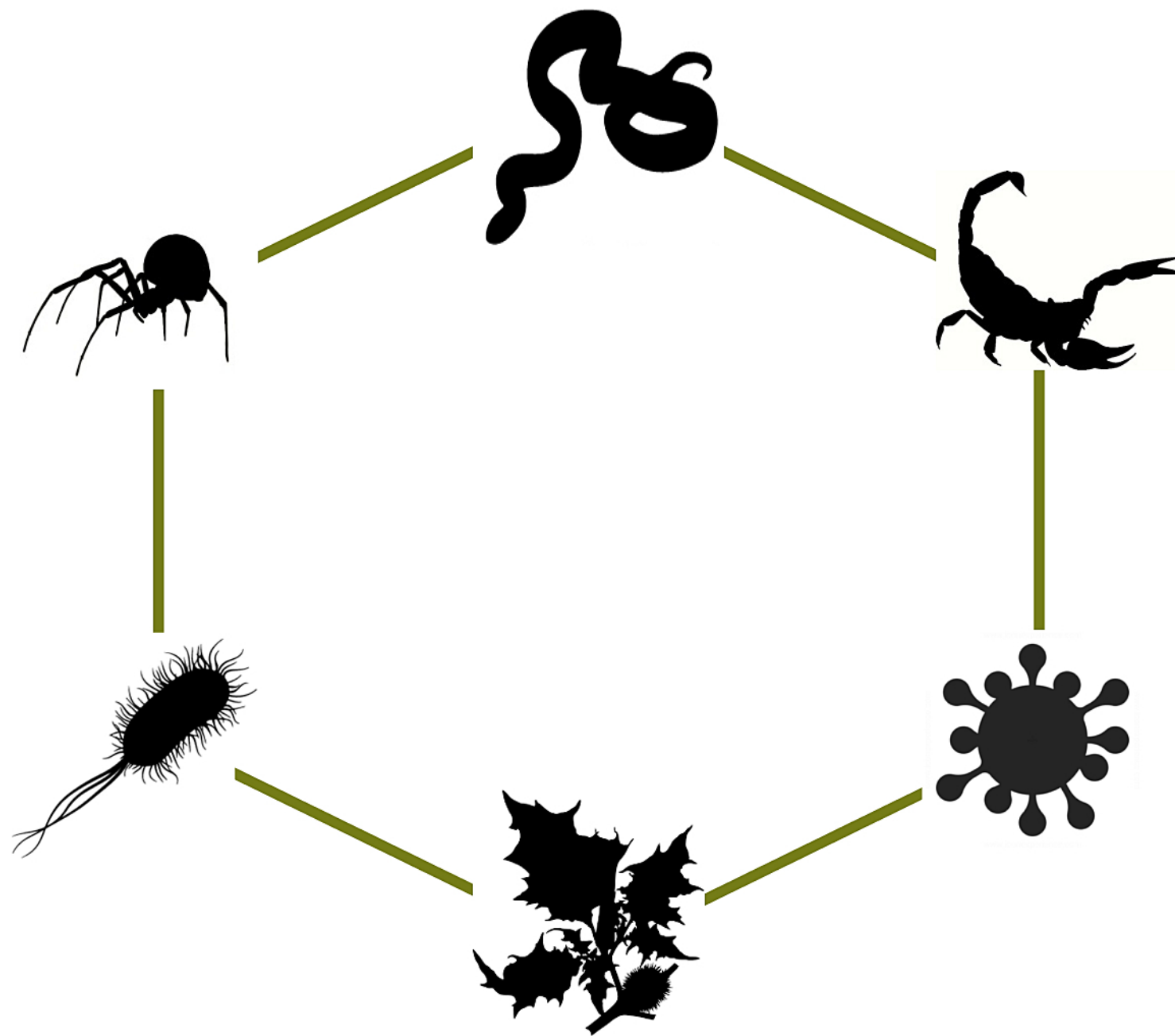


VENOM<sup>Y</sup>X  
THERAPEUTICS

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

