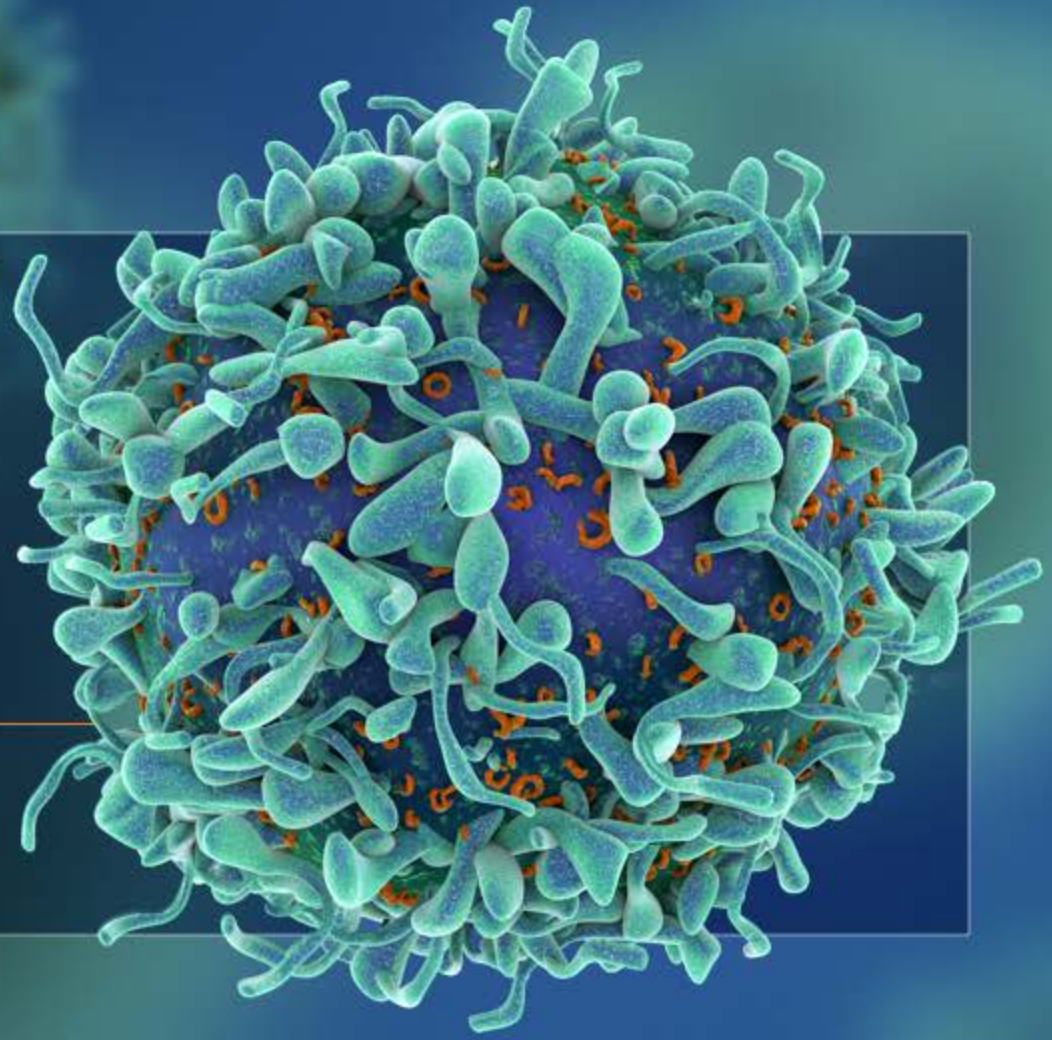
SOLIGENIX

Rising to the Challenges of Rare Disease Treatment



NASDAQ: SNGX

December 19, 2022

Forward-Looking Statements

This presentation contains forward-looking statements. All statements other than statements of historical facts contained in this presentation, including statements regarding our future results of operations and financial position, business strategy, prospective products and product candidates and their development, regulatory approvals, ability to commercialize our products and product candidates and attract collaborators, reimbursement for our product candidates, research and development costs, timing and likelihood of success, plans and objectives of management for future operations, our ability to obtain and maintain intellectual property protection for our product candidates and their development, competing therapies, and future results of current and anticipated products and product candidates, are forward-looking statements. These statements involve known and unknown risks and uncertainties, such as experienced with the COVID-19 outbreak, and other important 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, many of which are disclosed in detail in our reports and other documents filed with the Securities and Exchange Commission. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances, or otherwise. Certain information contained in this presentation and statements made orally during this presentation relate to or are based on studies, publications, surveys and other data obtained from third-party sources. In addition, no independent source has evaluated the reasonableness or accuracy of Soligenix, Inc. internal estimates and no reliance should be made on any information or statements made in this presentation relating to or based on such internal estimates.

