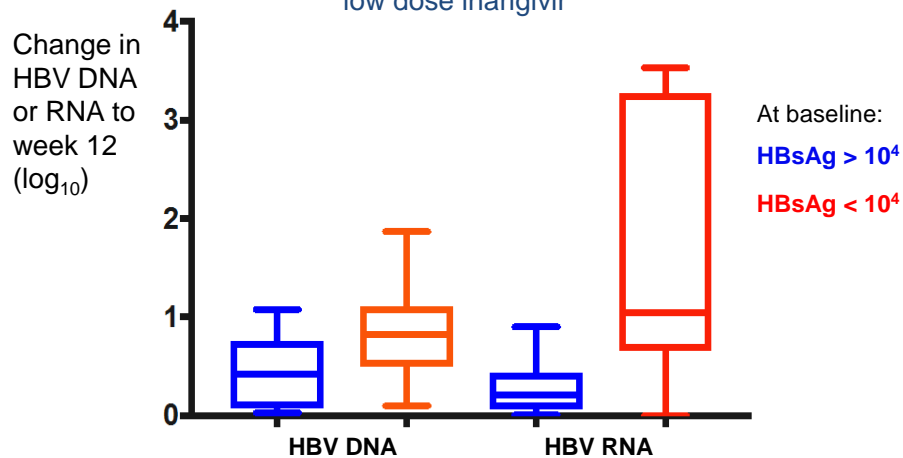
\* = All HBeAg -ve patients

# BASELINE HBV DNA AND HBsAg IS A STRONG PREDICTOR OF RESPONSE TO INARIGIVIR

Baseline HBV DNA  $<10^6$  is a strong predictor of response to low dose inarigivir