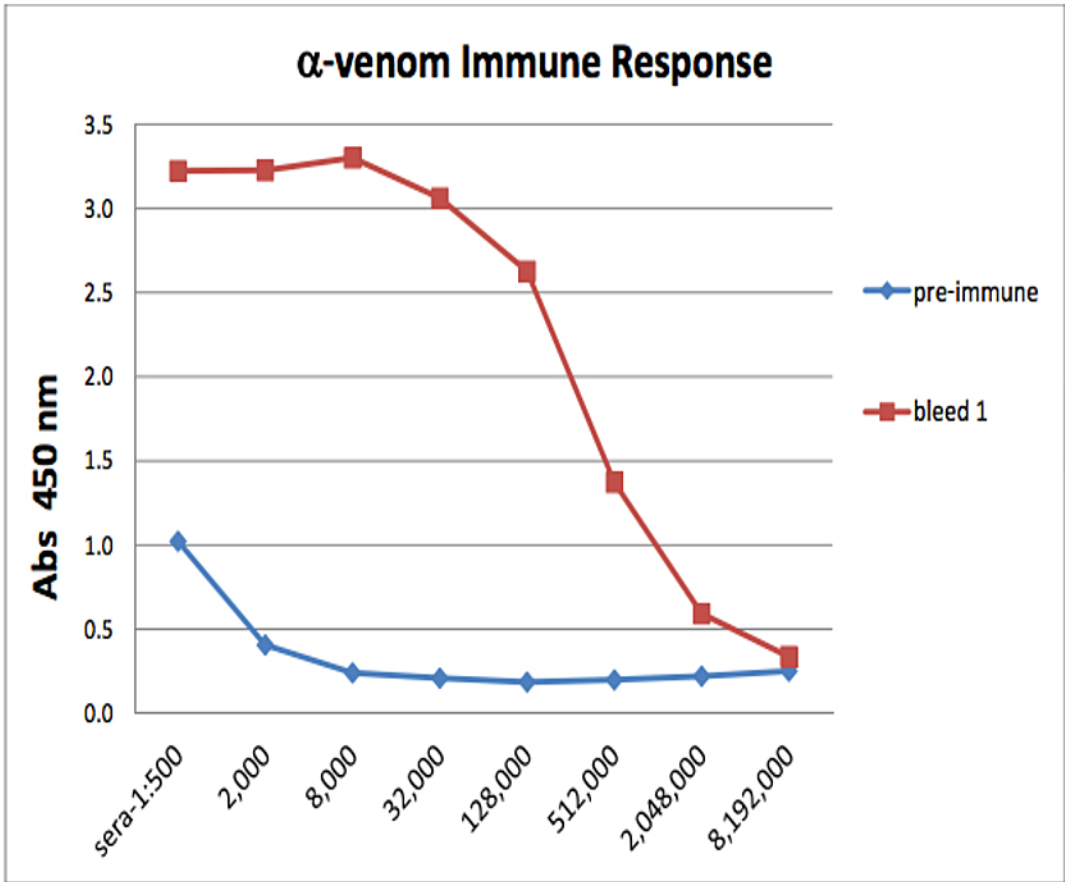




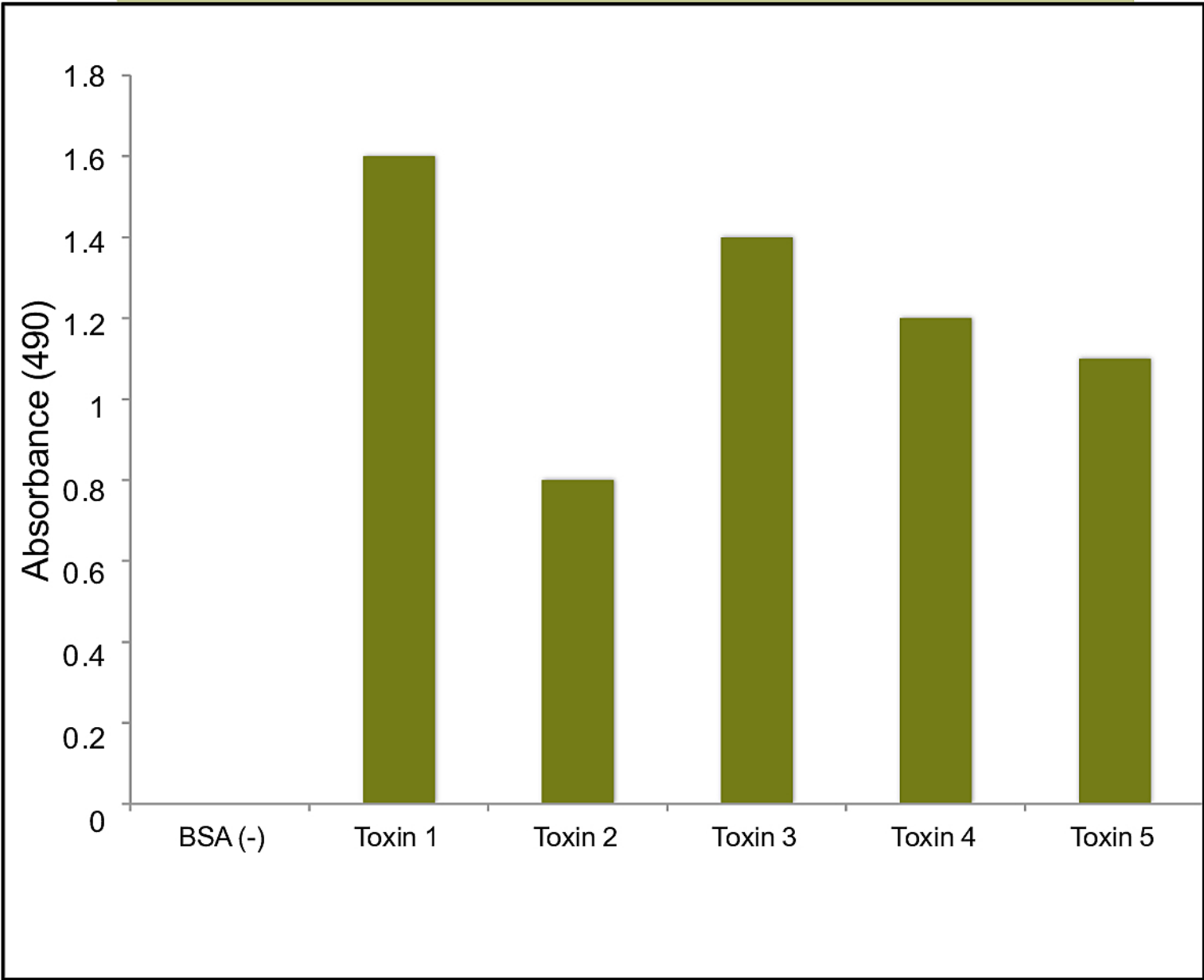
# PROMISING PRECLINICAL RESULTS



Llama immunization (for library only)