Company Description

Soligenix, Inc. is a late-stage biopharmaceutical company focused on developing and commercializing products to treat rare diseases where there is an unmet medical need

Two areas of focus:

- A ***Specialized BioTherapeutics segment*** dedicated to the development of products for orphan diseases and areas of unmet medical need in oncology and inflammation

- A ***Public Health Solutions segment*** that develops vaccines and therapeutics for military and civilian applications in the areas of ricin exposure, emerging and antibiotic resistant infectious disease, and viral disease including Ebola, Marburg and COVID-19

Investment Highlights

- **Robust pipeline consisting of multiple fast track and/or orphan designated products, with potential for significant commercial returns of ~$2B in global annual sales**
- **Late clinical-stage assets, one with successful Phase 3 data readout**
  - **Cutaneous T-cell lymphoma (HyBryte™ or SGX301)**
    - ***Positive statistically significant final results achieved***; complete study published
    - ***New drug application (NDA) submitted*** to the US Food and Drug Administration (FDA)
    - Significant commercial opportunity in area of unmet medical need; ***estimated global market potential $250M***
  - **Psoriasis (SGX302)**
    - Phase 2 study in mild-to-moderate psoriasis open to ***enrolling patients***
  - **Pediatric Crohn's disease (SGX203)**
    - Pivotal Phase 3 study initiation contingent upon additional funding and/or partnership
- **Strong balance sheet with cash runway into 2023; strategic investment by Pontifax**
- **Collaborations with biotech, academia and government agencies**
- **Non-dilutive government funding helps cover operating expenses**
  - NIH grant awards supporting development of vaccines for pre-exposure to ricin toxin and emerging infectious diseases, including Ebola and Marburg, with potential eligibility for up to 3 Priority Review Vouchers (PRVs)
- **Experienced management team and renowned advisors with record of success**

HyBryte (hypericin) ointment 0.25%

Development Pipeline – Rare Diseases

Specialized BioTherapeutics

Product Candidates*	Preclinical	Phase 1	Phase 2	Phase 3	NDA Review	Market	
HyBryte™ ***(synthetic hypericin)*** Cutaneous T-Cell Lymphoma (CTCL)	ORPHAN & FAST TRACK DESIGNATION						**Positive Phase 3 study results; NDA submitted to FDA**
SGX942 ***(dusquetide)*** Oral Mucositis in Head & Neck Cancer**	FAST TRACK DESIGNATION						Evaluate full datasets; 2nd Phase 3 study contingent upon additional funding and/or partnership
SGX203 ***(beclomethasone dipropionate)*** Pediatric Crohn's Disease**	ORPHAN & FAST TRACK DESIGNATION						Phase 3 study contingent upon additional funding and/or partnership
SGX302 ***(synthetic hypericin)*** Mild-to-Moderate Psoriasis							Positive proof-of-concept demonstrated in Phase 1/2 pilot study; Phase 2a study open to enrolling patients

Public Health Solutions**

Product Candidates *(FDA Animal Rule)**	Proof-of-Concept	IND	Phase 1	Phase 2/3	BLA Review	Market	
RiVax® + ThermoVax® – Vaccine Ricin Toxin Pre-Exposure	ORPHAN & FAST TRACK DESIGNATION						NIH Contract Awards of **$30M** to date; positive preclinical and clinical data
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MarVax™ + ThermoVax® – Filovirus Vaccine for Marburg							NIH Grant Subaward of **$700,000** to date; positive preclinical data
CiVax™ + ThermoVax® – Vaccine COVID-19							NIH Grant Award of **$1.5M** to date; positive preclinical data

Denotes funding in whole or in part by NIH, DTRA, BARDA and/or FDA

** Anticipated event and timing subject to COVID-19 disruption*
*** Potential value drivers dependent on continued government funding and/or other funding sources*

