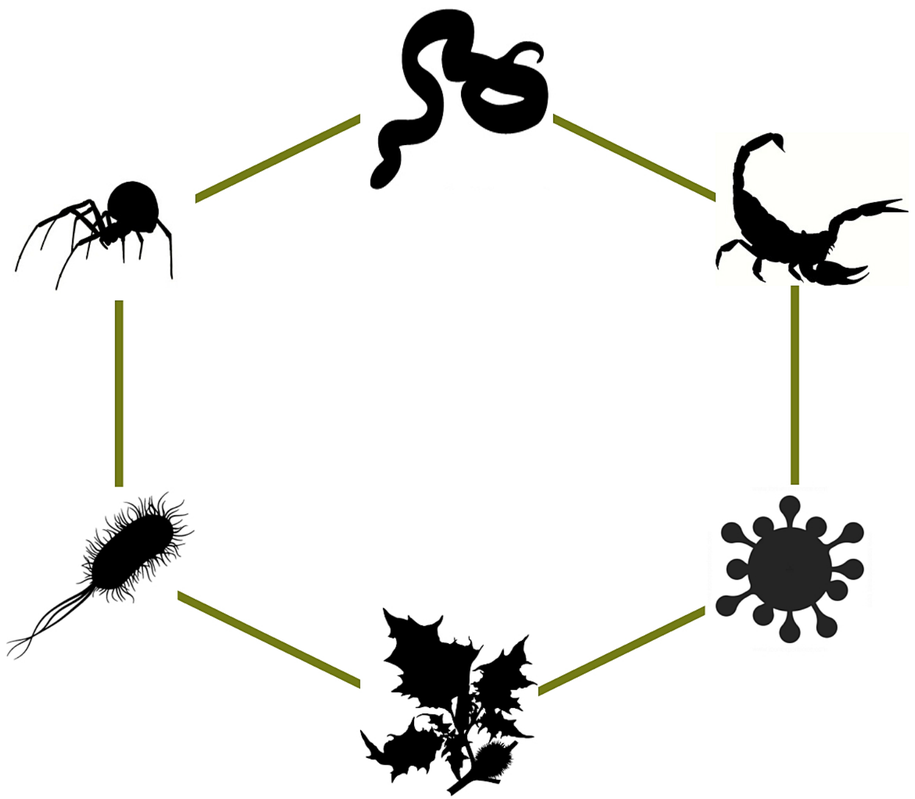


VENOMYX THERAPEUTICS

ENGINEERED ANTITOXINS

We are creating novel therapeutics for the **$15B antitoxins market**



- Snakes
- Spiders
- Scorpions
- Plants
- Bacteria
- Virus

OUR FIRST MARKET

The $1B snake antivenom market

We are developing a modern antivenom that is:

- **Broad-spectrum**
- **Humanized for safety**
- **Not manufactured in animals**
- **Portable**

Vipax™



In 2019 there will be:

5,500,000 snakebites
500,000 amputations
150,000 deaths

“One of the world’s most neglected public health issues.”

–World Health Organization



Today's Antivenom Relies on Antiquated Technology

Antivenom is produced the **same way it was in the 1800s.**

Snake venom is injected into horses to produce antibodies.

Today's antivenom needs improvement



X Expensive

Difficult animal-based production process

X Side effects

Animal antibodies create immune response in patients

X Poor efficacy

Requires many doses and is species-specific

OUR SOLUTION

Universal Recombinant Antivenom

Single domain antibodies offer a new approach



Safe
High homology with human antibodies

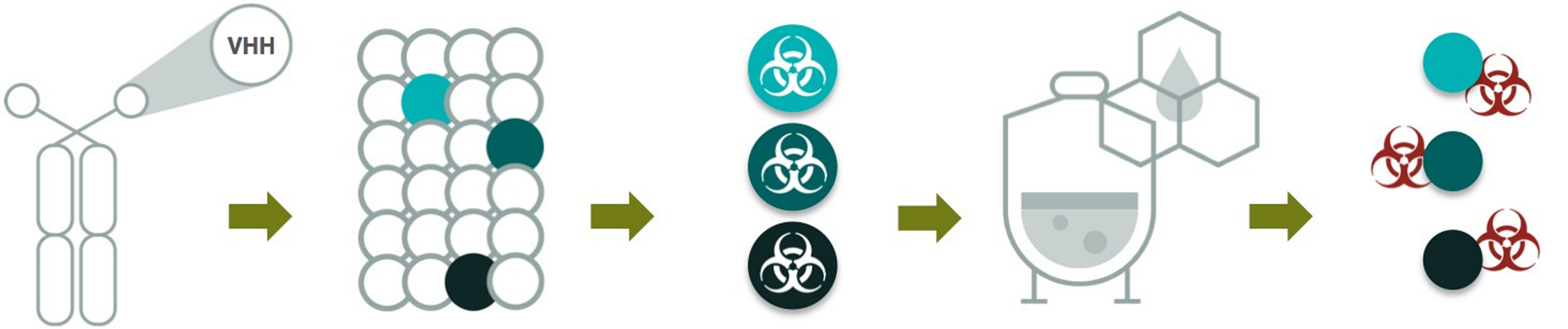
Effective
High affinity against conserved epitopes