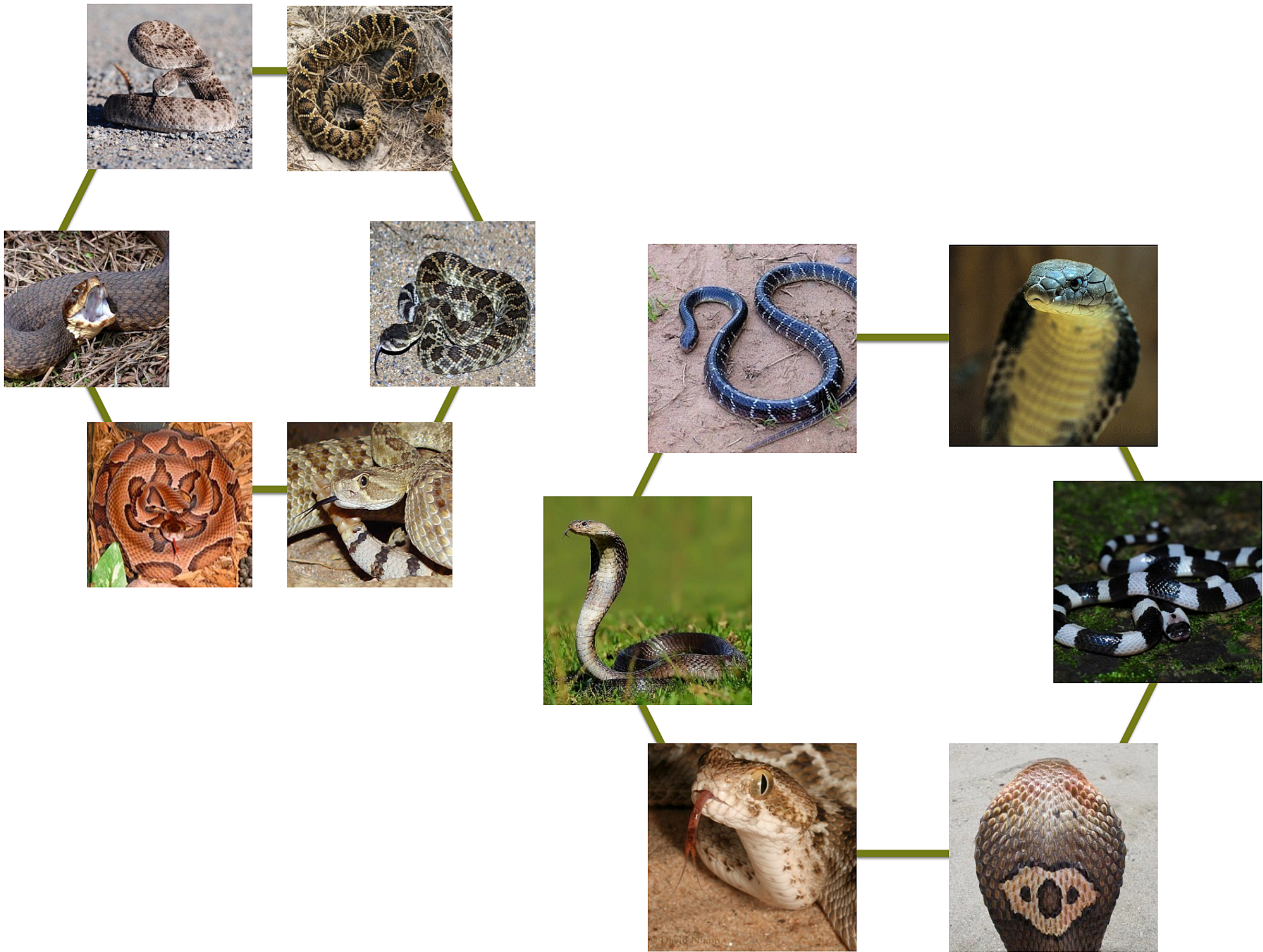
Llama serum titers



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



# PROMISING PRECLINICAL