

Supplementary material S2

Comparative proteomics of geographically distinct saw-scaled viper (*Echis carinatus*)  
venoms from India

Siddharth Bhatia, Karthikeyan Vasudevan\*

CSIR-Centre for Cellular and molecular biology, Laboratory for the Conservation of  
Endangered Species, Hyderabad, India  
Email: karthik@ccmb.res.in

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Supplementary Table 1: Assignment of peptides sequenced from MS/MS spectra against protein database from *Echis* genus for ECVTN. Relative abundance of each protein from HPLC fractions were estimated by taking sum of precursor abundance of all peptides matched to respective proteins.

Peak no.	Mol. Wt. by SDS-PAGE		Peak fraction	Protein Information							Peptide Information					
	Reducing (-kDa)	Non-reducing (-kDa)		Accession	Description	Toxin family	# Unique Peptides	Coverage [%]	MW [kDa]	Score Sequest HT	Sum of precursors Abundances	Relative abundance	Relative fraction of proteins	Sequence	Charge	m/z [Da]
1 to 3	n.f	n.f		P17347.2	Disintegrin echistatin-abha	Disintegrin	1	78	5.4	16.97	1960729.875			FLKEGTICKR GDDMDDYCNGKTCDCPR ARGDDMDDYCNGK QCESGPPCR	3 3 3 2	417.9010 693.9110 511.5300 577.7055
4	16	14 and 12	0.042176	AAW82478.1	Disintegrin, partial [Echis carinatus]	Disintegrin	3	86	7.1	131.72	1810944746	0.99198393	0.0418379	EGEHCISGPCCR FLNAGTICKR NSVHPCCDPVK AML DGLHDYCTGVTSDCPR NCKFLNAGTICK	3 2 2 3 3	487.8596 590.3134 656.7917 728.6441 475.9034
				ADI47722.1	Disintegrin domain of metalloproteinase [Echis carinatus sochureki]	Disintegrin domain (P-II svMP)	2	4	53.6	41.7	14633958	0.00801607	0.0003381	RAVGDDMDDYCISGTPDCPR	3	772.6488
5	25	12	0.051094	AAW82478.1	disintegrin, partial [Echis carinatus]	Disintegrin	7	92	7.1	90.8	313833205.3	0.87976949	0.0449509	FLNAGTICK AML DGLHDYCTGVTSDCPR EGEHCISGPCCR NSVHPCCDPVK RAMLDGLHDYCTGVTSDCPR NSVHPCCDPVKCEPR NCKFLNAGTICK	2 3 2 2 3 3 3	512.2694 723.3123 731.2863 656.7914 780.6779 618.9397 475.9031
				CAJ40966.1	MLD-containing dimeric disintegrin EO5A subunit precursor [Echis ocellatus]	Disintegrin	3	35	12.4	8.25	2611245.023	0.00732011	0.000374	TMLDGLNDYCTGVTSDCPR FLNSGTICK	3 3	730.9695 520.2657
				ADI47722.1	Disintegrin domain of metalloproteinase [Echis carinatus sochureki]	Disintegrin domain (P-II svMP)	2	4	53.6	46.17	40277634.09	0.1129104	0.005769	RAVGDDMDDYCISGTPDCPR	3	772.6483
6	25	25	0.032221	ADI47583.1	DC domain of metalloproteinase [Echis carinatus sochureki]	DC domain (P-III svMP)	7	15	46.1	157.77	1539583047	0.98029612	0.0315861	LFCEIHK FMSAQTECRPTR AESFYCR KENDVMIPCAPEDVK	2 2 2 3	461.7571 742.3431 548.2325 582.2799
				ADI47625.1	DC domain of metalloproteinase [Echis coloratus]	DC domain (P-III svMP)	3	5	68	7.92	12309335.72	0.0078377	0.0002525	KENDVLIPCAQDDVK YPYGDEGMVDPGK	3 2	586.9526 764.8389
				CAJ01683.1	DC domain of group III snake venom metalloproteinase [Echis ocellatus]	DC domain (P-III svMP)	2	4	68.9	6.4	18636174.69	0.01186618	0.0003823	YDYSENPYGMVEEGTK	2	1006.908
7	smeared around 27-35	27 and 14	0.015235	ADI47586.1	DC domain of metalloproteinase [Echis carinatus sochureki]	DC domain (P-III svMP)	2	3	69.1	1.71	8237477.813	0.12709357	0.0019363	WRLSDLLNRR	2	665.8593
				JAC88974.1	nerve growth factor a [Echis coloratus]	NGF	4	16	27.2	16.87	56576800.79	0.87290643	0.0132987	ALTMEGNQASWR QYFFETK NSNPVPSGCR INTACVCVSR	2 2 2 2	682.3253 482.2267 544.251 646.8278
8	54, 43, and 27	27	0.006168	ADW54339.1	group III snake venom metalloproteinase [Echis ocellatus]	P-III svMP	2	4	72.8	32.3	568951191.1	0.95700306	0.0059028	ANEEDKGMVDEGTK	2	762.33
				ADI47586.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	3	5	69.1	6.79	3955986.188	0.00665416	4.104E-05	LGNTYAYCR LYCFDNLPEHK WRLSDLLNRR	2 3 2	559.7454 479.2268 665.3677
				JAC88974.1	nerve growth factor a [Echis coloratus]	NGF	2	8	27.2	3.37	21606270	0.03634278	0.0002242	ALTMEGNQASWR QYFFETK	2 2	682.3252 481.7334
9	14	14	0.044002	pdb11OZ6IA	A Chain A, Phospholipase A2	PLA2	12	69	13.7	177.03	15326356178	0.99295257	0.0436919	NLYQFGR MTLYSYR EAAICLGENVNTYDKK FENGDIICDNK NLYQFGRMIWNR TGKLPILSYGSYCYGCGWGGQGGPPK FENGDIICDNKDPCKR MIWNRGTGK VGDCSPKMTLYSYR	2 2 3 2 2 3 3 3 3	449.232 475.2262 608.9648 662.797 799.4103 901.7354 660.9892 503.2687 564.9321
				ADI47583.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	2	25	39	28.24	1353541.5	8.7692E-05	3.859E-06	IPNSEAHAVYK GETYFIEPLK EITTNPLVK	3 2 2	410.2167 598.8138 507.7953
				ADI47586.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	9	69.1	21.94	15651210.51	0.001014	4.462E-05	YEDTMQYEFK WRLSDLLNRR GEAVVLHLEK	2 2 2	677.2865 665.367 547.8152
				CAA55566.1	metalloprotease, partial [Echis pyramidum]	P-III svMP	2	6	61.9	16.84	759540.2578	4.9209E-05	2.165E-06	IPDSEAHAVYK GEPVVLHLQK YENIEKEDQAPK	2 3 3	615.3122 560.8212 488.8999
				JAC88974.1	nerve growth factor a [Echis coloratus]	NGF	3	12	27.2	15.16	88733444.13	0.0057488	0.000253	NSNPVPSGCR QYFFETK	2 2	544.2534 481.7339
				AAN77202.1	acidic phospholipase A2 [Echis carinatus sochureki]	PLA2	2	21	15.9	73.44	1592905.438	0.0001032	4.541E-06	ALTMEGNQASWR MTLYSYR VNNCSPKMTLYSYR	2 2 3	682.3251 467.2285 578.2796
				Q7T248.2	Snaclec echicetin subunit alpha; Flags: Precursor	Snaclecs	2	11	15.7	1.85	687410.1094	4.4535E-05	1.96E-06	FENGDIICDNDPCR SYEIAIR	2 2	594.58 426.2346

10	14	14	0.109653	pdb1 OZ6 A	A Chain A, Phospholipase A2	PLA2	3	25	13.7	41	94206904.41	0.98587366	0.108104	IWTGLSER	2	481.2588
				JAC88974.1	nerve growth factor a [Echis coloratus]	NGF	2	8	27.2	5.35	1349867.922	0.01412634	0.001549	MTLYSYR EAAILCLGENVNTYDKK NLYQFGR	3	467.2282 3 608.9631 2 449.2318
				JAC96631.1	Cysteine-Rich Secretory Protein B [Echis coloratus]	CRISP	2	10	26.7	1.9	699060.6641	7.3872E-05	1.995E-06	ALTMEGNQASWR QYFFETK	2	682.3226 2 481.7345
				pdbj 2QHE A	A Chain A, Phospholipase A2	PLA2	2	13	13.8	57.64	9296663015	0.98240467	0.0265357	NLYQFGR	2	449.2352 2 467.2282 2 603.3022 2 769.3408
				Q7T248.2	Snaclec echicetin subunit alpha; Flags: Precursor	Snaclecs	4	23	15.7	9.49	162565100	0.01717871	0.000464	MIQETGK KNLNTYNK TWDEAEK SYEIAIR IWTGLSER YSECFVLEK	2	468.25 2 498.26 2 439.6978 2 426.2345 2 481.2582 2 587.7773
12	30 and 27	30, 27 and 14	0.026156	ADI47565.1	serine protease, partial [Echis carinatus sochurek]	svSP	5	31	26.2	48.76	402006816.3	0.05089406	0.0013312	IFDYSVCR	2	530.25 2 604.82 2 413.71 3 611.62 2 732.32 2 682.33 2 481.73 3 486.91 3 529.61
				JAC88974.1	nerve growth factor a [Echis coloratus]	NGF	2	8	27.2	10.05	14933076.71	0.00189053	4.945E-05	NVRNENEEMRVPAEK NENEEMRVPAEK ALTMEGNQASWR QYFFETK	2	595.3 2 434.76 2 583.26 3 640.35 2 769.34 2 426.23 3 476.55 2 616.79 2 481.26 2 587.78
				ADI47568.1	serine protease, partial [Echis coloratus]	svSP	4	6	25.4	14.17	5106560.785	0.00064649	1.691E-05	VLNDEETREPK KVLNDEETREPK	3	595.3 2 434.76 2 583.26 3 640.35 2 769.34 2 426.23 3 476.55 2 616.79 2 481.26 2 587.78
				JAC96631.1	Cysteine-Rich Secretory Protein B [Echis coloratus]	CRISP	5	26	24.7	29.73	20834113.96	0.0026376	6.899E-05	SVNPTASNMLR WTAIHK NVDFDSESPR KPEIQNEIDLHNSLR MEWYPEAAANAER	2	595.3 2 434.76 2 583.26 3 640.35 2 769.34 2 426.23 3 476.55 2 616.79 2 481.26 2 587.78
				Q7T248.2	Snaclec echicetin subunit alpha; Flags: Precursor	Snaclecs	7	36	15.7	90.75	7456014198	0.94393132	0.0246895	SYEIAIR TWDEAEKFCNK EPKTWDEAEK IWTGLSER YSECFVLEK	2	595.3 2 434.76 2 583.26 3 640.35 2 769.34 2 426.23 3 476.55 2 616.79 2 481.26 2 587.78
13	30	14	0.008274	pdbj OZ6 A	A Chain A, Phospholipase A2	PLA2	3	19	13.7	6.35	3186705.5	0.00035705	2.954E-06	NLYQFGR	2	449.2326
				JAC88974.1	nerve growth factor a [Echis coloratus]	NGF	2	8	27.2	5.21	10979075.75	0.00123013	1.018E-05	ALTMEGNQASWR QYFFETK	2	682.33 2 481.73 2 418.7242 2 769.8853 2 434.2055 2 408.744 3 476.88 2 426.23 2 481.26 2 616.79 2 587.78
				JAC96617.1	C-type lectin J [Echis coloratus]	Snaclecs	4	21	18.3	10.97	31490933.5	0.00352833	2.919E-05	TWFNLR SSADYVWIGLWNK NCFGLEK LISENIK	2	418.7242 2 769.8853 2 434.2055 2 408.744
				Q7T248.2	Snaclec echicetin subunit alpha	Snaclecs	6	36	15.7	99.49	8879508107	0.9948845	0.0082317	TWDEAEKFCNK SYEIAIR IWTGLSER EPKTWDEAEK YSECFVLEK	3	476.88 2 426.23 2 481.26 2 616.79 2 587.78
14	27	16 and 12	0.110645	pdbj OZ6 A	A Chain A, Phospholipase A2	PLA2	2	12	13.7	5.42	5394921.688	0.00089431	9.895E-05	NLYQFGR	2	449.23
				P81017.1	Snaclec echicetin subunit alpha	Snaclecs	2	13	15.8	5.83	14261219.25	0.00236407	0.0002616	MTLYSYR TWDEAEK VWIGLRDR	2	475.22 2 439.7 2 508.29 2 560.29 2 769.88 2 848.43 2 434.2 2 418.72 2 408.74
				JAC96617.1	C-type lectin J [Echis coloratus]	Snaclecs	6	22	18.3	309.51	4611285889	0.7644092	0.0845781	LISENIK SSADYVWIGLWNK SSADYVWIGLWNKR NCFGLEK TWFNLR	2	769.88 2 848.43 2 434.2 2 418.72 2 408.74
				AAB32774.1	echicetin beta subunit[Echis carinatus]	Snaclecs	2	29	14.9	20.2	351772439	0.05831304	0.006452	LISENIK MNVADAER DGHLSFRNSK QVKDGHLSFR EVDFMISLAFPMK	2	490.71 3 420.88 3 429.24 2 836.92
				Q7T248.2	Snaclec echicetin subunit alpha	Snaclecs	4	26	15.7	19.37	1049769035	0.17401938	0.0192544	TWDEAEK SYEIAIR IWTGLSER EPKTWDEAEK	2	439.6974 2 426.234 2 481.2589 3 411.5312
15	30, 27, and 25	14 and 12	0.09949	pdbj OZ6 A	A Chain A, Phospholipase A2	PLA2	2	12	13.7	3.34	2294357.938	0.00032741	3.257E-05	NLYQFGR	2	449.2325
				Q9PSM9.1	Snaclec coagulation factor IX/factor X-binding protein subunit	Snaclecs	3	13	15.4	6.87	362398269.5	0.05171475	0.0051451	MTLYSYR VFNEYK VFNEYKTKW LISENLEK	2	467.2285 2 400.2 2 607.81 2 473.27
				JAC96617.1	C-type lectin J [Echis coloratus]	Snaclecs	5	22	18.3	33.52	151684865.5	0.02164564	0.0021535	SSADYVWIGLWNKR TWFNLR NCFGLEK LISENIK	2	847.94 2 418.72 2 434.7 2 408.74
				AAB32774.1	echicetin beta subunit[Echis carinatus]	Snaclecs	4	46	14.9	80.17	2673184408	0.38146719	0.0379522	DGHLSFRNSK ERMNVADAER MNVADAER QVKDGHLSFR	3	420.88 2 633.28 2 490.71 3 429.24