Robust
High solubility and stability enable portability

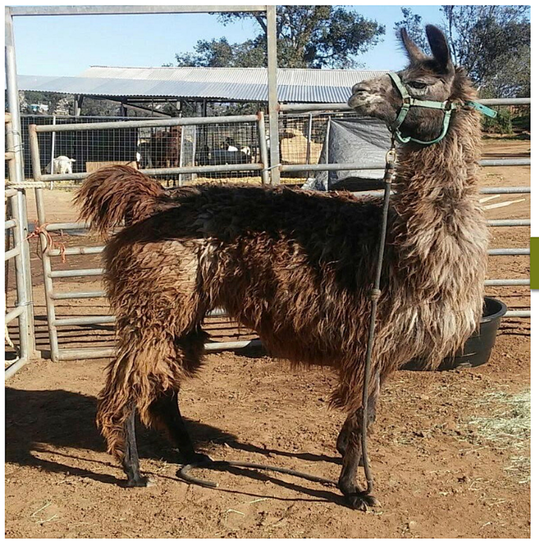
Economical
Manufactured at scale in bacteria

OVERVIEW OF OUR PROCESS

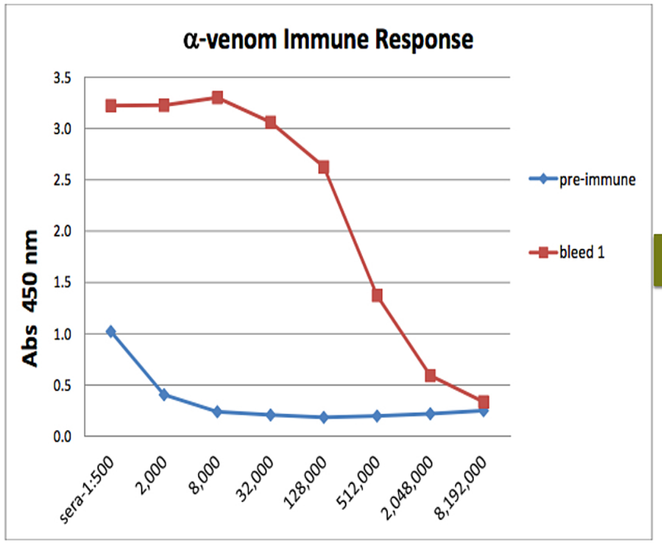
Making a Recombinant Antivenom



