

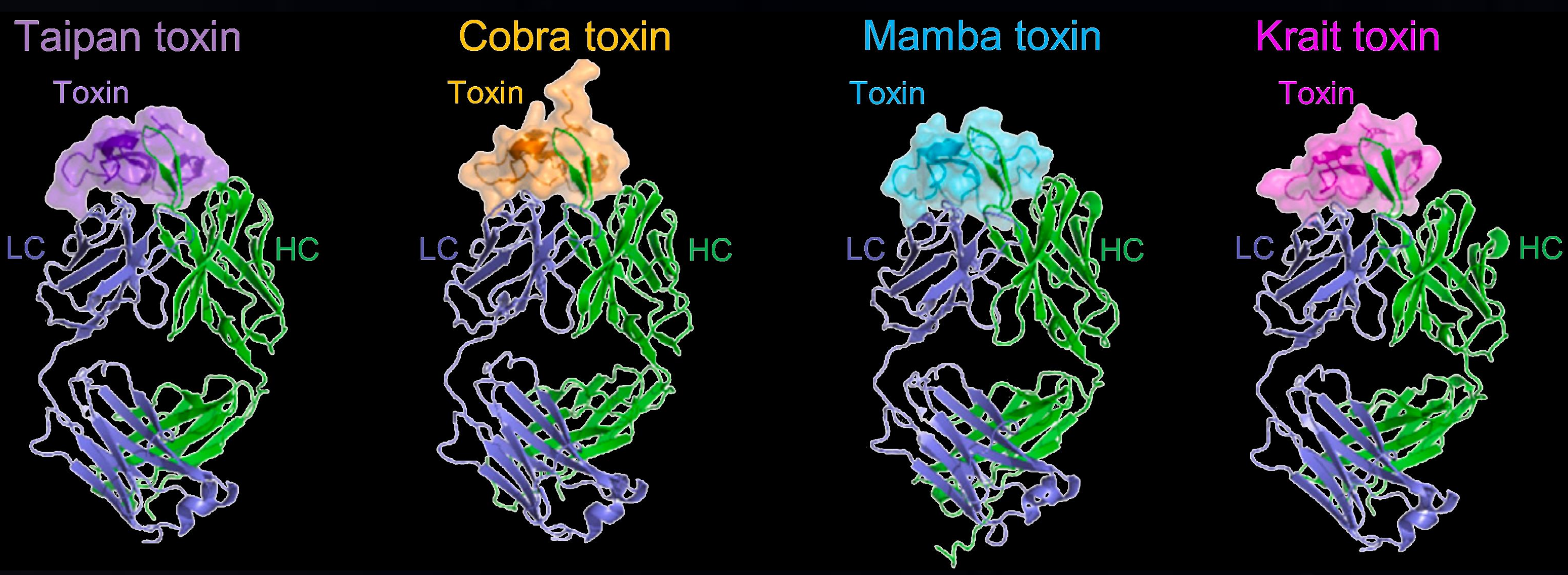
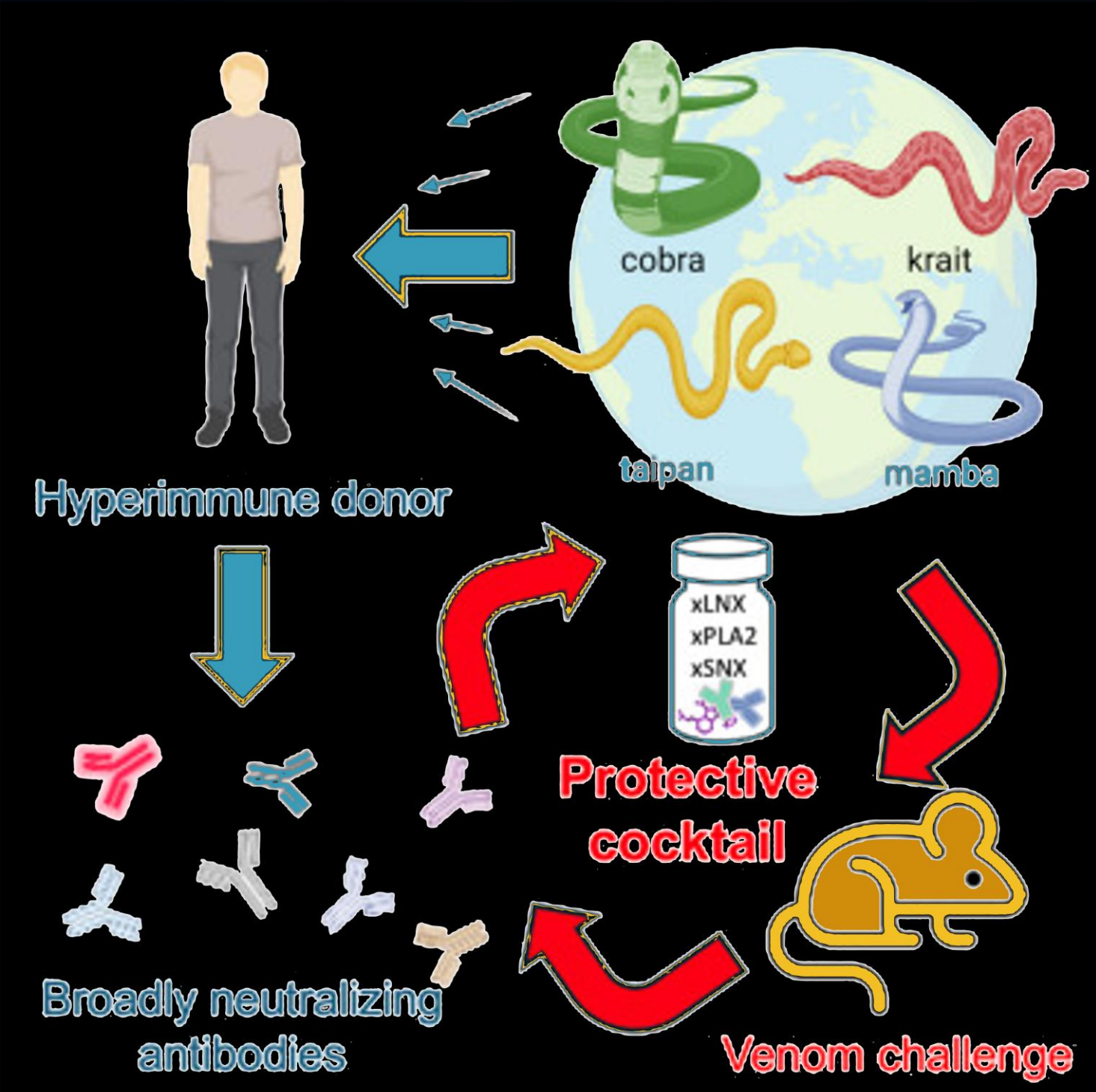
FULLY HUMAN SAFETY ENHANCED