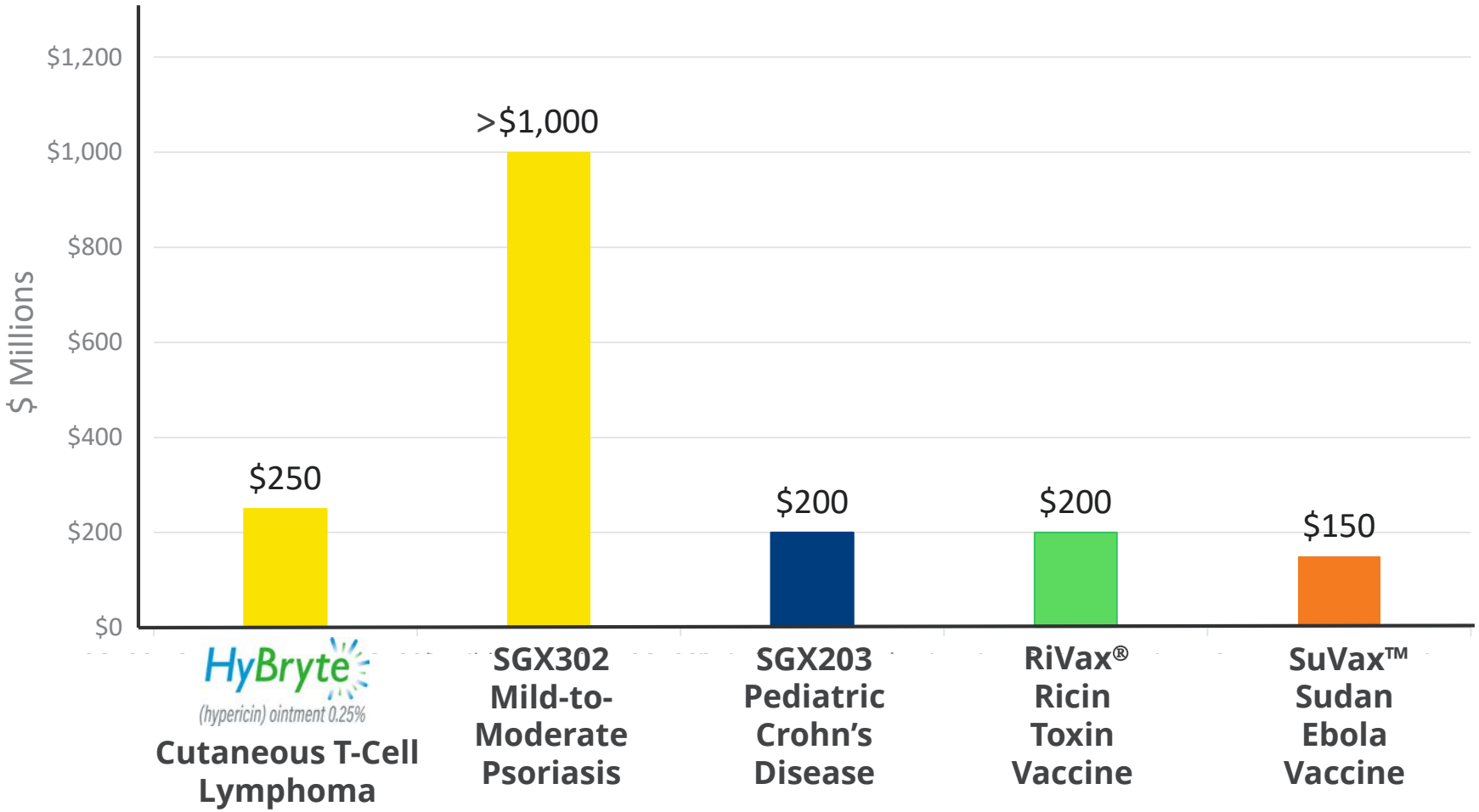
Multiple Potential Value Drivers

	2021**	2022**		2023**	
HyBryte™ *	EU regulatory – (e.g., PIP/ILAP)	Ph 3 published in JAMA Dermatology	HyBryte CTCL NDA submitted to FDA	1H: IIS start in CTCL (rec'd FDA grant award)	2H: (US) NDA approval CTCL
SGX302 *	Expansion into Psoriasis	IND and Ph 2a protocol clearance	Ph 2a clinical study enrolling patients		2H: Ph 2a clinical study results
RiVax® *	Preclinical animal data	Ricin antigen BD partnership - SERB	Preclinical animal (NHP) data		2H: Initiate Ph 2 clinical study
CiVax™ *	Preclinical animal (NHP) data	Preclinical animal (NHP) data		1H: Preclinical NHP data	
SuVax™/ MarVax™ *	Preclinical animal (NHP) data	Preclinical animal (NHP) data	BARDA Invite to submit full contract		2H: BARDA contract award

Green = achieved
Blue = data read-out
Grey = clinical
Orange = regulatory

** Potential value drivers dependent on continued government funding and/or other funding sources*
*** Timelines subject to potential disruption due to COVID-19 outbreak*

Total Addressable Global Market



Assumptions(1)

Cutaneous T-Cell Lymphoma
- 27,000 Patients US
- 20,000 Patients EU

Mild-to-Moderate Psoriasis
- 3,000,000 Patients US
- 5,000,000 Patients EU

Pediatric Crohn's Disease
- 80,000 Patients US
- 80,000 Patients EU

RiVax® Ricin Vaccine
- Assumes 3 year procurement order of $200 million *(PRV potential)*

SuVax™ Ebola Vaccine
- Assumes 5 year procurement order of $150 million *(PRV potential)*

(1) Supporting data on file

Specialized BioTherapeutics

Targeted Approach to Treating Oncology & Inflammation

Specialized BioTherapeutics Segment

Commercial Targets – Unmet Medical Needs in Oncology and Inflammation

Specialized BioTherapeutics

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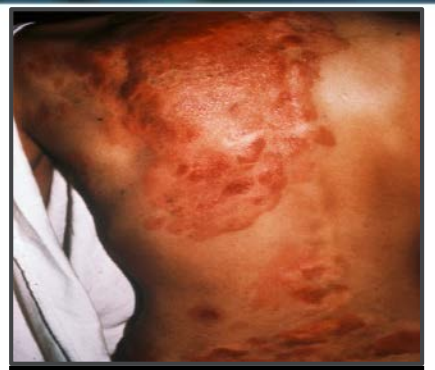
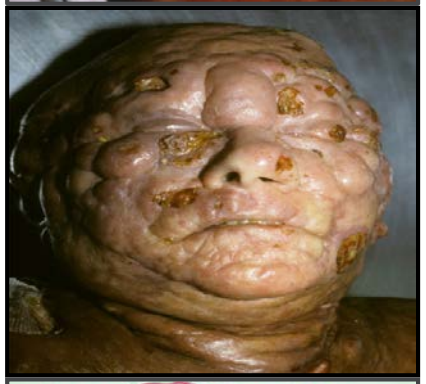
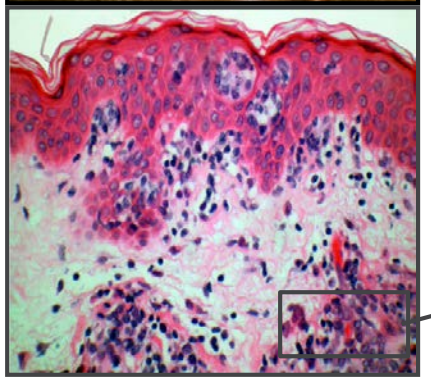
Cutaneous T-Cell Lymphoma – Disease Overview