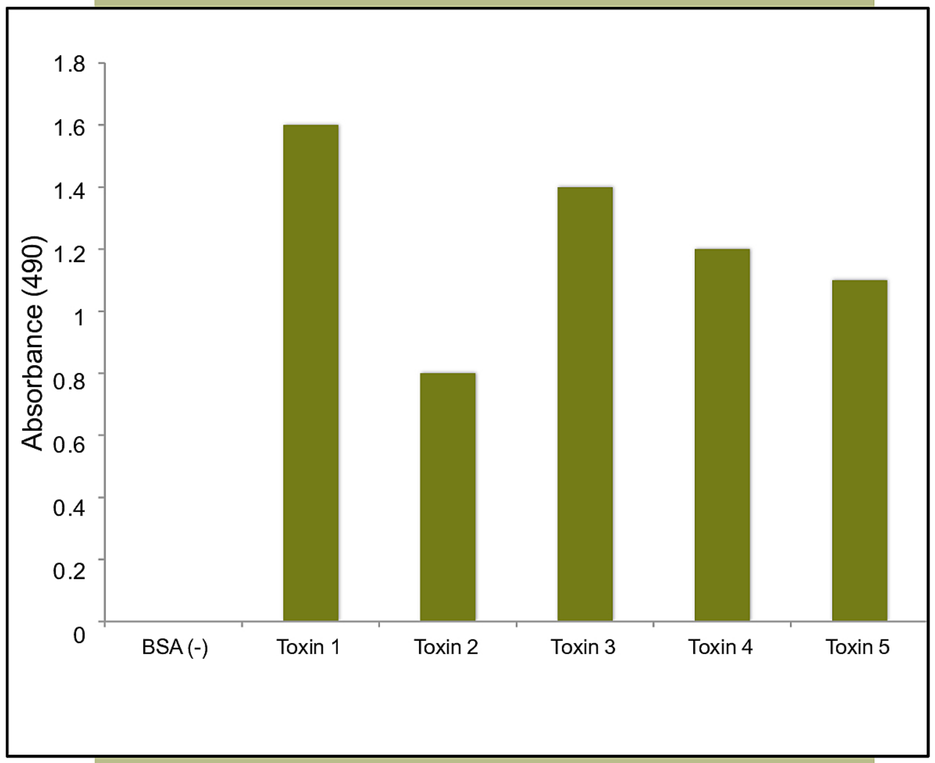
PROMISING PRECLINICAL RESULTS



Llama immunization (for library only)

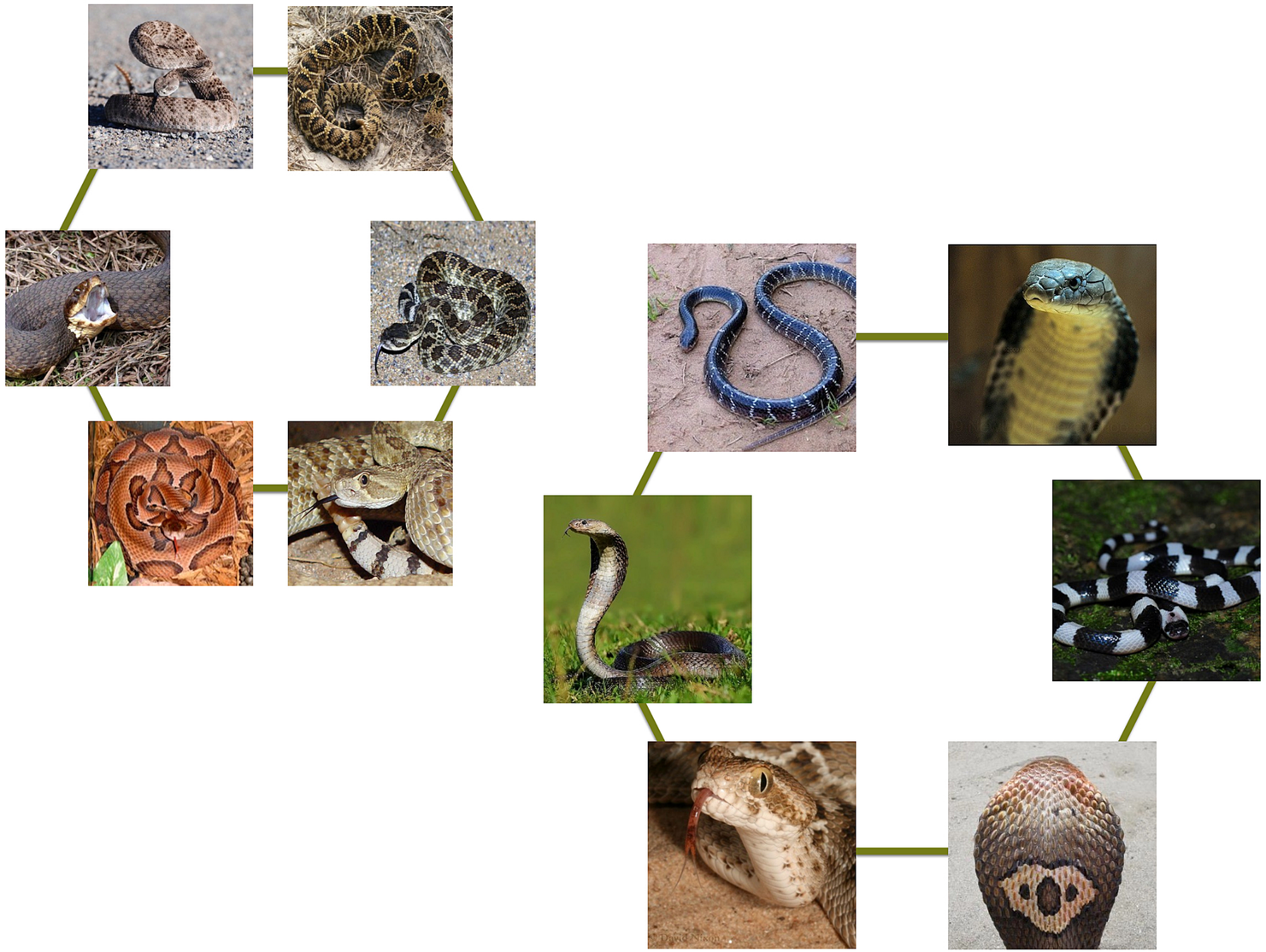


Llama serum titers



Llama Serum contains V_HH binders to every clinically-relevant toxin we've tested to date