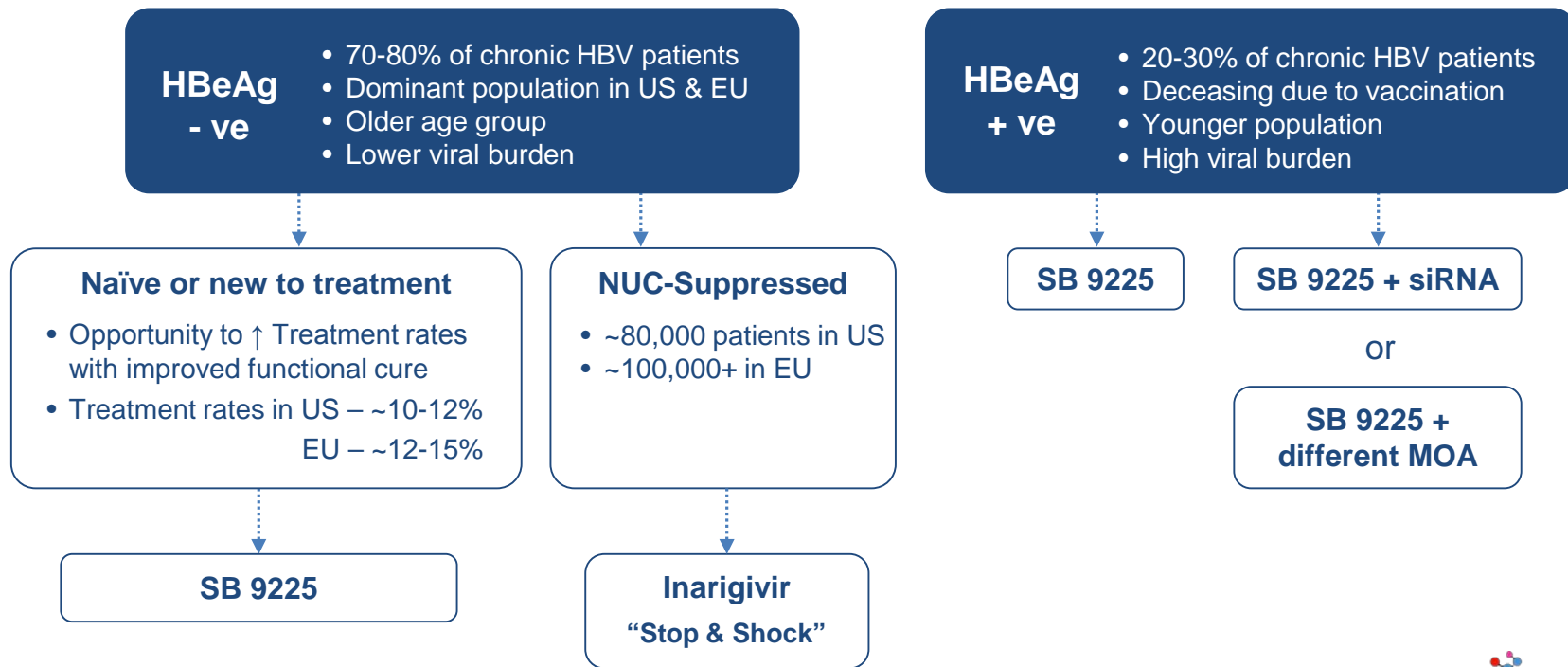


Baseline HBsAg  $<10^4$  is a strong predictor of response to low dose inarigivir

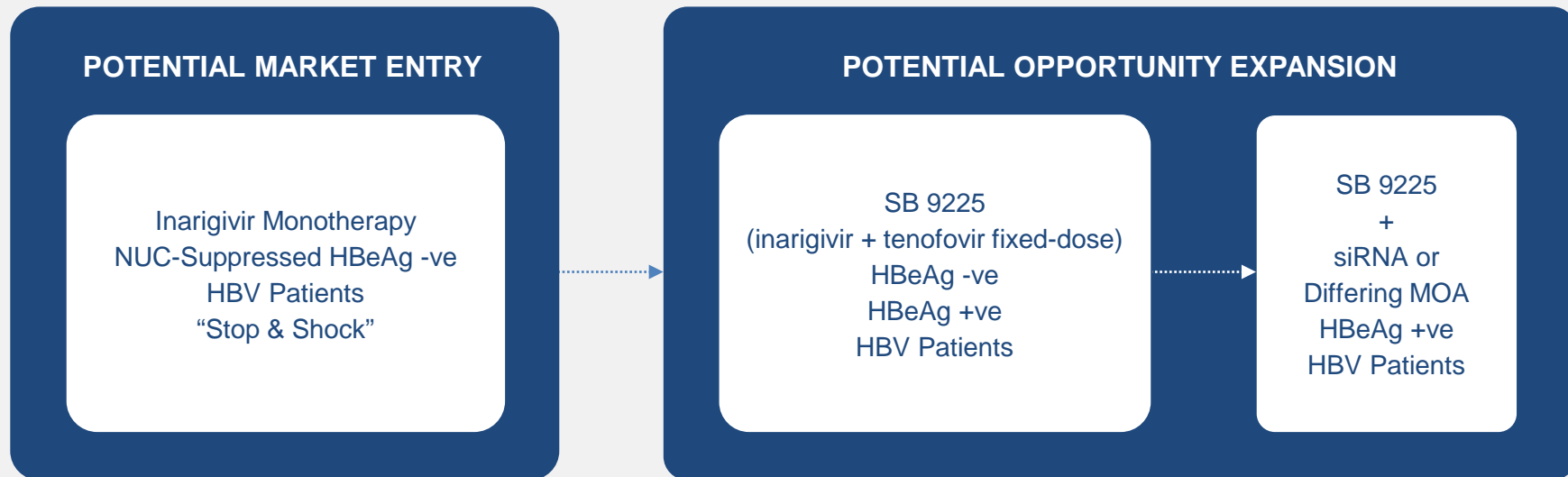


- Inarigivir demonstrates dose and exposure-dependent potent antiviral activity in HBV patients without cirrhosis with significant reductions in HBV DNA and HBV RNA
- Inarigivir is highly effective in HBeAg negative patients and the effect is enhanced in patients with low viral burden
- Inarigivir is the only oral agent which has demonstrated significant reduction in HBsAg in up to 30% of patients
- Inarigivir uniquely suited to be a backbone agent for anti-viral combinations to promote functional cure for HBV

