



VENOMSMART

CLOTTING SHIELD

VenomSmart Technology Comparison

Venom Effect	Result Without Intervention	VenomSmart Intervention
SVMPs degrade blood vessel walls	Hemorrhage, internal bleeding	Clotting bridge remains functional despite protease attack
SVSPs destroy clotting proteins	Inability to clot, systemic coagulopathy	Engineered to resist clotting factor degradation
PLA2 enzymes damage tissue	Local necrosis, inflammation, pain	Intended to maintain clotting at site to reduce damage
Venom acts before treatment begins	Irreversible damage or death before arrival	Prophylactic design provides early defense at exposure

Capability	Traditional Antivenom	VenomSmart
Used before bite	✗	✓ Preventive use
Acts at exposure site	✗	✓ Local clotting support
Neutralizes venom proteases	✓ (indirectly)	✓ Engineered resistance
Maintains clotting function	✗	✓ Functional shield
Requires hospital setting	✗	✗ Field-ready design goal
Veterinary deployment readiness	✓	✓ Primary development path