

Creating a Leading Global HBV Therapeutics Company

Transaction Overview | February 9, 2015



Forward Looking Statements

This presentation contains “forward-looking statements” or “forward-looking information” within the meaning of applicable securities laws (collectively, “forward-looking statements”). Forward-looking statements in this presentation include statements about, among others: the proposed merger of Tekmira and OnCore; meeting a significant unmet medical need; developing a curative regimen for HBV and the eradication of HBV; long term value creation and the potential creation of significant value; Tekmira shareholder approval for the merger; the combined company management team; advancing non-HBV assets; the potential of the combined company product candidates; the quantum of the implied market value of the combined company; and the anticipated timing of the closing of the merger.

With respect to the forward-looking statements contained in this presentation, Tekmira has made numerous assumptions regarding, among other things: the ability to satisfy all conditions for the closing of the merger, including receipt of required shareholder and regulatory approvals; the elements factored into the calculation of the implied market value of the combined company are correct and will remain unchanged as at closing of the merger; and the effectiveness and commercial viability of the combined company’s products. While Tekmira considers these assumptions to be reasonable, these assumptions are inherently subject to significant business, economic, competitive, market and social uncertainties and contingencies. Forward-looking statements herein involve known and unknown risks, uncertainties and other factors that may cause the actual results, events or developments to be materially different from any future results, events or developments expressed or implied by such forward-looking statements. Such factors include, among others: the ability of the parties to consummate the proposed merger; satisfaction of closing conditions (including shareholder and regulatory approval) to the consummation of the proposed merger; the ability of Tekmira to successfully integrate OnCore’s operations and employees in a timely and efficient manner; the ability to realize anticipated synergies and costs savings of the proposed merger; the combined company’s product pipeline may not prove to be effective or commercially beneficial; there can be no assurance that the implied market value of the combined company as disclosed herein is accurate or reflects the actual value of the combined company; the combined company may not be able to raise additional financing required to fund further research and development, clinical studies, and obtain regulatory approvals, on commercially acceptable terms or at all; and economic and capital market conditions. A more complete discussion of the risks and uncertainties facing Tekmira appears in Tekmira’s proxy statement dated February 4, 2015 and Tekmira’s continuous disclosure filings which are available at www.sec.gov and at www.sedar.com. Tekmira disclaims any obligation to update any forward-looking statements or to publicly announce the result of any revisions to any of the forward-looking statements contained herein to reflect future results, events or developments, except as required by law.

