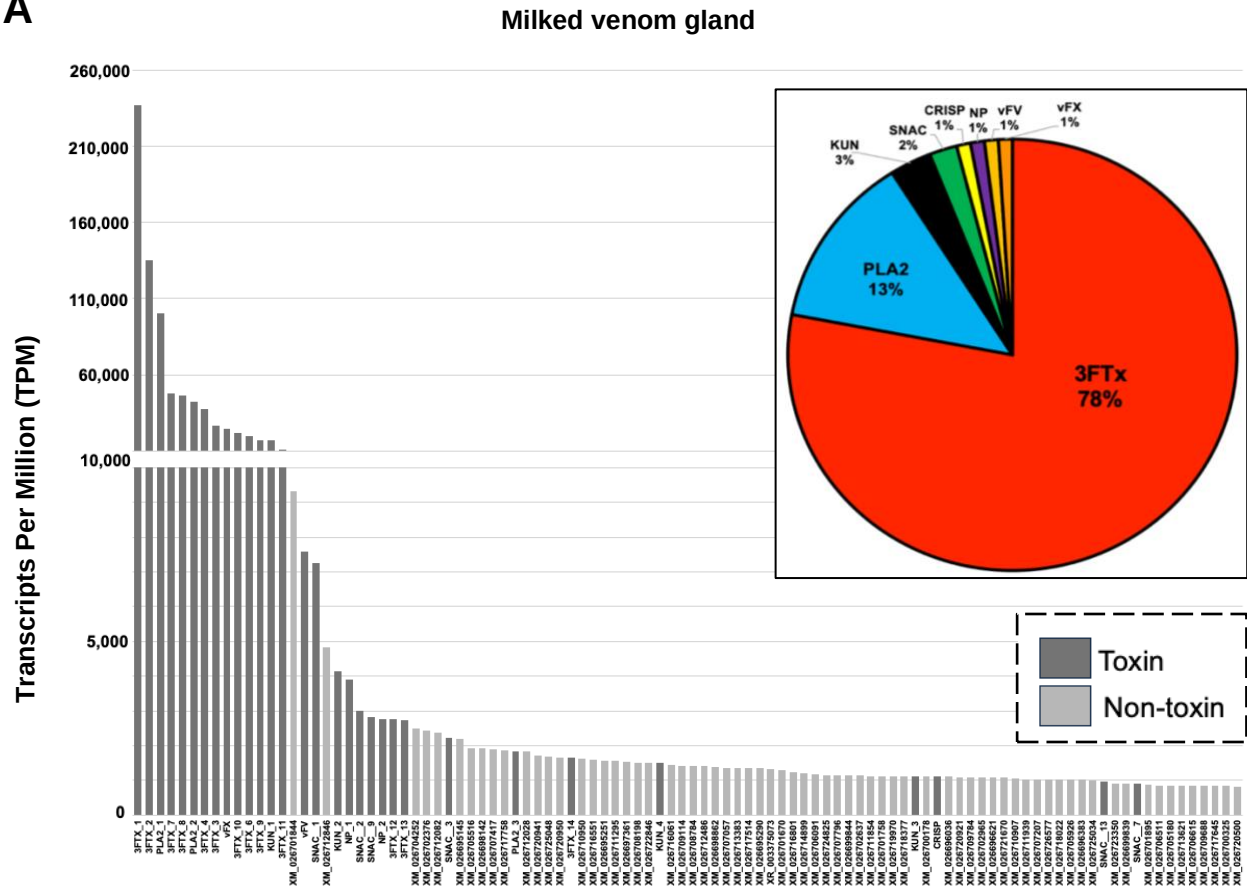
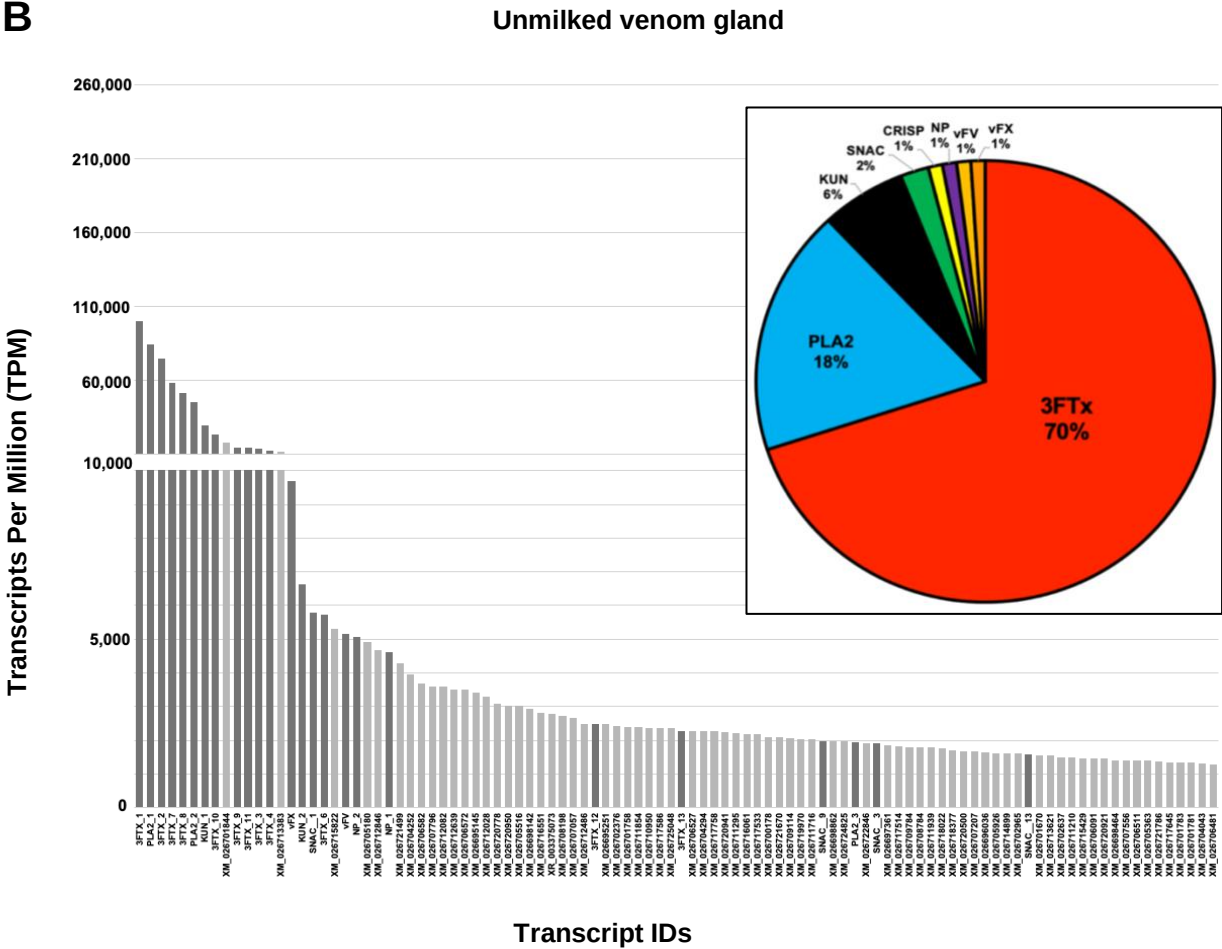


Supplemental Figure 1

A



B



Supplemental Figure 1. Toxin and non-toxin expression in a *Pseudonaja textilis* venom gland 96 hours post milking in comparison to an un milked venom gland. Toxin transcripts (dark grey bars with transcript identities determine from *de novo* assembled venom gland transcriptomes) are expressed in high abundance (TPM; transcripts per million) in comparison to non-toxin transcripts (light grey bars with accession numbers from *P. textilis* genome annotations) in the top 100 expressed transcripts in (A) milked and (B) un milked venom glands. Pie charts (insets in respective panels) show the percentages of total toxin reads belonging to each toxin superfamily, with toxin superfamilies that made up less than 1% excluded due to low abundance. Toxin identifications are as follows: 3FTx = three-finger toxin, CRISP = cysteine-rich secretory protein; KUN = Kunitz-type serine proteinase inhibitor; NP = natriuretic peptide; PLA2 = phospholipase A₂; SNAC = snake venom C-type lectin; vFA = venom factor V (pseutarin C non-catalytic subunit); vFX = venom factor X (pseutarin C catalytic subunit).

Supplemental Figure 2

A Three-finger toxins

Long-chain like

3FTx_1
Pseudonaja_LC
LICYLDFS-VPHTCAPGEKLYTRTWNDG---RGTRIERGCAATCPIPKKPEIHVTCGSTDRCNPHPKKPKPH
LICYLDFS-VPHTCAPGEKLYTRTWNDG---RGTRIERGCAATCPIPKKPEIHVTCGSTDRCNPHPKKQKPH

Long-chain

Notechis
Oxyuranus
3FTx_3
3FTx_6*
Pseudonajatoxinb_homolog*
3FTx_5
3FTx_2
Pseudonajatoxinb
Drysdalia
Austrelaps
3FTx_4
Demansia
LICYMGPK-TPRTCPRGQNLCTYKTKWDAFCSSRGKVVELGCAATCPIA-KSYEDVTCGSTDRCNPFVVRPRPHP-----
RRCFITPDVRSERCPGQEVCTYKTKWGDGFCGSRGKRVDLGCAATCPTPKKKGIDIIICGSKDNCNTFFLKP-----
RTCFITPDVKSKECPGQEVCTYKTKWGDGFCGIRGKRVDLGCAATCPTPKKKGIDIIICGSTDRCNTFFLKP-----RGRLLSSIKDHP
RTCFITPDVKSKECPGQEVCTYKTKWGDGFCGIRGKRVDLGCAATCPTPKKKGIDIIICGSTDRCNTFFLKP-----RGRLLSSIKDHP
RTCFITPDVKSKECPGQEVCTYKTKWGDGFCGIRGKRVDLGCAATCPTPKKKGIDIIICGSTDRCNTFFLKP-----RGRLLSSIKDHP
RTCFITPDVKSKECPGQEVCTYKTKWGDGFCGIRGKRVDLGCAATCPTPKKKGIDIIICGSTDRCNTFFLKP-----RGRLLSSIKDHP
RTCFITPDVKSKECPGQEVCTYKTKWGDGFCGIRGKRVDLGCAATCPTPKKKGIDIIICGSTDRCNTFFLKP-----RGRLLSSIKDHP
RTCFITPDVKSKECPGQEVCTYKTKWGDGFCGIRGKRVDLGCAATCPTPKKKGIDIIICGSTDRCNTFFLKP-----RGRLLSSIKDHP
RCKYKTHPYKSEPCAPGENLCYKTKWCDRCSQLGKAVELGCAATCPTT-KPYEEVTCGSTDRCNRFNWERPRPRGLLSSIMDHP
FSCYKTPDVKSEPCAPGENLCYKTKWCDRCSIRGKVIELGCAATCPA-EPRKIDTCGSTDRCNPHPAH-----
RTCFKTPYVKSEPCAPGQEVCTYKTKWCDRCSIRGKVIELGCAATCPA-GPKEDVTCGSTDRCNTHP-----
RTCLKTPVVKSEPCAPGQEVCTYKTKWCDRCSIRGKVIELGCAATCPRQ-EPGKEITCGSTDRCNTHP-----