- **Cutaneous T-cell lymphoma (CTCL)**
  - Rare class of Non-Hodgkin's Lymphoma (NHL)
  - Malignant T-cells migrate to the skin
  - Cancer forms patches, lesions or tumors
- **CTCL affects over 40,000 NHL patients worldwide; currently no cure**
  - $250 million total addressable global market; >$90 million in US
- **Two main subtypes of CTCL**
  - Mycosis fungoides (MF) – Early-stage (I-IIA) most common, 88% 5-year survival rate
  - Sézary syndrome (SS) – Advanced-stage, 24% 5-year survival rate
- **No approved first-line therapy for early stage (I-IIA) CTCL (~90% of CTCL patients); *unmet medical need***

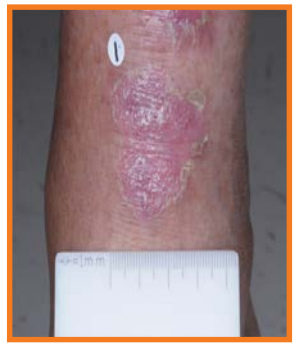


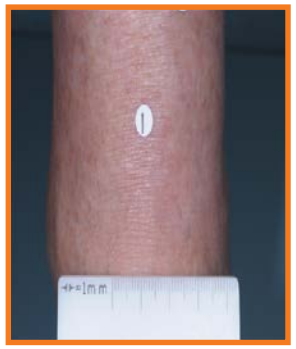




Atypical T-cells in dermis

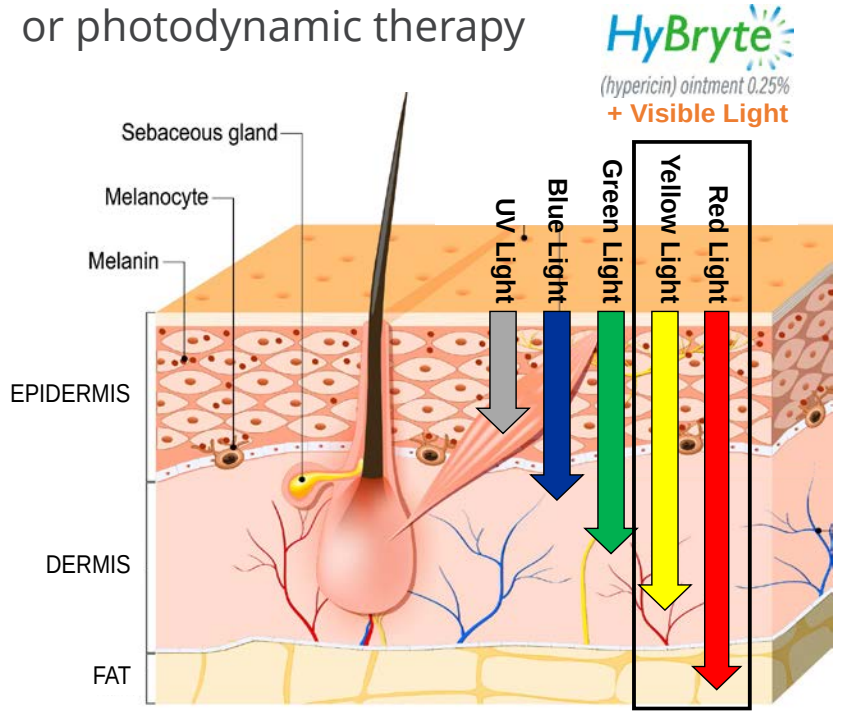
HyBryte™ – Synthetic Hypericin Ointment + Light Activation, First-in-Class





- **Treatment safe and well-tolerated**
  - **Minimal reported adverse events**
    - Other CTCL treatments characterized by acute and chronic side effects
  - **Uses visible fluorescent light**
    - ***Not*** carcinogenic unlike other UV phototherapy or photodynamic therapy