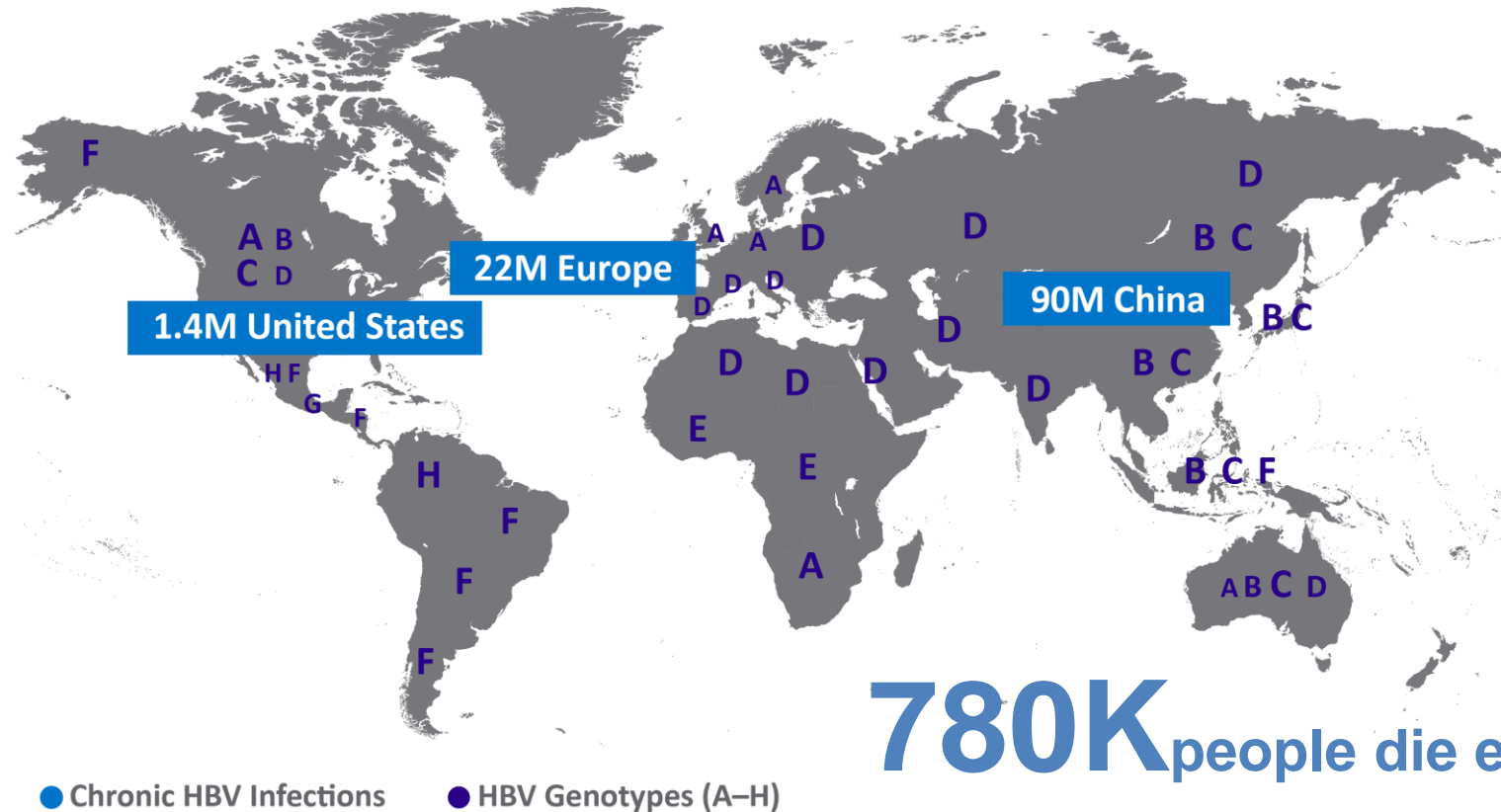
ADDITIONAL INFORMATION

Tekmira has filed with the Securities and Exchange Commission (the “SEC”) and mailed to its stockholders a proxy statement in connection with the proposed Merger. The proxy statement contains important information about the proposed Merger and related matters. INVESTORS AND STOCKHOLDERS ARE URGED TO READ THE PROXY STATEMENT CAREFULLY IN ITS ENTIRETY. Investors and stockholders are able to obtain free copies of the proxy statement and other documents filed with the SEC by Tekmira through the SEC’s website at www.sec.gov and from Tekmira by contacting Investor Relations by telephone at (604) 419-3200 or upon written request addressed to our corporate secretary at Tekmira Pharmaceuticals Corporation, 100 – 8900 Glenlyon Parkway, Burnaby, BC, Canada, V5J 5J8 or by going to Tekmira’s Investor section on its corporate web site at www.tekmira.com.

Tekmira and its executive officers and directors may be deemed to be participants in the solicitation of proxies from the stockholders of Tekmira in connection with the proposed Merger. Information regarding the interests of these executive officers and directors in the transaction described herein will be included in the proxy statement described above. Additional information regarding these executive officers and directors is also included in Tekmira’s Annual Report on Form 10-K, which was filed with the SEC on March 28, 2014, and is supplemented by other public filings made, and to be made, with the SEC by Tekmira. The Annual Report on Form 10-K and other public filings are available free of charge through the SEC’s website at www.sec.gov and from Tekmira by contacting Investor Relations by telephone at (604) 419-3200 or upon written request addressed to our corporate secretary at Tekmira Pharmaceuticals Corporation, Tekmira Pharmaceuticals Corporation, 100 – 8900 Glenlyon Parkway, Burnaby, BC, Canada, V5J 5J8 or by going to Tekmira’s Investor section on its corporate web site at www.tekmira.com.