Short-chain

3FTx_9
Oxyuranus
3FTx_13
3FTx_14
P.textilis_SC7
3FTx_12
P.textilis_SC6
3FTx_11
P.textilis_SC8
3FTx_7**
P.textilis_SC1/5**
P.textilis_SC4
P.textilis_SC3
3FTx_8***
P.textilis_SC2***
3FTx_10
LICHDSENLDHVVCKEDETMCYQYTFVPRDFEVVARGCSP-SCPEEEDAVCCSTDLCNK
LTC--YMNPSGTMVCKEHETMCYRLIVWTFQYHVLYLKGCSS-SCPGGNNACCSTDLCNN
LTC--YNTLGGTVVCKPHETICYEHTFCPPFNRVIFLRGCST-SCPGGNNPVCCSTDLCNL
LTC--YKGYHDTVCKPHETICYEHTFCPPFNRVIFLRGCST-SCPGGNNPVCCSTDLCNL
LTC--YKRYFDTVCKPQETICYRYIIPATHGNAITYRGCGT-SCPSGIRLVCCSTDLCNK
LTC--NKSYYDTVCKPHETICYRYHVPATHGNVITVRGCGT-SCPGGNNPVCCSTDLCNL
LTC--YKSLSGTVVCKPHETICYRRLIPATHGNAIDRGCGT-SCPGGNNPVCCSTDLCNK
LTC--YKGYHDTVCKPHETICYRYALPATHGNAVTLRGCGT-SCPEGIRPVCCSTDLCNK
LTC--YKGYHDTVCKPHETICYEYFIPATHGNVITRGCGT-SCPGGIRPVCCSTDLCNN
LTC--YKGYHDTVCKPHETICYEYFIPATHGNAILARGCGT-SCPGGIRPVCCRTDLCNK
LTC--YKGYHDTVCKPHETICYEYFIPATHGNAILARGCGT-SCPGGIRPVCCRTDLCNK
LTC--YKGYHDTVCKPHETICYRYLVPATHGNAIPARGCGT-SCPGGNNPVCCSTDLCNK
LTC--YKGYHDTVCKPHETICYRYLIPATHGNAIPARGCGT-SCPGGNNPVCCSTDLCNK
LTC--YKGYHDTVCKPHETICYRYLIPATHGNAIPARGCGT-SCPGGNNPVCCSTDLCNK
LTC--YKGYHDTVCKPHETICYRYLIPATHGNAIPARGCGT-SCPGGNNPVCCSTDLCNK
LTC--YKGYHDTVCKPHETICYRYLIPATHGNAIPARGCGT-SCPGGNNPVCCSTDLCNK

B Cysteine-rich secretory proteins

Pseudechis_australis
Pseudechis
CRISP_1*
Pseudonaja_textilis*
Oxyuranus
Drysdalia
Notechis
Austrelaps
TADFASSESSNKKNYQKEIVDKHNALRRSVKPTARNMLQMKWNSRAAQNAKRWANRCTFAHSPPNKRTVVGKLRGGENIFMSSQPPFWSGVV
TVDFASSESSNKKNYQKEIVDKHNALRRSVKPTARNMLQMKWNSRAAQNAKRWADRCTFAHSPPNTRTVVGKLRGGENIFMSSQPPFWSGVV
TVDFASSESSNKKNDYQKEIVDKHNDLRRSVKPTARNMLQMKWNSRAAQNAKRWANRCTFAHSPPYTRTVVGKLRGGENIFMSSQPPFAWSGVV
TVDFASSESSNKKNDYQKEIVDKHNDLRRSVKPTARNMLQMKWNSRAAQNAKRWANRCTFAHSPPYTRTVVGKLRGGENIFMSSQPPFAWSGVV
TVDFASSESSNKKDYRKEIVDKHNDLRRSVKPTARNMLQMKWNSRAAQNAKRWANRCTFAHSPPYTRTVVGKLRGGENIFMSSQPPFAWSGVV
TVDFASSESSNKKDYRKEIVDKHNALRRSVKPTARNMLQMEWNSHAAQNAKRWADRCTFAHSPPHTRTVVGQLRGGENIFMSSQPPFAWSGVV
TVDFASSESSNKKDYQKEIVDKHNALRRSVKPTARNMLRMEWNSHAAQNAKRWADRCTFAHSPPHTRTVVGKLRGGENIFMSSQPPFAWSGVV
TVDFASSESSNKKDYRKEIVDKHNALRRSVKPTARNMLRMEWNSRAAQNAKRWADRCTFAHSPPHTRTVVGKLRGGENIFMSTQPPFAWSGVV

Pseudechis_australis	QAWYDEIKNFVYGIGAKPPGSGVIGHYTVQVVMYKSYLIGCASAKSSSKYLYVCCQYCPAGNIRGSIATPYKSGPPCADCPSACVNNKLC	TNP
Pseudechis	QAWYDEIKNFVYGIGAKPPGSGVIGHYTVQVVMYKSHLLGCASAKSSSKYLYVCCQYCPAGNIRGSIATPYKSGPPCADCPSACVNNRLCTNP	
CRISP_1*	QAWYDEVKKFVYGIGAKPPSSVTGHYTVQVVMYKSHLLGCASAKSSSTKYLYVCCQYCPAGNIVGSIATPYKSGPPCGDCCPSACDNLGCTNP	
Pseudonaja_textilis*	QAWYDEVKKFVYGIGAKPPSSVTGHYTVQVVMYKSHLLGCASAKSSSTKYLYVCCQYCPAGNIVGSIATPYKSGPPCGDCCPSACDNLGCTNP	
Oxyuranus	QAWYDEVKKFVYGIGAKPPSSVIGHYTVQVVMYKSHLLGCASAKSSSTKYLYVCCQYCPAGNIIIGSIATPYKSGPPCGDCCPSACDNLGCTNP	
Drysdalia	QAWYDEVKKFVYGIGAKPPGSGVIGHYTVQVVMYKSHLLGCASAKSSSTKYLYVCCQYCPAGNIRGSIATPYKSGPTCGDCCPSACVNNLCTNP	
Notechis	QAWYDEVKKFVYGIGAKPPGSGVIGHYTVQVVMYKSHLLGCASAKSSSTKYLYVCCQYCPAGNIRGSIATPYKSGPTCGDCCPSACVNNLCTNP	
Austrelaps	QAWYDEVKKFVYGIGAKPPGSGVIGHYTVQVVMYKSHLLGCASAKSSSTKYLYVCCQYCPAGNIRGSIATPYKSGPA	CGDCCPSACVNNLCTNP

Pseudechis_australis	CKRNDFSNC	CKSLAKKSK	QTEWIKKK	C	PAS	CF	CHNKII
Pseudechis	CNYNDFSNC	CKSLAKKSK	QTEWIKKK	C	PAS	CF	CHNKII
CRISP_1*	CKHNDDL	CKSLAKKSK	QTEWIKSK	C	PAT	CF	CRTEII
Pseudonaja_textilis*	CKHNDDL	CKSLAKKSK	QTEWIKSK	C	PAT	CF	CRTEII
Oxyuranus	CKHNDDL	CKSLAKKSK	QTEWIKSK	C	PAT	CF	CRTEII
Drysdalia	CKYEDAF	TNCNELAKETK	CKTEWIKSK	C	PAT	CF	CHTEII
Notechis	CKYEDDFS	NCKALAKNSK	QTEWIKSK	C	PAAC	CF	CHNKII
Austrelaps	CKYEDAF	TNCALAKKTK	CKTEWIKSK	C	PAT	CF	CHNKII

C Kunitz-type serine protease inhibitors

KUN_3	KDRPKFC	ELPADIGP	CDDFTGAFHYS	PREHEC	IEFIYGG	CKGNANNFNTQEE	C	ESA	CAA-
Textilinin-6	KDRPKFC	ELPADIGP	CDDFTGAFHYS	PREHEC	IEFIYGG	CKGNANNFNTQEE	C	EST	CAA-
Scutellin-3	KDRPKFC	ELPADIGP	CDDFTGAFHYS	PREHEC	IEFIYGG	CKGNANNFNTLEE	C	ESA	CAA-
Microlepidin-3	KDRPKFC	ELPADIGP	CDDFTGAFHYS	PREHEC	IEFIYGG	CEGNANNFNTLEE	C	ESA	CAA-
KUN_4	KDRPKFC	ELLPDTG	PCDDFTGAFHYSTRDRE	C	IEFIYGG	CGGNANKFNTLEE	C	EST	CARK
Textilinin-5	KDRPKFC	ELLPDTG	SCDDFTGAFHYSTRDRE	C	IEFIYGG	CGGNANNFITKEE	C	EST	CAA-
Textilinin-7	KDRPKFC	ELLPDTG	SCDDFTGAFHYSTRDRE	C	IEFIYGG	CGGNANNFNTLEE	C	EST	CAA-
Textilinin-2	KDRPELC	ELPPDTG	PCRVRFPSFYYPNDEKQ	C	LEFIYGG	CEGNANNFITKEE	C	EST	CAA-
KUN_1*	KDRPDFC	ELPADTG	PCRVRFPSFYYPNDEKK	C	LEFIYGG	CEGNANNFITKEE	C	EST	CAA-
Textilinin-1*	KDRPDFC	ELPADTG	PCRVRFPSFYYPNDEKK	C	LEFIYGG	CEGNANNFITKEE	C	EST	CAA-
Mulgin-3	KDRPDFC	ELPADTG	PCRVGFPSFYYPNDEKK	C	LEFIYGG	CGGNANNFITKEE	C	EST	CAA-
Textilinin-3	KDRPNFC	KLPAETGR	CNAKIPRFYYPNQHQ	C	IEFIYGG	CGGNANNFNTKEE	C	EST	CAA-
KUN_2	KDRPEFC	ELPADTG	SCKGNVPRFYYPNADHHQ	C	CLKFIYGG	CGGNANNFITKEE	C	CKST	CAA-
Textilinin-4	KDHPKFC	ELPADTG	SCKGNVPRFYYPNADHHQ	C	CLKFIYGG	CGGNANNFITKEE	C	CKST	CAA-