RESULTS



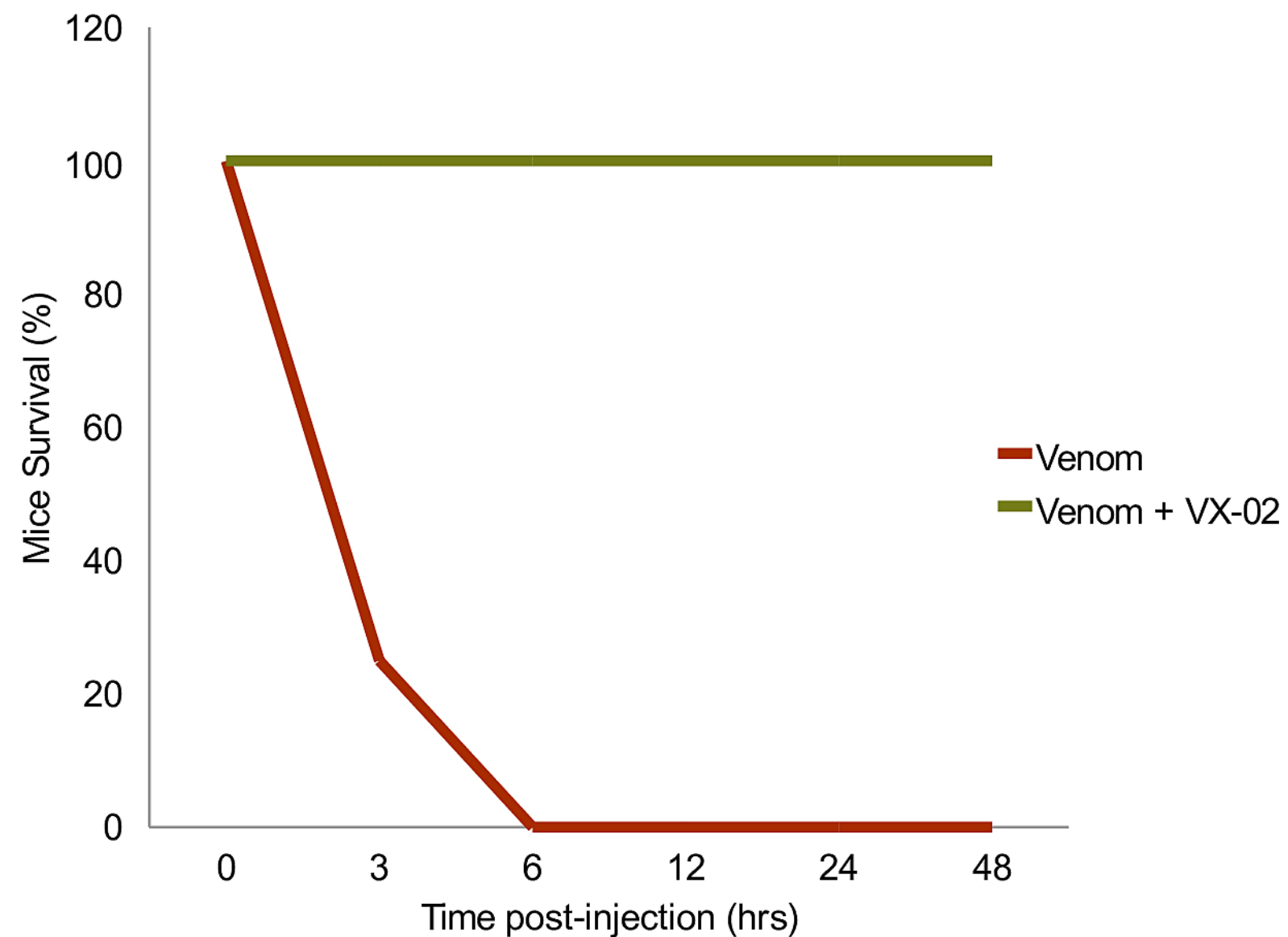
Binding and neutralizing whole venom of medically-important species in the U.S and Asia