Chronic HBV – *greatest global unmet medical need*

350M people chronically infected with HBV



780K people die every year as a consequence of HBV

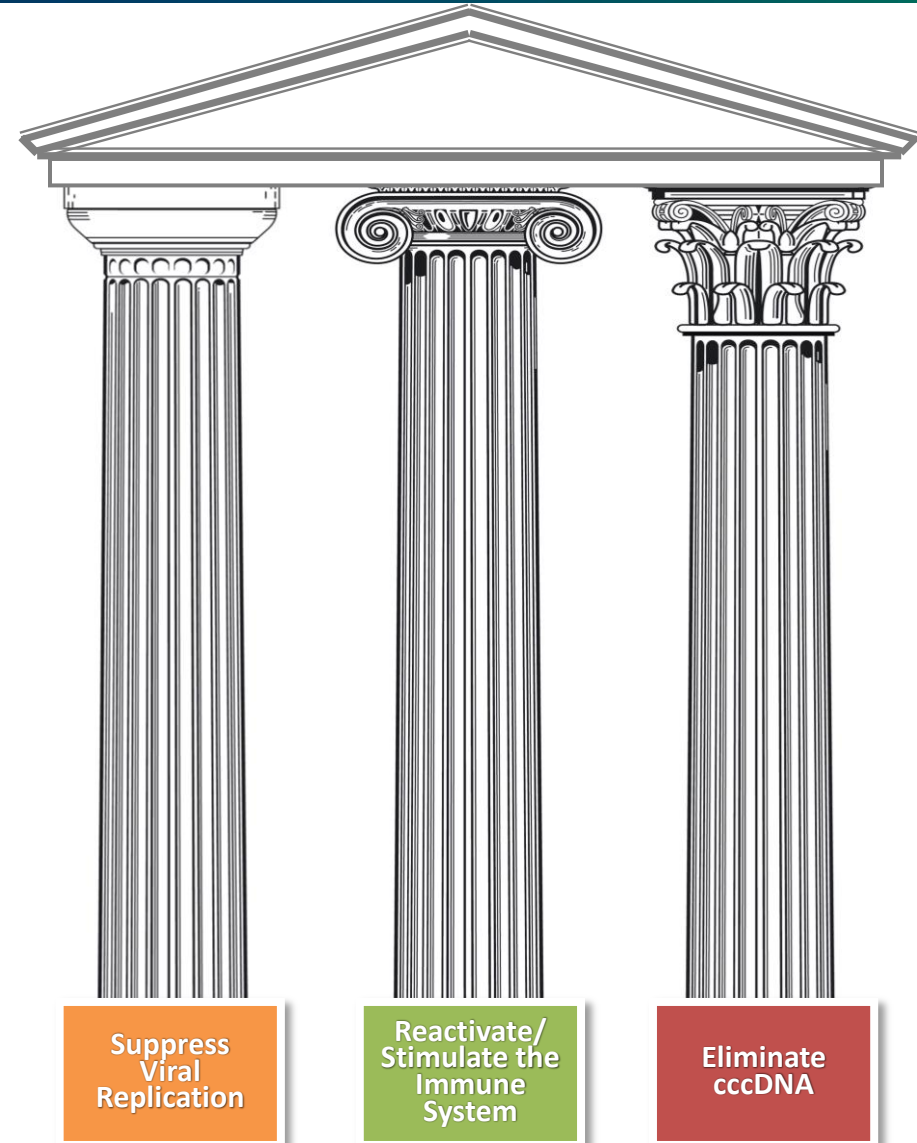
Our Goal — *an all oral, curative therapy for HBV*

- HBV biology is complex
 - *More complex than HCV*
- HBV persists by
 1. Replicating continually in liver hepatocytes
 2. Expressing viral antigens that suppress the patients' immune response
 3. Establishing a stable cccDNA reservoir in the nucleus
- Curative therapy will require a combination of drugs that overcome these “*three pillars*” of viral persistence
- We have assembled a unique set of clinical and preclinical assets which target these “*three pillars*” of viral persistence
 - 8 therapeutic assets under one roof
 - Enables efficient development of drug combinations

Our Strategy – *all needed assets under one roof*

- Provide a cure by developing combination therapies acting by complementary mechanisms of action against the virus
 - Aggressively suppress viral replication
 - Reactivate/stimulate the immune system
 - Eliminate cccDNA
 - Considered the “Holy Grail” in achieving a cure
- Efficiently use development capital
- Resulting in a finite treatment duration

**To succeed in achieving an HBV Cure,
all facets of HBV persistence need
to be addressed**



Transaction Highlights

- Combined company well positioned to capitalize on the global market opportunity in HBV and create significant long-term value for shareholders
- Creates the industry's leading portfolio of therapeutic approaches to cure HBV, addressing a significant unmet medical need
- Eight unique drug candidates to be used in combination regimes
- Brings together proven management teams and scientific leadership, including former Pharmasset executives
- Transaction has the unanimous support of the Tekmira and OnCore Boards of Directors
- Close expected in early March, subject to approval by Tekmira shareholders