D Group I phospholipase A2

textilotoxin_C	ARIPLPLNL	LIQFSNMIK	CTIPGSQLLDYANYG	CY	CGP	NGT	FPVDDVDR	CC	QAHDE	CY	DEASNHG	-CY----	PELTLYDYY	CDTGV									
textilotoxin_A	SDIPPLPL	NLVQFSYLI	RCA	NKYKRP	GWHYANYG	CY	CGSGGR	GT	FPVDDVDR	CC	QAHDK	CY	EDAEKLG	-CY----	PKWTFYY	YQCGSGS							
textilotoxin_B	-----	DLVEFG	FMIR	CANRNS	QPAWQYMDYG	CY	CGKRG	SGT	FPVDDVDR	CC	QTHNE	CY	DEAAKIP	GC	CK	-----	PKWTFYY	YQCGSGS					
textilotoxin_D	-SIPRPS	LNIMLFG	NMIQ	CTIP	CEQSWL	GYLDYG	CY	CGSGS	SGI	FPVDDVDR	CC	QTHDE	CY	YKAGQ	IP	GC	SVQ	PNFVNDYSY	ECNEG-				
Austrelaps	SNIP	PLSLDFEQ	FGKMIQ	CTIP	CEES	C	LAYMDY	GCY	CGPGS	GT	FPVDELDR	CC	QTHDNC	YAEAG	KLPA	CK	AMLSE	PYNDTYSY	SICIER-				
Tropidechis	--IPAR	PLNLYQ	FGNMIQ	CANHG	RRPT	WHYMDY	GCY	CGKGS	GT	FPVDELDR	CC	QIHDD	CY	GEAE	KLPA	CNYM	MSG	PYYNTYSY	ECNEG-				
Notechis	-----	NLYQ	FGNMIQ	CANHG	RRPT	TRHYMDY	GCY	CGKGS	GT	FPVDELDR	CC	QTHDD	CY	GEAE	KLPA	CNYM	MSG	PYYNTYSY	ECNEG-				
Oxyuranus	ARI	PPLPLS	LLNFAN	LIE	CANHG	TRSALA	YADY	GCY	CGKGR	GT	PLDDLDR	CC	QHVDH	DCY	GEAE	KLPA	CNYL	MS	SPYFNYSY	YKCNEG-			
PLA2_1*	-RI	PPLPLS	LDDF	SNLIT	CANRGS	RSWLDY	AHY	GCY	CGSGS	GT	FPVDDLDR	CC	QVHDN	CFG	DAE	KLPA	CNYL	FS	GYPWN	PYSYK	CNEG-		
Pseudonaja_1*	-RI	PPLPLS	LDDF	SNLIT	CANRGS	RSWLDY	ADY	GCY	CGSGS	GT	FPVDDLDR	CC	QVHDN	CFG	DAE	KLPA	CNYL	FS	GYPWN	PYSYK	CNEG-		
PLA2_3	-RI	PPLPLS	LV	EFRI	LK	CANHNS	SRN	VLDY	ADY	GCY	CGKGS	GT	FPVDELDR	CC	QAHDY	CY	DDAE	KLPA	CNYR	FS	GYPWN	PYSYK	CNEG-
PLA2_2	-RI	PPLPLS	LV	EFRI	LK	CANHNS	SRN	VLDY	ADY	GCY	CGKGS	GT	FPVDELDR	CC	QAHDY	CY	DDAE	KLPA	CNYR	FS	GYPWN	PYSYK	CNEG-
Pseudonaja_2	-RI	PPLPLS	LV	EFRI	LK	CANHNS	SRN	VLDY	ADY	GCY	CGKGS	GT	FPVDELDR	CC	QAHDY	CY	DDAE	KLPA	CNYR	FS	GYPWN	PYSYK	CNEG-

textilotoxin_C	-PYC	-KARTO	CQVFC	CG	DLAVAK	CLAGATY	NDEN	KNINTGER	--	CQ	
textilotoxin_A	-PYC	-KTRTK	CQRFV	CNC	DVVAAD	CFASY	PYNRRY	WFYSNKKR	--	CR	
textilotoxin_B	QFT	CRKSKD	VCRNV	DC	DFKAAL	CLTGARY	NSAN	YIN	IDIKTH	--	CR
textilotoxin_D	QLT	CNESNNE	CEMAV	CNC	DRAAIC	CFARF	PYNK	NYWS	INTEIH	--	CR
Austrelaps	QLT	CNDND	DECKAFI	CNC	DRAAVI	CFSGAPY	NDEN	SNDY	DIGTIEH	--	CK
Tropidechis	ELT	CKDND	DECKAFI	CNC	DRTAAIC	CFART	PYNDAN	WN	IDTKTR	--	C
Notechis	ELT	CKDND	DECKAFI	CNC	DRTAAIC	CFARA	PYNDAN	WN	IDTKTR	--	CQ
Oxyuranus	KVT	CTDDN	DECKAFI	CNC	DRTAAIC	CFAGATY	NDEN	FMI	SKKRNDICQ		
PLA2_1*	EIT	CTDDN	DECAAFI	CNC	DRTAAIC	CFAGATY	NDEN	FMTI	KKKNICQ		
Pseudonaja_1*	EIT	CTDDN	DECAAFI	CNC	DRTAAIC	CFAGATY	NDEN	FMTI	KKKNICQ		
PLA2_3	EIT	CTDDN	DECAAFI	CNC	DRTAAIC	CFAGATY	NDEN	FMTI	KKKNICQ		
PLA2_2	EVT	CTDDN	DECKAFI	CNC	DRTAAIC	CFAGAPY	NDEN	FMIT	KKKNICQ		
Pseudonaja_2	EVT	CTDDN	DECKAFI	CNC	DRTAAIC	CFAGAPY	NDEN	FMIT	KKKNICQ		

E Coagulation factor V

FV	AQLREYHIAA	QLEDWDYNPQPEELSRL	SES	DLTFKKIVYREYELDFKQEKPRDELSGLLGPTLRGEVGD	LI	IYFKNFATQPVSIHPQSAVY	
vFV	AQLREYHIAA	QLEDWDYNPQPEELSRL	SES	DLTFKKIVYREYELDFKQEKPRDALSGLLGPTLRGEVGD	SL	IYFKNFATQPVSIHPQSAVY	
Pseutarin C	AQLREYHIAA	QLEDWDYNPQPEELSRL	SES	DLTFKKIVYREYELDFKQEEPRDALSGLLGPTLRGEVGD	SL	IYFKNFATQPVSIHPQSAVY	
Omicarin C	AQLREYHIAA	QLEDWDYNPQPEELSRL	SE	SELTFFKKIVYREYELDFKQEKPRDELSGLLGPTLRGEVGD	LI	IYFKNFATQPVSIHPQSAVY	
Oscutarin C	AQLREYRLAA	QLEDWDYNPQPEELSRL	SES	DLTFKKIVYREYELDFKQEKPRDELSGLLGPTLRGEVGD	SL	IYFKNFATQPVSIHPQSAVY	
FV	NKWSEGS	SSYSDGTS	SDVERLDDAVPPGQSF	KYVWNITAEIGPKKADPP	CLTYA	YSHVNMVRDFNSGLIGALLI	CKEGSLNANGSQKFFNREY
vFV	NKWSEGS	SSYSDGTS	SDVERLDDAVPPGQSF	KYVWNITAEIGPKKADPP	CLTYA	YSHVNMVRDFNSGLIGALLI	CKEGSLNANGSQKFFNREY
Pseutarin C	NKWSEGS	SSYSDGTS	SDVERLDDAVPPGQSF	KYVWNITAEIGPKKADPP	CLTYA	YSHVNMVRDFNSGLIGALLI	CKEGSLNANGSQKFFNREY
Omicarin C	NKWSEGS	SSYSDGTS	SDVERLDDAVPPGQSF	KYVWNITAEIGPKKADPP	CLTYA	YSHVNMVRDFNSGLIGALLI	CKEGSLNANGSQKFFNREY
Oscutarin C	NKWSEGS	SSYSDGTS	SDVERLDDAVPPGQSF	KYVWNITAEIGPKKADPP	CLTYA	YSHVNMVRDFNSGLIGALLI	CKEGSLNADGAQKFFNREY