																			DCYWEWSDGAQLDYK EVDFMISLAFPMLK	2 2	968.4 820.92
				Q7T248.2	Snaclec echicetin subunit alpha	Snaclecs	4	26	15.7	50.26	3818077188	0.54484501	0.0542066	SYEIAIR TWDEAEKFCNK IWTGLSER YSECFVLEK	2 3 2 2	426.2352 476.5472 481.2595 587.7765					
16	30, 27, 25 and 23	16, 15, 14, and 12	0.062186	JAC88974.1	nerve growth factor a [Echis coloratus]	NGF	2	16	27.2	4.4	2709140.938	0.0007789	4.844E-05	ALTMEGNQASWR	2	682.33					
				pdb 1V7P B	B Chain B, Ems16 B Chain	Snaclecs	3	28	15.1	17.29	15686961.45	0.00451012	0.0002805	WEWSDNAR FTSMWIGLNNPWK LASHSSEEEAFVSK	2 2 2	532.2334 805.3988 817.409					
				P81017.1	Snaclec echicetin subunit alpha	Snaclecs	2	13	15.8	13.59	59843921.88	0.01720559	0.0010699	TWDEAEK VWIGLRDR LKTWDEAEK	2 2 2	439.6981 508.2904 560.2878					
				Q9PSM9.1	Snaclec coagulation factor IX/factor X-binding protein subunit A	Snaclecs	3	17	15.4	5.11	372295889.6	0.10703797	0.0066563	VFNEYK VFNEYKTVK WKGCSSEWSDGSK	2 3 3	400.2 405.55 528.9					
				BAC77706.1	EMS16 A chain [Echis multisquamatus]	Snaclecs	2	11	18.2	1.62	9511052.625	0.0027345	0.00017	IYVNWK	2	468.2719					
				JAC96617.1	C-type lectin J [Echis coloratus]	Snaclecs	6	26	18.3	27.53	142762475.3	0.04104532	0.0025524	SSADYYWIGLWLNK SSADYYWIGLWLNK TWFNLR RSRDAEK NCFGLEK LISENIK	3 3 2 2 2 2	769.89 565.63 418.72 431.72 434.21 408.74					
				AAB32774.1	echicetin beta subunit[Echis carinatus]	Snaclecs	2	31	14.9	42.53	834706257.4	0.23998456	0.0149237	DGHLVSFR DGHLVSFRNSK ERMNWADAER MNWADAER EVDFMISLAFPMLK QVKDGHLVSFR	2 3 3 2 2 3	465.74 420.88 417.19 490.71 528.92 429.24					
				Q7T248.2	Snaclec echicetin subunit alpha	Snaclecs	4	30	15.7	29.36	2040650854	0.58670303	0.0364847	TWDEAEK SYEIAIR DGHLLSIESK IWTGLSER YSECFVLEK	2 2 2 2 2	439.6981 426.2349 549.7931 481.2597 587.7766					
17			0.004362	pdb 1OZ6 A	A Chain A, Phospholipase A2	PLA2	2	12	13.7	5.1	3359248.484	0.00106688	4.654E-06	MTLSYSR NLYQFGR VPLVGMFEFVNQR	2 2 2	475.23 449.23 746.38					
				ADI47590.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	3	6	69.5	30.18	18743826.06	0.00595295	2.597E-05		2	481.73					
				JAC88974.1	nerve growth factor a [Echis coloratus]	NGF	2	8	27.2	8.17	13573471.5	0.00431087	1.88E-05	QYFFETK ALTMEGNQASWR	2 2	690.32 532.23					
				pdb 1V7P B	B Chain B, Ems16 B Chain	Snaclecs	4	33	15.1	37.07	18494306.83	0.0058737	2.562E-05	WEWSDNAR FTSMWIGLNNPWK LASHSSEEEAFVSK	2 3 3	797.4 545.27 435.24					
				CAA55566.1	metalloprotease, partial [Echis pyramidum]	P-III svMP	2	5	61.9	33.99	68851732.75	0.02186697	9.538E-05	IFWFTR KENDVPIPCAQEDVK	2 2	871.43					
				ADI47568.1	serine protease, partial [Echis coloratus]	svSP	4	6	25.4	28.17	60270351.11	0.01914157	8.35E-05	VLNEDEETREP VLNEDEETR KVLNEDEETREP KVLNEDEETR	3 2 3 2	486.91 552.76 529.61 616.81					
				JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAEO	5	12	56.7	16.35	8586397.953	0.002727	1.19E-05	STTDLPSR VTVLEASER YDTYSTK EADYEEFLEIAR	2 2 2 2	502.28 439.2 742.85 753.74					
				ADI47566.1	serine protease, partial [Echis coloratus]	svSP	3	12	28.8	5.4	27714300.16	0.00880193	3.839E-05	DIVVVGAGMSGLSAAAYVLGAGHK TFACAGVLOGGK AAYPWLPVNSR AAYPWLPVNSR ETYFCLPNK	3 2 2 2 3	569.2892 637.8301 637.3386 586.7728 612.96					
				BAC77706.1	EMS16 A chain [Echis multisquamatus]	Snaclecs	4	27	18.2	20.4	27775671.77	0.00882142	3.848E-05	EEGNFVAQLVSGFMHR DGHLVSQRS IYVNWK	2 2 2	556.3 468.27 434.21					
				JAC96617.1	C-type lectin J [Echis coloratus]	Snaclecs	4	21	18.3	26.55	127979056.8	0.04064552	0.0001773	NCFGLEK SSADYYWIGLWLNK TWFNLR LISENIK	2 2 2 2	769.89 418.72 408.75 581.32					
				ADI47556.1	serine protease, partial [Echis ocellatus]	svSP	2	17	21.8	7.93	9984451.594	0.00317101	1.383E-05	WPKDIMLIK AAFGRLPQASR IMGWGAITSPNK	2 2 2	587.81 645.83 462.2343					
				ADI47570.1	serine protease, partial [Echis coloratus]	svSP	3	8	26.4	20.6	827834415.3	0.26291617	0.0011468	NFTLWDK EAYGGLPEKSR EAYGGLPEK	2 2 2	402.8752 482.2431 482.71					
				AAB32774.1	echicetin beta subunit[Echis carinatus]	Snaclecs	2	32	14.9	38.73	865012172.4	0.27472364	0.0011983	MNWADAER ERMNWADAER DGHLVSFR TTDNQWMR MELVWIGLSDYYWR	3 2 2 2 2	422.52 465.74 526.24 842.41 439.6981					
				Q7T248.2	Snaclec echicetin subunit alpha	Snaclecs	4	30	15.7	37.54	986794247.4	0.31340103	0.0013671	TWDEAEK SYEIAIR DGHLLSIESK IWTGLSER YSECFVLEK	2 2 2 2 2	426.2348 549.7932 481.2597 587.7762 549.26					
				ADI47577.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	3	68.1	18.04	83689402.63	0.02657935	0.0001159	YNNDLTAMR ASDLLSHK	2 2	549.26 435.74					



				ADI47638.1	metalloproteinase [Echis coloratus]	P-III svMP	4	18	70	36.53	189185191.6	0.00612641	8.475E-05	NDIVSPPVCGNDLLEKGEEDCGSPENCRNPCCDAASCK LHSWVECESGECQQCR LFCKHDKNECR	3 3 2	1495.9 742.95 754.35
				CAJ01683.1	group III snake venom metalloproteinase [Echis ocellatus]	P-III svMP	3	12	71.7	46.45	208421618.5	0.00674935	9.337E-05	TDIVSPPVCGNDLLEK	2	879.44
				ANT80539.1	venom metalloprotease PIII-SVMP EOC00089 [Echis ocellatus]	P-III svMP	4	9	68.4	29.36	9245852.5	0.00029941	4.142E-06	ENDVEIPCAPEDVK LHSWVECESGACCDQCR	2 3	807.87 718.94
				ADW54356.1 ADI47552.1	group III snake venom metalloproteinase [Echis carinatus sochureki] serine protease, partial [Echis coloratus]	P-III svMP svSP	4 2	10 16	68.6 28.3	8.3 12.34	791873.4375 222102961.9	2.5643E-05 0.00719239	3.548E-07 9.95E-05	IPCAPEDKCGR WDKDMLIK GDSGGPLICNGIQIGVSWGAK ETYFCLPSR	3 2 3 2	477.8811 589.32 739.36 586.77
				ADI47676.1	metalloproteinase, partial [Echis pyramidum leakeyi]	P-III svMP	3	18	50.2	3.55	22348389.06	0.00072371	1.001E-05	ESDLLNR IPCEPEDIKCGR LHSWAECESGECQQCR SSPHAPISLPSNPPR TLCAGILR AAFGRLLPAQSR	2 3 3 3 2 2	423.72 491.9 733.61 557.6366 452.2568 587.8144
				ADE45140.1	serine protease, partial [Echis ocellatus]	svSP	3	14	28.2	3.93	246326055	0.00797681	0.0001104	KASQLVATSEQQRSYK SYEIAIR LKPGETCGDGMCCDQCR LFCVPESTGNK CSYDQYR CIFDPPLR YDYSEDPNYGMVDEGTK CPIMYHQCVALFGPDATVGQDGCFFWNK	2 3 3 2 2 2 3	913.9524 426.2343 687.2606 626.3052 496.1991 509.2638 991.9042 1123.13
				ADI47612.1 Q77248.2 ADI47584.1	metalloproteinase [Echis coloratus] Snaclec echicetin subunit alpha; Flags: Precursor metalloproteinase [Echis carinatus sochureki]	P-III svMP Snaclecs P-III svMP	2 2 2	9 11 5	68.7 15.7 69.3	5.36 3.79 2.65	38989332.5 1425855.25 2002900.625	0.0012626 4.6174E-05 6.486E-05	1.747E-05 6.388E-07 8.973E-07	SYEIAIR KASQLVATSEQQRSYK LKPGETCGDGMCCDQCR LFCVPESTGNK CSYDQYR CIFDPPLR YDYSEDPNYGMVDEGTK CPIMYHQCVALFGPDATVGQDGCFFWNK	2 2 2	913.9524 426.2343 687.2606
				ADI47593.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	2	6	28.3	3.97	2326243.625	7.5331E-05	1.042E-06	CSYDQYR CIFDPPLR YDYSEDPNYGMVDEGTK CPIMYHQCVALFGPDATVGQDGCFFWNK	2 2 2 3	496.1991 509.2638 991.9042 1123.13
				ADI47609.1	metalloproteinase, partial [Echis coloratus]	P-III svMP	2	16	56.4	2.32	422834.5313	1.3693E-05	1.894E-07	YDYSEDPNYGMVDEGTK CPIMYHQCVALFGPDATVGQDGCFFWNK	3	1123.13
21	56,30,27,25, and 23	56,16,14 and 12	0.009024	ADI47580.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	5	19	68.2	184.37	10012281277	0.95263219	0.0085966	VIVVDHSMCTK  HPYGDGEMVEPGTK YNDLTAMR VYEMINTVNEIYMHIR TDIVSPOVCGNGLLEK ENDVPVPCAQEDVK AHISSMCOATR SECDLPESCTGQSAECPDHFHK KENDVPVPCAQEDVK TRVYEMINTVNEIYMDIR	3 2 2 3 2 2 3 3 3	463.24 766.84 557.74 773.05 866.43 800.37 421.2 898.36 864.42 851.42
				ADI47595.1	metalloproteinase, partial [Echis carinatus sochureki]	P-II svMP	2	13	29.9	148.33	3258941.196	0.00310076	2.798E-05	SYDYDRY NECDLTESTCTGQSAECPDHFHK IPCSPEQVK	2 3 2	511.74 909.02 522.76
				ADI47577.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	4	14	68.1	144.15	100768571.1	0.00958776	8.652E-05	SYDYDRY NECDLTESTCTGQSAECPDHFHK IPCSPEQVK	2 3 2	511.74 909.02 522.76
				CAA55566.1	metalloprotease, partial [Echis pyramidum]	P-III svMP	2	6	61.9	14.26	308444222.1	0.02934735	0.0002648	KENDVPVPCAQEDVK	2	871.42
				ADI47643.1	metalloproteinase [Echis coloratus]	P-III svMP	2	7	69.3	11.75	916197.625	8.7173E-05	7.866E-07	KIPCAPQDVK SVGLVQDHSHTNLR	2 3	578.31 509.6
				CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAAO	3	5	56.5	10.14	3655868.313	0.00034784	3.139E-06	AVEELKR FWEDDGIQGGK KFWEDDGIQGGK	2 2 3	422.7473 626.2846 460.558
				ADI47552.1	serine protease, partial [Echis coloratus]	svSP	2	7	28.3	8.29	11907033.25	0.00113291	1.022E-05	WDKDMLIK ETYFCLPSR	2	581.32
				ANT80539.1	venom metalloprotease PIII-SVMP EOC00089 [Echis ocellatus]	P-III svMP	2	5	68.4	5.36	15137733.38	0.0014403	1.3E-05	ENDVEIPCAPEDVK	2	807.87
				Q7T248.2	Snaclec echicetin subunit alpha	Snaclecs	2	11	15.7	3.85	2999150.625	0.00028536	2.575E-06	SYEIAIR IWTGLSER TLCAGILR AAFGRLLPAQSR	2 2 2 2	426.2341 481.258 452.2591 587.8144
				ADE45140.1	serine protease, partial [Echis ocellatus]	svSP	2	7	28.2	1.62	21423258.5	0.00203835	1.839E-05	AAFGRLLPAQSR	2	587.8144
22	120, 56, 30,27,25, and 23	56,16,14 and 12	0.011608	ADI47580.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	7	24	68.2	190.97	9144451081	0.78555508	0.0091187	HPYGDGEMVEPGTK  LFCETEPNMCR YNDLTAMR VYEMINTVNEIYMHIR VIVVDHSMCTK AHISSMCOATR IRPSRTDIVSPOVCGNGLLEK KENDVPVPCAQEDVK ENDVPVPCAQEDVK RGERDFYCR VSDLLNRK YLLKYKPK CILDPLRK CILDPLR GMVEPGTK	2 2 3 3 3 3 3 2 2 2 2 2 2 2	766.84 728.8 557.75 773.05 468.57 426.53 781.08 576.61 800.37 631.27 472.78 526.83 556.32 492.27 417.71
				ADI47581.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	3	14	69.8	146.27	79344376.08	0.00681609	7.912E-05	VSDLLNRK YLLKYKPK CILDPLRK CILDPLR GMVEPGTK	2 2 2 2 2	472.78 526.83 556.32 492.27 417.71
				JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	4	26	56.7	74.02	364685051.6	0.03132831	0.0003637	IFLTCTK STTDLPSR YDTYSTK HDDIFAYEYKR DIVVVGAGMSGLSAAVYLAGAGHK EADYEEFLEIAR VTVLEASER EANLSPGAVDMIGDLLNEDSGYVVSFIESLK	2 2 2 3 3 2 2 2 3	441.74 438.72 439.2 431.88 748.4 742.85 502.27 1121.9

				ADI47590.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	3	10	69.5	60.75	1577576424	0.13552188	0.0015731	FDEIVGGMDRLPTSMYRAIEK YDYSEDPNYGMVDEGTK VPLVGMFEFWNOR TDIVSPPVCGNALLEK	3 2 2 2	810.72 991.9 746.87 856.95
				CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAAO	3	15	56.5	68.44	109708281	0.0094245	0.0001094	IFLTCTK AVEELKR FWEDDGIQGGK KFWEDDGIQGGK	2 2 2 2	441.74 422.75 626.29 690.33
				ADI47643.1	metalloproteinase [Echis coloratus]	P-III svMP	2	8	69.3	46.13	20144906.03	0.00173055	2.009E-05	KIPCAPQDVK LYCLDNSPGNK SVGLVQDHSHTNLR	2 2 2	578.31 640.8 763.9
				ADI47596.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	2	18	30.8	57.82	8309961.563	0.00071387	8.287E-06	HPYGDGEMVEPGTK TDIISPPVCGNELLEK	2 2	766.84 892.96
				ADI47568.1	serine protease, partial [Echis coloratus]	svSP	4	6	25.4	22.25	20710889.5	0.00177917	2.065E-05	VLNEDEETREP VLNEDEETR KVLNEDEETREP KVLNEDEETR	3 2 3 2	486.91 552.76 529.61 616.81
				ADI47604.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	2	20	27.8	28.62	173951148.6	0.01494329	0.0001735	LKPAGTECR TDIVSPPVCGNDLLER GDFYCR TPCAPEDVK LFCDIGPNNR WRLSDDLNR	2 3 2 2 2 2	516.27 595.63 409.17 508.74 546.27 665.86
				ADI47586.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	11	69.1	20.75	5490947.594	0.0004717	5.475E-06	WRLSDDLNR	2	665.86
				CAJ01683.1	group III snake venom metalloproteinase [Echis ocellatus]	P-III svMP	2	4	71.7	10.4	17120321.13	0.00147072	1.707E-05	TDIVSPPVCGNDLLEK	2	878.9446
				ADI47593.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	3	10	28.3	4.55	39535374.13	0.00339629	3.942E-05	CIFDPLLR EIGSYGRRRFPAPQDVK	2 3	509.26 660.66
				Q7T248.2	Snaclec echicetin subunit alpha	Snaclecs	2	11	15.7	7.37	4294023.813	0.00036888	4.282E-06	IWTGLSER SVEAIR	2	481.2584 426.2399
				ADE45140.1	serine protease, partial [Echis ocellatus]	svSP	2	14	28.2	1.99	75428241.38	0.00647967	7.522E-05	AAFGRPLPAQSR TLCAGILR SSPHIAPISLPSNPPR	2 2 3	587.815 452.2577 557.6374
24	56,30,27,25, and 23	56,16,14 and 12	0.041304	JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	5	30	56.7	763.88	5093839441	0.73396181	0.0303156	IFLTCTKK  INFKPLPPK STTDLPSR IFLTCTK HDDIFAYEKR RINFKPLPPK HDDIFAYEK NPLEECFR DIVVVGAGMSGLSAAVYLAGAGHK YDTYSTK YDTYSTKEYLIK SGTKIFLTCTK VTVLEASER EADYEEFLFIAR IYFAGEYITANAHGWIDSTIK FDEIVGGMDRLPTSMYRAIEK	2 2 2 3 2 3 2 3 2 2 2 3 2 2 3 3 3 3	505.79 576.34 438.72 441.74 431.88 436.6 569.26 532.74 753.73 439.2 508.59 628.34 502.28 742.85 753.03 810.73
				CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAAO	3	21	56.5	772.07	1121056837	0.16153099	0.0066719	IFLTCTKK AVEELKR KFWEDDGIQGGK FWEDDGIQGGK KIPCAPQDVK SVGLVQDHSHTNLR LYCLDNSPGNK	2 2 2 2 2 2 2	505.79 422.75 690.33 626.29 578.31 763.9 640.8
				ADI47643.1	metalloproteinase [Echis coloratus]	P-III svMP	2	7	69.3	26.65	339825997	0.04896489	0.0020224	KIPCAPQDVK SVGLVQDHSHTNLR LYCLDNSPGNK	2 2 2	578.31 763.9 640.8
				ADI47580.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	6	68.2	32.36	238429078.3	0.0343548	0.001419	HPYGDGEMVEPGTK YNDLTAMR VIVVDHSMCTK	3 2 3	511.56 557.74 468.57
				ADW54339.1	group III snake venom metalloproteinase [Echis ocellatus]	P-III svMP	2	5	72.8	15.68	5546145.656	0.00079913	3.301E-05	TLDSFGVEWR ANEEDKGMVDEGTK LGNTYAYCR	2 2 2	555.76 762.33 559.26
				ADI47581.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	6	70.3	11.69	133682166.1	0.01926201	0.0007956	KIPCAPQDVK VSDLLNR ATVAEDSCFOENLK	2 2 2	578.31 408.73 806.37
				ADI47552.1	serine protease, partial [Echis coloratus]	svSP	2	7	28.3	5.2	7817181.625	0.00112636	4.652E-05	WDKIMLIK ETYFCLPSR	2 2	581.3217 586.7736
25	120,70,56,3 0,27,25, and 23	56,16,14 and 12	0.01663	JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	36	54	56.7	168	2251129057	0.18016118	0.0029961	HDDIFAYEKR  HDDIFAYEK IFLTCTKK YDTYSTKEYLIK YDTYSTK IFLTCTK NPLEECFR INFKPLPPK STTDLPSR DIVVVGAGMSGLSAAVYLAGAGHK SGTKIFLTCTK VTVLEASER FDEIVGGMDRLPTSMYRAIEK EANLSPGAVDMIGDLLNEDSGYVVSFIESLK EADYEEFLFIAR KVCINGK LFCETPNMCR	3 2 3 2 2 2 2 2 3 3 3 3 3 3 2 2 2	431.88 569.26 505.79 508.59 439.2 441.74 532.74 576.34 438.72 748.4 419.23 502.27 821.38 1121.5 742.85 410.22 728.81
				ADI47580.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	26	44	68.2	101.77	949128009.2	0.07596012	0.0012632		2	728.81