Proven Leadership

- Mark Murray, Chief Executive Officer (Tekmira)
- Patrick Higgins, President and Chief Operating Officer (OnCore, former Pharmasset)
- Bruce Cousins, Chief Financial Officer (Tekmira)
- Michael Sofia, Chief Scientific Officer (OnCore, former Pharmasset)
- William Symonds, Chief Development Officer (OnCore, former Pharmasset)
- Mark Kowalski, Chief Medical Officer (Tekmira)
- Bryce Roberts, Chief Legal Officer (OnCore, former Pharmasset)
- Michael McElhaugh, Chief Business Officer (OnCore, former Pharmasset)
- Mike Abrams, Chief Discovery Officer (Tekmira)

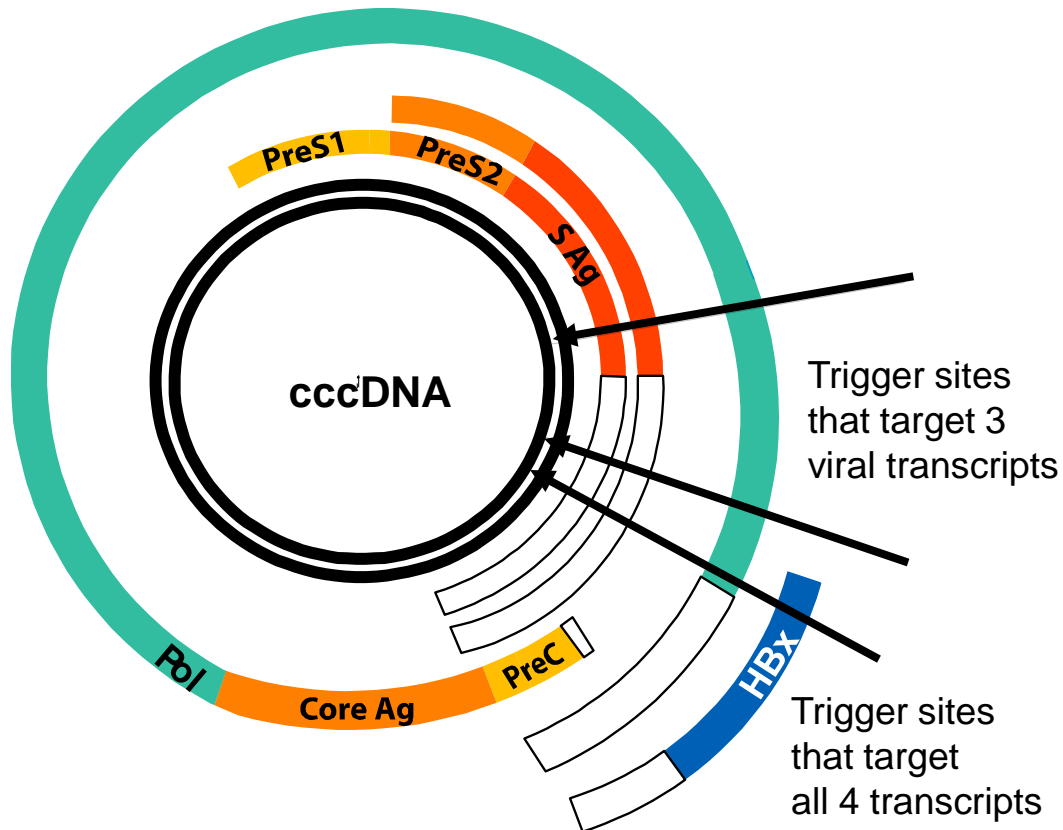
Building the “HBV Solutions” Company

- Hepatitis B is a bigger market than Hepatitis C
- Building a portfolio of HBV assets that will lead to curative therapy
- Differentiating from the potential competition in multiple ways:
 1. Utilization of combination therapy with a three-pillar approach
 2. Nine compounds or compound series against eight distinct mechanisms of action on viral target
 3. Ultimately, driving to oral mechanisms of action: equally as important as in hepatitis C
- HBV cure will evolve from parenteral to oral cure similar to HCV, but on faster development path
- Of all mechanisms of action, we believe the BACKBONE to curing HBV is eradicating cccDNA
 - ✓ Two direct approaches and two indirect approaches
 - ✓ Turns HBV into an HCV-like disease
- Because of the need for combination therapy, we believe each drug is worth more in the hands of a single company that also owns the other mechanisms of action
 - ✓ Increases chances for success
 - ✓ Spreads risks across multiple assets
- Married to the strategy, not married to one product
 - ✓ Changes the drug development paradigm
 - ✓ More efficient use of capital