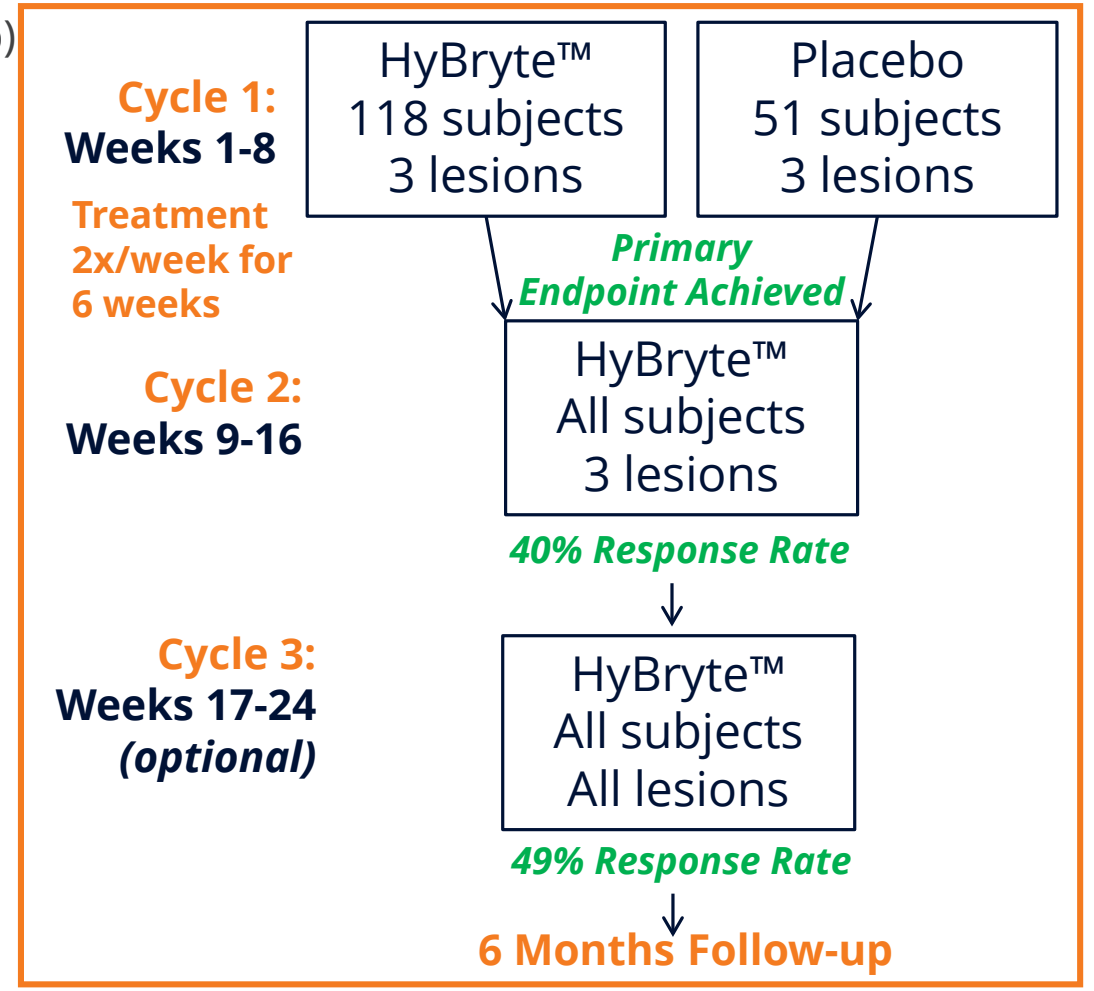
- **US/EU orphan designations; US fast track status**
- **Rapid treatment response**
  - Phase 3 data demonstrates **statistically significant efficacy as early as 6 weeks** with improved responses through 12 weeks (40%) and 18 weeks (49%)
    - Most early-stage CTCL treatments require *at least 12 months* to observe a statistically significant response
  - **Effective against patch *and* deeper plaque lesions**
    - Other early-stage CTCL treatments known to be useful against patches but lacking in efficacy against plaques



HyBryte™ – Pivotal Phase 3 Clinical Trial

(*JAMA Dermatology.* Published online July 20, 2022. doi:10.1001/jamadermatol.2022.2749)

- **Highly powered, double-blind, placebo-controlled, randomized**
  - Randomized 2:1 (HyBryte™ [synthetic hypericin 0.25%] : placebo)
  - **Cycle 1 complete: Primary Endpoint (response rate) statistically significant (p=0.04)**
    - **Primary endpoint**: Percent of patients achieving ≥50% cumulative reduction as assessed by Composite Assessment of Index Lesion Severity (CAILS) score for 3 index lesions at the end Cycle 1 (week 8)
  - **Cycle 2 complete: Statistically significant improvement in treatment response of 40% (p<0.0001)**
  - Statistically significant improvement in ***BOTH patch and plaque lesion responses*** after Cycle 2
    - **Plaque: 42% improvement (p<0.0001)**
    - **Patch: 37% improvement (p=0.0009)**
  - **Optional Cycle 3 complete: Statistically significant improvement in treatment response of 49% (p<0.0001)**
- **Secondary Endpoints**
  - Treatment response (including duration), degree of improvement, time to relapse and safety



Phototherapy a mainstay treatment of early stage CTCL

HyBryte™ Treatment Regimen

Patient applies topical synthetic hypericin ointment at home 18-24 hours prior to visiting office for light therapy

Visible non-UV light therapy administered on average 2x week by physician or nurse technician in office