AD147643.1	metalloproteinase [Echis coloratus]	P-III svMP	28	27	69.3	89.79	577531249.3	0.04622068	0.0007686	HPYGDGEMVEPGTK YPCCDAASCK LHSWVECESGECDCQCR AHISSMCQATR YNDLFTAMR VIVVDHSMCTK ENDVVPVCAQEDVK GERDFYCR KENDVVPVCAQEDVK IRPSRTDIVSPQVCGNGLLEK KIPCAPQDVK SVGLVQDHSSTNLR CMLDPPFR YCTCEDYPCIMSAVLSPSR LYCLDNSPGNKNPK HECDLPEHCTGQSAECPIDEFOR LYCLDNSPGNK LFSNGSYQDYQK	2 2 2 2 2 2 2 3 3 2 2 2 2 2 3 3 2 2	758.84 616.23 1106.4 631.29 549.26 694.36 800.37 551.74 576.61 781.08 578.8 763.9 526.24 1155 594.27 939.05 640.8 776.84
CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAO	20	38	56.5	134.64	473575242.3	0.03790093	0.0006303	HDDIFAYEKR AVEELKR FWEDDGIQGGK KFWEDDGIQGGK DSDQSKCIDNPKPK SAECLDFVFOR YCRNPCCDAATCK YIELALIADNLIYR KEHDNAQLVTGINFGQTLGRAPVSGMCSPIR FKPAGTQCR LFCVEPSTGNK	3 2 2 2 2 2 2 2 3 2 2	431.88 422.75 626.29 690.33 824.41 661.31 838.82 841.46 1119.5 533.26 626.31
AD147584.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	23	101	69.3	61.98	4548750624	0.36404323	0.0006054	VSDLLNR ATVAEDSCFQENLK CILDPPLRK LYCLDSSR KASDECDVPEYCTGQADPCPR FRTAGTECR	2 2 2 2 2 2	408.73 806.37 556.32 564.26 1223 549.26
AD147581.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	14	22	68.7	50.55	303874669.5	0.02431954	0.0004044	VCINGKCIDVNTAY TDIISPPVCGNELLEK GEECDGCSPENGQYPCDDAASCK LFCQTEPNMCR	2 2 2 2	813.89 596.64 918.65 728.81
AD147596.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	38	22	30.8	48.3	8216538.875	0.0006758	1.094E-05	LYCSYNSFGNHISLPCYR ADEEDKGMVDEGTK FIEYLIVDHRMYVYKYNNDSTAIR DPCDDAALCK	2 2 3 2	1206 762.33 991.85 605.24
ADW54356.1	group III snake venom metalloproteinase [Echis carinatus sochureki]	P-III svMP	22	20	68.6	51.02	497554374.4	0.03982001	0.0006622	LELENLIYLR HSDSNFLHLFPESFR GKLEENLIYLR NDQLLWLWR CPEIEMSR ENFMCQCYQGWK DLHPELSEDKIR DLHPELSEDK GMVDEGTK TLDSFGWEV CPITLYQCR TDIISPPVCGNELLER LGNTYA YCR LFCDGPNR TDIVSPPVCGNDLLER LKPAGTECR LHSWIECEFGECCQCR GDFYCR NENYVKTCPAEDVK TPCAPEDVK	2 2 2 2 2 2 2 2 2 2 3 2 2 2 2 2 2 2 2	638.37 635.31 730.93 622.33 511.22 825.83 726.38 591.79 418.69 555.77 605.79 604.98 559.75 546.27 595.63 516.27 1150.5 409.17 882.42 508.74
ADW54339.1	group III snake venom metalloproteinase [Echis ocellatus]	P-III svMP	11	20	72.9	51.07	440933953.5	0.0352886	0.0005868	LELENLIYLR HSDSNFLHLFPESFR GKLEENLIYLR NDQLLWLWR ENDAKIPCAPEDVKCGR	2 2 2 2 3	638.3703 635.3067 730.9273 622.3328 653.97
AD147604.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	40	16	27.8	42.81	338182369.3	0.02706523	0.0004501	NECDLPEYCTGQSAECPIDRSHR HDNAQLFTAIDISNTIGIAHVSSMCQATR KENDVVEICAPEDVK	2 2 2 2 2 2 2 2 2 2 2	932.38 1092.2 581.61
ABI33937.1	hyaluronidase [Echis ocellatus]	HYAL	15	11	52.5	36.41	1165902.875	9.3309E-05	1.552E-06	ASDLLSHK VYEMINTVNEIYYMDIR	2 3	435.74 765.71
AD147594.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	14	20	35.9	42.67	919931830.2	0.0736235	0.0012244	RFPCAPQDVK DDCDVPEHCTGQSAECPR CSYDQYR SCTCGANPCIMFSEVSEPTPK LFCIEIVKNTCK YDYSEDPDYGMVGGQTKCEDGK TDIVSPPVCGNDILEQGECCDGSPEK	3 3 2 2 3 3 3	406.54 711.61 496.2 791.34 471.57 844.01 1002.4
CAJ01683.1	Group III snake venom metalloproteinase [Echis ocellatus]	P-III svMP	16	14	69.6	33.09	33373184.14	0.00267091	4.442E-05			
ANT80539.1	venom metalloprotease PIII-SVMP EOC00089 [Echis ocellatus]	P-III svMP	14	39	68.4	21.97	65912828.13	0.0052751	8.772E-05			
AD147595.1	metalloproteinase, partial [Echis carinatus sochureki]	P-II svMP	19	11	29.9	31.3	6755838.867	0.00054068	8.992E-06			
AD147593.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	22	6	28.3	20.34	11226370.13	0.00089846	1.494E-05			
ADW54348.1	group III snake venom metalloproteinase [Echis ocellatus]	P-III svMP	13	15	69.4	26.75	477202796.5	0.03819124	0.0006351			



				ADI47612.1	metalloproteinase [Echis coloratus]	P-III svMP	6	18	69.1	37.2	7773862.5	0.00062215	1.035E-05	HCVDVNTAY GQTLGRAPVSGMCSPK	2	540.23
				ADI47552.1	serine protease, partial [Echis coloratus]	svSP	20	9	28.3	18.77	412465118	0.03301019	0.000549	WDKDMLIK GDSGGPLICNGQIQGVSWGAK	2	831.89
				ADI47588.1	metalloproteinase, partial [Echis carinatus sochurek]	P-III svMP	22	20	41.1	14.92	22959681.81	0.0018375	3.056E-05	ETYFCLPSR SECDMAEYCTGRSADCPDYFHR	3	589.32
				ADI47585.1	metalloproteinase [Echis carinatus sochurek]	P-III svMP	15	10	69.2	17.83	1047947.188	8.3869E-05	1.395E-06	DHDNAQLLTGINLNGTIGYVSGMCMPK	3	738.71
				ADI47626.1	metalloproteinase [Echis coloratus]	P-III svMP	10	7	68.8	9.3	76075277.13	0.00608842	0.0001013	LFCEIVKNTCK HCVDVTTAY KGEEDFYCR	2	587.27
				ADI47725.1	metalloproteinase, partial [Echis carinatus sochurek]	P-II svMP	12	4	27.7	6.23	4100045.813	0.00032813	5.457E-06	THDNAQLFTAIDLSPGTIGIAHVSSMCQATR	2	471.57
				ADI47586.1	metalloproteinase [Echis carinatus sochurek]	P-III svMP	7	10	69.1	8.85	7476113.875	0.00059832	9.95E-06	KENDVPIPCAQEDIKCCR DLINVVSSIDTLR WRLSDLLNRR IYEINLNAIYR	2	533.2361
				AAP41219.2	echicetin B-chain [Echis carinatus]	Snaclecs	20	3	17.2	7.3	4478205.203	0.0003584	5.96E-06	MNVADA EK NDLWVIGLTDYWR DGHVLSFR ENDVMPCAPEDVK	2	566.2493
				ADI47583.1	metalloproteinase [Echis carinatus sochurek]	P-III svMP	10	13	46.1	22.56	15387420	0.00123148	2.048E-05	TWDEAEK IWTGLSER YSECFVLEK	2	766.4205
				Q7T248.2	Snaclec echicetin subunit alpha	Snaclecs	18	3	15.7	3.67	6930960.875	0.0005547	9.225E-06	STDDLPSR	2	665.859
26	70.56,30,27, 25, and 23	56,16,14 and 12	0.028477	JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LA AO	7	34	56.7	165.91	1764543521	0.12857307	0.0036614	HDDIFAYEK HDDIFAYEKR NPLEECFR IFLTCTK TSNPKDIVVVGAGMSGLSAAVYLAGAGHK YDTYSTKEYLIK YDTYSTK DIVVVGAGMSGLSAAVYLAGAGHK IYFAGEYATANAHGWIDSTIK SGTKIFLTCTK VTVLEASER EANLSPGAVDMIGDLLNEDSGYVYFIESLK EADYEEFLEIAR FDEIVGGMDRLPTSMYRAIEK STDDLPSR VYFAGEYATANAHGWIDSTIK AVEELKR KFWEDDGIQGGK FWEDDGIQGGK LHSWVVEGSEGCCDQCR HPYGDEGMVPEPTGK LFCETEPNMCR YPCDDAASCK YNNDLTAMR VIVVDHSMCTK ENDVPVPCAQEDVK AHISSMCOATR KENDVPVPCAQEDVK GERDFYCR LYCSYNSFGNHISCLPCYR	2	438.72
				CAQ72894.1	L-amino oxidase [Echis ocellatus]	LA AO	4	22	56.5	135.12	367984491	0.02681311	0.0007636	CILDPPLRK VSDLLNR LYCLDNSSR ATVAEDSCFQENLK ASDECDVPEYCTGQSADCPR KASDECDVPEYCTGQSADCPR	2	569.26
				ADI47580.1	metalloproteinase [Echis carinatus sochurek]	P-III svMP	4	18	68.2	84.24	1061481740	0.07734463	0.0022025	LFCETEPNMCR YPCDDAASCK YNNDLTAMR VIVVDHSMCTK ENDVPVPCAQEDVK AHISSMCOATR KENDVPVPCAQEDVK GERDFYCR LYCSYNSFGNHISCLPCYR	3	532.74
				ADW54356.1	group III snake venom metalloproteinase [Echis carinatus sochurek]	P-III svMP	3	19	68.6	126.03	282295663.5	0.02056941	0.0005858	CILDPPLRK VSDLLNR LYCLDNSSR ATVAEDSCFQENLK ASDECDVPEYCTGQSADCPR KASDECDVPEYCTGQSADCPR	2	441.74
				ADI47581.1	metalloproteinase [Echis carinatus sochurek]	P-III svMP	5	13	68.7	40.86	701229497.6	0.05109493	0.001455	LFCETEPNMCR YPCDDAASCK YNNDLTAMR VIVVDHSMCTK ENDVPVPCAQEDVK AHISSMCOATR KENDVPVPCAQEDVK GERDFYCR LYCSYNSFGNHISCLPCYR	3	924.16
				CAA55566.1	metalloprotease, partial [Echis pyramidum]	P-III svMP	4	8	61.9	52.71	545331441.5	0.03973545	0.0011315	LFCETEPNMCR KENDVPIPCAQEDVKCGR	2	762.38
				ABI33937.1	hyaluronidase [Echis ocellatus]	HYAL	2	15	52.5	56.26	4199401.375	0.00030599	8.714E-06	GKLELENLIYLR NDQLLWLWR HSDSN AFLHLFPESFR KHSDSN AFLHLFPESFR LELENLIYLR TFHGLGVIDWENWRPQWDR	2	439.25
				ABI33941.1	hyaluronidase [Echis pyramidum leakeyi]	HYAL	3	15	52.7	54.5	55909937.28	0.00407386	0.000116	GKLELENLIYLR DLHPPELSEDK CPEIEMSR ENFMCCCYQGWK LHSWVVEGSEGCCDQCR	2	748.68
				ADW54339.1	group III snake venom metalloproteinase [Echis ocellatus]	P-III svMP	3	13	72.9	88.36	7763119215	0.56565793	0.0161082	LFSNCSSEIQYER TLDSFGIEWR CPITLYQCR LGNTYAYCR ANEEDKGMVDEGTK	2	421.2
				ADI47654.1	metalloproteinase, partial [Echis coloratus]	P-III svMP	2	23	55.1	81.97	23378568	0.00170347	4.851E-05	CPITLYQCR	2	576.61
															2	1206.012
															2	556.3173
															2	408.7309
															2	564.7527
															2	806.3662
															3	772.9654
															2	1223.002
															2	728.81
															3	706
															2	730.93
															2	622.83
															3	635.31
															3	678
															2	638.37
															3	804.73
															2	730.93
															2	591.79
															2	511.23
															3	825.83
															3	737.95
															2	773.36
															2	555.76
															2	605.79
															2	559.26
															2	770.33
															2	605.7895



28	120,70,56,4 3,30,27,25, and 23	56,43,30,16, 14 and 12,10	0.029205	JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	12	41	56.7	589.68	4334225710	0.19882841	0.0058068	IFLTCTK	2	441.74
														RINFKPPLPPK	3	436.6
														HDDIFAYEK	3	431.88
														IFLTCTK	2	505.79
														STTDLPSR	2	438.72
														INFKPPLPPK	2	576.34
														TSNPKDIVVVGAGMSGLSAAAYVLGAGHK	3	924.16
														HDDIFAYEK	2	569.26
														YDYSTK	2	439.2
														YDYSTKEYLIK	2	762.38
														DIVVVGAGMSGLSAAAYVLGAGHK	3	748.4
														NPLEECFR	2	532.74
														NTKEGWYANLGPMPRIEK	3	708.01
														SGTKIFLTCTK	2	628.34
														NTKEGWYANLGPMP	2	619.88
														VTVLEASER	2	502.27
														FDEIVGGMDRLPTSMYRAIEK	2	1215.6
														EADYEEFLEIAR	2	742.85
														EADYEEFLEIARNGLK	3	633.31
														EANLSPGAVDMIGDLLNEDSGYVYVFIESLK	3	1116.2
														IYFAGEYTANAHGWIDSTIK	3	753.04
				ADI47643.1	metalloproteinase [Echis coloratus]	P-III svMP	10	21	69.3	241.04	1863211996	0.08547305	0.0024962	KIPCAPQDVK	2	578.81
														NGEPCLNLLGCGYNDGCPIMTNQCISLFGSR	3	1209.2
														SVGLVQDHSHTNLR	3	509.93
														YCTCEDYPCIMSAVLSPSR	2	1155
														HECDLPEHCTGQSAECPIDEFQR	3	939.05
														CMLDPPFR	2	518.24
														CMLDPPFRK	2	590.29
														LYCLDNSPGNKNPCK	2	890.41
														KYCTCEDYPCIMSAVLSPSR	2	1219
				CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAAO	3	21	56.5	513.18	978767340.4	0.04490001	0.0013113	IFLTCTK	2	441.74
														FWEDDGIQGGK	2	626.29
														AVEELKR	2	422.75
														KFWEDDGIQGGK	2	690.33
				ADI47580.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	4	23	68.2	199.21	1245968726	0.05715761	0.0016693	LFCETEPNMCR	2	728.8
														KVCINGKCTDVNTAY	2	871.91
														LHSWVECEGECDCOQR	3	737.95
														HPYGDEGMVEPGTK	3	511.56
														YENIEKEDEAPK	3	488.9
														YNNDLTAMR	2	549.26
														VIVVVDHSMCTK	2	702.35
														TDIVSPOVCGNGLLEK	2	866.43
														AHISSMCOATR	3	421.2
														KENDVPVPCAQEDVK	3	576.61
				JAC96587.1	Phospholipase B [Echis coloratus]	PLB	14	27	64.5	102.81	149609631.1	0.0068632	0.0002004	QVVPESLFAWER	2	730.88
														VLPGYENIFAHSSWFTYAATLR	3	902.79
														VTDMESMK	2	470.71
														YNNYKEDPYTK	2	717.83
														TWAQIFEK	2	511.77
														ENSGTYNNQYMILDTK	2	945.93
														ENSGTYNNQYMILDTKK	3	673.65
														HGYWPSYNIPFHK	3	549.27
														HQSLPESYNFDFVTMKPVL	2	1126.6
														YSDQTEVLR	2	555.78
														ITDPQTK	2	401.72
														LVKYSQTEVLR	3	484.27
														KTPVPAGCYDSK	2	661.82
														IANMMADSGK	2	519.24
				ADI47634.1	metalloproteinase [Echis coloratus]	P-III svMP	3	21	69	185.85	180144670.9	0.00826396	0.0002413	NGQPCLNLLGCGYNDGCPIMTNQCISLFGSR	3	1209.2
				CAJ01683.1	group III snake venom metalloproteinase [Echis ocellatus]	P-III svMP	4	20	47.5	119.26	1901863598	0.08724615	0.002548	KCDVNTAY	2	535.25
														TDIVSPPVCGNDLLEKGEEDCGSPENCQNPCCDAASCK	3	1481.6
				ADI47581.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	3	18	68.7	163.82	374165172.2	0.01716447	0.0005013	CILDPPLR	2	492.27
														CEDGKVCINR	2	625.78
														ATVAEDSCFQENLK	2	806.37
														VSDLLNR	2	408.73
														LYCLDNSSR	2	564.26
														KASDECVDPEYCTGQADCPR	2	1223
				ADI47586.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	12	32	64	60.34	395128303.2	0.01812613	0.0005294	FCTCGAK	2	422.18
														LYCFDNLPEHK	3	479.23
														NGHPCQNNNGYCYNGK	3	632.92
														SCIMSGTLCSEGSFR	2	846.37
														SIOEASQLNLTPEQQR	2	921.47
														WRLSDLLNRR	2	665.37
														CPVMGNQCISLFGSR	2	863.4
														IYEIINLNAIYR	2	804.46
														KMPQCILK	2	509.28
				ADW54356.1	group III snake venom metalloproteinase [Echis carinatus sochureki]	P-III svMP	4	26	68.6	121.94	105159040.4	0.00482407	0.0001409	ADEEDKGMVDEGTK	2	770.33
														LYCSYNSFGNHISCLPCYR	2	1206