- Combination of leading RNAi technology experts with former executives from Pharmasset, who successfully developed the sofosbuvir-based HCV cure regimen

OnCore-Tekmira Development Pipeline

Candidate/ Program	Addressed HBV Persistence Factor			Stage of Development				Source of Candidate / Program
	HBV Replication Inhibition	Immune System Stimulation/ Reactivation	cccDNA Formation Inhibition/ Elimination	Research	Preclinical		Phase 1	
					Lead Optimization	IND Enabling		
TKM-HBV	<div></div>	<div></div>	<div></div>	<div></div>				Tekmira
OCB-030 (Cyclophilin Inhibitor)	<div></div>	<div></div>		<div></div>				Licensed from NeuroVive
CYT003 (TLR9 Agonist)		<div></div>		<div></div>				Licensed from Cytos
cccDNA Formation Inhibitor	<div></div>	<div></div>	<div></div>	<div></div>				License from Blumberg/Drexel
Surface Antigen Secretion Inhibitor		<div></div>		<div></div>				Acquisition of Enantigen
Capsid Assembly Inhibitors (2 Candidates)	<div></div>		<div></div>	<div></div>				Acquisition of Enantigen and license from Blumberg Institute/Drexel University
cccDNA Epigenetic Modifier	<div></div>	<div></div>	<div></div>	<div></div>				License from Blumberg/Drexel
STING Agonist	<div></div>	<div></div>		<div></div>				License from Blumberg/Drexel

TKM-HBV: Targeting Multiple HBV Transcripts



- Design an anti-HBV RNAi Trigger 'payload' that is:
 - **Potent** - reduces viral protein production, especially HBsAg
 - **Universal** - effective against all genotypes
- All three triggers target the 2.1/2.4 kb sAg encoding mRNAs and also cleave 3.5 kb and 0.7 kb mRNA and pgRNA with potential for additional therapeutic benefit by reducing eAg, HBx, and core Ag

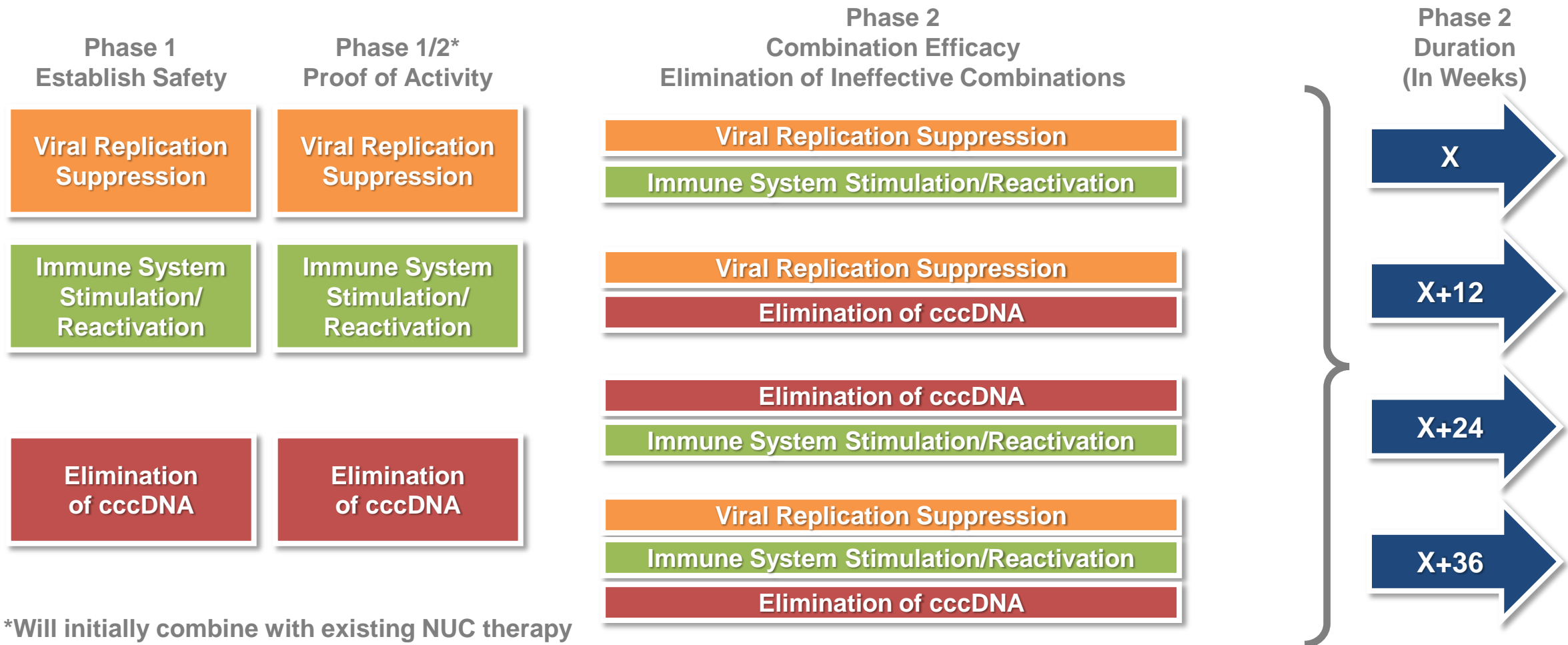
Relationship with Baruch S. Blumberg Institute