# PROMISING PRECLINICAL RESULTS



**Monocled Cobra**  
N. kaouthia



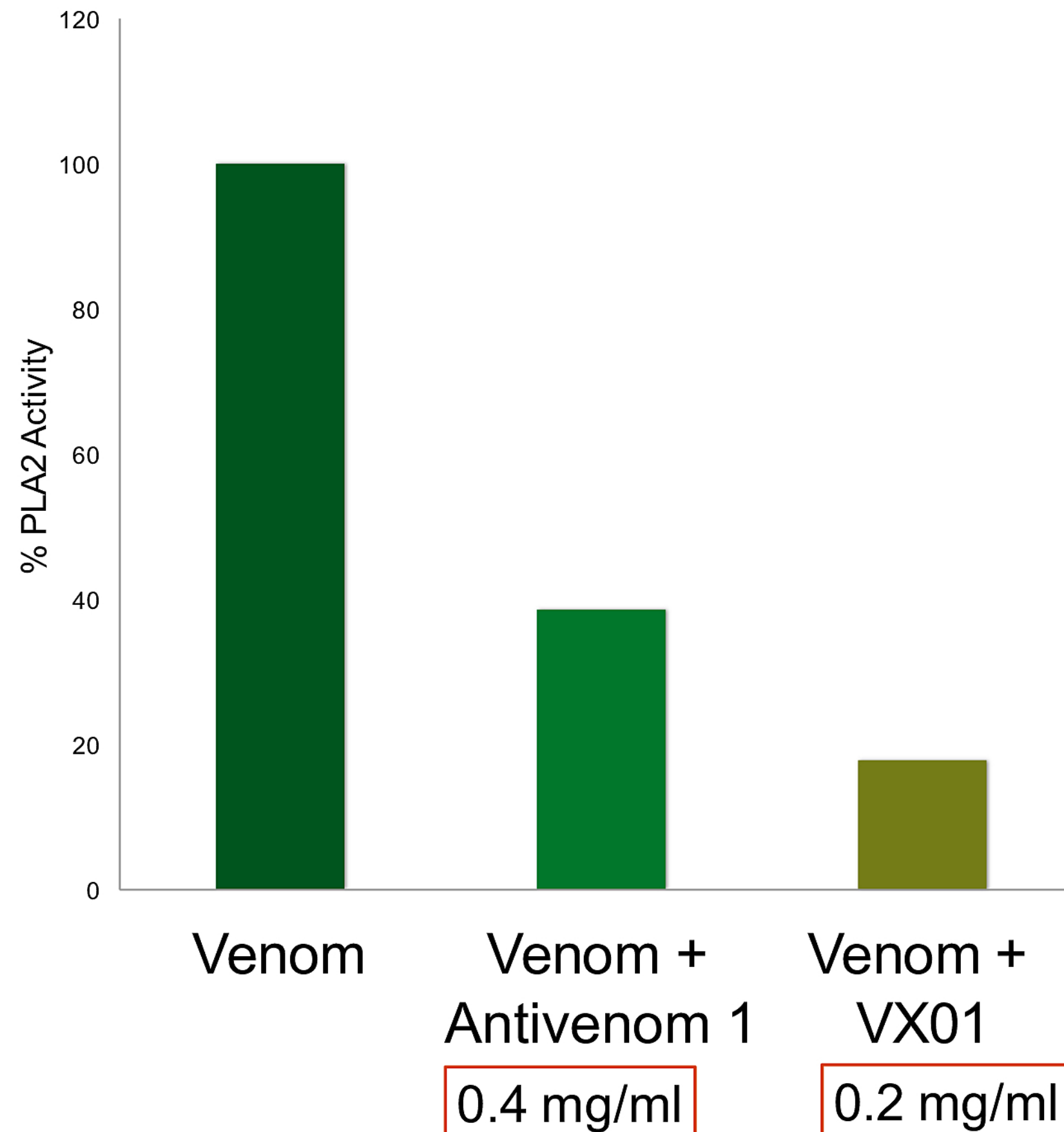
Our candidate was able to **save 100% of mice** from whole cobra venom