# INARIGIVIR OPPORTUNITY HBV HETEROGENEITY

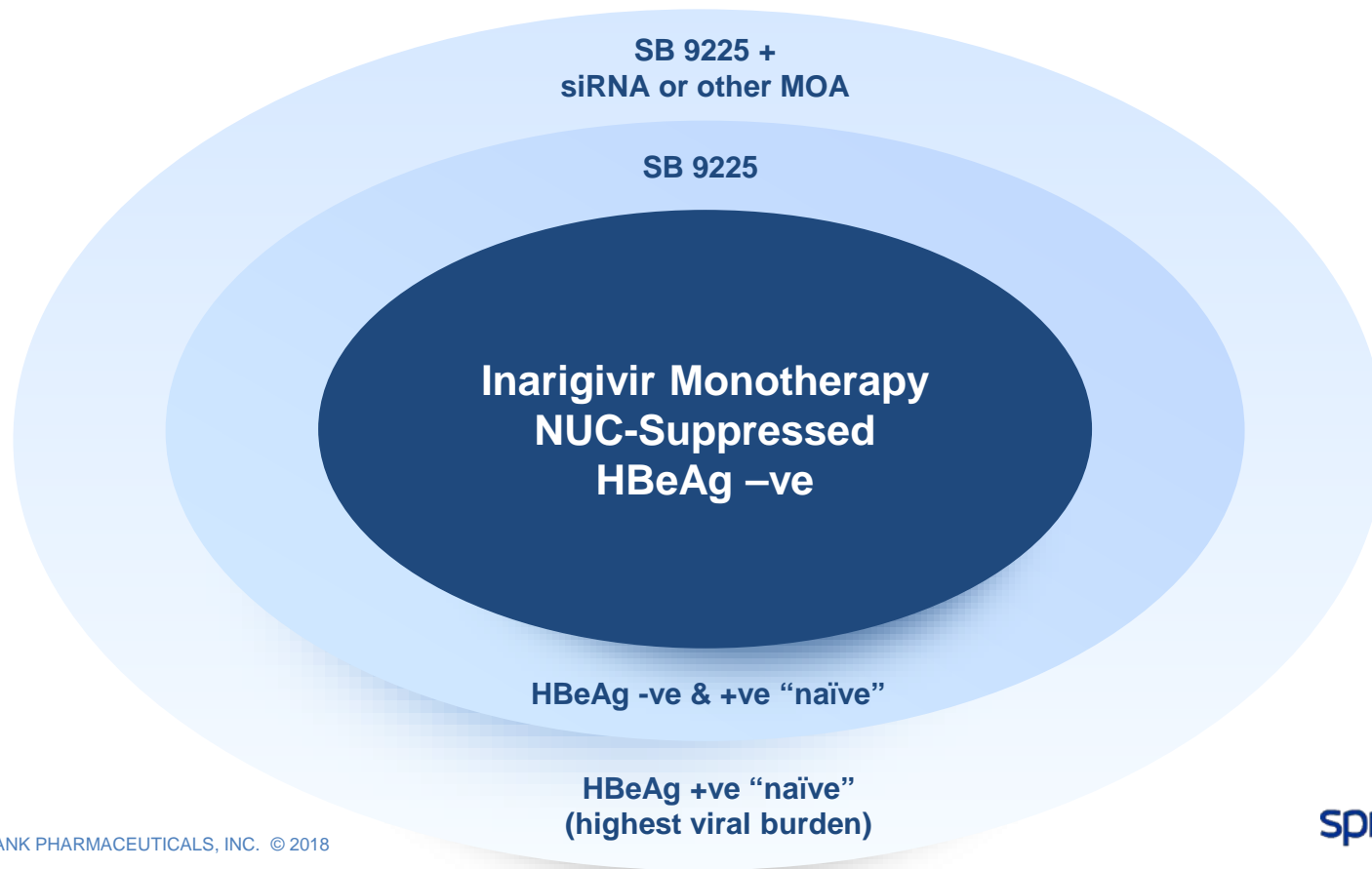


# INARIGIVIR CLINICAL & REGULATORY PLAN





# INARIGIVIR CLINICAL & REGULATORY PLAN



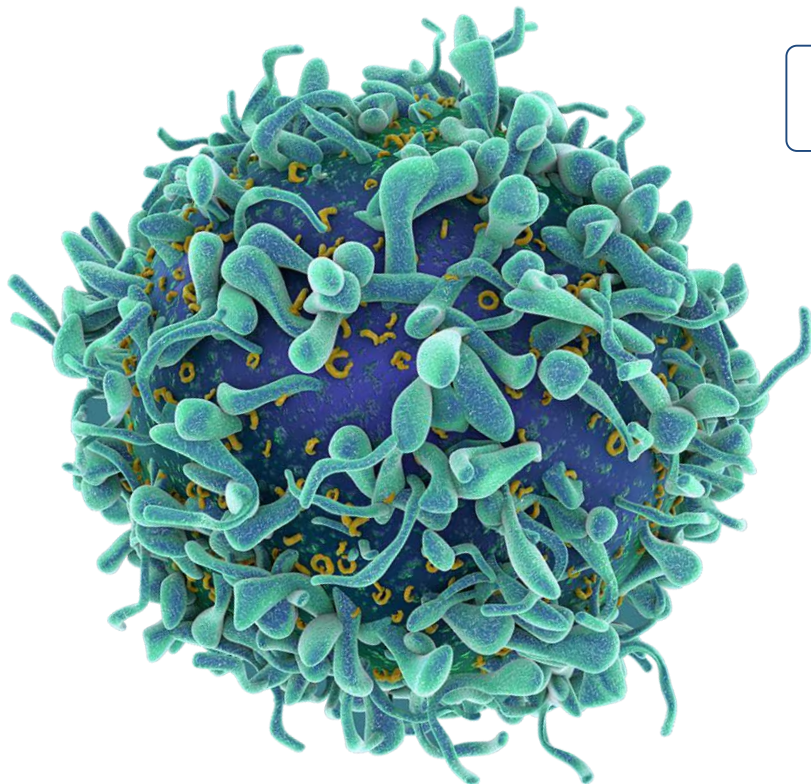
LEAD COMPOUND

**SB 11285**

A NOVEL SYNTHETIC

**STING AGONIST**

# SB 11285 – lead next generation STING agonist



Differentiated cyclic dinucleotide / SMNH

Multiple routes of administration (IV, IT & SC)

Distinctive chemistry allows for potential conjugation with ADCs for targeted delivery

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

Demonstrated to turn “cold” tumors “hot”

Complimentary mechanism with other I/O therapies

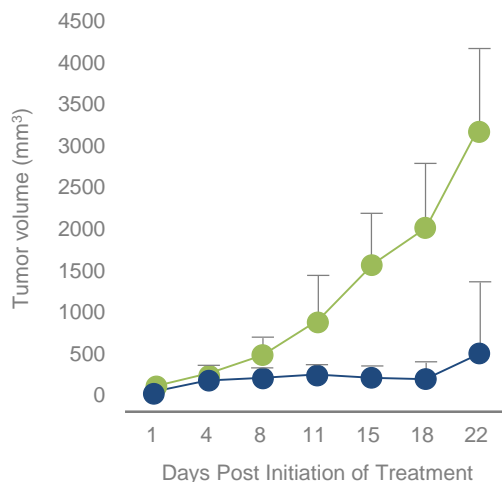
ADC, antibody-drug conjugates; IV, intravenous; IT, intratumoral; SC, subcutaneous; STING, STimulator of INterferon Genes.