Blumberg Institute is One of the Leading Research Institutes Focused on HBV










- License Agreements with Blumberg and Drexel University (Drexel) — February 2014 and November 2014
 - cccDNA Inhibitors
 - Capsid Assembly Inhibitors
 - Epigenetic Modifiers of cccDNA
 - STING Agonists
- Patent License Agreements with Blumberg and Drexel via Enantigen Acquisition — October 2014
 - Surface Antigen Secretion Inhibitors
 - Capsid Assembly Inhibitors
- Research Funding and Collaboration Agreement with Blumberg — October 2014
 - ✓ Research collaboration and funding agreement - exclusive rights to in-license any IP generated through relationship
 - ✓ Three-year term, renewable option for an additional three years
 - ✓ Includes identification of novel targets, new therapeutic compound series, proprietary assays, diagnostics and biomarkers
 - ✓ Supplements our internal discovery efforts with 30 to 40 dedicated HBV scientists

**Integral part of HBV portfolio with research collaboration
a continued source of potential novel drug candidates and technologies**

Combination Development Strategy Driven by the “ELECTRON engine”



Advancing Non-HBV Programs

Focus	Indication	Product	Research	Pre-Clinical	Phase I	Phase II	Phase III
Cancer	Gastrointestinal Neuroendocrine Tumors	TKM-PLK1: GI-NET					
	Adrenocortical Carcinoma	TKM-PLK1: ACC					
	Hepatocellular Carcinoma	TKM-PLK1: HCC					
Anti-Viral	Ebola Virus Infection	TKM-Ebola					
	Ebola Virus Infection	TKM-Ebola-Guinea					
	Marburg Virus Infection	TKM-Marburg					
Metabolic	Rare Forms of Hypertriglyceridemia	TKM-HTG					
	Glycogen Storage Disorder Type IV	TKM-GSD					
	Alcohol Use Disorder	TKM-ALDH					

OnCore-Tekmira Transaction Details

- OnCore will become a wholly-owned subsidiary of Tekmira
- Merger of equals as determined by the treasury stock method
- Implied market value of the combined company, based on the closing price of Tekmira common shares on the NASDAQ Global Market on January 9, 2015, is approximately USD\$750 million
- Merger is subject to approval of a majority of Tekmira shareholders
- Transaction is expected to close in early March 2015

Conclusion

- Combined company well positioned to capitalize on the global market opportunity in HBV and create significant long-term value for shareholders
- Creates the industry's leading portfolio of therapeutic approaches to cure HBV, addressing a significant unmet medical need
- 8 unique drug candidates to be used in combination regimes
- Brings together proven management teams and scientific leadership, including former Pharmasset executives
- Tekmira Board of Directors unanimously recommends that Tekmira shareholders vote **FOR** the proposed transaction

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