# 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**

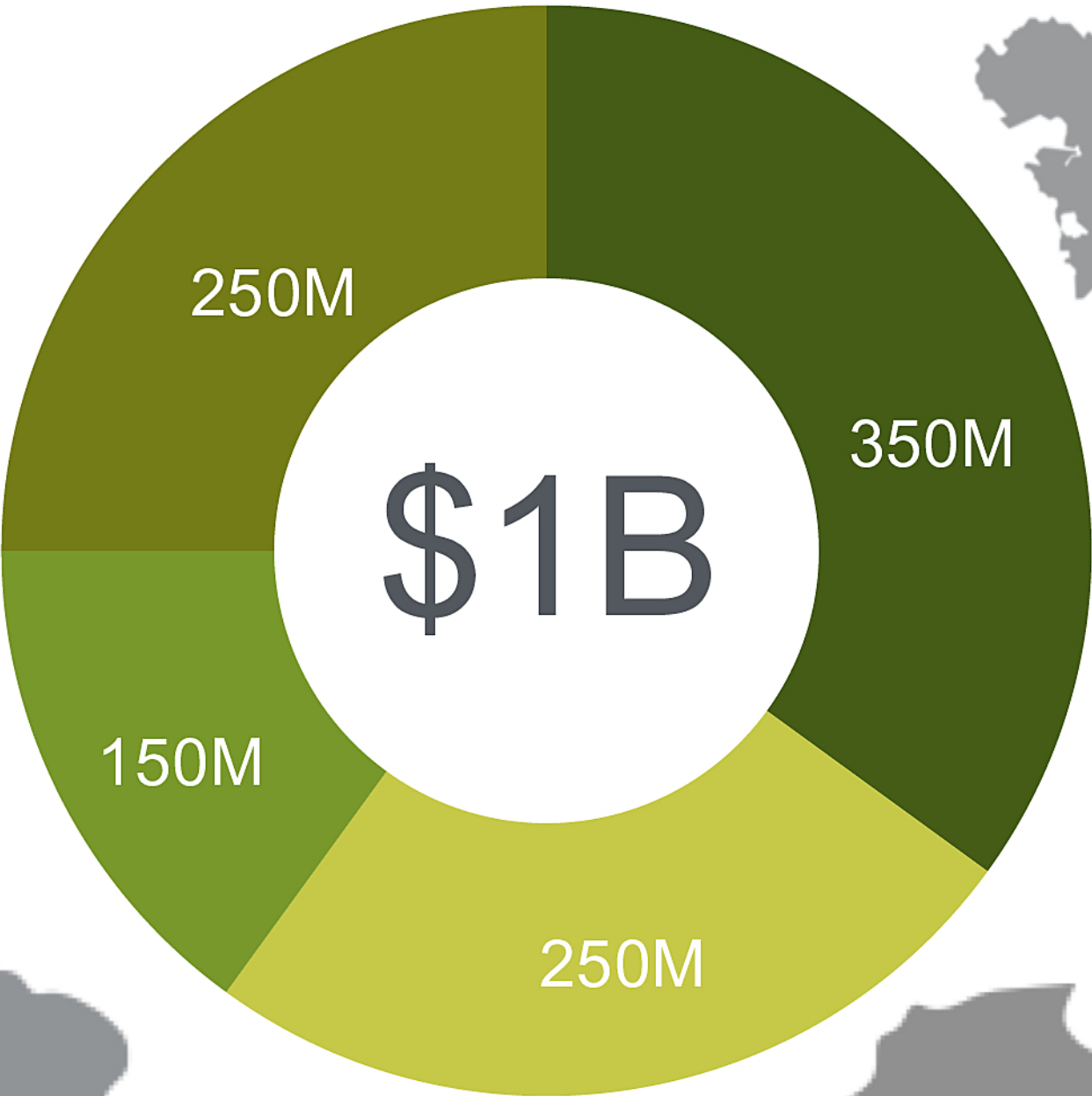
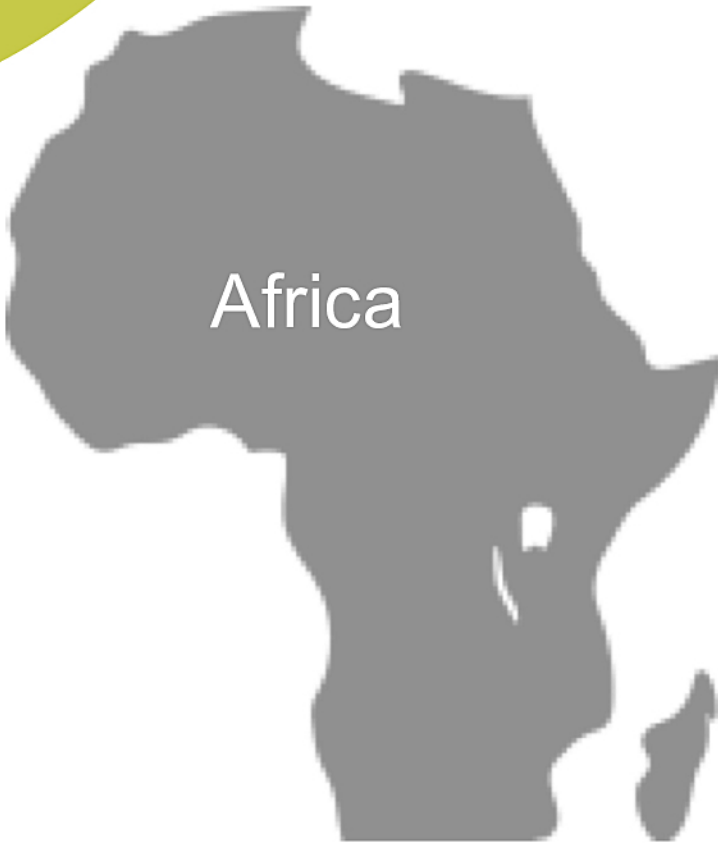
“Composition and Methods for Treating Snake Envenomation”