PROMISING PRECLINICAL RESULTS

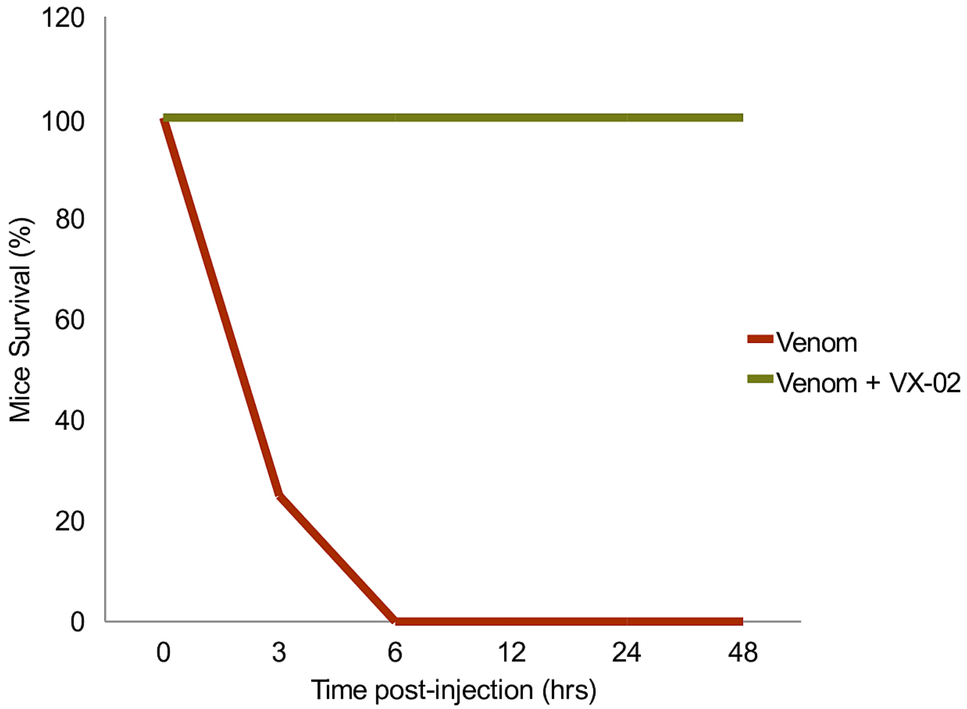


Binding and neutralizing whole venom of medically-important species in the U.S and Asia