- Treating dermatologists are experienced administering phototherapy
- Approximately 80% of community dermatology practices have light units available
- 100% of the ~50 US CTCL clinics currently administer UV phototherapy, despite UV not being approved for CTCL
- HyBryte™ utilization has potential to grow significantly with transition to home use, which is part of commercial strategy
- Many examples of successful dermatology phototherapy combination products (Levulan+Blu-U, Uvadex+Therakos, Metvixia-PDT)

"I trained in '90s, and some of my mentors … used [UV] light therapy without thinking twice; now you are exchanging [CTCL], a disease that will not harm you, for [skin cancers and melanoma], something that is not only disfiguring but also a more life-threatening disease." — Specialist Dermatologist

Source: Soligenix primary market research

Dermatologist KOLs play pivotal role in treatment of early stage CTCL

- Most CTCL patients who go to a Key Opinion Leader (KOL) for diagnosis will remain with that KOL for their care and treatment
- For those that return to their referring physician (typically for logistical reasons or travel distances), the KOL remains involved and directs care through the local dermatologist
- There is a subset of community dermatologists who treat CTCL and are comfortable in their diagnostic and therapeutic decision-making abilities
- Majority of US CTCL KOLs participated in the execution and success of the pivotal Phase 3 clinical trial; eager to support HyBryte™ moving forward

Source: Soligenix primary market research

Significant opportunity for improvement to current treatment paradigm in early stage CTCL

Early Stage CTCL Treatment Paradigm

Empiric Tx

Topical steroids
(Typically pre-Dx, not often efficacious; not approved for CTCL)

CTCL Dx Tx

HyBryte (hypericin) ointment 0.25%
(Approved in CTCL 1st line)[1]

- **Mechlorethamine** (2nd line)
- **nbUVB[2]** (Not approved for CTCL)
- **Topical Retinoids** (2nd line)
- **PUVA[3]** (Not approved for CTCL)

Current Treatment Landscape

- Because of chronic nature of early stage CTCL and long-term treatment cycles, clinicians choose therapies with better safety profiles first and foremost
- Clinicians see critical need for additional treatment options with fewer side effects
- NB UVB and PUVA are not targeted therapies and have serious side effects with extended use (e.g., melanoma)
- NB UVB is used on 20%-50% of early-stage CTCL patients, despite not being approved

"[We] only have two FDA approved drugs with lots of side effects." — Specialist Dermatologist at Center of Excellence

Source: Soligenix primary market research

1 = Subject to FDA approval. 2 = Narrow Band Ultra Violet B light therapy. 3 = Psoralen + Ultra Violet A light therapy.

Advantages to commercializing CTCL in the US: smaller sales force and market access support

- **A concentrated prescriber base allows for an efficient sales force footprint**
  - Planned launch focused on high volume specialists and their referral base in the community
  - Likely sales force deployment of ~20 reps; reaching >80% of high volume prescribers
  - Pre-launch activities underway with ~$10M in anticipated cost

- **Payers are likely to cover the drug and light treatment if shown to be safe and efficacious**
  - CTCL treatment does not have a large financial impact on payers and we anticipate low/no barriers to access
  - HyBryte™ light treatment will likely be reimbursed under an existing CPT code
  - KOLs and patient advocacy organizations will likely support coverage

Source: Soligenix primary market research

HyBryte™ a Significant Near Term Commercial Opportunity Addressing a Clear Unmet Need

Unmet Need

- Clinicians see need for additional treatment options with fewer side effects
- Most patients cycle through several treatments over course of their disease
- Chronic nature of early stage CTCL and dissatisfaction with current therapies provides opportunity for HyBryte™

Positive Feedback

- Derms like *efficacy* of HyBryte™; rapid response with equal effect on both patches and plaques
- Derms like *safety* of HyBryte™; use of safe, visible light vs. UV light exposure
- 4 of 5 Derms likely to prescribe HyBryte™

Efficient Commercialization

- Planned launch focused on high volume CTCL specialists
- Targeted sales force of ~20 reps; reaching >80% of high volume prescribers
- Partnership with medical device company, Daavlin, allows convenient end-to-end business solution for companion light unit to customers

Sales Potential

- Anticipated US launch in 1Q 2024
- Estimated US peak annual sales of >$90M; with life cycle management upside
- Competing 2nd line products with inferior profiles have achieved similar sales