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**



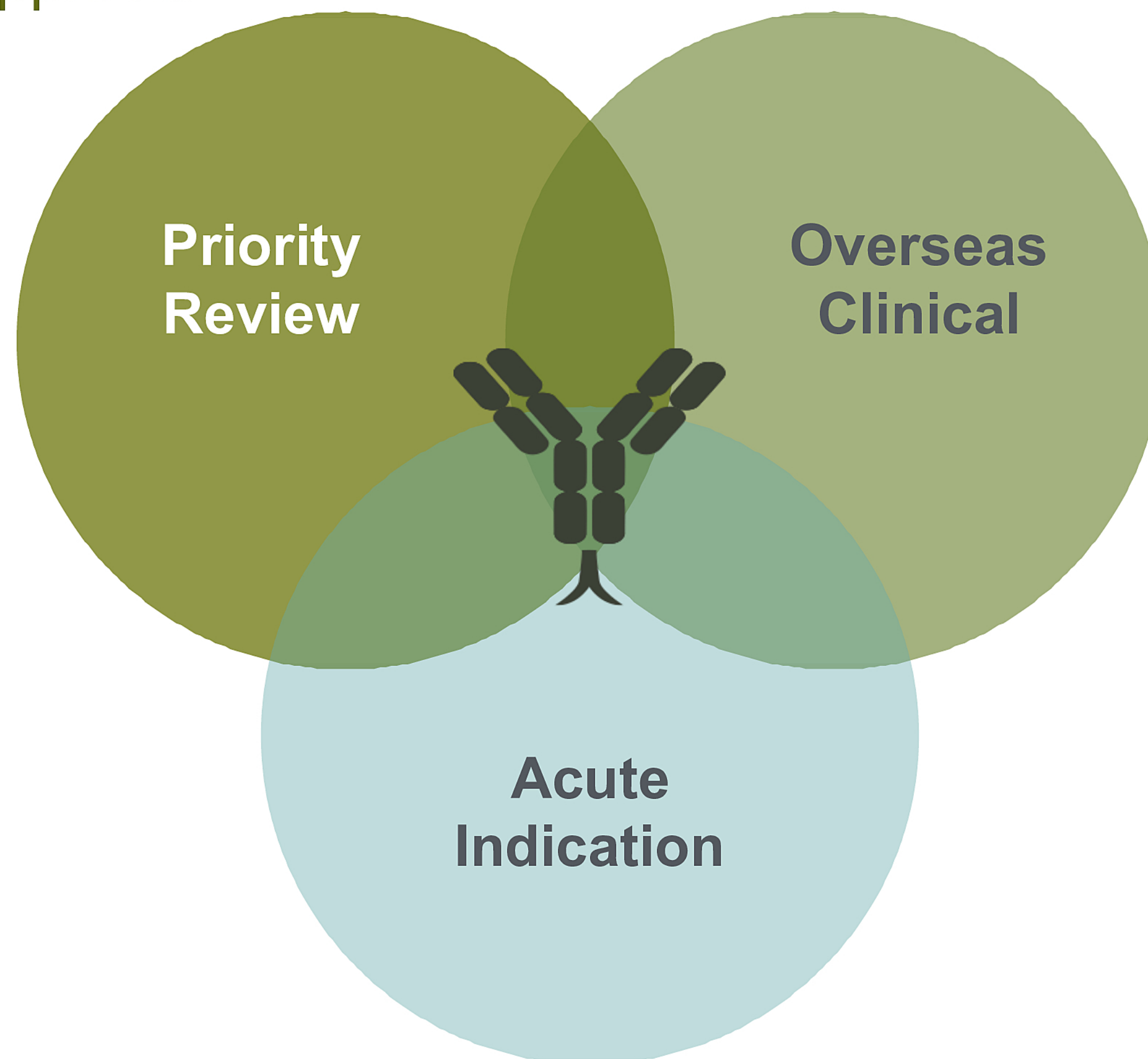
**Government Alliances**

# SWEET SPOT FOR BRINGING DRUGS TO MARKET

Compared to Typical Drug Approval



**50%** of the time  
**25%** of the cost

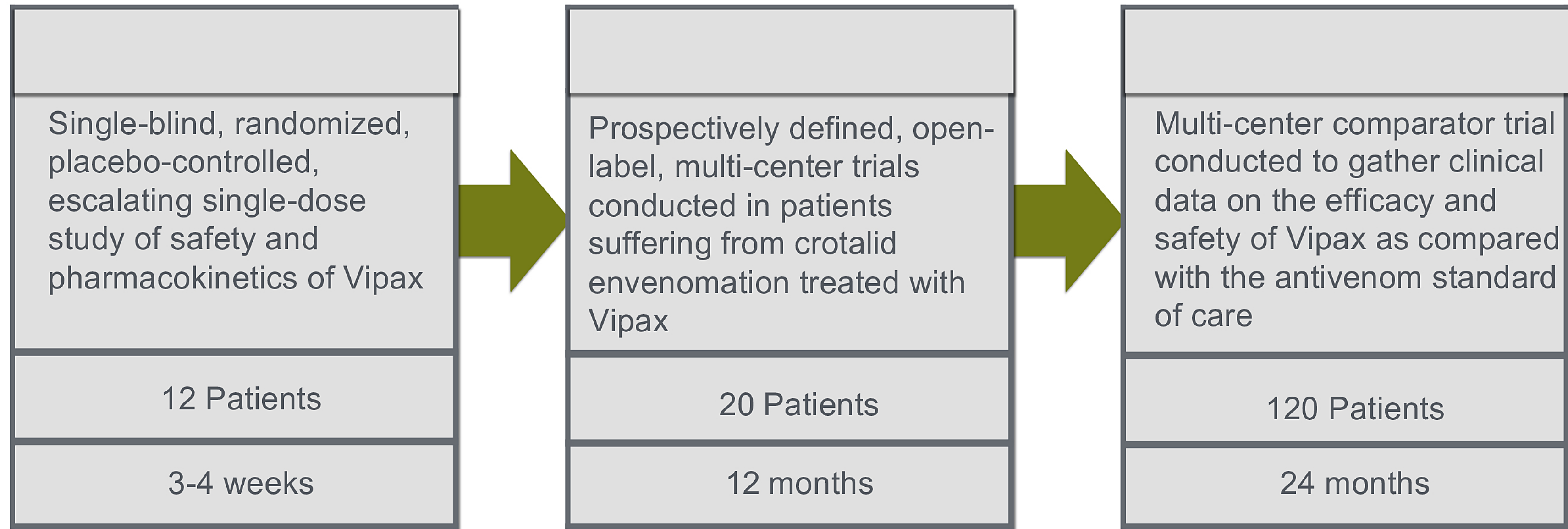




# REGULATORY PATHWAY



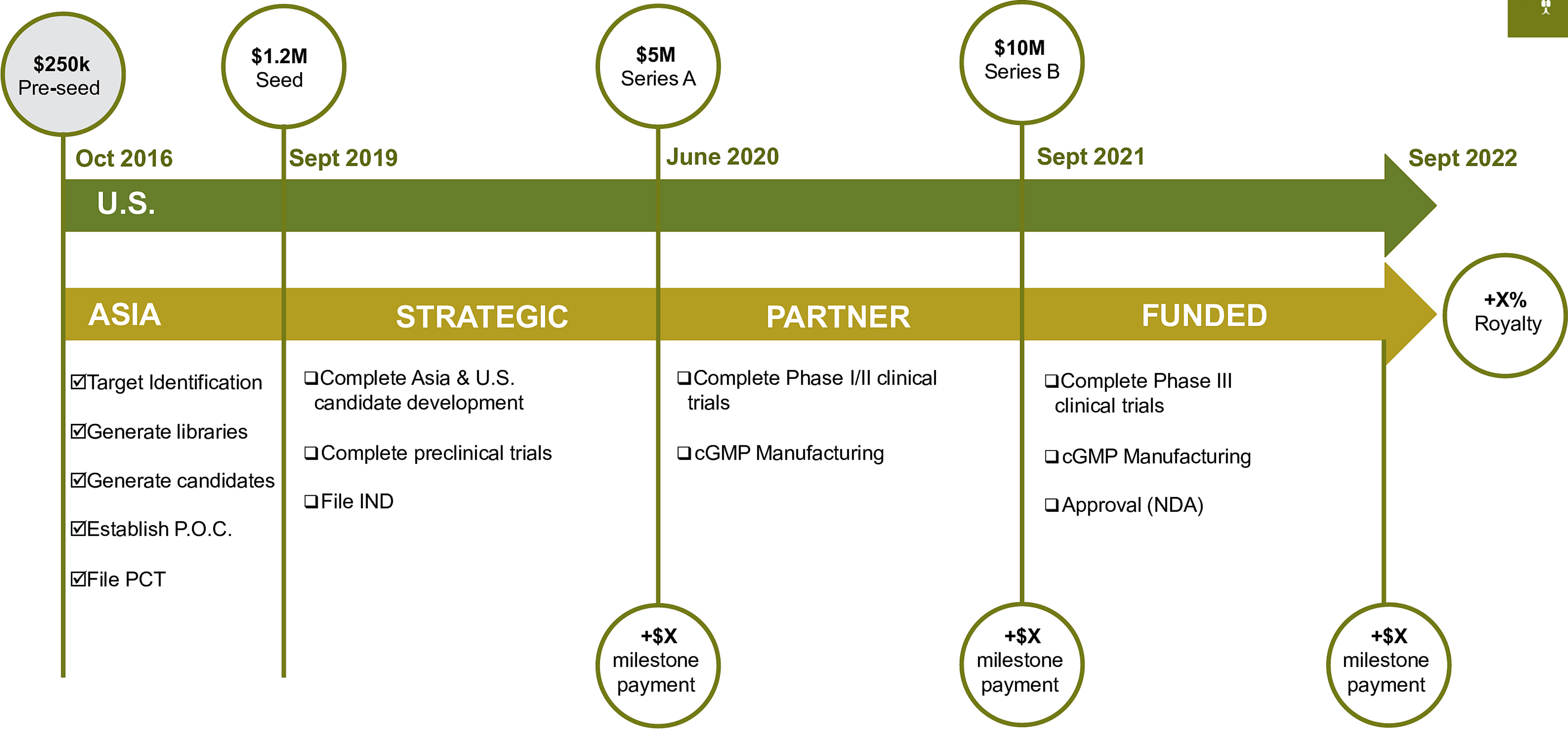
## USFDA Clinical Trials



**PAREXEL**<sup>®</sup>

 **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



**USC**

**Genentech**



**PHILIP TAN, PhD**

CSO

**AstraZeneca**

**SAIC**





# ADVISORS



## SCIENTIFIC:

**ELDA SANCHEZ, PhD**  
Director

National Natural Toxin Research Center



**WILLIAM HAYES, PhD**  
Principal Investigator  
Venomous Species Laboratory



## LEGAL & BUSINESS:







# VENOMX THERAPEUTICS

## 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](mailto:ddempsey@venomyx.com)

[www.venomyx.com](http://www.venomyx.com)