PROMISING PRECLINICAL RESULTS



Monocled Cobra
N. kaouthia

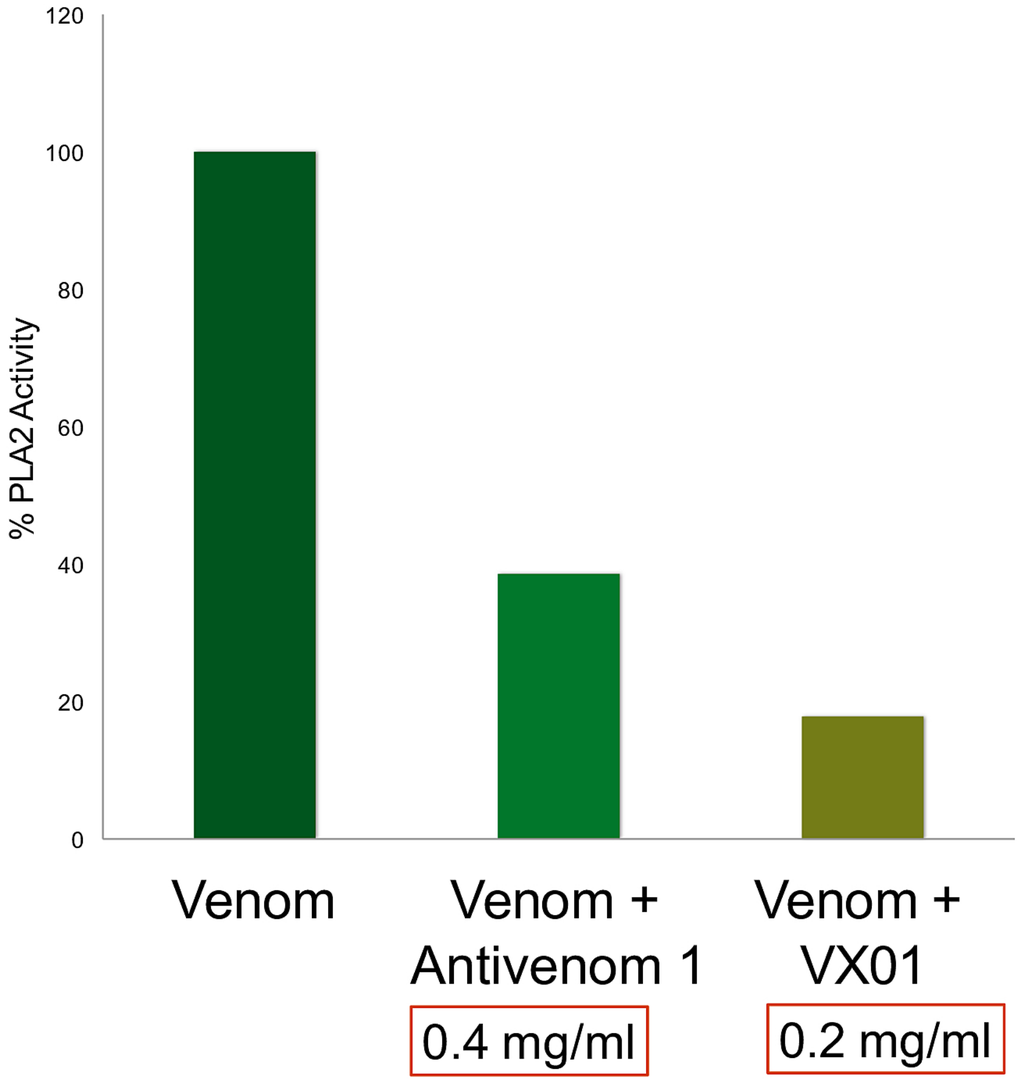


Our candidate was able to **save 100% of mice** from whole cobra venom

PROMISING PRECLINICAL RESULTS



Eastern Diamondback
C. adamanteus



Our binders inhibit toxin activity **better** at **lower** doses when compared to standard of care