HyBryte™ (hypericin) ointment 0.25%

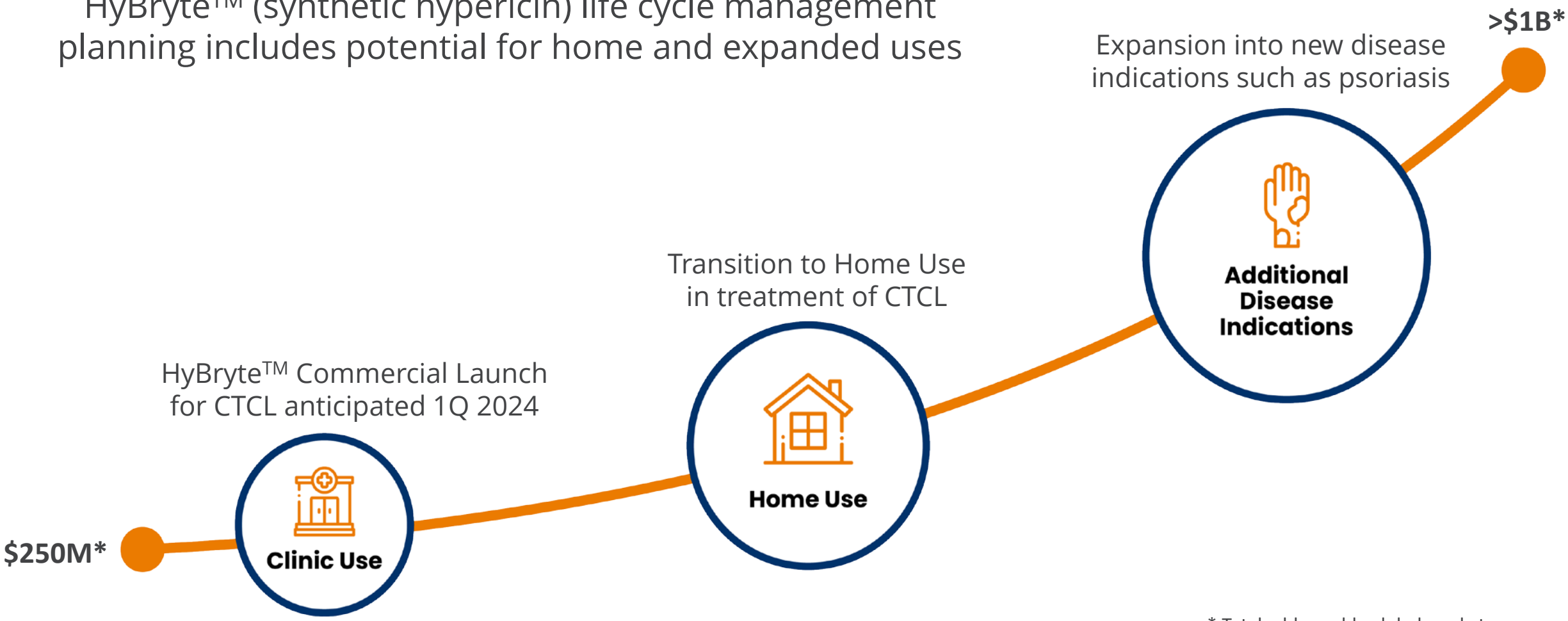
>$90M

US Annual Net Sales

Source: Soligenix primary market research

HyBryte™ Life Cycle Management

HyBryte™ (synthetic hypericin) life cycle management planning includes potential for home and expanded uses



* Total addressable global market

Public Health Solutions

Addressing Critical Concerns for Industry and Government

Public Health Solutions Segment

Funded by Government – Medical Countermeasures (MCMs) for Civilian and Military Use

Public Health Solutions**

Product Candidates *(FDA Animal Rule)**	Proof-of-Concept	IND	Phase 1	Phase 2/3	BLA Review	Market
RiVax® + ThermoVax® – Vaccine Ricin Toxin Pre-Exposure	ORPHAN & FAST TRACK DESIGNATION					NIH Contract Awards of **$30M** to date; positive preclinical and clinical data
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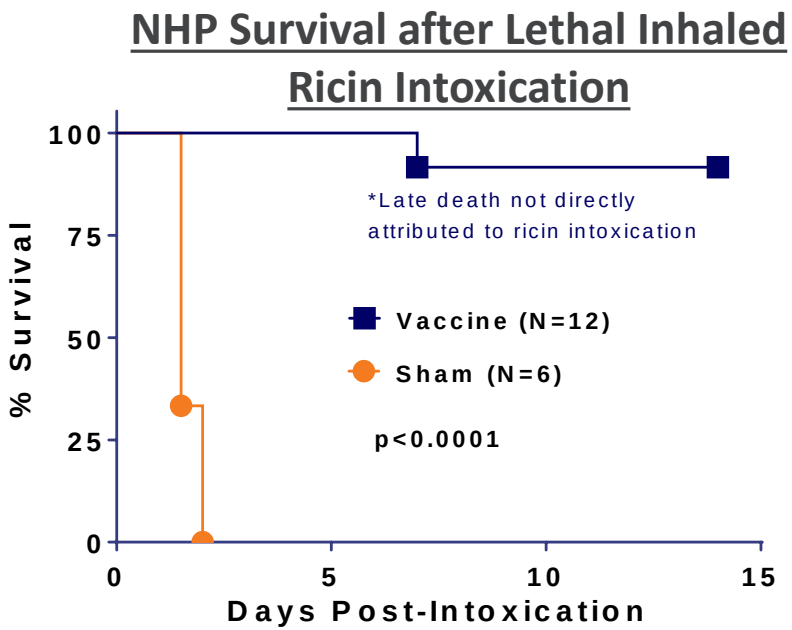
With FDA MCM approvals, potential to be awarded:

- **Up to 3 Priority Review Vouchers *(PRVs have sold for ~$100 million)*** to be used for future programs or sold, and/or
- **Government Procurement Contracts** for supplying strategic national stockpile

RiVax® – Ricin Toxin Vaccine Candidate

Heat-stable ricin vaccine provided 100% protection in a non-human primate (NHP) aerosol challenge model

Demonstrated safety in Phase 1 human studies



Market Opportunity

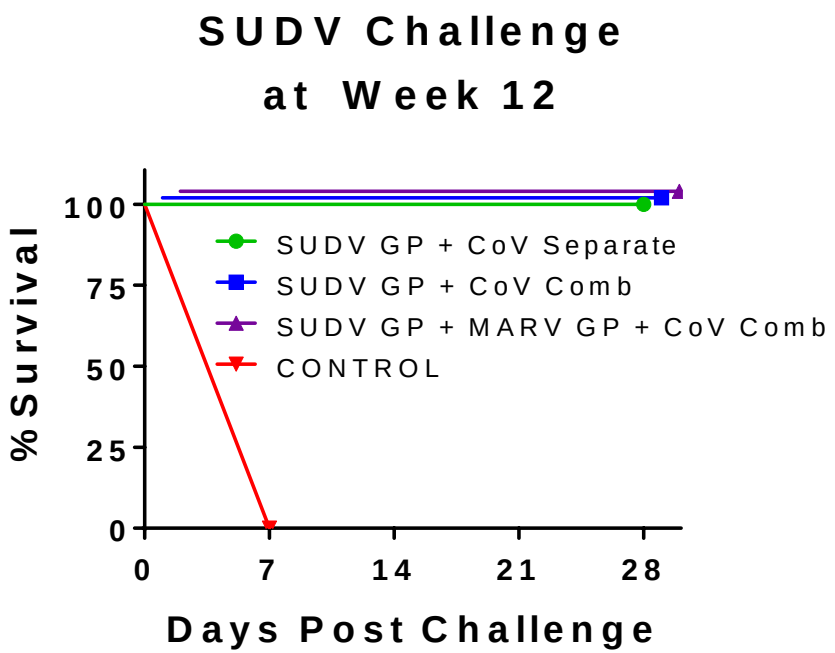
- Ricin toxin vaccine of rising interest to US and other countries due to recent terrorist threats and ease of castor bean procurement and ricin production
- Government has placed priority on development activities
- Potential to be first approved ricin toxin vaccine
- Potential for RiVax® to qualify for Priority Review Voucher

Development Status

- FDA Orphan Drug and Fast Track designations granted
- EU Orphan Drug designation granted
- Development pursued under the FDA "Animal Rule"
- NIH contract awards totaling **~$30M to date**

SuVax™ / MarVax ™ – Filovirus Vaccine Candidates

Heat-stable single-vial bivalent SUDV + MARV vaccine provided 100% protection against SUDV and MARV challenge



Market Opportunity

- Filovirus infections (*Zaire ebolavirus*, *Sudan ebolavirus*, *Marburg marburgvirus*) are deadly; only Zaire strain vaccines are available and requires ≤ -60°C shipping/storage
- Disease-endemic areas benefit from ability to avoid cold-chain distribution
- Government has placed priority on development activities, with *Marburg marburgvirus and Sudan ebolavirus* areas of unmet medical need
- Potential for SuVax™/MarVax™ to qualify for Priority Review Vouchers

Development Status

- Collaboration with the University of Hawai‘i at Mānoa, under NIH grant
- Demonstration of efficacy in NHPs
- Bi- and Tri-valent mixtures feasible

Experienced Management and Board of Directors

Christopher J. Schaber, PhD Chairman, President & CEO	• 30 years of experience • Discovery Laboratories (COO) • Acute Therapeutics (Co-Founder) • Ohmeda Pharmaceuticals • The Liposome Company • Wyeth Ayerst
Richard Straube, MD Chief Medical Officer	• 35 years of experience • Stealth Peptides Inc. • INO Therapeutics • Ohmeda Pharmaceuticals • Centocor
Oreola Donini, PhD Chief Scientific Officer	• 20 years of experience • Inimex Pharmaceuticals • ESSA Pharma, Inc. • Kinetek Pharmaceuticals
Jonathan Guarino, CPA, CGMA Chief Financial Officer	• 25 years of experience • Hepion Pharmaceuticals, Inc. • Covance, Inc. • BlackRock, Inc. • Barnes & Noble, Inc. • PricewaterhouseCoopers LLP

Gregg Lapointe, CPA, MBA	• 25 years of experience • Cerium Pharmaceuticals (CEO) • Formerly of Sigma-Tau Pharmaceuticals, AstenJohnson, PricewaterhouseCoopers
Diane Parks	• 30 years of experience • Formerly of Kite Pharma, Pharmacyclics, Amgen, Genentech
Robert Rubin, MD	• 40 years of experience • The Lewin Group • Georgetown School of Medicine • Former Assistant Surgeon General of the United States
Jerome Zeldis, MD, PhD	• 35 years of experience • Sorrento Therapeutics (CMO) • Formerly of Celgene Corporation (CMO), Sandoz, Janssen Research Institute

In Summary

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Thank you

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