ADI47604.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	4	37	27.8	111.25	994663582	0.04562923	0.0013326	GDFYCR LFCDIGPNNR TDIVSPPVCGNDLLER LKPAGTECR TPCAPEDVVK NECDLPEYCTGQSGDCPTDHFHR LHSWIECEFGCECQCR KENDAKIPCAPEDVVK	2 2 3 2 2 3 3 2	409.17 546.27 595.63 516.27 508.74 932.38 787.31 857.92
ADI47594.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	2	28	35.9	78.41	23437448.25	0.00107517	3.14E-05			
ADI47654.1	metalloproteinase, partial [Echis coloratus]	P-III svMP	2	24	55.1	106.8	1024167458	0.04698269	0.0013721	CPITLYQCR QRDLLNR REIVSPPVCGNELLEVGEEDCGSPANCRDPCCDAASCK	2 2 3	605.79 458.25 1490.9
ADI47596.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	3	40	30.8	113.85	9143808.5	0.00041946	1.225E-05	VCINGKCIDVNTAY TDIISPPVCGNELLEK GEECDGSPENCQYPCDDAASCK LFCQTEPNMCR	3 3 2 2	542.93 892.96 918.65 728.31
ADW54339.1	group III snake venom metalloproteinase [Echis ocellatus]	P-III svMP	2	9	72.8	126.8	686218770.2	0.03147962	0.0009194	GMVDEGTK TLDSFGEWR LGNTYAYCR DIMLIKLNKPVK VLNEDEETREP VLNEDEETR KVLNEDEETR	2 2 2 3 3 3	418.69 555.76 559.26 471.3 486.91 552.76 411.54
ADI47568.1	serine protease, partial [Echis coloratus]	svSP	4	11	25.4	49.56	519874938.2	0.02384876	0.0006965	KVLNEDEETREP VFKERMNWADAEK ERMWADAEK DGHLSVFR MNVADAEK NCLPDWVSVYEGYCYK NSKEVDFMISLAFPMK EVDFMISLAFPMK DCYWVWSDGAOLDYK MELVWIGLSDYYR	3 3 2 2 2 2 2 2 2 3	529.6 542.26 633.28 465.74 490.71 977.42 657.34 820.92 968.4 834.42
AAB32774.1	echicetin beta subunit[Echis carinatus]	Snaclecs	4	66	14.9	67.48	614768626.3	0.02820192	0.0008236	TDIVSPPVCGNELLEK YQIVNFLNEMYLWPNIR	3 2	590.97 1171.6
ADI47585.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	3	20	69.2	70.39	942188710.2	0.043222	0.0012623	HPYDDEGMVDPGK IPCAPEDVVK TDIISPPVCGNDLLEK RFPAPQDVK SCTCGANPCIMFSEVSEPTPK GIFDGYCTK CIFDPLLR CSYDQYR DDCDVPEHCTGQSAECP KENDVPIPCAQEDVVK	2 2 3 2 2 2 2 2 2	751.83 514.76 590.97 406.5401 1186.506 530.7423 509.2634 496.2 711.6099 871.42
ADW54346.1	group III snake venom metalloproteinase, partial [Echis ocellatus]	P-III svMP	2	16	63.2	45.49	79902573.59	0.00366545	0.000107	YDYSEDDPDYGMVGQTK TDIVSPPVCGNDILEQGEEDCGSPEKQDPCCDAASCK	2 3	962.9 1486.6
ADI47593.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	6	29	28.3	27.99	38980082.88	0.00178817	5.222E-05	HCDVDNTAY YCRNPCCDAATCK EHDNAQLVTGIFNGQTLGRAPVSGMCSPR CIDNKPLK LFCVPEPSTGNK TWDEAEK SYEIAIR TWDEAEKFCNK EPKTWDEAEK IWTGLSER YSECFVLEK	2 2 3 2 2 2 2 2 2 2 2	539.73 838.32 1077.2 494.27 626.31 439.7 426.23 476.55 616.79 481.26 587.78
CAA55566.1	metalloproteinase, partial [Echis pyramidum]	P-III svMP	2	20	44.3	25.31	16532423.38	0.00075841	2.215E-05	TDIVSPPVCGNYFVEVGEEDCGSPR	3	981.7594
ADW54348.1	group III snake venom metalloproteinase [Echis ocellatus]	P-III svMP	4	12	69.4	44.03	58954101.41	0.00270446	7.898E-05	SSADYVWIGLWLNK SSADYVWIGLWNR TWFNLR NCFGLEK LISENIK GEECDGSPENCRNPCCDAASCK LHSWIECESGECCQCR RDLINWSSSIDTLR	2 2 2 2 3 3 3	769.8868 847.9343 418.7243 434.2047 408.7434 911.9902 742.618 563.3161
ADI47584.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	7	20	69.3	29.31	445221780.8	0.02042412	0.0005965	WDKDIMLIK NENEEMRVPAEK IMGWGTITTTK IFDYSVCR	2 3 2 2	581.32 488.22 604.82 530.25
Q7T248.2	Snaclec echicetin subunit alpha	Snaclecs	6	36	15.7	73.19	2945185803	0.13510755	0.0039458	YDYSEDDPDYGMVGQTK TDIVSPPVCGNDILEQGEEDCGSPEKQDPCCDAASCK	2 2 3 2 2 2	962.9 1486.6
ADI47653.1	metalloproteinase [Echis coloratus]	P-III svMP	2	9	69.2	36.07	13719466.44	0.00062937	1.838E-05			
JAC96617.1	C-type lectin J [Echis coloratus]	Snaclecs	5	22	18.3	24.78	67195990.88	0.00308255	9.003E-05			
ADI47638.1	metalloproteinase [Echis coloratus]	P-III svMP	3	13	61.8	16.29	10675952.38	0.00048975	1.43E-05			
ADI47725.1	metalloproteinase, partial [Echis carinatus sochureki]	P-II svMP	2	9	27.7	43.98	18782995.22	0.00086165	2.516E-05			
ADI47565.1	serine protease, partial [Echis carinatus sochureki]	svSP	4	17	26.2	22.5	123269201.9	0.00565486	0.0001652	YENIEKEDEAPK SYDNFR LOGETVYFIESLK YDYSENPNYGMVDEGTK	2 2 2 2	488.8999 483.2051 714.8883 991.9029
ANT80539.1	venom metalloprotease PIII-SVMP EOC00089 [Echis ocellatus]	P-III svMP	2	7	68.4	5.98	1014180.656	4.6525E-05	1.359E-06			
ADI47645.1	metalloproteinase [Echis coloratus]	P-III svMP	2	11	69.6	11.03	2674642.813	0.0001227	3.583E-06			
ADI47566.1	serine protease, partial [Echis coloratus]	svSP	2	8	28.8	6.88	40697285.38	0.00186695	5.452E-05	TFCAGVLGGK AAYPWLPVNSR QYVIEFDR YDSSESSTYKPK	2 2 2 2	569.29 637.34 567.2674 696.3211
CAJ55260.1	renin-like aspartic protease [Echis ocellatus]	AsP	2	5	43.8	11	18057113.84	0.00082835	2.419E-05			

				pdbj1V7PjB	B Chain B, Ems16 B Chain	Snaclecs	3	23	15.1	10.69	6538968.406	0.00029997	8.761E-06	WEWSDNAR LASHSSEEEAFVSK IFWFR		2	532.2333
				ADI47574.1	serine protease, partial [Echis coloratus]	svSP	3	11	28.4	7.79	4770190	0.00021883	6.391E-06	NMPNEDEQIR TLCAGILQGGK		2	435.2365
				P81017.1	Snaclec echicetin subunit alpha	Snaclecs	3	17	15.8	9.41	2526070.875	0.00011588	3.384E-06	LKPAVYTK TWDEAEK VWVGLRDR CFVLER		2	623.28
				Q9PSM9.1	Snaclec coagulation factor IX/factor X-binding protein subunit A	Snaclecs	2	10	15.4	9.49	1060061479	0.0486293	0.0014202	LKTWDEAEK VFNEYK TWKDAEK VFNEYKWK GKLELENLYLR		2	559.3
				ABI33937.1	hyaluronidase [Echis ocellatus]	HYAL	2	5	52.5	5.37	1881220.188	8.6299E-05	2.52E-06	NDQLLWLWR WDKDIMLIK AAFGRLPAGSR		2	460.28
				ADI47556.1	serine protease, partial [Echis ocellatus]	svSP	2	17	21.8	15.04	79570696.88	0.00365023	0.0001066	IMGWGATSPNK DIMLIKLRPVK EAYGGLPEK		2	439.22
				ADI47570.1	serine protease, partial [Echis coloratus]	svSP	2	9	26.4	3.88	18136015.28	0.00083197	2.43E-05	EAGNVAQLVSGFMHR IYVNWK		2	607.81
				BAC77706.1	EMS16 A chain [Echis multisquamatus]	Snaclecs	2	15	18.2	6.1	3331812.031	0.00015284	4.464E-06	ALTMEGNQASWR		3	487.6202
				JAC88974.1	nerve growth factor a [Echis coloratus]	NGF	2	8	27.2	3	294785.625	1.3523E-05	3.949E-07	YFCLPR		2	622.3326
				ADI47576.1	serine protease, partial [Echis coloratus]	svSP	2	5	28.2	7.25	398142292.6	0.01826439	0.0005334	TLCAGILR		2	581.3209
29	120.65,56.3 0.27,25, and 23	65, 56,30,25,16, 14 and 12	0.083108	JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAO	6	28	56.7	210.09	2608775853	0.14146257	0.0117567	STTDLPSR		2	587.8152
				CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAO	4	17	56.5	152.96	582674390.8	0.0315959	0.0026259	IFLTCTK HDDIFAYEK YDTYSTK DIVVVGAGMSGLSAAVYLAGAGHK YDTYSTKEYLIK HDDIFAYEKR TSNPKDIVVVGAGMSGLSAAVYLAGAGHK VTVLEASER FDEIVGGMDRLPTSMYRAIEK EANLSPGAVDMIGDLLNEDSGYYVFSIESLK EADYEEFLEIAR DIVVVGAGMSGLSAAVYLAGAGHKVTVLEASER		2	645.8295
				ADI47586.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	12	28	69.1	232.18	4117804053	0.22329061	0.0185572	STTDLPSR AVEELKR FWEDDGIQGGK FWEDDGIQGGKSTTDLPSR KFWEDDGIQGGK		2	482.2424
				ADI47725.1	metalloproteinase, partial [Echis carinatus sochureki]	P-II svMP	2	13	27.7	487.4	8738538337	0.47385293	0.039381	LYCFDNLPEHK SIQEA SOLNLTPQQR AFPMHVALVFLIWSNGDK YLSKHK VAJADYLYR IYEINILNAYR LSDLLNRR INVLPAAVTLDLFGK KMPQCILK		2	924.16
				JAC96587.1	Phospholipase B [Echis coloratus]	PLB	10	19	64.5	36.74	8771763.945	0.00047565	3.953E-05	ERDLLNR SYKFSDCSK RDLINVVSSIDTLR		3	502.27
				ADI47580.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	8	68.2	45.57	3932473.5	0.00021324	1.772E-05	QVVPESLFAWER YSDQTEVLR YNNYKEDPYTK VTDMESMK ENSGTYNNQYMILDTKK ENSGTYNNQYMILDTK IANMMADSGK HQSLPESYNFDFVTMCPVL HGYYWPSYNIPEHK HPYGDGEMVPEGTK YNDLHMR VINVDHSMCTK TDIVSPQVCGNGLLEK SYDRYR		2	422.75
				ADI47577.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	6	68.1	40.37	669170619.4	0.03628621	0.0030157	ERDLLNR SYKFSDCSK RDLINVVSSIDTLR		2	626.28
				ADW54339.1	group III snake venom metalloproteinase [Echis ocellatus]	P-III svMP	3	5	72.8	32.93	416763604.3	0.02259928	0.0018782	QVVPESLFAWER YSDQTEVLR YNNYKEDPYTK VTDMESMK ENSGTYNNQYMILDTKK ENSGTYNNQYMILDTK IANMMADSGK HQSLPESYNFDFVTMCPVL HGYYWPSYNIPEHK HPYGDGEMVPEGTK YNDLHMR VINVDHSMCTK TDIVSPQVCGNGLLEK SYDRYR		2	703.67
				ADI47643.1	metalloproteinase [Echis coloratus]	P-III svMP	2	7	69.3	42.59	83181363.55	0.00451056	0.0003749	TLDSFGEWR ANEEDKGMVDEGTK LGNTYAYCR KIPCAPQDVK SVGLVQDHSTTLNR LYCLDNTPGNK		2	690.33
				ADI47581.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	6	70.3	31.69	101573453.5	0.00550789	0.0004577	GMVEPGTK VSDLLNR ATVAEDSCFQENLK NPNYGMVDEGTK ESVGIVQDHSK YSDVALDYGMDVDPGTK KYTGDVTAIK		2	517.28
				ADI47638.1	metalloproteinase [Echis coloratus]	P-III svMP	2	5	70	25.44	1016774434	0.05513526	0.0045822	GMVEPGTK VSDLLNR ATVAEDSCFQENLK NPNYGMVDEGTK ESVGIVQDHSK YSDVALDYGMDVDPGTK KYTGDVTAIK		2	458.25
				ADI47641.1	metalloproteinase [Echis coloratus]	P-III svMP	2	5	69.2	12.74	4203985	0.00022796	1.895E-05	GMVEPGTK VSDLLNR ATVAEDSCFQENLK NPNYGMVDEGTK ESVGIVQDHSK YSDVALDYGMDVDPGTK KYTGDVTAIK		2	468.57
				ADI47588.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	2	4	57.6	7.43	11921618	0.00064646	5.373E-05	GMVEPGTK VSDLLNR ATVAEDSCFQENLK NPNYGMVDEGTK ESVGIVQDHSK YSDVALDYGMDVDPGTK KYTGDVTAIK		2	866.43