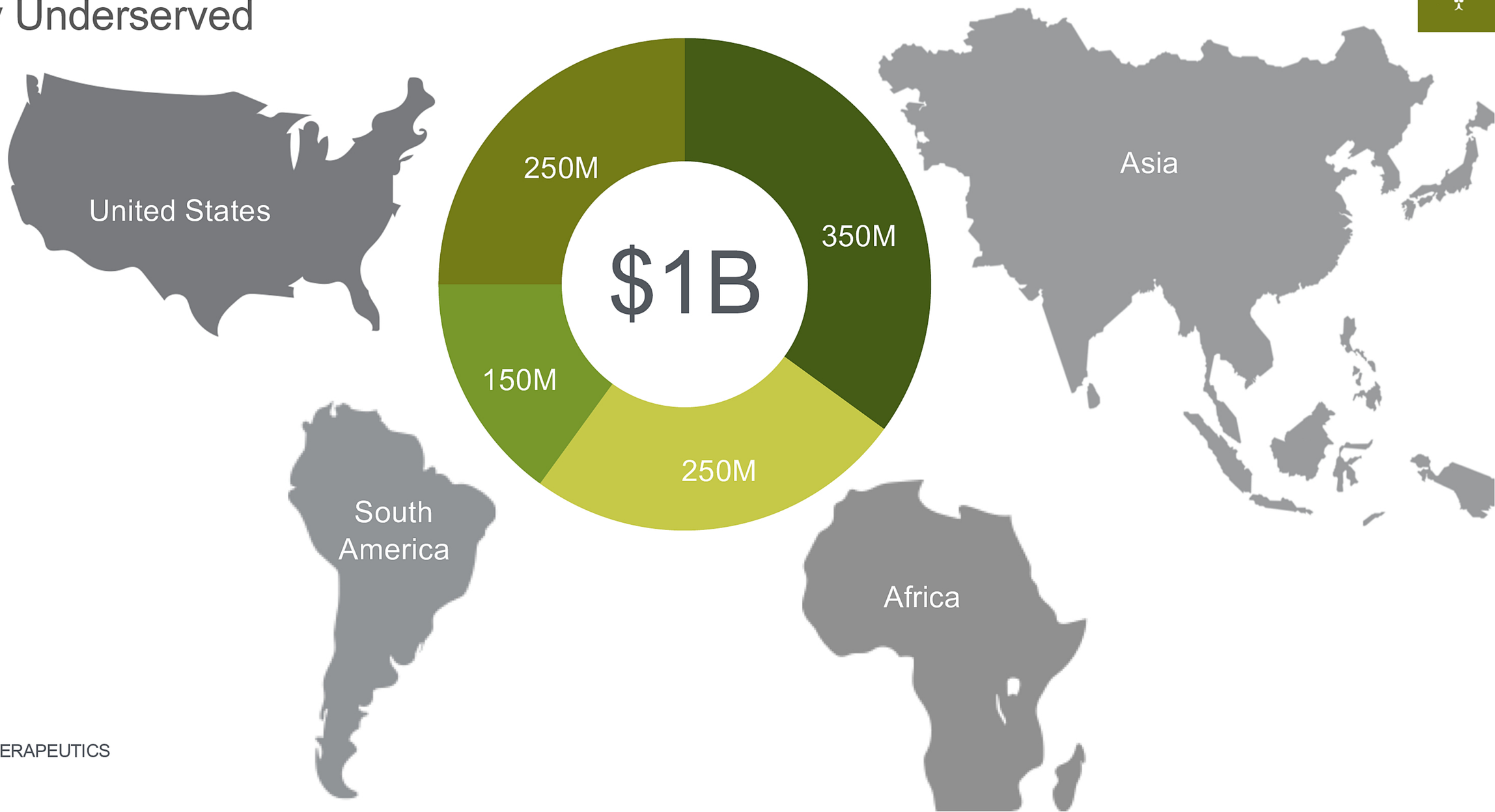
IP STATUS & ASSETS

International Patent Filing: PCT/US18/29498
"Composition and Methods for Treating Snake Envenomation"
Filing Date 4/26/2018

- Venomics database
- Proprietary phage display libraries
- In-house expertise in toxinology and drug development

GLOBAL MARKET

Highly Underserved



WHO BUYS ANTIVENOM?

Customer	Conventional Antivenom	Vipax™
Hospitals	✓	✓
Government	✓	✓
Non-profits	✓	✓
Military		✓
First responders		✓
State Parks		✓
Schools		✓

GO-TO-MARKET STRATEGY

Beachhead Risk Mitigation

First establish clinical safety/efficacy in **U.S.**



Then develop product for remaining regions:
Asia, Africa, Latin America

TRACTION

Strategic partnership interest from 4 corporate partners in our space

Licensing model provides:



Manufacturing



Clinical Trials



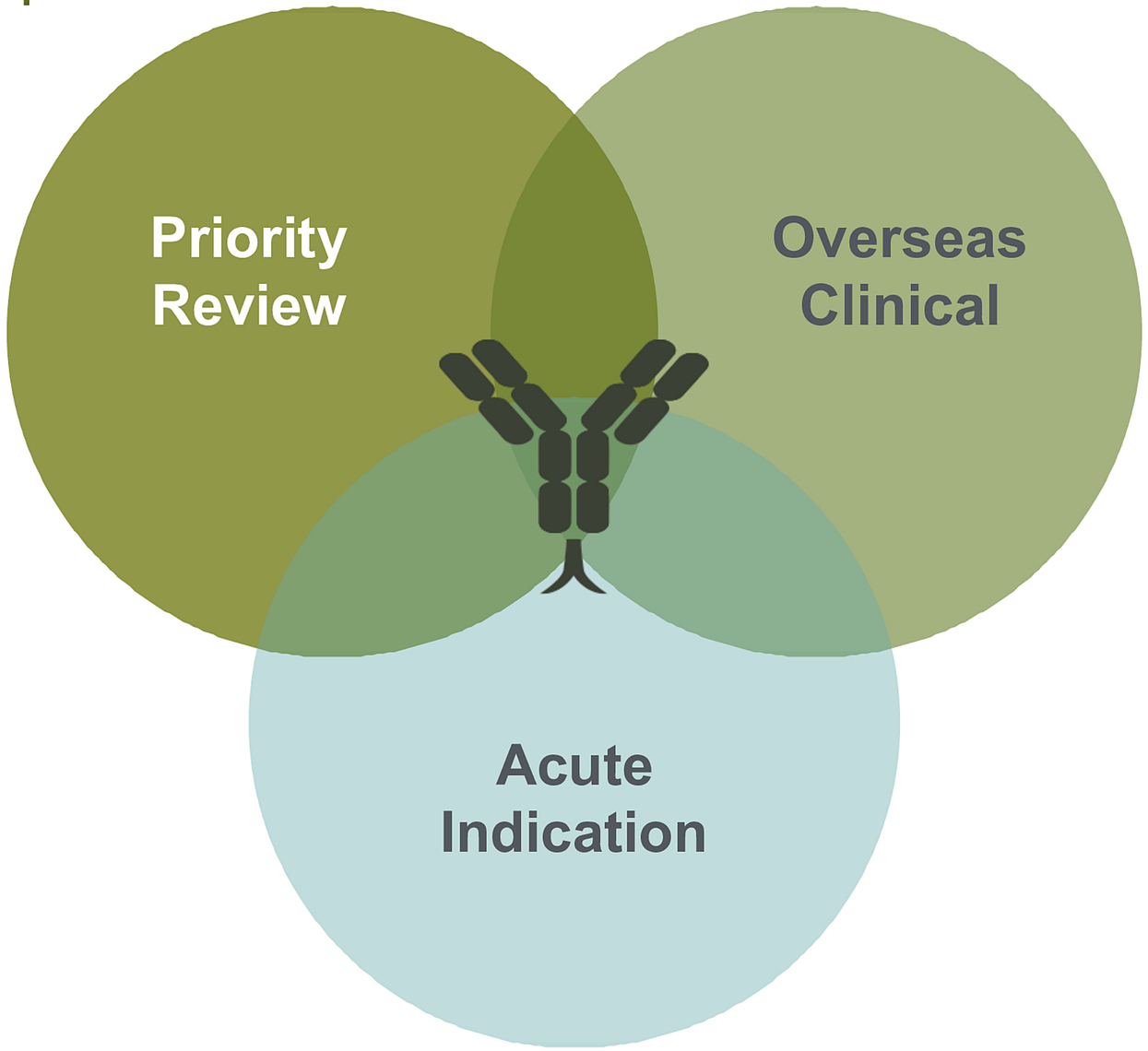
Distribution



Government Alliances

SWEET SPOT FOR BRINGING DRUGS TO MARKET

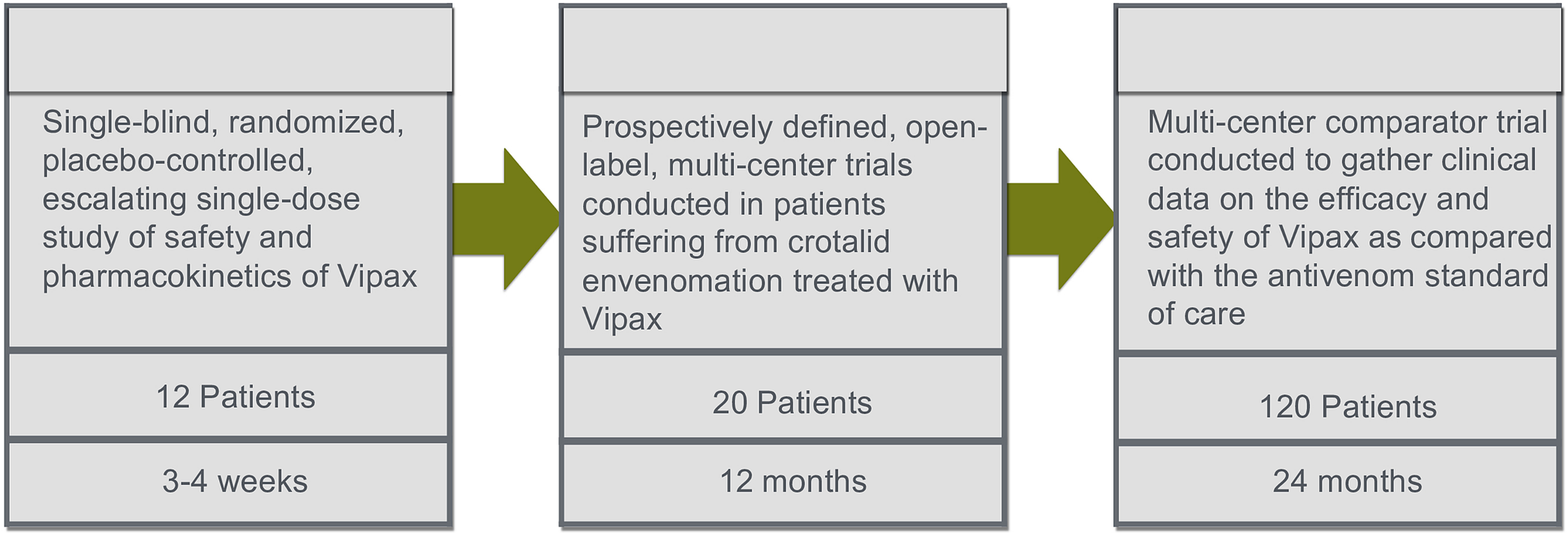
Compared to Typical Drug Approval



50% of the time
25% of the cost

REGULATORY PATHWAY

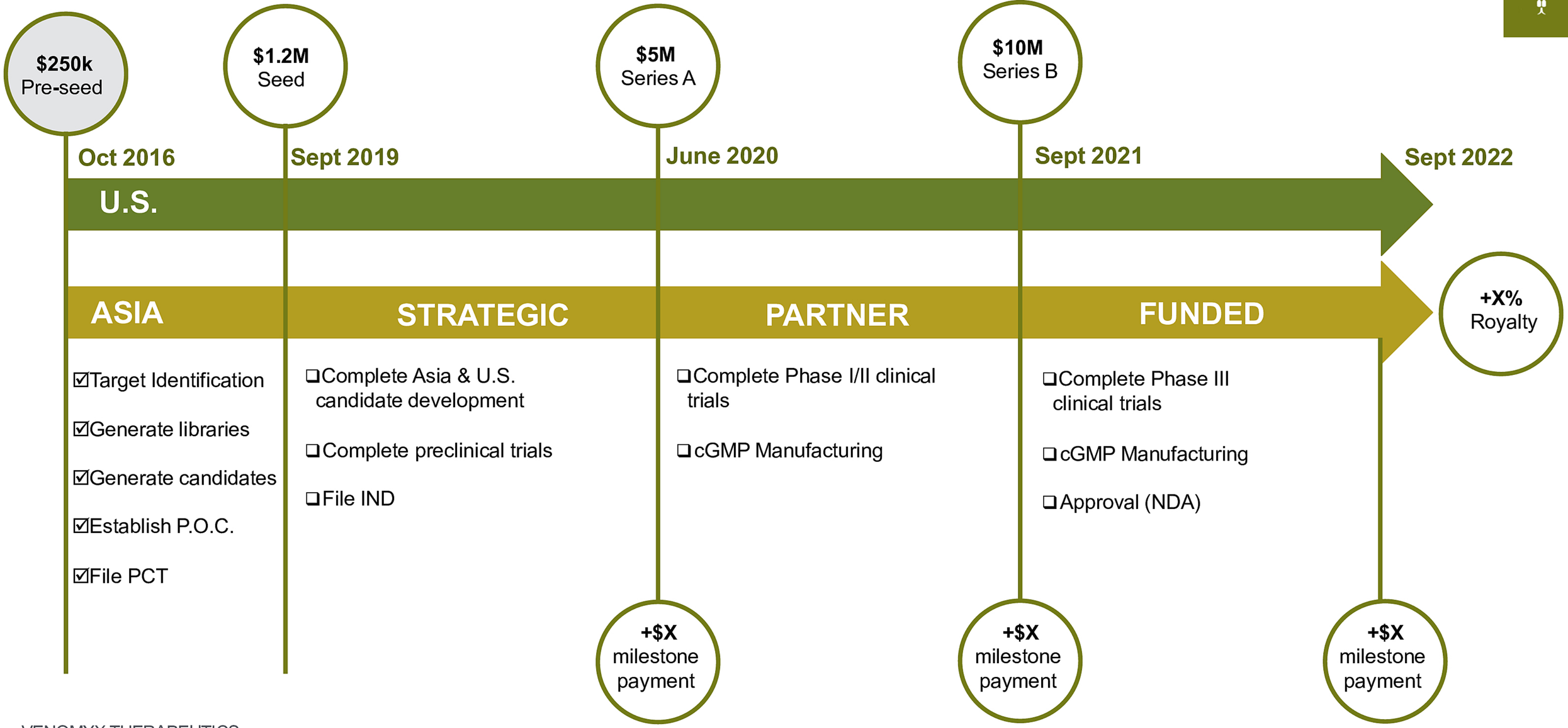
USFDA Clinical Trials



PAREXEL®

SynteractHCR

Timeline & Milestones



EXIT STRATEGY
M&A or IPO

Multiple Potential Strategic Partners



Antivenom

Antitoxin

CORE TEAM

Motivated team with 30 years of drug discovery scientific and business expertise



DAN DEMPSEY
Founder & CEO



DEEPANKAR ROY, PhD
Co-Founder & COO



PHILIP TAN, PhD
CSO

Celgene

UNIVERSITY OF CALIFORNIA · SAN DIEGO · LE TIGRE EST

USC

Genentech

AstraZeneca

SAIC®

ADVISORS

SCIENTIFIC:



ELDA SANCHEZ, PhD
Director
National Natural Toxin Research Center

TEXAS A&M UNIVERSITY KINGSVILLE



WILLIAM HAYES, PhD
Principal Investigator
Venomous Species Laboratory

LOMA LINDA UNIVERSITY

LEGAL & BUSINESS:

ORRICK

SOSV
THE ACCELERATOR VC

INDIE BIO



Now raising a $1.2M Seed round to:

- √ Complete all preclinical trials
- √ File IND
- √ File PCT
- √ Generate candidates for antibacterial programs

$250k committed to round

Thank you!

ddempsey@venomyx.com

www.venomyx.com