	VLMFSVFDESKNWKPSLQYTINGFANGTLPDVQA	CAYDHI	SWHLIGMSSSPEIFSVHFNQTLEQNHKYSTINLVGGASVTANMSVSRT			
vFV	VLMFSVFDESKNWKPSLQYTINGFANGTLPDVQA	CAYDHI	SWHLIGMSSSPEIFSVHFNQTLEQNHKYSTINLVGGASVTADMVSRT			
Pseutarin C	VLMFSVFDESKNWKPSLQYTINGFANGTLPDVQA	CAYDHI	SWHLIGMSSSPEIFSVHFNQTLEQNHKYSTINLVGGASVTADMVSRT			
Omicarin C	VLMFSVFDESKNWKPSLQYTINGFANGTLPDVQA	CAYDHI	SWHLIGMSSSPEIFSVHFNQTLEQNHKYSTINLVGGASVTANMSVSRT			
Oscutarin C	VLMFSVFDESKNWKPSLQYTINGFANGTLPDVQA	CAYDHI	SWHLIGMSSSPEIFSVHFNQTLEQNHKYSTINLVGGASVTANMSVSRT			
FV	GKWLISSLVAKHLQAGMYGYLNKID	C	GNPDTLTRKLSFRELRRIMNWEYFIAAEEITWDYAPEIPSSVDRRYKAQYLDNFSNFIGKYYKAV			
vFV	GKWLISSLVAKHLQAGMYGYLNKID	C	GNPDTLTRKLSFRELMMIKNWEYFIAAEEITWDYAPEIPSSVDRRYKAQYLDNFSNFIGKYYKAV			
Pseutarin C	GKWLISSLVAKHLQAGMYGYLNKID	C	GNPDTLTRKLSFRELMMIKNWEYFIAAEEITWDYAPEIPSSVDRRYKAQYLDNFSNFIGKYYKAV			
Omicarin C	GKWLISSLVAKHLQAGMYGYLNKID	C	GHPNTLTRKLSFRELRRIMNWEYFIAAEEITWDYAPEIPSSVDRRYKAQYLDNFSNFIGKYYKAV			
Oscutarin C	GKWLISSLVAKHLQAGMYGYLNKID	C	GNPDTLTRKLSFRERRIMKWEYFIAAEEITWDYAPEIPSSVDRRYKAQYLDNFSNFIGKYYKAV			
FV	FRQYKDSNFTKPTYAIWPKERGILGPVIRAKVRDVT	I	IVFKNLASRPYSIYVHGVSVSKDAEGAIYPSDPKENITHGKAVEPGQVYTYKWTV			
vFV	FRQYEDGNFTKPTYAIWPKERGILGPVIRAKVRDVT	I	IVFKNLASRPYSIYVHGVSVSKDAEGAIYPSDPKENITHGKAVEPGQVYTYKWTV			
Pseutarin C	FRQYEDGNFTKPTYAIWPKERGILGPVIRAKVRDVT	I	IVFKNLASRPYSIYVHGVSVSKDAEGAIYPSDPKENITHGKAVEPGQVYTYKWTV			
Omicarin C	FRQYEDGNFTKPTYAIWPKERGILGPVIRAKVRDVT	I	IVFKNLASRPYSIYVHGVSVSKDAEGAIYPSDPKENITHGKAVEPGQVYTYKWTV			
Oscutarin C	FRQYEDSNFTKPTYAIWPKERGILGPVIRAKVRDVT	I	IVFKNLASRPYSIYVHGVSVSKDAEGAVYPSDPKENITHGKAVEPGQVYTYKWTV			
FV	LDTDEPTVKDSECITKLYHSVDMTRDIASGLIGPLLVC	KKH	KALSVKGVQNKADVEQHAVFAVDENKSWYLEDNIKKYCSNPSTVKKDDPK			
vFV	LDTDEPTVKDSECITKLYHSVDMTRDIASGLIGPLLVC	KKH	KALSVKGVQNKADVEQHAVFAVDENKSWYLEDNIKKYCSNPASVKKDDPK			
Pseutarin C	LDTDEPTVKDSECITKLYHSVDMTRDIASGLIGPLLVC	KKH	KALSVKGVQNKADVEQHAVFAVDENKSWYLEDNIKKYCSNPASVKKDDPK			
Omicarin C	LDTDEPTVKDSECITKLYHSVDMTRDIASGLIGPLLVC	KKL	KALSVKGVQNKADVEQHAVFAVDENKSWYLEDNIKKYCSNPASVKKDDPK			
Oscutarin C	LDTDEPTVKDSECITKLYHSVDMTRDIASGLIGPLLVC	KKR	KALSIIRGVQNKADVEQHAVFAVDENKSWYLEDNIKKYCSNPSSVKKDDPK			
FV	FYKSNVMYTLNGYASDRTEVLGFHQSEVVWEHLTSVGTVDE	I	IVPVHLSGHTFLSKGKHQDILNLFPPMSGESATVTMDNLGTWLLSSWSGCEM			
vFV	FYKSNVMYTLNGYASDRTEVLRFHQSEVVQWHLTSVGTVDE	I	IVPVHLSGHTFLSKGKHQDILNLFPPMSGESATVTMDNLGTWLLSSWSGCEM			
Pseutarin C	FYKSNVMYTLNGYASDRTEVLRFHQSEVVQWHLTSVGTVDE	I	IVPVHLSGHTFLSKGKHQDILNLFPPMSGESATVTMDNLGTWLLSSWSGCEM			
Omicarin C	FYKSNVMYTLNGYASDRTEVLGFHQSEVVQWHLTSVGTVDE	I	IVPVHLSGHTFLSKGKHQDILNLFPPMSGESATVTMDNLGTWLLSSWSGCEM			
Oscutarin C	FYKSNVMYTLNGYASDRTEVWGPHQSEVVWEHLTSVGTVDE	I	IVPVHLSGHTFLSKGKHQDILNLFPPMSGESATVTMDNLGTWLLSSWSGCEM			
FV	SNGMRLRFLDANYDDEDEGNEEEEEEDDGDIFADIF	I	FPPEVVKKKEEVPVNFVDPDES	DKIAKELGLLDD	EDNQE	-ESHNVQTEDDEEQLMIA
vFV	SNGMRLRFLDANYDDEDEGNEEEEEEDDGDIFADIF	I	FPSEVVKKKEEVPVNFVDPDES	DALAKELGLLDD	EDNGE	I IQPREQTEDDEEQLMKA
Pseutarin C	SNGMRLRFLDANYDDEDEGNEEEEEEDDGDIFADIF	I	FPSEVVKKKEEVPVNFVDPDES	DALAKELGLLDD	EDNGE	I IQPREQTEDDEEQLMKA
Omicarin C	SNGMRLRFLDANYDDEDEGNEEEEEEDDGDIFADIF	I	FPSEVVKKKEEVPVNFVDPDES	DALAKELGLLDD	EDNPE	-QSRSEQTEDDEEQLMIA
Oscutarin C	SNGMRLRFLDANYDDEDEGNEEEEEEDDGDIFADIF	I	FNPEVVKKKEEVPVNFVDPDES	DALAKELGLD	EDNPK	-QSRSEQTEDDEEQLMIA
FV	TMLGFRSFKGSVAEEELNL	TALALEE	DAHASDPRIDNSARNPDDIAGRYLRTINRGNKRRYYIAAEEVLWDYSPIGKSQVRSRAAKTTFFKK			
vFV	SMLGLRSFKGSVAEEELKHTALALEE	DAHASDPRIDNSARNPDDIAGRYLRTINRGNKRRYYIAAEEVLWDYSPIGKSQVRSRAAKTTFFKK				
Pseutarin C	SMLGLRSFKGSVAEEELKHTALALEE	DAHASDPRIDNSARNPDDIAGRYLRTINRGNKRRYYIAAEEVLWDYSPIGKSQVRSRAAKTTFFKK				
Omicarin C	SMLGLRSFKGSVAEEELKHTALALEE	DAHASDPRIDNSARNPDDIAGRYLRTINRGNKRRYYIAAEEVLWDYSPIGKSQVRSRAAKTTFFKK				
Oscutarin C	SMLGLRSFKGSVAEEELKHTALALEE	DAHASDPRIDNSARNPDDIAGRYLRTINRGNKRRYYIAAEEVLWDYSPIGKSQVRSRAAKTTFFKK				
FV	AIFRSYLDDTFQTPSTGGEYEKHLGILGPI	I	IRAEVDDVIEVQFRNLASRPYSLHAHGLLYEKSSEGRSYDDKSPELFKKDDA	IMPNGTYTYV		
vFV	AIFRSYLDDTFQTPSTGGEYEKHLGILGPI	I	IRAEVDDVIEIQFRNLASRPYSLHAHGLLYEKSSEGRSYDDKSPELFKKDDA	IMPNGTYTYV		
Pseutarin C	AIFRSYLDDTFQTPSTGGEYEKHLGILGPI	I	IRAEVDDVIEIQFRNLASRPYSLHAHGLLYEKSSEGRSYDDKSPELFKKDDA	IMPNGTYTYV		
Omicarin C	AIFRSYLDDTFQTPSTGGEYEKHLGILGPI	I	IRAEVDDVIEVQFRNLASRPYSLHAHGLLYEKSSEGRSYDDNSPELFKKDDA	IMPNGTYTYV		
Oscutarin C	AIFRSYLDDTFQTPSTGGEYEKHLGILGPI	I	IRAEVDDVIEVQFRNLASRPYSLHAHGLLYEKSSEGRSYDDNSPELFKKDDA	IMPNGTYTYV		
FV	WQVPPRSGPTDNTEKCKSWAYYSGVNP	PEKDI	HSGLIGPILICQKGMIDKYNRTIDIREFVLFFMVFDEEKS	SWYFPKSDKSTRAEKLIGVQS-		
vFV	WQVPPRSGPTDNTEKCKSWAYYSGVNP	PEKDI	HSGLIGPILICQKGMIDKYNRTIDIREFVLFFMVFDEEKS	SWYFPKSDKSTCEEKLIGVQS-		
Pseutarin C	WQVPPRSGPTDNTEKCKSWAYYSGVNP	PEKDI	HSGLIGPILICQKGMIDKYNRTIDIREFVLFFMVFDEEKS	SWYFPKSDKSTCEEKLIGVQS-		
Omicarin C	WQVPPRSGPTDNTEKCKSWAYYSGVNP	PEKDI	HSGLIGPILICQKGMIDKYNRTIDIREFVLFFMVFDEEKS	SWYFPKSDKSTCEEKLIGVQS-		
Oscutarin C	WQVPPRSGPTDNTEKCKSWAYYSGVNP	PEKDI	HSGLIGPILICQKGMIDKYNRTIDIREFVLFFMVFDEEKS	SWYFPKSDKSTCEEKLIGVQS-		
FV	RHTFPAINGIPYQLQGL	TM	KDENVHWHLLNMGGPKDIHVNVFHGQTFTEEGREDNQLGVLP	PLLPGTFASIKMKPSKIGTWLLE	TEVGENQE	
vFV	LHTFPAINGIPYQLQGL	TM	KDENVHWHLLNMGGPKDIHVNVFHGQTFTEEGREDNQLGVLP	PLLPGTFASIKMKPSKIGTWLLE	TEVGENQE	
Pseutarin C	LHTFPAINGIPYQLQGL	TM	KDENVHWHLLNMGGPKDIHVNVFHGQTFTEEGREDNQLGVLP	PLLPGTFASIKMKPSKIGTWLLE	TEVGENQE	
Omicarin C	LHTFPAINGIPYQLQGL	TM	KDENVHWHLLNMGGPKDIHVNVFHGQTFTEEGREDNQLGVLP	PLLPGTFASIKMKPSKIGTWLLE	TEVGENQE	
Oscutarin C	LHTFPAINGIPYQLQGL	MM	KDENVHWHLLNMGGPKDIHVNVFHGQTFTEEGREDNQLGVLP	PLLPGTFASIKMKPSKIGTWLLE	TEVGENQE	
FV	RGMQALFTVIDKCKLPMGLASGI	IQDSQISASGHVGYWEPKLARLNNTGKYN	AWSI	IKKEHEHPWQIDLQRQVVITGIQTQGAMQLLKHL		
vFV	RGMQALFTVIDKCKLPMGLASGI	IQDSQISASGHVGYWEPKLARLNNTAFN	AWSI	IKKEHEHPWQIDLQRQVVITGIQTQGTQVQLLQHS		
Pseutarin C	RGMQALFTVIDKCKLPMGLASGI	IQDSQISASGHVGYWEPKLARLNNTGKYN	AWSI	IKKEHEHPWQIDLQRQVVITGIQTQGTQVQLLQHS		
Omicarin C	RGMQALFTVIDKCKLPMGLASGI	IQDSQISASGHVGYWEPKLARLNNTGMFN	AWSI	IKKEHEHPWQIDLQRQVVITGIQTQGTQVQLLKHS		
Oscutarin C	RGMQALFTVIDKCKLPMGLASGI	IQDSQISASGHVGYWEPKLARLNNTGMFN	AWSI	IKKEHEHPWQIDLQRQVVITGIQTQGTQVQLLKHS		
FV	YTVEYFVTYSKDGQNWIT	FKGRHSETQMH	FEGNSDGT	TVKENHIDPPIIARYIRLHPTKFYNRPTFRIELLG	CEVEGC	SVPLGMESGAIKNS
vFV	YTVEYFVTYSBDGQNWIT	FKGRHSETQMH	FEGNSDGT	TVKENHIDPPIIARYIRLHPTKFYNRPTFRIELLG	CEVEGC	SVPLGMESGAIKNS
Pseutarin C	YTVEYFVTYSBDGQNWIT	FKGRHSETQMH	FEGNSDGT	TVKENHIDPPIIARYIRLHPTKFYNRPTFRIELLG	CEVEGC	SVPLGMESGAIKNS
Omicarin C	YTVEYFVTYSKDGQNWIT	FKGRHSETQMH	FEGNSDGT	TVKENHIDPPIIARYIRLHPTKFYNTPTFRIELLG	CEVEGC	SVPLGMESGAIKNS
Oscutarin C	YTVEYFVTYSKDGQNWIT	FKGRHSETQMH	FEGNSDGT	TVKENHIDPPIIARYIRLHPTKFYNTPTFRIELLG	CEVEGC	SVPLGMESGAIKNS
FV	EITASSYKKTWWSSWEPFLARLN	LKGR	TNAWQPKVNNKDQWLQIDLQHLTKITS	II	TQGATSMTTSMYVKTFSIHYTDDNSTWKPYLDVRTS	
vFV	EITASSYKKTWWSSWEPFLARLN	LKGR	TNAWQPEVNNKDQWLQIDLQHLTKITS	II	TQGATSMTTSMYVKTFSIHYTDDNSTWKPYLDVRTS	
Pseutarin C	EITASSYKKTWWSSWEPFLARLN	LKGR	TNAWQPEVNNKDQWLQIDLQHLTKITS	II	TQGATSMTTSMYVKTFSIHYTDDNSTWKPYLDVRTS	
Omicarin C	EITASSYKKTWWSSWEPFLARLN	LKGR	TNAWQPKVNNKDQWLQIDLQHLTKITS	II	TQGATSMTTSMYVKTFSIHYTDDNSTWKPYLDVRTS	
Oscutarin C	EITASSYKKTWWSSWEPFLARLN	LKGR	TNAWQPKVNNKDQWLQIDLQHLTKITS	II	TQGATSMTTSMYVKTFSIHYTDDNSTWKPYLDVRTS	
FV	MEKVFTGNINSDGHVKHFFKPPILSR	FIRII	PKTNWQYIALRIELFG	CEVF		
vFV	MEKVFTGNINSDGHVKHFFKPPILSR	FIRII	PKTNWQYIALRIELFG	CEVF		
Pseutarin C	MEKVFTGNINSDGHVKHFFKPPILSR	FIRII	PKTNWQYIALRIELFG	CEVF		
Omicarin C	MEKVFTGNINSDGHVKHFFKPPILSR	FIRII	PKTNWQYIALRIELFG	CEVF		
Oscutarin C	MEKVFTGNINSDGHVKHFFNPILSR	FIRII	PKTNWQYIALRIELFG	CEVF		