				ANT80539.1	venom metalloprotease PIII-SVMP EOC00089 [Echis ocellatus]	P-III svMP	2	5	68.4	4.73	2305676.688	0.00012503	1.039E-05	ENDVEIPCAPEDVK	2	807.8729
				ADI47585.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	4	69.2	13.61	26164245.25	0.00141877	0.0001179	TDIVSPVCGNELLEK	3	591.3
				ADI47604.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	2	10	27.8	6.1	2788758.125	0.00015122	1.257E-05	TDIVSPVCGNDLLER	2	892.9461
				ADI47552.1	serine protease, partial [Echis coloratus]	svSP	2	7	28.3	5.28	32309530	0.00175201	0.0001456	LFCDIGNR WDKDMLIK ETVCLPSR	2	545.2687
				ADI47626.1	metalloproteinase [Echis coloratus]	P-III svMP	2	2	68.8	2.83	3789218.156	0.00020547	1.708E-05	KENDVPIPCAQEDIK	2	581.3203
				Q7T248.2	Snaclec echicetin subunit alpha	Snaclecs	2	11	15.7	7.21	8538018.25	0.00046298	3.848E-05	SYEIAIR IWTGLSER	2	586.773
				AAP41219.2	echicetin B-chain [Echis carinatus]	Snaclecs	2	11	17.2	6.06	1475271.688	7.9998E-05	6.648E-06	MNWADA EK DGLHVSFR	2	878.916
30	56.43,30,27, 25, and 23	56.43,16,14 and 12	0.00906	JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LA AO	8	35	56.7	262.22	3084973872	0.25350229	0.0022967	IFLTCTK	2	426.2346
															2	481.2583
															2	482.7117
															2	465.7427
															2	441.74
															2	1130.1
															2	438.72
															2	569.26
															2	647.31
															2	505.79
															2	576.35
															2	439.2
															3	508.59
															3	753.04
															3	419.23
															2	502.27
															3	1121.5
															2	742.85
															3	810.73
				ADI47588.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	12	39	57.6	222.58	4329631038	0.3557798	0.0032234	FDIYVGMRLPTSMYRAIEK GGGYFYCR	2	625.73
															2	508.27
															2	613.73
															2	747.77
															2	684.79
															2	670.31
															3	846.09
															3	1096.2
															2	675.84
															2	534.71
															2	738.87
															2	881.9
															2	548.31
				CAQ72894.1	L-amino oxidase [Echis ocellatus]	LA AO	4	19	56.5	231.51	679245361.1	0.05581579	0.0005057	IFLTCTK AVEELKR	2	441.74
															2	422.75
															2	690.33
															3	703.67
															2	626.78
				ADI47586.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	12	25	69.1	91.11	884788167.2	0.07270591	0.0006587	FWEDDGIQGGKSTDLPSR FVEDDGIQGGK	3	626.78
															2	422.18
															2	718.34
															2	842.99
															2	517.28
															2	804.95
															2	854.36
															2	921.47
															2	665.86
															2	655.38
															2	863.4
				ADI47580.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	4	12	68.2	53.91	703735807.1	0.05782825	0.0005239	HPYGDGEMVEPGTK YNDLTAMR	2	758.84
															2	549.26
															3	898.36
															3	468.57
															3	576.61
				ADI47641.1	metalloproteinase [Echis coloratus]	P-III svMP	2	12	69.2	86.77	1164040259	0.09565296	0.0008666	ESVGIQDHSK YSDVALDYGMDVDPGTK	3	400.21
															2	873.9
				ADW54339.1	group III snake venom metalloproteinase [Echis ocellatus]	P-III svMP	3	4	72.8	32.23	606007985.4	0.04979764	0.0004512	AYMNANKFIKLVVDNVMYR ANEEDKGMVDEGTK	3	834.78
															2	770.33
															2	559.75
				ADI47643.1	metalloproteinase [Echis coloratus]	P-III svMP	3	8	69.3	33.04	67535678.25	0.00554963	5.028E-05	KIPCAPQDVK SVGLVDHSTTLNR	2	578.31
															3	509.6
															2	640.8
															2	518.24
				ADI47590.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	6	69.5	25.6	213924607.4	0.01757888	0.0001593	CMLDPPFR	2	518.24
															2	423.72
															2	1032.5
				ADI47634.1	metalloproteinase [Echis coloratus]	P-III svMP	4	8	70.3	32.51	148278661.4	0.01218454	0.0001104	VPLVGMFEWNR LYCLDNSSR	3	497.92
															2	564.26
				ADI47725.1	metalloproteinase, partial [Echis carinatus sochureki]	P-II svMP	2	6	27.7	11.04	13769473.38	0.00113148	1.025E-05	RDLINVSSSIDTLR	3	563.3156
				CAA55566.1	metalloprotease, partial [Echis pyramidum]	P-III svMP	2	5	61.9	15.19	25093305	0.002062	1.868E-05	KENDVPIPCAQEDVK	3	581.29
				JAC96587.1	Phospholipase B [Echis coloratus]	PLB	5	11	64.5	11.37	5081303.5	0.00041755	3.783E-06	YNNYKEDPYTK	2	717.83



Supplementary Table 2: Assignment of peptides sequenced from MS/MS spectra against protein database from *Echis* genus for ECVGO. Relative abundance of each protein from HPLC fractions were estimated by taking sum of precursor abundance of all peptides matched to respective proteins.

Peak no.	Mol. Wt. by SDS-PAGE		Peak fraction	Protein Information										Peptide Information		
	Reducing (-kDa)	Non-reducing (-kDa)		Accession	Description	Toxin family	# Unique Peptides	Coverage [%]	MW [kDa]	Score Sequest HT	Sum of precursors Abundances	Relative abundance	Relative fraction of proteins	Sequence	Charge	m/z [Da]
1 and 2	n.f	n.f		P17347.2 POC6R5.1	Disintegrin echistatin-alpha Disintegrin multisquamatin	Disintegrins Disintegrins	1 1	100 100	5.4 5.7	247.63 209.28	2009869014 5923222980			QCESGPPCR EGEECESGPPCR EGADCASGPPCR	2 2 2	577.21 735.257 670.736
3	18	14	0.183442	1V7P JAC96617.1 Q7T248.2	B Chain B, Ems16 B Chain C-type lectin J [Echis coloratus] Snaclec echicetin subunit alpha; Flags: Precursor	Snaclecs Snaclecs Snaclecs	3 3 3	28 17 16	15.1 18.3 15.7	9.3 6.89 9.36	47628405.94 17570465.98 10387286.25	0.63012074 0.23245613 0.13742313	0.1155906 0.0426422 0.0252092	LASHISSEEEAFVSK SSADYVWVGLWLNK IWTGLSER TWDEAEK	3 2 2 2	545.274 769.884 481.259 439.698
4	18,16	18,16	0.030468	1OZ6 JAC88974.1	A Chain A, Phospholipase A2 nerve growth factor a [Echis coloratus]	PLA2 NGF	2 2	12 8	13.7 27.2	10.6 15.48	103826309.3 21177287.56	0.83058657 0.16941343	0.0253063 0.0051617	MTLYSYR NLYQFGR ALTMEGNQASWR QYFFETK	2 2 2 2	467.228 449.232 682.325 481.735
5	14	14	0.059546	1OZ6	A Chain A, Phospholipase A2	PLA2	3	25	13.7	30.73	7306448051	1	0.059546	MTLYSYR EAAICLGENVNTYDK EAAICLGENVNTYDKK NLYQFGR	2 2 3 2	467.227 848.896 609.292 449.232
6	71,43	43	0.029476	1OZ6 JAC88974.1 ADI47584.1 ADI47654.1	A Chain A, Phospholipase A2 nerve growth factor a [Echis coloratus] metalloproteinase [Echis carinatus sochureki] metalloproteinase, partial [Echis coloratus]	PLA2 NGF P-III svMP P-III svMP	5 2 4 2	48 8 11 4	13.7 27.2 69.3 55.1	58.49 8.65 24.66 4.36	12945719283 43128697.5 700813755.5 23240636.41	0.94405392 0.00314512 0.05110616 0.0016948	0.0278269 9.271E-05 0.0015064 4.996E-05	MTLYSYR EAAICLGENVNTYDK EAAICLGENVNTYDKK NLYQFGR ALTMEGNQASWR EHDNAQLVTGINFNGQTLGR SQDDPDYGMVDIGTK QRDLLNR	2 2 2 2 3 3 2	467.228 848.896 912.942 449.233 682.817 728.694 547.575 458.254
8	33	33	0.045146	CAJ01689.1 ADW54338.1 ADI47565.1 ADI47671.1 ADI47596.1 1OZ6	Group III snake venom metalloproteinase [Echis ocellatus] group III snake venom metalloproteinase [Echis ocellatus] serine protease, partial [Echis carinatus sochureki] metalloproteinase [Echis pyramidum leakeyi] metalloproteinase, partial [Echis carinatus sochureki] A Chain A, Phospholipase A2	DC domain (P-II) DC domain (P-II) svSP DC domain (P-II) DC domain (P-II) PLA2	2 2 2 2 2 2	7 4 14 9 12 12	69.8 72.8 26.2 69.9 30.8 13.7	114.71 36.8 10.41 8.98 7.4 2.47	288343125.5 1523610613 17562372.45 39814319.13 447285566 9021284.5	0.12398456 0.65513682 0.00755164 0.01711975 0.19232817 0.00387906	0.0055974 0.0295768 0.0003409 0.0007729 0.0086828 0.0001751	GMVEPGTK IPCAPQDVK LYCLDNSSR MHYLNADQHK ANEEDKGMVDEGTK NENEEMRVPAEK CILDPPLR RFPCAPQDVK TDIISPPVCGNELLEK NLYQFGR	2 2 2 3 2 3 2 2 2 2	409.708 514.265 564.262 419.861 770.331 488.221 492.271 406.866 893.453 449.232
9	30, 27	16, 14	0.047574	ADI47575.1 ADI47568.1 ADI47577.1 ADI47581.1	serine protease, partial [Echis carinatus sochureki] serine protease, partial [Echis coloratus] metalloproteinase [Echis carinatus sochureki] metalloproteinase [Echis carinatus sochureki]	svSP svSP P-III svMP P-III svMP	3 4 3 2	35 19 5 6	25.7 25.4 68.1 68.7	284.95 26.51 7.98 1.89	2922529969 67331486.61 3167685.203 2009774.133	0.97579032 0.02248101 0.00105764 0.00067103	0.0464222 0.0010695 5.032E-05 3.192E-05	NMPNEDEQIR FPNGMDK NMPNEDEQIRVPK HSWCEAIYPWVPADSR TLCAGILQGGK FPNGMDKDIMLIR VLNEDETR TLCAGILEGGK KVLNEDETR VLNEDETR ASDLLSHK GMVEPGTK SLGMAFVDMCKPYRSVGLIK	2 2 3 2 3 2 2 2 2 2 3	623.28 404.687 523.928 658.637 559.797 528.262 552.762 559.797 411.542 553.254 435.737 409.707 782.395
10	27	16, 14	0.048999	JAC88974.1 Q7T248.2	nerve growth factor a [Echis coloratus] Snaclec echicetin subunit alpha; Flags: Precursor	NGF Snaclecs	2 6	8 36	27.2 15.7	1.95 47.16	6252042.219 6471655778	0.00096513 0.99903487	4.729E-05 0.0489517	ALTMEGNQASWR TWDEAEK DGHLLSIESK IWTGLSER SYEIAIR YSECFVLEK	2 2 2 2 2 2	682.82 439.7 549.793 481.26 426.235 587.776
11	27	16, 14	0.01107	Q9PSM9.1	Snaclec coagulation factor IX/factor X-binding protein subunit A	Snaclecs	5	30	15.4	13.04	1205056578	0.94617892	0.0104742	SGHLVSVESSEEGDFVAKLISEN LEK VFNEYK VFNEYKTKW	3 2 2 3	935.458 400.204 405.545



				Q7T248.2	Snaclec echicetin subunit alpha	Snaclecs	4	30	15.7	9.67	68546704.63	0.05382108	0.0005958	TWDEAEK	2	439.698
12	54,50,27	14	0.030133	ADI47581.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	3	4	70.3	6.13	7714139.547	0.00178476	5.378E-05	GMVEPGTK	2	409.707
				ADI47590.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	5	69.5	13.43	76287263.31	0.01764999	0.0005318	VPLVGMFVWNR	2	738.869
				JAC96622.1	C-type lectin E, partial [Echis coloratus]	Snaclecs	3	19	11.6		989489829.2	0.22893051	0.0068984	MCQGLAK	2	404.196
				1V7P	B Chain B, Ems16 B Chain	Snaclecs	7	52	15.1	45.76	1356194447	0.31377208	0.0094549	IIVVNWKEGESK IIVVNWK	3 2	489.261 468.763
				P81017.1	Snaclec echicetin subunit alpha	Snaclecs	3	17	15.8	17.64	493665973.3	0.11421563	0.0034417	WEWSDNAR IFWFTR LASIHSSEEEAFVSKLASK LASIHSSEEEAFVSK FTSMWIGLNNPWK	2 2 3 3 2	532.725 435.237 678.357 545.274 805.394
				JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	5	12	56.7	14.55	60655441.56	0.01403337	0.0004229	TWDEAEK LKTWDEAEK YDTYSTK	2 2 2	439.2 560.286 439.2
				JAC96617.1	C-type lectin J [Echis coloratus]	Snaclecs	4	18	18.3	24.97	254647502.6	0.0589158	0.0017753	EADYEEFLEIAR SSADYVWIGLWNKR SSADYVWIGLWNK	2 2 2	742.849 847.94 769.887
				ADI47570.1	serine protease, partial [Echis coloratus]	svSP	2	5	26.4	6.56	779086548.3	0.18025115	0.0054315	EAYGGLPEKSR	3	402.875
				Q7T248.2	Snaclec echicetin subunit alpha; Flags: Precursor	Snaclecs	2	16	15.7	17.05	5413537.875	0.00125249	3.774E-05	TWDEAEK	2	439.698
				ADI47577.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	3	68.1	13.71	299073192.3	0.06919422	0.002085	ASDLLSHK YNNDLTAMR	2 2	435.737 549.257
13	54, 27	14	0.009734	JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	10	25	56.7	147.44	1630971499	0.3907317	0.0038034	VTVLEASER YDTYSTK DIVVVGAGMSGLSAAYVLAGAG HK EADYEEFLEIAR FDEIVGGMDRLPTSMYRAIEK HDDIFAYEK STTDLPSR	2 2 3 2 3 3 2 2	502.276 439.2 748.4 742.85 816.056 569.264 438.724
				ADI47577.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	11	68.1	296.86	18470200	0.0044249	4.307E-05	YNNDLTAMR TRVYEMINTVNEIYIMHIR VYEMINTVNEIYIMHIR CIDVNTAY	2 3 3 3	557.745 853.436 767.719 478.213
				ADI47596.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	2	39	30.8	71.78	357519906.2	0.08565101	0.0008337	ASDLLSHK NGQPCLHNYGYCYNGK KENDVKIPCAPEDVK ENDVKIPCAPEDVK IPCAPEDVK TDIISPPVCGNELLEK	2 3 3 2 2 2	435.738 649.598 581.625 807.396 514.76 893.449
				1V7P	B Chain B, Ems16 B Chain	Snaclecs	8	55	15.1	24.24	382915520	0.09173504	0.0008929	FTSMWIGLNNPWK LASIHSSEEEAFVSK RPYCTVMVVKPDR	2 2 3	797.396 817.406 540.95
				ADW54346.1	group III snake venom metalloproteinase, partial [Echis	P-III svMP	2	14	63.2	39.06	10073974	0.00241342	2.349E-05	KENDVKIPCAPEDVK GKSDFYCR GEECDGSPENCRYPCCDAASC K TDIISPPVCGNDLLEK	3 2 3 2	581.625 516.731 928.324 885.948
				JAC96617.1	C-type lectin J [Echis coloratus]	Snaclecs	3	13	18.3	17.43	87880682.88	0.02105357	0.0002049	SSADYVWIGLWNK	2	769.885
				ADI47581.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	3	6	69.8	24.81	1523806400	0.36505816	0.0035535	IPCAPQDVK GMVEPGTK VSDLLNR	2 2 2	514.76 409.707 408.732
				Q7T248.2	Snaclec echicetin subunit alpha; Flags: Precursor	Snaclecs	3	23	15.7	9.46	38702591.38	0.00927198	9.025E-05	TWDEAEK	2	439.698
				ADI47576.1	serine protease, partial [Echis coloratus]	svSP	2	12	28.2	1.97	21245575.02	0.0050898	4.954E-05	VFDYTDWVQSIAGNTAVTCPP	2	1227.59
				ADI47648.1	metalloproteinase [Echis coloratus]	P-III svMP	2	9	68	7.49	67190735.25	0.01609688	0.0001567	CIDVNTAY ENDVLIPCAQQDVK	2 2	478.213 815.884
				P81017.1	Snaclec echicetin subunit alpha	Snaclecs	2	11	15.8	9.87	35369810	0.00847354	8.248E-05	TWDEAEK	2	439.698
14	54,43	54,43	0.020879	ADI47581.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	5	68.7	17.02	109908899.3	0.00444569	9.282E-05	GMVEPGTK	2	409.708
				ADI47590.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	6	69.5	52.1	4471230891	0.18085628	0.0037761	VPLVGMFVWNR KYNGNLR	3 2	498.245 433.23
				ADI47585.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	5	69.2	16.62	55385731.63	0.00224029	4.678E-05	KENDVKIPCAPEDIK	3	585.969
				ADI47580.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	3	12	68.2	325.15	7118754214	0.28794563	0.006012	YNNDLTAMR TRVYEMLNTVNEIYIMHIR TRVYEMINTVNEIYIMHIR VYEMINTVNEIYIMHIR VYEMLNTVNEIYIMHIR VIVVDHSMCTK KENDVPVPCAQEDVK	2 3 3 3 3 3 3	557.254 853.433 858.766 767.718 773.377 468.571 576.613



				CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAAO	2	12	56.5	40.08	36852624.06	0.02464853	0.0017494	TDIVSPPVCGNALLEK YDTYSTK STTDLPSR	2 2 2	857.441 439.2 438.725
				JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	2	14	56.7	39.37	86320896.41	0.05773492	0.0040976	KFWEDDGIQGGK YDTYSTK EADYEEFLEIAR VTVEASER	3 2 2 2	460.558 439.2 742.849 502.274
				ADI47584.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	7	69.3	16.74	157280666.4	0.1051957	0.0074661	SQDDPDYGMVDIGTK	2	828.856
19	91,71,54	65,54	0.050173	CAJ01689.1	Group III snake venom metalloproteinase [Echis ocellat	P-III svMP	2	7	69.8	105.16	519242093.5	0.19895458	0.0099821	CILDPLLR GMVEPGTK LYCLDNSSR MHYLNADQHK	2 2 2 3	492.271 409.707 564.26 419.535
				ADI47590.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	5	69.5	21.04	1333218231	0.51084048	0.0256304	VPLVGMFVFNQR TDIVSPPVCGNALLEK	2 2	746.867 857.44
				CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAAO	2	13	56.5	40.42	35659579	0.01366345	0.0006855	YDTYSTK STTDLPSR DIVVVGAGMSGLSAAYVLAGAG HK	2 2 3 3	439.2 438.724 748.399 460.557
				JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	3	18	56.7	44.01	282297347.5	0.10816602	0.005427	KFWEDDGIQGGK YDTYSTK EADYEEFLEIAR VTVEASER	3 2 2 2	460.557 439.2 742.849 502.274
				ADI47584.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	6	69.3	10.25	388551815.7	0.14887885	0.0074697	SQDDPDYGMVDIGTK	2	820.859
				ADI47671.1	metalloproteinase [Echis pyramidum leakeyi]	P-III svMP	2	9	69.9	8.97	50883296.5	0.01949662	0.0009782	CILDPLLR RFPDAPQDVK	2 3	492.271 406.866
20	54	54	0.011069	ADW54338.1	group III snake venom metalloproteinase [Echis ocellat	P-III svMP	2	4	72.8	12.56	9398102.688	0.00105953	1.173E-05	ANEEDKGMVDEGTK	3	508.556
				ADI47581.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	6	68.7	18.34	23529945.64	0.00265274	2.936E-05	GMVEPGTK	2	409.708
				ADI47590.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	5	69.5	4.64	5314957.531	0.0005992	6.633E-06	VPLVGMFVFNQR	2	746.865
				CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAAO	5	19	56.5	409.63	1054126221	0.11884105	0.0013155	YDTYSTKEYLIK STTDLPSR RINFKPLPPK DIVVVGAGMSGLSAAYVLAGAG HK	3 2 3 3 3	508.591 438.725 436.599 748.4 576.345
				JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	6	35	56.7	409.87	7763745902	0.87527633	0.0096884	INFKPLPPK YDTYSTK HDDIFAYEKR HDDIFAYEK AVEELKR KFWEDDGIQGGK FWEDDGIQGGK YDTYSTKEYLIK FDEIVGGMDRLPTSMYRAIEK VTVEASER EADYEEFLEIAR EADYEEFLEIARNGLK VYEMINTVNEIYIMHIR	3 2 3 2 2 3 3 3 2 3 3 3	508.591 821.388 502.273 495.568 633.31 767.717
				ADI47577.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	4	68.1	1.61	13936090.75	0.00157114	1.739E-05		3	767.717
21	1,54,43,30	54,43	0.028888	JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	5	32	56.7	83.23	1668649343	0.40009007	0.0115578	YDTYSTK STTDLPSR DIVVVGAGMSGLSAAYVLAGAG HK	2 2 3	439.201 438.725 748.4
				CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAAO	2	15	56.5	80.64	170426309.4	0.04086291	0.0011804	HDDIFAYEK FDEIVGGMDRLPTSMYRAIEK VTVEASER EADYEEFLEIAR YDTYSTK KFWEDDGIQGGK FWEDDGIQGGK	3 3 3 3 2 2 2	569.265 816.056 502.274 495.568 439.201 460.558 626.777
				ADW54338.1	group III snake venom metalloproteinase [Echis ocellat	P-III svMP	5	7	69.5	78.98	2079016345	0.49848328	0.0144002	ANEEDKGMVDEGTK GMVDEGTK	3 2	508.559 418.694
				ADI47590.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	4	9	69.5	6.41	244880576.3	0.05871472	0.0016962	VPLVGMFVFNQR	2	746.865
				P81017.1	Snaclec echicetin subunit alpha	Snaclecs	2	7	15.8	3.87	7711652.5	0.00184901	5.341E-05	TWDEAEK	2	439.698
23	4,30,27,24	4,24,16,10	0.040581	CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAAO	3	12	56.5	52.59	1531632012	0.31355117	0.0127242	DIVVVGAGMSGLSAAYVLAGAG HK STTDLPSR KFWEDDGIQGGK KFWEDDGIQGGK FWEDDGIQGGK	3 2 2 3 3 2	753.73 438.728 460.886 460.558 460.558 626.287

				JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAO	6	26	56.7	36.67	1430731434	0.2928951	0.011886	DIVVVGAGMSGLSAAYVLAGAG HK FDEIVGGMDRLPTSMYRAIEK EADYEEFLEIAR IYFAGEYTANAHGWIDSTIK VTVLEASER SQDDPDYGMVDIGTK ANEEDKGMVDEGTK LASHSSSEEEAFVSK GMVEPGTK NPCQIYYTLRDENK	3 3 3 2 2 3 3 3 2	753.73 816.055 495.567 753.035 502.275 828.856 513.888 545.274 409.708 605.62
				ADI47584.1	metalloproteinase [Echis carinatus sochurek]	P-III svMP	4	10	69.3	25.38	1403464174	0.28731303	0.0116594	SQDDPDYGMVDIGTK	2	828.856
				ADW54338.1	group III snake venom metalloproteinase [Echis ocellatus]	P-III svMP	2	4	72.8	29.15	498420409.8	0.10203515	0.0041407	ANEEDKGMVDEGTK	3	513.888
				1V7P	B Chain B, Ems16 B Chain	Snaclecs	4	33	15.1	10.72	17301428	0.0035419	0.0001437	LASHSSSEEEAFVSK	3	545.274
				ADI47586.1	metalloproteinase [Echis carinatus sochurek]	P-III svMP	2	5	69.1	14.58	3241822.813	0.00066366	2.693E-05	GMVEPGTK	2	409.708
24	54,43,27	54,43	0.023195	CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAO	2	12	56.5	47.27	49404091	0.02476954	0.0005745	DIVVVGAGMSGLSAAYVLAGAG HK YDTYSTK KFWEDDGIQGGK DIVVVGAGMSGLSAAYVLAGAG	3 2 3	748.4 439.2 460.556
				JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAO	3	20	56.7	36.34	210925437.6	0.10575089	0.0024529	HK IYFAGEYTANAHGWIDSTIK EADYEEFLEIAR	3 2 2	748.4 753.036 742.85
				ADI47655.1	metalloproteinase [Echis coloratus]	P-III svMP	2	2	68.8	26.52	1671499452	0.83803339	0.0194382	KENDVPIPCAQEDIK ENDVPIPCAQEDIK	2 2	878.927 814.878
				ADW54338.1	group III snake venom metalloproteinase [Echis ocellatus]	P-III svMP	3	5	72.8	16.21	23980659.38	0.01202309	0.0002789	ANEEDKGMVDEGTK	2	762.33
				ADI47580.1	metalloproteinase [Echis carinatus sochurek]	P-III svMP	2	4	68.2	4.38	38740300	0.01942308	0.0004505	TDIVSPQVCGNGLLEK YNDLTAMR	2 2	866.427 549.257
25	120, 65, 30	65, 54, 30	0.018604	ADI47586.1	metalloproteinase [Echis carinatus sochurek]	P-III svMP	11	25	69.1	224.91	6882752714	0.34234281	0.0063689	IPCAPEDVK LYCFDNLPEHK GMVEPGTK SIQEASQLNLTPEQQR LSDLLNR LSDLLNR IYEIINLNAIYR TNWESDK AFHMHVALVFLEIWSNGDK KMPQCILK YNNYKEDPYTK	2 2 2 2 2 2 2 2 2 2 2 3	514.757 718.338 409.707 921.971 415.74 494.282 804.462 440.196 744.043 509.285 478.889
				JAC96587.1	Phospholipase B [Echis coloratus]	PLB	16	31	64.5	160.84	2600921908	0.12936785	0.0024068	VLPGYENIYFAHSSWFTYAATLR QVVPESLFAWER TWAQIFEK SLEDGTLYIEIQIPK SLEDGTLYIEIQIPKLVK LGLFESYEMAPR ENSGTYNNQYMILDTK ENSGTYNNQYMILDTKK HGYWPSYNIPIPHK HQSLPESYNFDFVTMKPVL IANMMADSGK YSDQTEVLR	3 2 2 3 2 2 3 3 3 2 2 2	902.784 730.879 511.769 859.964 687.061 706.847 945.931 673.654 549.269 751.373 527.239 555.775
				ADI47725.1	metalloproteinase, partial [Echis carinatus sochurek]	P-II svMP	2	9	27.7	153.92	10076285143	0.50118665	0.0093241	ERDLLNR RDLINVVSSSIDTLR DLINVVSSSIDTLR	2 3 2	458.255 563.316 766.423
				JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAO	3	21	56.7	40.68	271863585.7	0.01352228	0.0002516	YDTYSTK DIVVVGAGMSGLSAAYVLAGAG HK STDLPSR EADYEEFLEIAR	2 3 3 2	439.2 748.401 438.725 742.849
				CAJ55261.1	renin-like aspartic protease [Echis ocellatus]	AsP	3	10	43.8	24.88	220276875	0.0109564	0.0002038	ITLTYGQGYIEGFLSQDIVR YDSSESSTYKPK	3 3	758.401 464.549
				ADI47581.1	metalloproteinase [Echis carinatus sochurek]	P-III svMP	3	6	70.3	43.8	11280783	0.0005611	1.044E-05	GMVEPGTK IPCAPQDVK	2 2	409.707 514.757
				ADI47655.1	metalloproteinase [Echis coloratus]	P-III svMP	2	5	68.8	6.39	7178044	0.00035703	6.642E-06	VYEMINTVNEIYIMHIR KENDVPIPCAQEDIK	3 2	767.717 878.916

Supplementary Table 3: Assignment of peptides sequenced from MS/MS spectra against protein database from *Echis* genus for ECVRAJ. Relative abundance of each protein from HPLC fractions were estimated by taking sum of precursor abundance of all peptides matched to respective proteins.

Peak no.	Molecular wt by SDS-PAGE		Peak fraction	Protein Information									Peptide Information		
	Reducin g (-kDa)	Non-reducing(-kDa)		Accession	Description	Toxin family	# Unique Peptides	Coverage [%]	MW [kDa]	Score Sequest HT	Sum of precursors Abundances	Relative abundance	Relative fraction of proteins	Sequence	Charge
1 to 3	n.f	n.f		P0C6R5.1	Disintegrin multisquamatin	Disintegrin	2	100	5.7	171.22	3369579891	0.37427213	EGEECESGPCCRNCK	3	624.89
				P17347.2	Disintegrin echistatin-alpha	Disintegrin	1	100	5.4	174.66	164455427.9	0.01826669	EGEECESGPCCR	2	735.26
				ADI47725.1	Disintegrin domain of metalloproteinase [Echis carinatus sochureki]	DIS domain (P-II svMP)	6	6	55.4	150.65	5468985909	0.60746118	QCESGPCCR	2	578.2
													FLKEGTICKR	2	626.84
													FLKEGTICK	2	548.3
7	14	14	0.2164	pdbj2QHE A	A Chain A, Phospholipase A2	PLA2	6	38	13.8	46.63	3778025750	1	GPPLDATDR	2	471.24
													MIQETGK	2	460.25
													NLNTYNK	2	433.72
													SVVELGKMIQETGK	3	544.64
8	14	14	0.0367	AAP41217.1	phospholipase A2 [Echis carinatus]	PLA2	2	12	15.5	1.92	10790134.75	0.04087616	EAAICLGENVNTYDKK	3	608.96
				pdbj2QHE A	A Chain A, Phospholipase A2	PLA2	4	25	13.8	11.51	253181238	0.95912384	GPPLDATDR	2	471.24
													MIQETGK	2	460.25
													NLNTYNK	2	433.72
9	27	27	0.0239	ADI47565.1	serine protease, partial [Echis carinatus sochureki]	svSP	2	13	26.2	6.26	115729696.8	0.00479502	IMGWGTITTTK	2	612.82
				ADI47559.1	serine protease, partial [Echis coloratus]	svSP	2	9	29	5.75	255114510.6	0.01057014	NENEEMRVPAAEK	3	488.22
				pdbj2QHE A	A Chain A, Phospholipase A2	PLA2	3	20	13.8	3.94	10741739	0.00044506	IKLGVHMK	2	454.79
				P0DMT4.1	Cysteine-rich venom protein	CRISP	13	38	24.7	254.15	23753804045	0.98418977	IMGWGTITTTK	2	612.82
													WDKDIMLIR	3	402.55
													NLNTYNK	2	433.72
													GPPLDATDR	2	471.24
													SVNPTASNMLRMEWYPEAAAN	2	471.24
													AER	3	908.75
													SVNPTASNMLR	2	603.3
													RSVNPTASNMLR	3	454.57
													NVDFDSESPR	2	583.75
													WTAIHK	2	434.76
													MEWYPEAAANAER	2	777.34
													WTAIHKWHDEK	3	521.94
10	32,30, and	43,35,33	0.0522	P0DMT4.1	Cysteine-rich venom protein	CRISP	11	26	24.7	232.14	18266910115	0.88775409	KPEIQNEIIDLHNSLR	3	640.35
													SVNPTASNMLR	3	402.54
													RSVNPTASNMLR	3	454.57
													NVDFDSESPR	2	583.75
													MEWYPEAAANAER	3	518.56
													WTAIHK	2	434.76
				ADI47565.1	serine protease, partial [Echis carinatus sochureki]	svSP	6	21	26.2	30.23	1732192482	0.08418287	IMGWGTITTTK	2	604.82
													NENEEMR	2	461.68
													NVRNENEEMR	3	431.52
													NENEEMRVPAAEK	3	488.55
													IKLGVHMK	2	454.79
				ADI47573.1	serine protease, partial [Echis carinatus sochureki]	svSP	5	28	25.5	10.73	283308781.8	0.01376853	IYFGLHNLK	2	552.81
				ADI47559.1	serine protease, partial [Echis coloratus]	svSP	2	12	29	13.57	294131520.4	0.01429451	LDKPVTSSTHIAPISLSPSPSVG	3	963.84
													SVCR	3	963.84
													IMGWGTITTTK	2	604.82
													WDKDIMLIR	2	595.32
12	43,27	43,16, and	0.0141	Q9PSM9.1	Snaclec coagulation factor IX/factor X-binding protein subunit A	Snaclec	3	17	15.4	1.63	414222934.3	0.6627607	VFNEYK	2	400.2
				P0DMT4.1	Cysteine-rich venom protein	CRISP	7	26	24.7	29.62	154427512.3	0.24708551	MEWYPEAAANAER	2	769.34
													NVDFDSESPR	2	583.26
													SVNPTASNMLR	2	595.3
				ADI47550.1	serine protease, partial [Echis carinatus sochureki]	svSP	2	12	25.5	6.51	56345776	0.09015379	IMGWGSIIISPNEK	2	716.37
13	27	16,14	0.0165	Q9PSM9.1	Snaclec coagulation factor IX/factor X-binding protein subunit A	Snaclec	4	20	15.4	5.35	657686593.1	0.36975271	VFNEYK	2	400.69
				pdbj2QHE A	A Chain A, Phospholipase A2	PLA2	3	20	13.8	5.32	17687093.44	0.00994372	NLNTYNK	2	433.72