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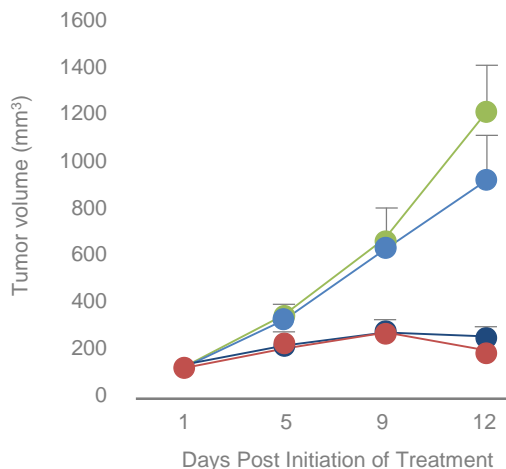
# SB 11285 SIGNIFICANTLY INHIBITS TUMOR GROWTH IN RELEVANT ONCOLOGY MODELS

Efficacy in relevant oncology animal models demonstrated with intratumoral (IT) and intravenous (IV) delivery

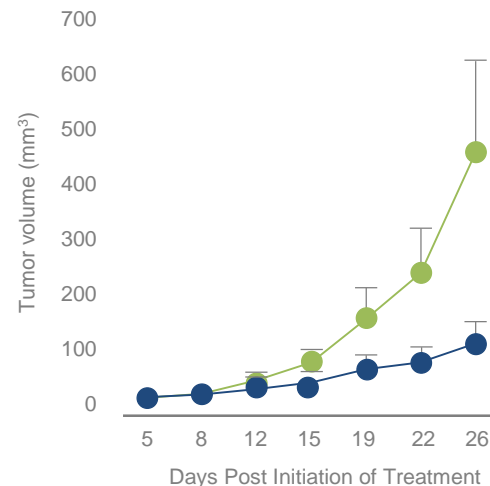
## A20 Lymphoma (IT)



## CT26 Colon Cancer (IV)



## 4T1 Metastatic Breast Cancer (IT)



● SB 11285 ● Vehicle ● Anti-CTLA4 Ab ● Anti-CTLA4 Ab + SB 11285

# THE PATH FORWARD FOR SPRING BANK POTENTIAL FOR MULTIPLE CATALYSTS

2018

**1H 2018** | Gilead initiated Phase II study (inarigivir + Vemlidy®)  
Presented 24 week data for 1<sup>st</sup> 2 cohorts @ EASL

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**2H 2018** | Complete monotherapy dosing from the ACHIEVE Phase II (Part A) study  
Submit IND/CTA for SB 11285; initiate Phase Ib clinical trial  
Multiple cohorts in Phase II of inarigivir + NUC combo dosing  
SB 9225 (inarigivir + tenofovir disoproxil fumarate fixed-dosed combination) ready for clinical trials

2019

**1H 2019** | Complete ACHIEVE Part A 24 week data  
Initial data from inarigivir + NUC combo dosing  
Initiate global Phase IIb/III “Stop & Shock” clinical trial

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**2H 2019** | Initiate global Phase IIb SB 9225 24 week clinical trial  
Initiate global Phase II triple combo trial (SB 9225 + differing MOA)  
Initial data from SB 11285 Phase Ib clinical trial

IPO  
**2016**

NASDAQ  
**SBPH**

Market Cap  
**~\$200MM**

Available Funding  
**\$51MM<sup>1</sup>**  
into Q4 2019

Shares Outstanding  
**12,961,933<sup>1</sup>**

1. At 12.31.2017.  
CMC, chemistry, manufacturing and controls; CTA, clinical trial application; IND, Investigational new drug.

# SPRING BANK PHARMACEUTICALS, INC.

A FOCUS ON SIMPLICITY, SAFETY, AND SELECTIVITY

Differentiated, selective, potent  
**SMNH platform technology**

Orally administered inarigivir has  
demonstrated potent antiviral activity  
in HBV

**No safety signals observed to date**

SB 9225 (inarigivir + tenofovir disoproxil  
fumarate fixed-dosed combination):

**Advance development in HBV**

Next-generation  
STING agonist program:  
**Lead SB 11285 anticipated to enter  
clinic in multiple cancers in 2018**

Anticipate **multiple data points  
for potential valuation  
enhancements** in the next 12  
months

Company presently  
**funded into Q4 of 2019**

HBV, hepatitis B virus; SMNH, Small Molecule Nucleic Acid Hybrid; STING, STimulator of INterferon Genes.

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