F Coagulation factor X

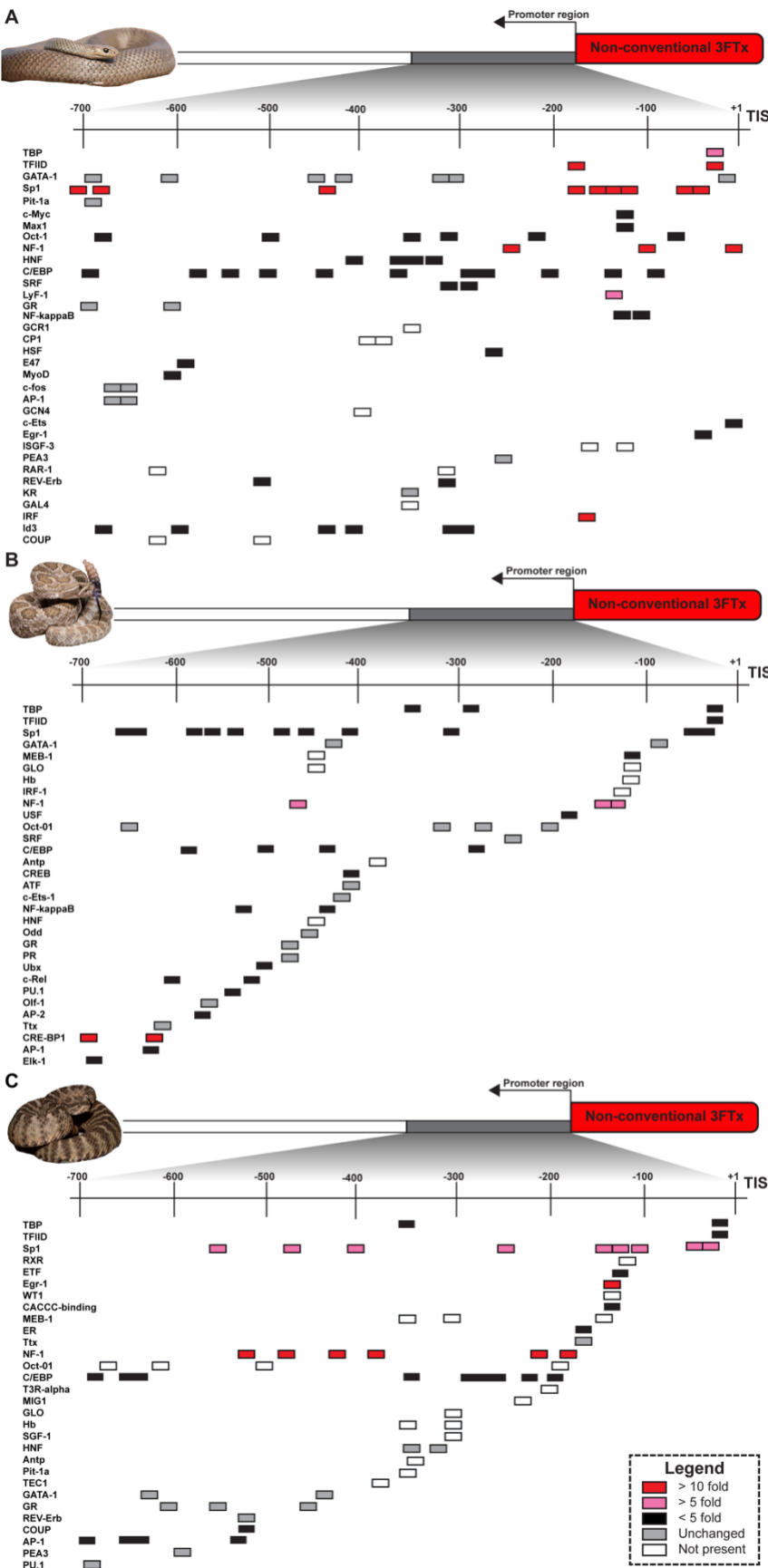
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Oscutarin C	NVFLKSKVANRFLQRTKRANSLYEEFRSGNIERE	C	IEERC	SKEEAREVFEDDEKTETFWNVYVDGQC	SSNP	CHYRGTC	KD	GIGSYTCTCLS
FX isoform 2	NVFLKSKVANRFLQRTKRANSLVEEFSGNIERE	C	IEERC	SKEEAREAFEDDEKTETFWNVYVDGQC	SSNP	CHYRGTC	KD	GIGSYTCTCLS