				ADI47550.1	serine protease, partial [Echis carinatus sochureki]	svSP	8	38	25.5	54.65	1103346469	0.62030357	0.0102468	MSYVPHCANINILR FFCLPSR IMGWGSIIISPNEK NSAHIAPLHLPSNPPR	3 2 2 3	563.29 463.73 716.37 574.31
14	27	16, 14	0.0592	ADI47565.1 pdb 1V7P B P81017.1	serine protease, partial [Echis carinatus sochureki] B Chain B, Ems16 B Chain Snaclec echicetin subunit alpha	svSP Snaclec Snaclec	3 3 5	15 23 23	26.2 15.1 15.8	1.61 3.39 8.23	96630215.38 10146904.81 60093428.94	0.09381181 0.00985095 0.05834069	0.005553 0.0005831 0.0034534	NENEEMRVPAEK LASHISSEEEAFVSK SAIEDRVWIGLR TWDEAEK	3 3 3 2	488.22 545.27 472.26 439.7
				Q9PSM9.1	Snaclec coagulation factor IX/factor X-binding protein subunit A	Snaclec	4	29	15.4	1.69	566208804.5	0.54969426	0.0325381	VFNEYK	2	400.2
				ADI47550.1	serine protease, partial [Echis carinatus sochureki]	svSP	3	18	25.5	17.79	296963798	0.28830229	0.0170655	IMGWGSIIISPNEK NSAHIAPLHLPSNPPR	2 3	716.37 574.31
15	28,27	16,15,and	0.0111	pdb 1V7P B P81017.1	B Chain B, Ems16 B Chain Snaclec echicetin subunit alpha	Snaclec Snaclec	3 2	23 7	15.1 15.8	3.86 3.3	8884516.375 56612494	0.1147247 0.73103038	0.0012717 0.0081035	LASHISSEEEAFVSK TWDEAEK	2 2	817.41 439.7
				ADI47550.1	serine protease, partial [Echis carinatus sochureki]	svSP	2	12	25.5	5.19	11945043.63	0.15424492	0.0017098	NSAHIAPLHLPSNPPR	3	574.31
16	43, 27	43,16,14	0.0327	P81017.1 pdb 1V7P B	Snaclec echicetin subunit alpha B Chain B, Ems16 B Chain	Snaclec Snaclec	2 5	9 43	16.7 15.1	5.59 10.47	119865736.1 89183464.5	0.38718706 0.28807802	0.0126494 0.0094115	TWADAEK LASHISSEEEAFVSK	2 2	410.7 817.41
				Q9PSM9.1	Snaclec coagulation factor IX/factor X-binding protein subunit A	Snaclec	4	28	15.4	2.07	81408254.69	0.26296274	0.008591	VFNEYK	2	400.2
				pdb 2QHE A	A Chain A, Phospholipase A2	PLA2	2	14	13.8	5.63	12533144.75	0.04048423	0.0013226	GPPLDATDR	2	471.24
				ADI47589.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	4	68.4	7.12	6590345.875	0.02128796	0.0006955	SVGIEDHSPIVR	3	469.92
17	43,30,27	43, 18,16,	0.0076	P81017.1	Snaclec echicetin subunit alpha	Snaclec	14	63	15.8	28.44	697424185.1	0.14861333	0.0011351	VWIGLRDR TWDEAEK SAIEDRVWIGLRDR SAIEDRVWIGLR YCNQWDGGHLVSIENAK LKTWDEAEK CFVLER	2 2 3 3 3 2 2	508.29 439.7 562.64 472.26 693.32 560.29 412.21
				pdb 1V7P B	B Chain B, Ems16 B Chain	Snaclec	9	63	15.1	38.97	1908092381	0.40659326	0.0031056	WEWSDNAR RRPYCTVMVVKPDR RPYCTVMVVKPDR IFWFTR LASHISSEEEAFVSK FTSMWIGLNNPWK	2 3 3 2 2 2	532.23 592.98 540.95 435.24 817.41 805.39
				JAC96617.1	C-type lectin J [Echis coloratus]	Snaclec	6	28	18.3	18.09	847234133.1	0.18053617	0.0013789	TWFNLR SSADYVWIGLWNKR SSADYVWIGLWNK NCFGLEK	2 3 2 2	418.72 565.63 769.89 434.21
				Q9PSM9.1	Snaclec coagulation factor IX/factor X-binding protein subunit A	Snaclec	3	18	15.4	4.97	138943242.6	0.02960726	0.0002261	VFNEYKTKWK VFNEYK	3 2	405.54 400.2
				pdb 2QHE A	A Chain A, Phospholipase A2	PLA2	4	25	13.8	7.77	29176727.09	0.00621724	4.749E-05	NLNTYNK GPPLDATDR	2 2	433.72 471.24
				ADI47570.1	serine protease, partial [Echis coloratus]	svSP	2	5	26.4	5.48	408059312	0.0869529	0.0006641	EAYGGLPEKSR EAYGGLPEK	2 2	603.81 482.24
				JAC96622.1	C-type lectin E, partial [Echis coloratus]	Snaclec	3	19	11.6	1.63	663947624.5	0.14147985	0.0010806	MCOGLAK IIVVNWK	2 2	404.2 468.27
18	54, 27,16	54, 16,14	0.0428	ADI47570.1	serine protease, partial [Echis coloratus]	svSP	2	5	26.4	1.95	190796042.1	0.28565293	0.0122157	EAYGGLPEKSR EAYGGLPEK	3 2	402.88 482.25
				P81017.1	Snaclec echicetin subunit alpha	Snaclec	2	7	15.8	3.52	133280291.7	0.19954243	0.0085332	TWDEAEK	2	439.7
				ADI47577.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	5	68.1	12.87	127216295.4	0.19046363	0.008145	YNNDLTAMR HPYGDGEMVEPGTK HPYGDGEMVEPGTK	2 3 3	549.26 511.56 506.23
				pdb 1V7P B	B Chain B, Ems16 B Chain	Snaclec	3	23	15.1	4.51	94057635.5	0.14081969	0.006022	IFWFTR LASHISSEEEAFVSK	2 3	435.24 545.27
				JAC96622.1	C-type lectin E, partial [Echis coloratus]	Snaclec	2	8	18.2	1.61	84579847.41	0.12662989	0.0054152	IIVVNWK	2	468.27
				CAQ2894.1	L-amino oxidase [Echis ocellatus]	LAAO	3	10	56.5	15.64	34878139.02	0.05221829	0.0022331	YDTYSTK AVEELKR	2 2	439.2 422.75
				ADI47589.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	6	68.4	11.28	3121332.75	0.00467315	0.0001998	YNNDLTAMR SVGIEDHSPIVR	2 3	549.26 469.92
19	91	18, 14	0.0286	JAC96617.1	C-type lectin J [Echis coloratus]	Snaclec	6	22	18.3	14.19	2510163003	0.44192263	0.0126262	TWFNLR SSADYVWIGLWNKR	2 3	418.72 565.63

				pdb 1V7P B	B Chain B, Ems16 B Chain	Snaclec	7	52	15.1	26.86	1595846886	0.28095421	0.0080271	SSADYVWIGLWNK NCFGLEK WEWSDNAR IFWFTR LASHSSEEEAFVSKLASK LASHSSEEEAFVSK FTSMWIGLNNPWK DIVVVGAGMSGLSAAYVLAGAG	3 2 2 2 3 2 2	513.59 434.21 532.23 435.24 678.36 817.41 797.4
				JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	4	20	56.7	23.74	763686689.9	0.13444961	0.0038414	HK YDTYSTK HDDIFAYEK VTVLEASER EADYEEFLEIAR	3 2 2 2 2	753.73 439.2 569.26 502.28 742.85
				JAC96622.1 ADI47570.1	C-type lectin E, partial [Echis coloratus] serine protease, partial [Echis coloratus]	Snaclec svSP	3 2	19 5	11.6 26.4	3.99 3.49	634243937 83349340.94	0.11166078 0.01467393	0.0031903 0.0004192	IIVNWK EAYGGLPEK	2 2	468.27 482.24
				ADI47550.1 P81017.1	serine protease, partial [Echis carinatus sochureki] Snaclec echicetin subunit alpha	svSP Snaclec	2 3	12 13	25.5 15.8	8.43 2.17	43304197.75 32596107	0.00762385 0.00573865	0.0002178 0.000164	NSAHIAPLHLPSNPPR VWIGLRDR TWDEAEK	3 2 2	574.31 508.29 439.7
				pdb 2QHE A CAQ72894.1	A Chain A, Phospholipase A2 L-amino oxidase [Echis ocellatus]	PLA2 LAAO	2 2	14 14	13.8 56.5	3.41 16.8	10808751.13 6097138.73	0.00190292 0.00107342	5.437E-05 3.067E-05	MIHQETGK DIVVVGAGMSGLSAAYVLAGAG HK YDTYSTK HDDIFAYEK AVEELKR	2 3 2 2 2	468.25 753.73 439.2 569.26 422.75
20	120,54	54	0.0033	ADI47590.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	3	12	69.5	33.51	1970820103	0.35109331	0.0011758	YDYSIEDPNYGMVDEGTK VPLVGMFEWVNRQ KYNGNLR	3 2 2	666.93 738.38 433.23
				pdb 1V7P B	B Chain B, Ems16 B Chain	Snaclec	8	57	15.1	8.52	1034429262	0.18427922	0.0006172	WEWSDNAR IFWFTR LASHSSEEEAFVSK FTSMWIGLNNPWK	2 2 2 2	532.23 435.24 817.41 805.4
				JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	4	21	56.7	23	1001413421	0.17839759	0.0005975	YDTYSTK HDDIFAYEK HDDIFAYEKR STTDLPSR VTVLEASER EADYEEFLEIAR	2 2 3 2 2 2	439.2 569.27 431.88 438.73 502.27 742.85
				ADI47589.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	5	68.4	5.83	730809308.5	0.13019061	0.000436	YNNDLTAMR YPYGDGEMVEPGTK	2 2	549.25 771.84
				ADI47581.1 CAQ72894.1	metalloproteinase [Echis carinatus sochureki] L-amino oxidase [Echis ocellatus]	P-III svMP LAAO	2 3	5 15	70.3 56.5	19.58 45.59	417349680.6 367921195.5	0.07434909 0.06554361	0.000249 0.0002195	VSDLLNR YDTYSTK HDDIFAYEK HDDIFAYEKR STTDLPSR KFWEDDGIQGGK FWEDDGIQGGK AVEELKR	2 2 3 3 2 2 2 2	408.73 439.2 569.27 431.88 438.73 460.56 626.29 422.75
				ADI47550.1 ADI47590.1 ADI47643.1	serine protease, partial [Echis carinatus sochureki] metalloproteinase [Echis carinatus sochureki] metalloproteinase [Echis coloratus]	svSP P-III svMP P-III svMP	2 2 2	12 9 5	25.5 69.2 69.3	12.44 6.87 6.81	63650935.75 25328996.25 1656854.563	0.01133915 0.00451225 0.00029516	3.797E-05 1.511E-05 9.885E-07	NSAHIAPLHLPSNPPR YDYSIEDPNYGMVDEGTK GMVEPGTK	3 3 2	574.31 666.93 409.71
21	54,43,33	Bands as	0.024	JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	4	25	56.7	34.55	1844270667	0.48118157	0.0115647	YDTYSTK HDDIFAYEK HDDIFAYEKR STTDLPSR VTVLEASER FDEIVGGMDRLPTSMYRAIEK EADYEEFLEIAR	2 2 3 2 2 3 2	439.2 569.26 431.88 438.73 502.28 816.05 742.85
				ADI47589.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	4	68.4	8.48	911661468.8	0.23785809	0.0057167	YNNDLTAMR YPYGDGEMVEPGTK	2 2	549.75 771.84
				ADI47581.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	5	10	69.8	22.77	593659103.5	0.15488932	0.0037226	GMVEPGTK VSDLLNR	2 2	409.71 408.73
				CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAAO	3	19	56.5	59.63	375501620.8	0.09797068	0.0023546	YDTYSTK	2	439.2





																			DIVVVGAGMSGLSAAYVLAGAG	3	753.73				
																			HK	2	441.74				
																			IFLTCTK	2	439.2				
																			YDTYSTK	3	508.59				
																			YDTYSTKEYLIK	2	502.28				
																			VTVLEASER	3	816.05				
																			FDEIVGGMDRLPTSMYRAIEK	3	495.57				
																			EADYEEFLEIAR	3	418.69				
					ADW54356.1	group III snake venom metalloproteinase [Echis carinatus sochureki]	P-III svMP	4	5	68.6	14.27	81878465.48	0.01600841	0.0001885	GMVDEGTK	2	513.89		ADEEDKGMVDEGTK	3	574.31				
					ADI47550.1	serine protease, partial [Echis carinatus sochureki]	svSP	2	12	25.5	9.74	61177548.5	0.01196108	0.0001409	NSAHIAPLHLPSPNPPR	3	408.73		VSDLLNR	2	782.73				
					ADI47581.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	3	9	68.7	9.79	98264614.34	0.01921213	0.0002263	SLGMAFVDGMCKPYRSVGLIK	3	492.59		VPLVGMFEFVNQR	2	423.72				
					ADI47590.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	4	8	69.5	7.07	39855067.38	0.00779223	9.177E-05	ESDLLNR	2	435.24		IFWFTR	2	817.41				
					pdb 1V7P B	B Chain B, Ems16 B Chain	Snaclec	3	23	15.1	5.89	28039594.63	0.00548214	6.456E-05	LASHSSEEEAFVSK	2	406.54		RFPCAPQDVK	3	509.26				
					ADI47593.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	2	11	28.3	4.13	32314720	0.00631799	7.441E-05	CIFDPPLR	2	406.54		RFPCAPQDVK	3	610.24				
					ADI47671.1	metalloproteinase [Echis pyramidum leakeyi]	P-III svMP	2	4	69.9	2.42	239155718.4	0.04675835	0.0005507	NDYSYADENK	2	400.2		VFNEYK	2	409.71				
					Q9PSM9.1	Snaclec coagulation factor IX/factor X-binding protein subunit A	Snaclec	3	17	15.4	1.64	55928915.16	0.0109349	0.0001288	GMVEPGTK	3	479.95		VAIADYLIYRK	3	655.38				
				27	120,100,	54,43, 16,	0.0135	ADI47586.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	9	17	69.1	17.02	412992874.4	0.36704951	0.0049405	VAIADYLIYR	2	409.71		GMVEPGTK	3	409.71	
					ADI47643.1	metalloproteinase [Echis coloratus]	P-III svMP	2	6	69.3	19.1	229455324	0.20392958	0.0027449	SVGLVQDHSTTNLR	3	409.71		GMVEPGTK	2	409.71				
					CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAAO	3	13	56.5	17.11	147574204.4	0.13115732	0.0017654	GSDLLNRK	2	451.76		YDTYSTK	2	439.2				
					JAC96587.1	Phospholipase B [Echis coloratus]	PLB	9	19	64.5	16	96687462.25	0.08593147	0.0011566	STTDLPSR	2	438.72		KFWEDDGIQGGK	3	460.56				
					ADI47588.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	2	4	71.7	3.77	88884891.66	0.0789969	0.0010633	AVEELKR	2	422.75		HGYWPSYNIPFHK	3	549.27				
					JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	2	14	56.7	16.74	78710248	0.06995413	0.0009416	GMVDPGDK	2	410.7		YDTYSTK	2	439.2				
					pdb 1V7P B	B Chain B, Ems16 B Chain	Snaclec	3	23	15.1	3.98	40841558	0.03629814	0.0004886	STTDLPSR	2	438.72		IFWFTR	2	435.24				
					JAC96617.1	C-type lectin J [Echis coloratus]	Snaclec	3	13	18.3	6	30022816.5	0.02668293	0.0003592	LASHSSEEEAFVSK	2	817.4		TWFNLR	2	418.73				
				28	120,100,	54, 43	0.0055	JAC96587.1	Phospholipase B [Echis coloratus]	PLB	14	23	64.5	19.83	355265392.2	0.31210853	0.0017153	VTDMESMK	2	478.71		TWAQIFEK	2	511.77	
					ADI47586.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	10	13	69.1	20.25	692930544	0.60875486	0.0033457	IANMMADSGK	2	527.24		ENSGTYNNQYMILDTK	3	630.96				
					CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAAO	3	7	56.5	4.14	33940767.55	0.02981772	0.0001639	YNNYKEDPYTK	3	478.89		YSDQTEVLR	2	555.77				
					ADI47718.1	metalloproteinase, partial [Echis carinatus sochureki]	P-II svMP	2	6	36.6	4.83	43355576.84	0.03808884	0.0002093	LSDLLNR	2	415.74		GMVEPGTK	2	417.7				
					JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	2	7	56.7	3.96	12782894.06	0.01123006	6.172E-05	DENKGMVEPGTK	3	435.54		YDTYSTK	2	439.2				
					ADI47718.1	metalloproteinase, partial [Echis carinatus sochureki]	P-II svMP	4	28	27.7	36.94	2664060014	0.27488	0.0050944	AVEELKR	2	422.75		KFWEDDGIQGGK	3	460.56				
					30	54,50,24	54,50,24	0.0185	ADI47718.1	metalloproteinase, partial [Echis carinatus sochureki]	P-II svMP	4	28	27.7	36.94	2664060014	0.27488	0.0050944	DLINVVSSSDTLR	2	753.39		YDTYSTK	2	439.2
																		ERDLLNR	2	458.25		ERDLLNR	3	889.8	
																		NQYQNYLTIYKQPCILNQPLR	3	502.6		DLINVVSSSDTLR	3	502.6	