Current antivenom is made from horse blood or sheep blood. It is a crude product that has not changed much in over 125 years. Warfighters who receive current antivenoms must do so in a medical setting that can manage the risk of anaphylaxis, serum sickness and other significant side effects of being administered very large and repeat doses of horse or sheep non-human sera.

In contrast, the universal antivenom is fully human. It consists of a cocktail of broadly neutralizing antibodies from a human subject hyperimmune to snake venom. Human antibodies can be safely administered without supportive care in austere environments. Out in the field. Right after a bite. We have further enhanced the safety with safety-enhancement and half-life extension mutations.

A HYPERIMMUNE MAN MADE BROADLY NEUTRALIZING ANTIBODIES

For 18 years, Tim Friede self-immunized over 850 times with escalating doses of 19 of the world’s deadliest snakes from every continent, culminating in 202 exposures to live-bites from lethal snakes. In (Glanville, Bellin,et al, Cell, 2025), we reported on the isolation of broadly neutralizing antibodies against snake toxins shared across hundreds of species of snakes.

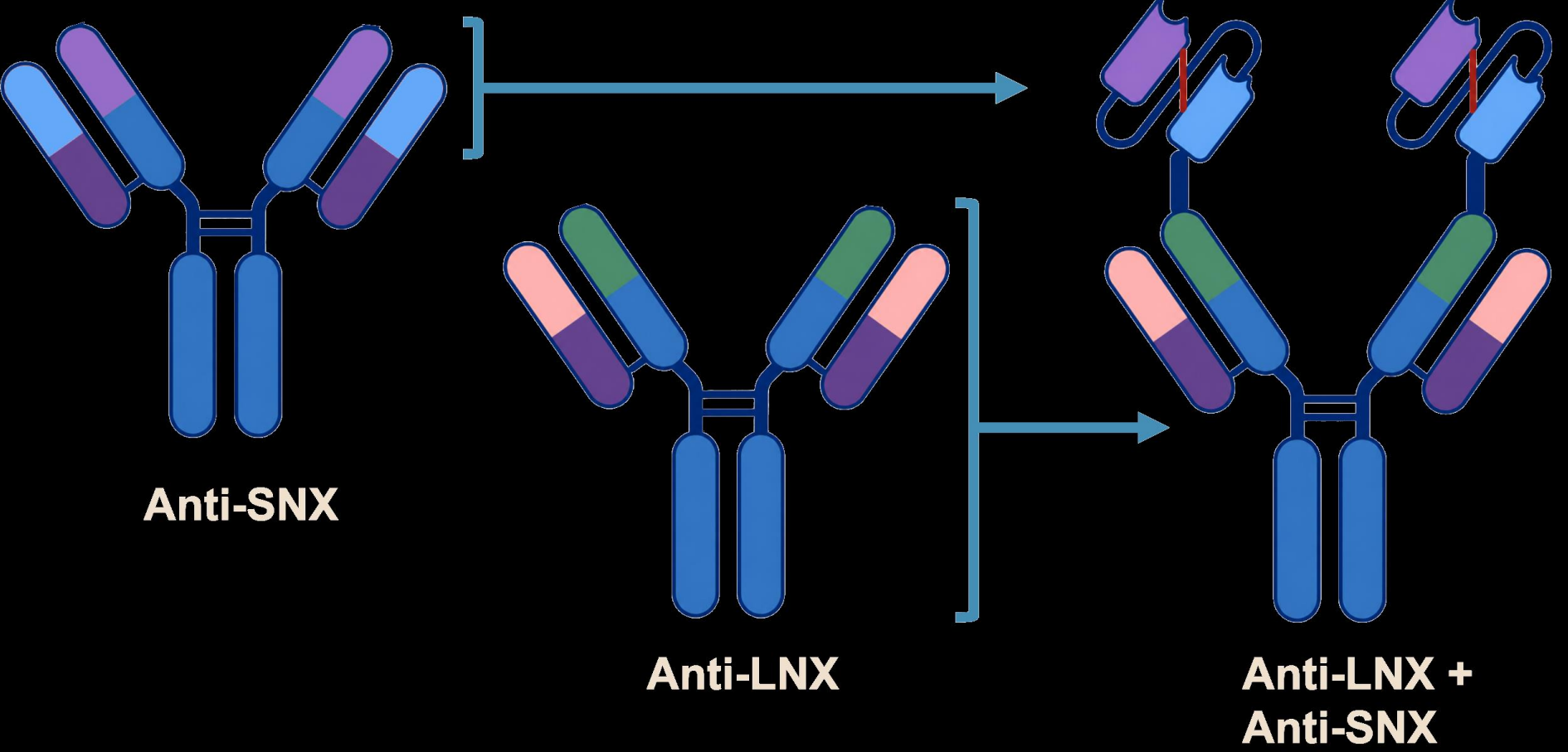


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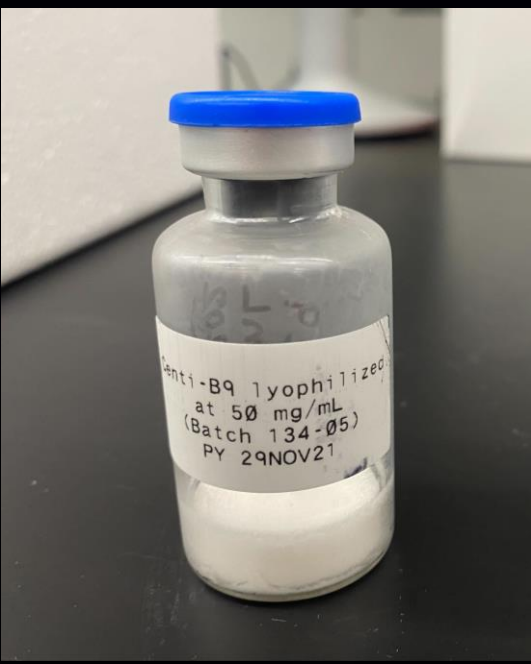
UNIVERSAL ANTIVENOM FOR WARFIGHTERS

ENGINEERED FOR EXTREME POTENCY



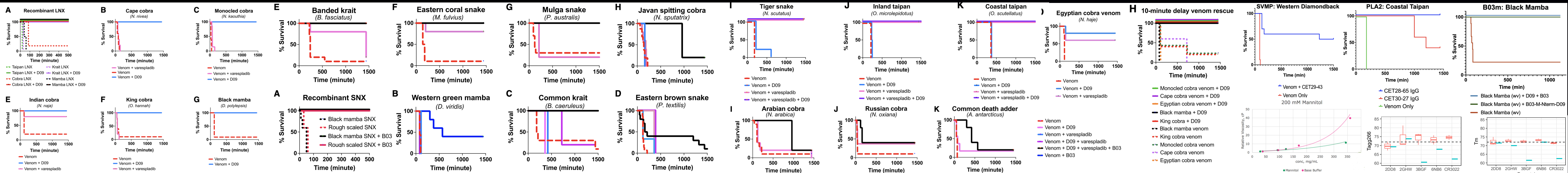
Picomolar bnAbs are combined in multi-specific fully-human IgG format with LALA effector function muting for safety enhancement and LS half-life extension and biodistribution enhancement

ENGINEERED FOR PORTABILITY



Warfighters need antivenom in their medkits, their helicopters, their backpacks. Away from hospitals and refrigerators. Through thermostabilizing, viscosity reduction engineering, and germlining, we have established a method to battle-harden monoclonal antibodies to tolerate lyophilization

PROTECTION AGAINST HUNDREDS OF SNAKES Whole-venom protection against large diverse panels of snakes



Tim Friede,
Hyperimmune donor
and Director of
Herpetology