vFX	NVFLKSKVANRFLQRTKRANSLVEEFKSGNIERE	IEERCSKEEAREVFEDDEKTETFWNVYVDGQ	CSSNPCHYRGICKDYGISYTC	CLSL
Pseutarin C	NVFLKSKVANRFLQRTKRANSLVEEFKSGNIERE	IEERCSKEEAREVFEDDEKTETFWNVYVDGQ	CSSNPCHYRGICKDYGISYTC	CLSL
Tr FX	NVFLKSKVANRFLQRTKRANSLVEEFKAGNIERE	IEERCSKEEAREAFEDNEKTETFWNVYVDGQ	CSSNPCHYGGTCKDYGISYTC	CLSL
FX isoform 1	NVFLKSKVANRFLQRTKRANSLVEEFKSGNIERE	IEERCSKEEAREAFEDDEKTETFWNVYVDGQ	CSSNPCHYGGTCKDYGISYTC	CLSL
Porpharin D	NVFLKSKVANRFLQRTKRANSLVEEFKSGNIERE	IEERCSKEEAREAFEDNEKTETFWNVYVDGQ	CSSNPCHYGGTCKDYGISYTC	CLSL
Noteccarin D	NVFLKSKVANRFLQRTKRANSLVEEFKSGNIERE	IEERCSKEEAREAFEDNEKTETFWNVYVDGQ	CSSNPCHYGGTCKDYGISYTC	CLSL
Troccarin D	NVFLKSKVANRFLQRTKRANSLVEEFKSGNIERE	IEERCSKEEAREAFEDNEKTETFWNVYVDGQ	CSSNPCHYGGTCKDYGISYTC	CLSL
Omicarin C	GYEGKNCERVLYKSRVDNNGNCWHFCKPVQNDIQ	CSAEGYLLGEDGHSCVAGGNFSCGRNIKTRNKREASLPDF	-----	
Oscutarin C	GYEGKNCERVLYKSRVDNNGNCWHFCKPVQNDIQ	CSAEGYLLGEDGHSCVAGGNFSCGRNIKTRNKREASLPDF	-----	
FX isoform 2	GYEGKNCERVLYKSRVDNNGNCWHFCKHVQNDIQ	CSAEGYLLGEDGHSCVAGGNFSCGRNIKTRNKREASLPDF	-----	
vFX	GYEGKNCERVLYKSRVDNNGNCWHFCKSVQNDIQ	CSAEGYLLGEDGHSCVAGGNFSCGRNIKTRNKREASLPDF	-----	
Pseutarin C	GYEGKNCERVLYKSRVDNNGNCWHFCKSVQNDIQ	CSAEGYLLGEDGHSCVAGGNFSCGRNIKTRNKREASLPDF	-----	
Tr FX	GYEGKNCQVLYKSRVDNNGNCWHFCKPVQNEIQ	CSAESYLLGDDGYSVAGGDFSCGRNIKARNKREASLPDF	QTFDSDDYDAIDENN	FV
FX isoform 1	GYEGKNCQVLYKSRVDNNGNCWHFCKPVQNEIQ	CSAESYLLGDDGYSVAGGDFSCGRNIKARNKREASLPDF	QTFDSDDYDAIDENN	FV
Porpharin D	NYEGKNCQVLYKSRVDNNGNCWHFCKPVQNEIQ	CSAESYLLGDDGYSVAGGDFSCGRNIKARNKREASLPDF	-----	
Noteccarin D	NYEGKNCQVLYKSRVDNNGNCWHFCKPVQNEIQ	CSAESYLLGDDGYSVAGGDFSCGRNIKARNKREASLPDF	-----	
Troccarin D	NYEGKNCQVLYKSRVDNNGNCWHFCKPVQNEIQ	CSAESYLLGDDGYSVAGGDFSCGRNIKARNKREASLPDF	-----	
Omicarin C	-----VQSQNATLLKKSNDNPSDIRIVNGMD	CKLGECPWQAVLVDEKEGVFCGGTILSPIYVLTAAH	CINQTEKISVVVGEIDKS	
Oscutarin C	-----VQSQNATLLKKSNDNPSDIRIVNGMD	CKLGECPWQAVLVDEKEGVFCGGTILSPIYVLTAAH	CINQTKMISVVVGEINIS	
FX isoform 2	-----VQSQNATLLKKSNDNPSDIRIVNGMD	CKLGECPWQAVLVDEKEGVFCGGTILSPIYVLTAAH	CINETETISVVVGEIDKS	
vFX	-----VQSQNATLLKKSNDNPSDIRIVNGMD	CKLGECPWQAVLVDEKEGVFCGGTILSPIYVLTAAH	CINETETISVVVGEIDKS	
Pseutarin C	-----VQSHNATLLKKSNDNPSDIRIVNGMD	CKLGECPWQAVLVDEKEGVFCGGTILSPIYVLTAAH	CINETETISVVVGEIDRS	
Tr FX	ETPTNFSGLVPTVQSQNATLLKKSNDNPSDIRIVNGMD	CKLGECPWQALLINDQDGFCCGGTILSPIYVLTAAH	CINQTKYIRVVVGEIDIS	
FX isoform 1	ETPTNFSGLVPTVQSQNATLLKKSNDNPSDIRIVNGMD	CKLGECPWQALLINDQDGFCCGGTILSPIYVLTAAH	CINQTKYIRVVVGEIDIS	
Porpharin D	-----VQSQNATLLKKSNDNPSDIRIVNGMD	CKLGECPWQAVLLDKEGVFCGGTILSPIYVLTAAH	CITQSKHISVVVGEIDIS	
Noteccarin D	-----VQSQKATLLKKSNDNPSDIRIVNGMD	CKLGECPWQAVLLINEKEGVFCGGTILSPIHVLTAH	CINQTKSVSVIVGEIDIS	
Troccarin D	-----VQSQKATLLKKSNDNPSDIRIVNGMD	CKLGECPWQAVLLINEKEGVFCGGTILSPIHVLTAH	CINQTKSVSVIVGEIDIS	
Omicarin C	RVETGHLISVDKIYVHKFVPPKRGYFYEKFDLVSYDYDIAI	IQMKTPIQFSENVVPA	CLPTADFANQVLMKQDFGIISGFGRIFEKGPKS	
Oscutarin C	RKNPGRLLSVDKIYVHKFVPPKRGYFYEKFDLVSYDYDIAI	IQMKTPIQFSENVVPA	CLPTADFANQVLMKQDFGIISGFGRIFEKGPKS	
FX isoform 2	RIETGPLLSVDKIYVHKFVPPKQAY----	KFDLAAYDYDIAI	IQMKTPIQFSENVVPA	CLPTADFANQVLMKQDFGIISGFGRIFEKGPKS
vFX	RVETGHLISVDKIYVHKFVPPKRGYFYEKFDLVSYDYDIAI	IQMKTPIQFSENVVPA	CLPTADFANQVLMKQDFGIISGFGRIFEKGPKS	
Pseutarin C	RAETGPLLSVDKIYVHKFVPPKRGYFYEKFDLVSYDYDIAI	IQMKTPIQFSENVVPA	CLPTADFANQVLMKQDFGIISGFGRIFEKGPKS	
Tr FX	RKKTGRLLSVDKIYVHKFVPPKQAY----	STYDYDIAI	IQMKTPIQFSENVVPA	CLPTADFANQVLMKQDFGIISGFGRIFEKGPKS
FX isoform 1	SKKTGRLLSVDKIYVHKFVPPKQAY----	ATYDYDIAI	IQMKTPIQFSENVVPA	CLPTADFANQVLMKQDFGIISGFGRIFEKGPKS
Porpharin D	RKETRHLISVDKAYVHTKFFV-----	LATYDYDIAI	IQMKTPIQFSENVVPA	CLPTADFANQVLMKQDFGIISGFGRIFEKGPKS
Noteccarin D	RKETRHLISVDKIYVHTKFFVPPNYYY--VHQNFDRVAYDYDIAI	IRMKTPIQFSENVVPA	CLPTADFANQVLMKQDFGIISGFGRIFEKGPKS	
Troccarin D	RKETRHLISVDKIYVHTKFFVPPNYYY--VHQNFDRVAYDYDIAI	IRMKTPIQFSENVVPA	CLPTADFANQVLMKQDFGIISGFGRIFEKGPKS	
Omicarin C	NTLKVLKVPYVDRHTCMVSSSPITPTMFCAGYDTLPQDA	QGDSSGGPHITAYRDTHTFITGIVSWGEG	CAQTKGYGYVTKVS	
Oscutarin C	NTLKVLKVPYVDRHTCMVSSSPITPTMFCAGYDTLPQDA	QGDSSGGPHITAYRDTHTFITGIVSWGEG	CAQTKGYGYVTKVS	
FX isoform 2	NTLKVLKVPYVDRHTCMVSSSPITPTMFCAGYDTLPQDA	QGDSSGGPHITAYRDTHTFITGIVSWGEG	CAQTKGYGYVTKVS	
vFX	NTLKVLKVPYVDRHTCMVSSSPITPTMFCAGYDTLPQDA	QGDSSGGPHITAYRDTHTFITGIVSWGEG	CAQTKGYGYVTKVS	
Pseutarin C	NTLKVLKVPYVDRHTCMVSSSPITPTMFCAGYDTLPQDA	QGDSSGGPHITAYRDTHTFITGIVSWGEG	CAQTKGYGYVTKVS	
Tr FX	NTLKVVTLVPYVDRHTCMVSSSPITPTMFCAGYDTLPQDA	QGDSSGGPHITAYRDTHTFITGIVSWGEG	CAQTKGYGYVTKVS	
FX isoform 1	NTLKVVTLVPYVDRHTCMVSSSPITPTMFCAGYDTLPQDA	QGDSSGGPHITAYRDTHTFITGIVSWGEG	CAQTKGYGYVTKVS	
Porpharin D	NTLKVVTLVPYVDRHTCMVSSDFRITPTMFCAGYDTLPQDA	QGDSSGGPHITAYRDTHTFITGIVSWGEG	CAQTKGYGYVTKVS	
Noteccarin D	NTLKVVTLVPYVDRHTCMVSSDFRITPTMFCAGYDTLPQDA	QGDSSGGPHITAYRDTHTFITGIVSWGEG	CAQTKGYGYVTKVS	
Troccarin D	NTLKVVTLVPYVDRHTCMVSSDFRITPTMFCAGYDTLPQDA	QGDSSGGPHITAYRDTHTFITGIVSWGEG	CAQTKGYGYVTKVS	
Omicarin C	KFILWIKRIMRQKLPSTESSTGRL			
Oscutarin C	KFILWIKRIMRQKLPSTESSTGRL			
FX isoform 2	KFIPWIKRIMRQKLPSTESSTGRL			
vFX	KFIPWIKRIMRQKLPSTESSTGRL			
Pseutarin C	KFIPWIKRIMRQKLPSTESSTGRL			
Tr FX	RFLWIKRIMRQKLPSTESSTGRL			
FX isoform 1	KFILWIKRIMRQKLPSTESSTGRL			
Porpharin D	NFIPWIKRIMRQKLPSTESSTGRL			
Noteccarin D	RFLWIKRIMRQKLPSTESSTGRL			
Troccarin D	KFILWIKRIMRQKLPSTESSTGRL			

Supplemental Figure 2. Multiple sequence alignments of all major venom protein sequences translated from *Pseudonaja textilis* venom gland transcripts. A) Alignment of protein sequences from *P. textilis* three-finger toxin transcripts (3FTx_1 - 3FTx_14; this study), *Pseudonaja*_LC (A8HDK6; long neurotoxin 1), *Pseudonaja*toxin b (P13495), *Pseudonaja*toxin b homolog (Q9W7J5), short-chain neurotoxin 1/ 5 (*P. textilis*_SC1/5; Q9W7K2), short-chain neurotoxin 2 (*P. textilis*_SC2; Q9W7K1), short-chain neurotoxin 3 (*P. textilis*_SC3; Q9W7K0), short-chain neurotoxin 4 (*P. textilis*_SC4; Q9W7J9), short-chain neurotoxin 6 (*P. textilis*_SC6; Q9W7J7), short-chain neurotoxin 7 (*P. textilis*_SC7; Q9W7J6), and short-chain neurotoxin 8 (*P. textilis*_SC8; A8HDK1). Three-finger toxin sequences (long-chain) from Australian species *Austrelaps superbus* (A8S6A8), *Demansia vestigiata* (A6MFK4), *Drysdalia coronoides* (F8J2D7), *Notechis scutatus* (P01384), and *Oxyuranus microlepidotus* (A7X4Q3). Three-finger toxin sequences (short-chain) from Australian species *D. coronoides* (F8J2G3) and *O. microlepidotus* (A7X4S7).