				ADI47588.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	15	33	57.6	49.88	1598744214	0.1649598	0.0030572	DLINVVSSSDTLRSFAEWR	3	761.39
														ESVGIVQDHSK	2	599.81
														CILNEPLR	2	507.77
														YSDVSLDYGMDVPGTK	2	873.9
														SADCPDYFHR	3	456.86
														DHDNAQLLTGINLNGNTIGYGYV		
														GSMCMKP	3	1090.5
														FATAETVCRPAK	3	450.9
														KYTGDTVTAIK	2	548.3
														LPIDNTPLCNYR	3	492.58
														YTGDTVTAIK	2	484.26
														YTGDTVTAIKTR	3	408.89
				ADI47725.1	metalloproteinase, partial [Echis carinatus sochureki]	P-II svMP	2	31	27.7	51.52	999634114.3	0.10314311	0.0019116	ERDLLNR	2	458.25
														NQYQNYLTNYKPQCIINQPLR	3	890.12
														ERDLLNR	2	458.25
														ERDLLNRR	2	537.29
				ADI47638.1	metalloproteinase [Echis coloratus]	P-III svMP	3	6	70	6.9	819222476.3	0.08452808	0.0015666	YNGNLQK	2	419.7
														FKPAGTECR	2	533.26
														RHDNAQLLTAIGFDRPTIGR	3	751.73
														HDNAQLLTAIGFDRPTIGR	3	699.69
				ADI47641.1	metalloproteinase [Echis coloratus]	P-III svMP	3	11	69.2	21.83	644190795.6	0.06646816	0.0012319	ESVGIVQDHSK	2	599.81
														CILNEPLR	2	507.77
														QRDLLNR	2	458.25
														YSDVALDYGMDVPGTK	2	873.9
														AYMNANKFIKLVVDNVMYR	3	834.77
				JAC96610.1	Snake venom metalloproteinase A, partial [Echis coloratus]	P-I svMP	2	13	13.4	17.5	619268899.9	0.0638967	0.0011842	ENDVLIPCEPEDIK	3	557.6
														KENDVLIPCEPEDIK	3	600.3
				ADW54330.1	group I snake venom metalloproteinase, partial [Echis ocellatus]	P-I svMP	2	4	51	2.3	594776816.5	0.06136958	0.0011374	YIQLVIVADHAMVTKK	3	615.68
														YIQLVIVADHAMVTK	3	572.99
				ADI47590.1	metalloproteinase [Echis carinatus sochureki]	P-III svMP	2	7	69.5	1.79	181002249	0.01867597	0.0003461	FKPAGTECR	2	533.26
				ADI47732.1	metalloproteinase [Echis pyramidum leakeyi]	P-II svMP	2	5	54.2	3.92	149600610.8	0.01543592	0.0002861	YIQLVIVADHAMITK	3	577.65
														SVGIVQDHSK	2	535.29
				CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAAO	3	16	56.5	8.4	93684106.69	0.00966641	0.0001791	STDDLPSR	2	438.73
														DIVVVGAGMSGLSAAYVLAGAG		
														HK	3	748.4
														AVEELKR	2	422.75
														KFWEDDGIQGGK	3	460.56
				CAJ55261.1	renin-like aspartic protease [Echis ocellatus]	AsP	5	22	43.8	2	66479435.31	0.00685941	0.0001271	ITLTYGGQYIEGFLSQDIVR	2	1137.1
				ADI47550.1	serine protease, partial [Echis carinatus sochureki]	svSP	4	27	25.5	10.66	61873664.25	0.00638418	0.0001183	MSYVPHCANINILR	3	563.28
				JAC96580.1	L-amino acid oxidase B variant 1 [Echis coloratus]	LAAO	2	16	56.7	10.81	53316672	0.00550126	0.000102	STDDLPSR	2	438.73
														DIVVVGAGMSGLSAAYVLAGAG		
														HK	3	748.4
				ADI47642.1	metalloproteinase [Echis coloratus]	P-III svMP	2	6	69.1	8.35	35850981	0.00369913	6.856E-05	HDNAQLLTGINFKGQTLGR	3	695.69
				P81017.1	Snaclec echicetin subunit alpha	Snaclec	7	57	15.8	3.53	25825874.5	0.00266474	4.939E-05	YCNQWDGGHLVSIENAK	3	693.32
				JAC96587.1	Phospholipase B [Echis coloratus]	PLB	10	20	64.5	11.21	21339833.63	0.00220186	4.081E-05	NAGYYIAQLDGLYMGNVWVAK	3	771.38
				P0DMT4.1	Cysteine-rich venom protein	CRISP	3	18	24.7	11.72	21062289	0.00217323	4.028E-05	KPEIQNEIIDLHNSLR	3	640.35
				pdb 1V7P B	B Chain B, Ems16 B Chain	Snaclec	3	27	15.1	3.64	18557195	0.00191475	3.549E-05	LASHSSEEEAFVSK	2	817.41
31	27	27	0.3747	ADI47718.1	metalloproteinase, partial [Echis carinatus sochureki]	P-II svMP	4	23	27.7	119.2	7809173608	0.49719421	0.1863176	ERDLLNR	2	458.25
														NQYQNYLTIIYKPQCIINQPLR	3	890.12
														DLINVVSSSDTLR	2	753.4
														DLINVVSSSDTLRSFAEWR	3	761.38
				ADW54330.1	group I snake venom metalloproteinase, partial [Echis ocellatus]	P-I svMP	2	4	51	6.18	4313636154	0.27464045	0.1029182	YIQLVIVADHAMVTK	3	572.98
				ADI47725.1	metalloproteinase, partial [Echis carinatus sochureki]	P-II svMP	4	26	27.7	178.56	3466867142	0.22072838	0.0827153	ERDLLNR	2	458.25
														NQYQNYLTNYKPQCIINQPLR	3	890.12

													RPHDNAQFLTNINFDDNVIGR	3	819.74
			ADI47588.1	metalloproteinase, partial [Echis carinatus sochureki]	P-III svMP	4	16	57.6	8.62	75413078.25	0.0048014	0.0017993	NELWGYFISHTPR	3	540.6
			ADI47641.1	metalloproteinase [Echis coloratus]	P-III svMP	2	9	69.2	16.61	27011498	0.00171977	0.0006445	YTGDTVTAIK	2	484.26
			CAQ72894.1	L-amino oxidase [Echis ocellatus]	LAAO	3	13	56.5	5.54	14383925.14	0.0009158	0.0003432	NELWGYFISHTPR	3	540.6
													QRDLLNR	2	458.25
													KFWEDDGIQGGK	3	460.56

Supplementary Table 4: List of toxin families and unique proteins matched to MS/MS sequenced peptides for ECVTN. Total of 69 unique proteins belonging to 10 toxin families were detected.

#### Snake venom metalloproteinases (svMP)

ADI47722.1	Disintegrin domain of metalloproteinase [Echis carinatus sochureki]
ADI47583.1	DC domain of metalloproteinase [Echis carinatus sochureki]
ADI47625.1	DC domain of metalloproteinase [Echis coloratus]
CAJ01683.1	DC domain of group III snake venom metalloproteinase [Echis ocellatus]
ADI47586.1	DC domain of metalloproteinase [Echis carinatus sochureki]
ADW54339.1	group III snake venom metalloproteinase [Echis ocellatus]
CAA55566.1	metalloprotease, partial [Echis pyramidum]
ADI47590.1	metalloproteinase [Echis carinatus sochureki]
ADI47577.1	metalloproteinase [Echis carinatus sochureki]
ADI47580.1	metalloproteinase [Echis carinatus sochureki]
ADI47592.1	metalloproteinase [Echis carinatus sochureki]
ADI47604.1	metalloproteinase, partial [Echis carinatus sochureki]
ADI47596.1	metalloproteinase, partial [Echis carinatus sochureki]
ADW54346.1	group III snake venom metalloproteinase, partial [Echis ocellatus]
ADI47581.1	metalloproteinase [Echis carinatus sochureki]
ADW54348.1	group III snake venom metalloproteinase [Echis ocellatus]
ADI47681.1	metalloproteinase, partial [Echis pyramidum leakeyi]
ADI47638.1	metalloproteinase [Echis coloratus]
ADI47626.1	metalloproteinase [Echis coloratus]
ANT80539.1	venom metalloprotease PIII-SVMP EOC00089 [Echis ocellatus]
ADW54356.1	group III snake venom metalloproteinase [Echis carinatus sochureki]
ADI47676.1	metalloproteinase, partial [Echis pyramidum leakeyi]
ADI47612.1	metalloproteinase [Echis coloratus]
ADI47584.1	metalloproteinase [Echis carinatus sochureki]
ADI47593.1	metalloproteinase, partial [Echis carinatus sochureki]
ADI47609.1	metalloproteinase, partial [Echis coloratus]
ADI47595.1	metalloproteinase, partial [Echis carinatus sochureki]
ADI47643.1	metalloproteinase [Echis coloratus]
ADI47634.1	metalloproteinase [Echis coloratus]

ADI47594.1 metalloproteinase, partial [Echis carinatus sochureki]  
ADI47585.1 metalloproteinase [Echis carinatus sochureki]  
ADI47725.1 metalloproteinase, partial [Echis carinatus sochureki]  
ADI47654.1 metalloproteinase, partial [Echis coloratus]  
ADI47653.1 metalloproteinase [Echis coloratus]  
ADI47645.1 metalloproteinase [Echis coloratus]  
ADI47641.1 metalloproteinase [Echis coloratus]  
ADI47588.1 metalloproteinase, partial [Echis carinatus sochureki]

### Snaclecs

Q7T248.2 Snaclec echicetin subunit alpha; Flags: Precursor  
JAC96617.1 C-type lectin J [Echis coloratus]  
P81017.1 Snaclec echicetin subunit alpha  
AAB32774.1 echicetin beta subunit[Echis carinatus]  
Q9PSM9.1 Snaclec coagulation factor IX/factor X-binding protein subunit  
pdb|1V7P|B B Chain B, Ems16 B Chain  
BAC77706.1 EMS16 A chain [Echis multisquamatus]  
JAC96622.1 C-type lectin E, partial [Echis coloratus]  
AAP41219.2 echicetin B-chain [Echis carinatus]

### om serine protease (svSP)

ADI47565.1 serine protease, partial [Echis carinatus sochureki]  
ADI47568.1 serine protease, partial [Echis coloratus]  
ADI47566.1 serine protease, partial [Echis coloratus]  
ADI47556.1 serine protease, partial [Echis ocellatus]  
ADI47570.1 serine protease, partial [Echis coloratus]  
ADI47552.1 serine protease, partial [Echis coloratus]  
ADE45140.1 serine protease, partial [Echis ocellatus]  
ADI47574.1 serine protease, partial [Echis coloratus]  
ADI47576.1 serine protease, partial [Echis coloratus]

### Phospholipases

pdb|1OZ6|B A Chain A, Phospholipase A2  
AAN77202.1 acidic phospholipase A2 [Echis carinatus sochureki]  
pdb|2QHE|B A Chain A, Phospholipase A2  
JAC96587.1 Phospholipase B [Echis coloratus]

### L-amino acid oxidase (LAAO)

JAC96580.1 L-amino acid oxidase B variant 1 [Echis coloratus]

CAQ72894.1 L-amino oxidase [Echis ocellatus]

### Hyaluronidase (HYAL)

ABI33941.1 hyaluronidase [Echis pyramidum leakeyi]

ABI33937.1 hyaluronidase [Echis ocellatus]

### Disintegrins

P17347.2 Disintegrin echistatin-alpha

AAW82478.1 Disintegrin, partial [Echis carinatus]

CAJ40966.1 MLD-containing dimeric disintegrin EO5A subunit precursor [Echis ocellatus]

### Aspartic protease (AsP)

CAJ55260.1 renin-like aspartic protease [Echis ocellatus]

### Cysteine-Rich Secretory protein (CRISP)

JAC96631.1 Cysteine-Rich Secretory Protein B [Echis coloratus]

### Nerve growth factor (NGF)

JAC88974.1 nerve growth factor a [Echis coloratus]

Supplementary Table 5: List of toxin families and unique proteins matched to MS/MS sequenced peptides for ECVGO. Total of 38 unique proteins belonging to 8 toxin families were detected.

#### Snake venom metalloproteinases (svMP)

ADI47584.1	metalloproteinase [Echis carinatus sochureki]
ADI47654.1	metalloproteinase, partial [Echis coloratus]
CAJ01689.1	Group III snake venom metalloproteinase [Echis ocellatus]
ADW54338.1	group III snake venom metalloproteinase [Echis ocellatus]
ADI47671.1	metalloproteinase [Echis pyramidum leakeyi]
ADI47596.1	metalloproteinase, partial [Echis carinatus sochureki]
ADI47577.1	metalloproteinase [Echis carinatus sochureki]
ADI47581.1	metalloproteinase [Echis carinatus sochureki]
ADI47590.1	metalloproteinase [Echis carinatus sochureki]
ADW54346.1	group III snake venom metalloproteinase, partial [Echis ocellatus]
ADI47648.1	metalloproteinase [Echis coloratus]
ADI47585.1	metalloproteinase [Echis carinatus sochureki]
ADI47580.1	metalloproteinase [Echis carinatus sochureki]
ADI47638.1	metalloproteinase [Echis coloratus]
ADI47604.1	metalloproteinase, partial [Echis carinatus sochureki]
ADI47647.1	metalloproteinase [Echis coloratus]
ADI47586.1	metalloproteinase [Echis carinatus sochureki]
ADI47655.1	metalloproteinase [Echis coloratus]
ADI47725.1	metalloproteinase, partial [Echis carinatus sochureki]

#### Snaclecs

1V7P	B Chain B, Ems16 B Chain
JAC96617.1	C-type lectin J [Echis coloratus]
Q7T248.2	Snaclec echicetin subunit alpha; Flags: Precursor
Q9PSM9.1	Snaclec coagulation factor IX/factor X-binding protein subunit A
JAC96622.1	C-type lectin E, partial [Echis coloratus]
P81017.1	Snaclec echicetin subunit alpha

#### Snake venom serine protease (svSP)

ADI47565.1	serine protease, partial [Echis carinatus sochureki]
ADI47575.1	serine protease, partial [Echis carinatus sochureki]
ADI47568.1	serine protease, partial [Echis coloratus]

ADI47570.1 serine protease, partial [Echis coloratus]

ADI47576.1 serine protease, partial [Echis coloratus]

#### Phospholipases

1OZ6 A Chain A, Phospholipase A2

JAC96587.1 Phospholipase B [Echis coloratus]

#### L-amino acid oxidase (LAAO)

JAC96580.1 L-amino acid oxidase B variant 1 [Echis coloratus]

CAQ72894.1 L-amino oxidase [Echis ocellatus]

#### Disintegrins

P17347.2 Disintegrin echistatin-alpha

P0C6R5.1 Disintegrin multisquamatin

#### Nerve growth factor (NGF)

JAC88974.1 nerve growth factor a [Echis coloratus]

#### Aspartic protease (AsP)

CAJ55261.1 renin-like aspartic protease [Echis ocellatus]



Supplementary Table 6: List of toxin families and unique proteins matched to MS/MS sequenced peptides for ECVRAJ. Total of 38 unique proteins belonging to 8 toxin families were detected.

#### Snake venom metalloproteinases (svMP)

ADI47589.1	metalloproteinase [Echis carinatus sochureki]
ADI47577.1	metalloproteinase [Echis carinatus sochureki]
ADI47590.1	metalloproteinase [Echis carinatus sochureki]
ADI47643.1	metalloproteinase [Echis coloratus]
CAJ01689.1	Group III snake venom metalloproteinase [Echis ocellatus]
ADI47581.1	metalloproteinase [Echis carinatus sochureki]
ADI47593.1	metalloproteinase, partial [Echis carinatus sochureki]
ADW54356.1	group III snake venom metalloproteinase [Echis carinatus sochureki]
ADI47671.1	metalloproteinase [Echis pyramidum leakeyi]
ADI47586.1	metalloproteinase [Echis carinatus sochureki]
ADI47718.1	metalloproteinase, partial [Echis carinatus sochureki]
ADI47588.1	metalloproteinase, partial [Echis carinatus sochureki]
ADI47725.1	metalloproteinase, partial [Echis carinatus sochureki]
ADI47638.1	metalloproteinase [Echis coloratus]
ADI47641.1	metalloproteinase [Echis coloratus]
JAC96610.1	Snake venom metalloproteinase A, partial [Echis coloratus]
ADW54330.1	group I snake venom metalloproteinase, partial [Echis ocellatus]
ADI47732.1	metalloproteinase [Echis pyramidum leakeyi]
ADI47642.1	metalloproteinase [Echis coloratus]

#### Snaclecs

Q9PSM9.1	Snaclec coagulation factor IX/factor X-binding protein subunit A
pdb 1V7P B	B Chain B, Ems16 B Chain
P81017.1	Snaclec echicetin subunit alpha
JAC96617.1	C-type lectin J [Echis coloratus]
JAC96622.1	C-type lectin E, partial [Echis coloratus]

#### Snake venom serine protease (svSP)

ADI47565.1	serine protease, partial [Echis carinatus sochureki]
ADI47559.1	serine protease, partial [Echis coloratus]

ADI47573.1 serine protease, partial [Echis carinatus sochureki]  
ADI47550.1 serine protease, partial [Echis carinatus sochureki]  
ADI47570.1 serine protease, partial [Echis coloratus]

#### Phospholipases

pdb|2QHE|A A Chain A, Phospholipase A2  
AAP41217.1 phospholipase A2 [Echis carinatus]  
JAC96587.1 Phospholipase B [Echis coloratus]

#### L-amino acid oxidase (LAAO)

CAQ72894.1 L-amino oxidase [Echis ocellatus]  
JAC96580.1 L-amino acid oxidase B variant 1 [Echis coloratus]

#### Disintegrins

P0C6R5.1 Disintegrin multisquamatin  
P17347.2 Disintegrin echistatin-alpha

#### Cysteine-Rich Secretory protein (CRISP)

P0DMT4.1 Cysteine-rich venom protein

#### Aspartic protease (AsP)

CAJ55261.1 renin-like aspartic protease [Echis ocellatus]