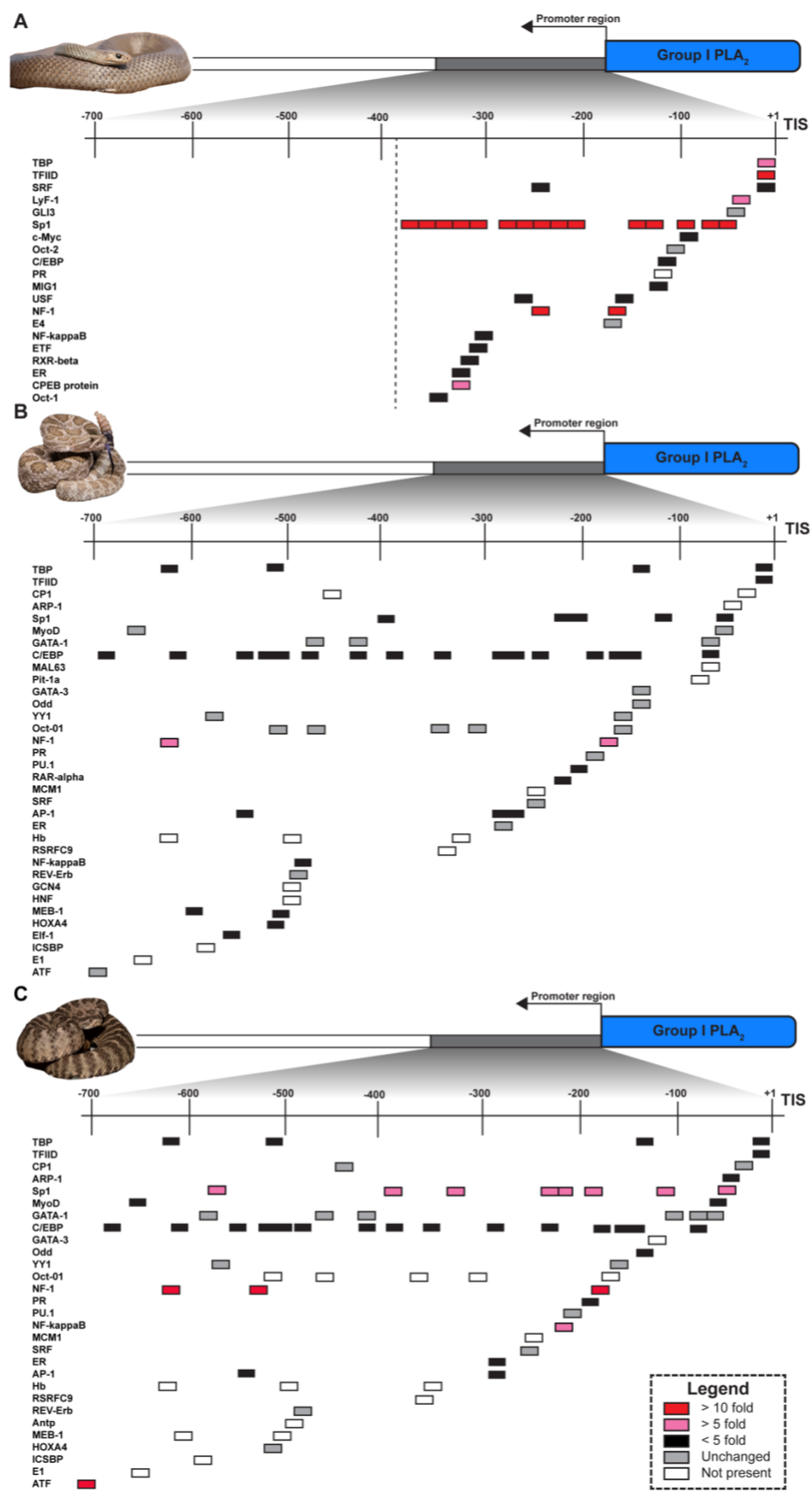
B) Alignment of protein sequences from cysteine-rich secretory proteins from *P. textilis* (CRISP_1; this study), *P. textilis* pseudetoxin-like (Q3SB05), and Australian species *A. superbis* (A8S6B6), *D. coronoides* (F8J2D4), *N. scutatus* (Q3SB04), *O. microlepidotus* (Q3SB06), *P. australis* pseudetoxin (Q8AVA4), and *P. porphyriacus* (Q8AVA3). C) Alignment of protein sequences from Kunitz-type serine protease inhibitors from *P. textilis* venom transcripts (KUN_1-4; this study), textilinin-1 (Q90WA1), textilinin-2 (Q90WA0), textilinin-3 (Q90W99), textilinin-4 (Q90W98), textilinin-5 (Q90W97), textilinin-6 (Q90W96), textilinin-7 (B5L5Q1), and Australian species *O. microlepidotus* (Microlepidin-3; B5KL27), *O. scutellatus* (Scutellin-3; B5KL29) and *Pseudechis australis* (Mulgin-3; Q6ITB9). D) Alignment of protein sequences from *P. textilis* phospholipase A₂ (PLA₂) transcripts (PLA₂_1-3; this study), textilotoxin subunit A (P23026), textilotoxin subunit B (P23027), textilotoxin subunit C (P30811), textilotoxin subunit D (P23028), *P. textilis* acidic phospholipase A₂ 1 (Pseudonaja_1; Q9W7J4), *P. textilis* acidic phospholipase A₂ 2 (Pseudonaja_2; Q9W7J3), and PLA₂s from Australian species *A. superbis* (Q9PUG7), *N. scutatus* (Q9PSN5), *Oxyuranus scutellatus* (Q4VRI5), and *Tropidechis carinatus* (Q45Z25). E) Alignment of protein sequences from pseutarin C venom factor V (vFV; this study), characterized pseutarin C venom factor V (Q7SZN0), *P. textilis* coagulation factor V (Q593B6), and non-catalytic subunits of prothrombin activators in *O. microlepidotus* (omicarin C; Q58L90) and *O. scutellatus* (oscutarin C; Q58L91). F) Alignment of protein sequences from pseutarin C venom factor X (vFX; this study), characterized pseutarin C venom factor X (Q56VR3), *P. textilis* coagulation factor X isoform 1 (FX isoform 1; Q1L659), *P. textilis* coagulation factor X isoform 2 (FX isoform 2; Q1L658), *T. carinatus* coagulation factor X (Tr FX; Q4QXT9) and catalytic subunits of prothrombin activators in *N. scutatus* (Notecarin D1; P82807), *O. microlepidotus* (omicarin C; Q58L95), *O. scutellatus* (oscutarin C; Q58L96), *Pseudechis porphyriacus* (porpharin D; Q58L93), and *T. carinatus* (trocarin D; P81428).

Supplemental Figure 3



Supplemental Figure 3. Predicted *cis*-regulatory elements in the promoter regions of non-conventional three-finger toxin genes and homologs in an elapid and viperids. *Cis*-regulatory elements (CREs) were predicted 713 bp upstream from what would be the transcription initiation site (TIS) for the (A) *Pseudonaja textilis* non-conventional three-finger toxin (3FTx) (XP_026561523) present in the genome. Non-conventional 3FTxs or plesiotypic 3FTx-like homologs are present in viperid genomes, and 700 bp upstream from what would be the TIS of the closest *P. textilis* non-conventional 3FTx homologs in (B) *Crotalus viridis* and (C) *C. tigris* (XM_039332037.1; LOC120302985) were also evaluated for CREs. Fold-changes in expression levels of *trans*-factors known to interact with predicted CREs are shown between the *P. textilis* and viperid milked and unmilked venom glands (96 hours post venom milking). CRE predictions were completed with the online server AliBaba2.1 using the TRANSFAC 4.0 database. Photo credits: *P. textilis*, Ákos Lumnitzer; *C. viridis*, Wolfgang Wüster; *C. tigris*, Ben Lowe.

Supplemental Figure 4



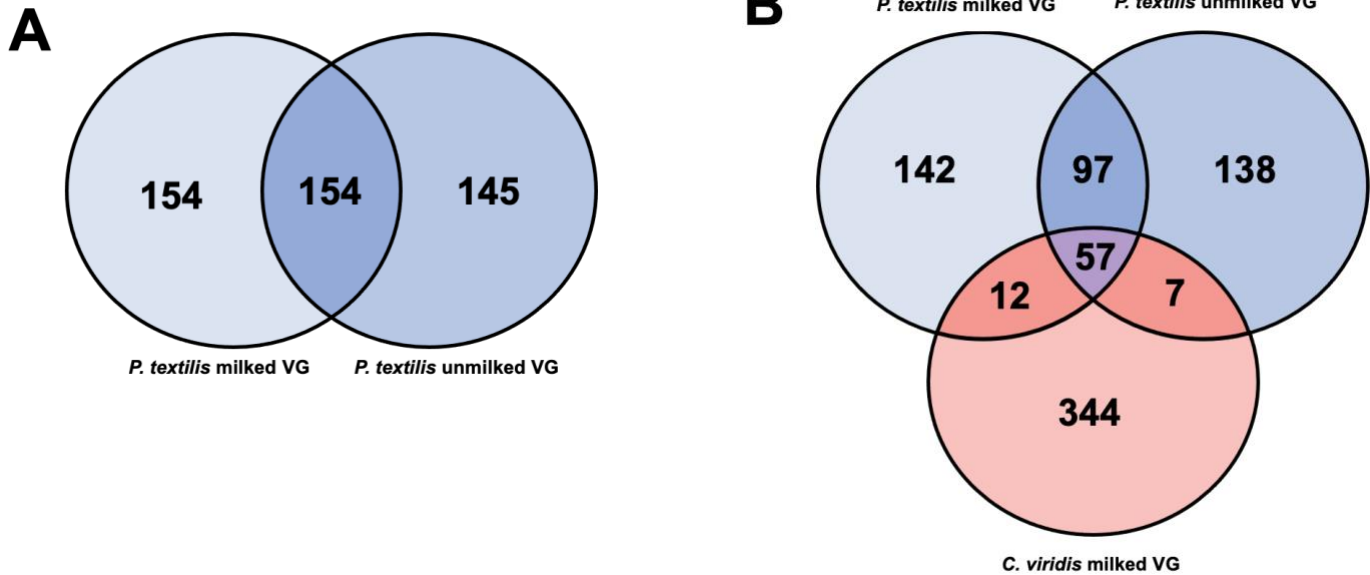
Supplemental Figure 4. Predicted *cis*-regulatory elements in the promoter regions of group I phospholipase A₂ genes and homologs in an elapid and viperids. From the *Pseudonaja textilis* genome, 385 bp upstream from the transcription initiation site (TIS) for (A) group IB phospholipase A₂ (PLA₂) in *P. textilis* (AY027495) was evaluated for *cis*-regulatory elements (CREs). Group I PLA₂ homologs are present in viperid genomes, and 700 bp upstream from what would be the TIS of the closest *P. textilis* group I PLA₂ (AY027495) homologs in (B) *Crotalus viridis* and (C) *C. tigris* (XM_039332037.1; LOC120302985) were also evaluated for CREs. Fold-changes in expression levels of *trans*-factors known to interact with predicted CREs are shown between the *P. textilis* and viperid milked and unmilked venom glands (96 hours post venom milking). CRE predictions were completed with the online server AliBaba2.1 using the TRANSFAC 4.0 database. Photo credits: *P. textilis*, Ákos Lumnitz; *C. viridis*, Wolfgang Wüster; *C. tigris*, Ben Lowe.

Supplemental Figure 5

		Oct-1	Up2	Sup1	c/EBP	
Trocarin	TAGTGTACTT	GGTTTGCATACTCG	TAATACTGCATTC	CTA	TTGGACAGATACC	ATCGCTTA 60
Pseutarin	TAGTGTACTT	GGTTTGCATACTC	AATAACTGCATTC	CTA	TTGGACAGATACTAT	CGCTTA 60
	*****	*****	*****	*****	*****	*****
		GATA-1	Up1	Sp1	TBP/HNF/c/EBP	
Trocarin	ACGATTG	G	TAGATAACAA	CAGTTCTAATTGGCCGC	CTAAGCGATGGGAGT	TTTAAATAAA 120
Pseutarin	ACGATTG	G	TAGATAACAA	CAGTTCTAATTG	GACGCCTAAGCAGTGGGAGT	TTTAAATAAA 120
	*****	*****	*****	*****	*****	*****
				SRF/TBP/TFIID	Sp1	
Trocarin	TGCCATTGGTTGCGAGCCGCGAGCAGCC	GCTATAAAAG	GGCTGCCGCGC	CTCGACTTTA 180		
Pseutarin	TGCCATTGGTTGCGAGCCGCGAGCAGCC	GCTATAAAAG	GGCTGCCGCGC	CTCGACTTTA 180		
	*****	*****	*****	*****	*****	*****
		HNF/c/EBP			c/EBP	LEF1
Trocarin	GTTGAAGTTACTGA	CAGTTAATAAA	AGAGCTGAATTCAACTCCGGTCTCGAG	TCTGCTTTT 240		
Pseutarin	GTTGAAGTTACTGA	CAGTTAATAAA	AGAGCTGAATTCAACTCCGGTCTCGAG	TCTGCTTTG 240		
	*****	*****	*****	*****	*****	*****
		GR	GR			
Trocarin	GTTCTG	SCGACAGAA	CAAGAAC	-----		
Pseutarin	TTCTGGC	-GATAGAA	CAAGAACA	GAAGACTG		
	*	*	**	*****		

Supplemental Figure 5. Alignments of the two *VERSE* core promoter sequences from pseutarin C (*Pseudonaja textilis*) and trocarin D (*Tropidechis carinatus*) with predicted *cis*-regulatory elements. Three regulatory regions have been identified in this *VERSE* core promoter, two that upregulate venom factor X expression (Up1 and Up2, highlighted in red) and one that suppresses expression (Sup1, highlighted in teal) [40]. *Cis*-regulatory element (CRE) predictions were completed with the online server AliBaba2.1 using the TRANSFAC 4.0 database. *Trans*-regulatory factors that bind to CREs that were upregulated more than 10-fold in the venom gland of *P. textilis* after venom milking are colored in red.

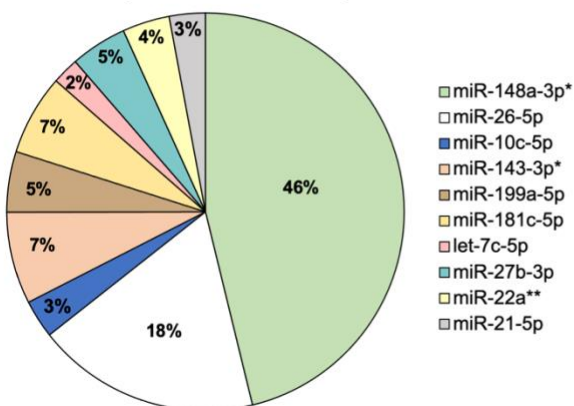
Supplemental Figure 6



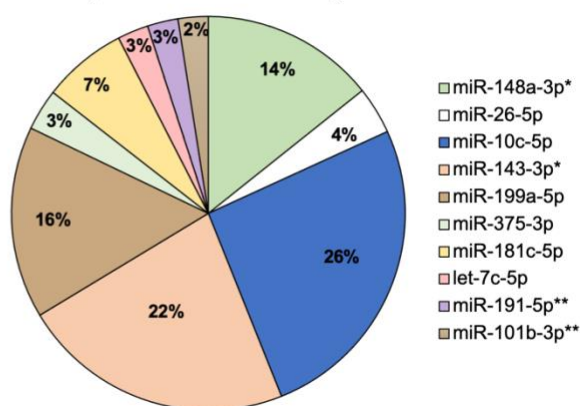
Supplemental Figure 6. Conservation of microRNAs between milked and unmilked *Pseudonaja textilis* venom glands and a milked *Crotalus viridis* venom gland. (A) There were approximately equal numbers of common and unique mature miRNA sequences in the milked and unmilked *P. textilis* venom glands. (B) Only 76 miRNAs were common to both *P. textilis* venom glands and the *Crotalus viridis* venom gland. VG = venom gland.

Supplemental Figure 7

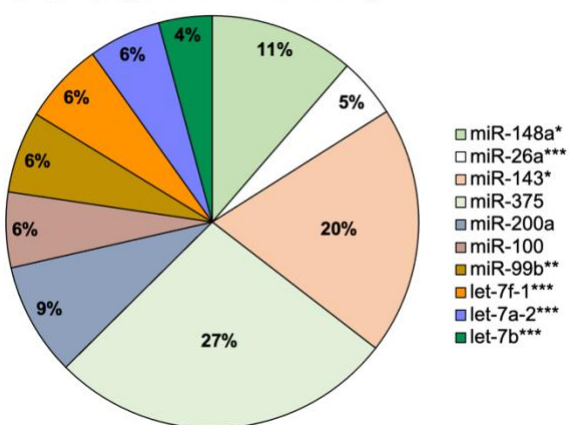
A *Pseudonaja textilis*: Milked venom gland



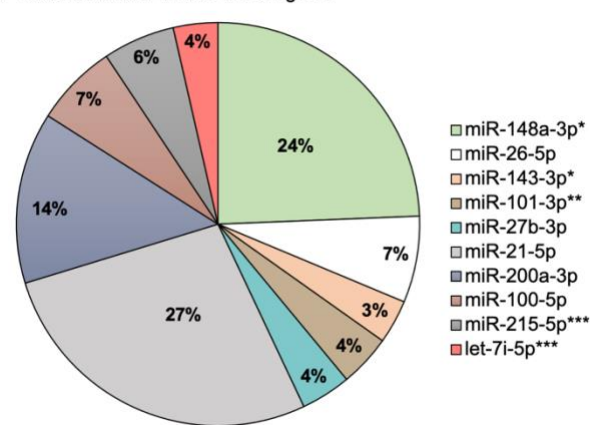
B *Pseudonaja textilis*: Unmilked venom gland



C *Ophiophagus hannah*: Milked venom gland

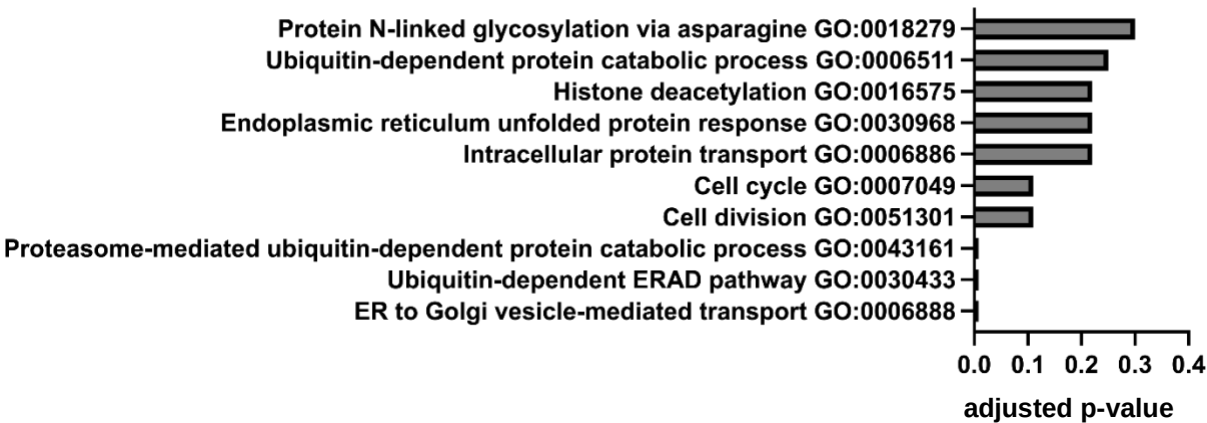


D *Crotalus viridis*: Milked venom gland



Supplemental Figure 7. Abundances of the top ten expressed miRNAs in snake venom glands. Shown are the expression percentages for each of the top ten miRNAs in the (A) *Pseudonaja textilis* milked venom gland, (B) *P. textilis* unmilked venom gland, (C) *Ophiophagus hannah* milked venom gland, and (D) *Crotalus viridis* milked venom gland. * = miRNAs that are in the top ten most abundant miRNAs for all species, ** = miRNAs shared between species, but not in the top ten for all, and *** = miRNAs that are species-specific.

Supplemental Figure 8



Supplemental Figure 8. Biological processes associated with the transcripts targeted by *Pte-miR-1*. Analysis was completed using DAVID Bioinformatics Resources [73, 74] and Benjamini-Hochberg adjusted p-values used for identifying levels of significance for each biological process.