

Supplementary Materials: Intra-Specific Venom Variation in the Australian Coastal Taipan *Oxyuranus scutellatus*

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Electrophoresis/MS

B	C	D	E	F	G	H	I	J
Best N (Pe All N	Accessions	Names	Start Pe	Best Conf (Pe	Best Hypo	Sequence		
1	1 sp P0CB06 3512_OXYSC; sp Q45Z11 3511_O	Short neurotoxin 2 OS=Oxyuranus scutellatus	1	97	96.97	MTCYNQSSSEAK	Met	
1	1 sp P0CB06 3512_OXYSC; sp Q45Z11 3511_O	Short neurotoxin 2 OS=Oxyuranus scutellatus	1	32.3	32.32	MTCYNQSSSEAK	Oxi	
1	1 sp P0CB06 3512_OXYSC; sp Q45Z11 3511_O	Short neurotoxin 2 OS=Oxyuranus scutellatus	1	32.3	32.02	MTCYNQSSSEAK	Oxi	
1	1 sp P0CB06 3512_OXYSC; sp Q45Z11 3511_O	Short neurotoxin 2 OS=Oxyuranus scutellatus	1	32.3	28.05	MTCYNQSSSEAK	Carl	
1	1 sp P0CB06 3512_OXYSC; sp Q45Z11 3511_O	Short neurotoxin 2 OS=Oxyuranus scutellatus	1	32.3	16.09	MTCYNQSSSEAK	Carl	
1	1 sp P0CB06 3512_OXYSC; sp Q45Z11 3511_O	Short neurotoxin 2 OS=Oxyuranus scutellatus	1	32.3	15.94	MTCYNQSSSEAK	Carl	
1	1 sp P0CB06 3512_OXYSC; sp Q45Z11 3511_O	Short neurotoxin 2 OS=Oxyuranus scutellatus	1	99	90.45	MTCYNQSSSEAK	Carl	
1	1 sp P0CB06 3512_OXYSC; sp Q45Z11 3511_O	Short neurotoxin 2 OS=Oxyuranus scutellatus	1	99	2.234	MTCYNQSSSEAK	Carl	
1	1 sp P0CB06 3512_OXYSC; sp Q45Z11 3511_O	Short neurotoxin 2 OS=Oxyuranus scutellatus	1	92.5	92.45	MTCYNQSSSEAK	Carl	
1	1 sp P0CB06 3512_OXYSC; sp Q45Z11 3511_O	Short neurotoxin 2 OS=Oxyuranus scutellatus	1	80.3	80.31	MTCYNQSSSEAK	Met	
1	1 sp P0CB06 3512_OXYSC; sp Q45Z11 3511_O	Short neurotoxin 2 OS=Oxyuranus scutellatus	1	80.3	71.95	MTCYNQSSSEAK	Thr	
1	1 sp P0CB06 3512_OXYSC; sp Q45Z11 3511_O	Short neurotoxin 2 OS=Oxyuranus scutellatus	3	99	99	CYNQSSSEAK	Cys	
1	1 sp P0CB06 3512_OXYSC; sp Q45Z11 3511_O	Short neurotoxin 2 OS=Oxyuranus scutellatus	3	99	86.5	CYNQSSSEAK	Cys	
2	2 sp B7S4N9 VKT_OXYSC	Kunitz-type serine protease inhibitor taicotox	47	95.3	95.3	FYYNPHSK		
3	3 sp Q3SAX8 VNPD_OXYSC	Natriuretic peptide OsNP-d (Fragment) OS=O:	22	38.3	38.32	IGSVSGLGCLR	Carl	
3	3 sp Q3SAX8 VNPD_OXYSC	Natriuretic peptide OsNP-d (Fragment) OS=O:	22	47.3	47.29	IGSVSGLGCLR	Carl	
3	3 sp Q3SAX8 VNPD_OXYSC	Natriuretic peptide OsNP-d (Fragment) OS=O:	33	55.4	55.42	LVQNPPKPIGSES	Asn	
3	3 sp Q3SAX8 VNPD_OXYSC	Natriuretic peptide OsNP-d (Fragment) OS=O:	33	93.7	93.66	LVQNPPKPIGSES		
3	3 sp Q3SAX8 VNPD_OXYSC	Natriuretic peptide OsNP-d (Fragment) OS=O:	33	93.7	55.09	LVQNPPKPIGSE	Oxi	
3	3 sp Q3SAX8 VNPD_OXYSC	Natriuretic peptide OsNP-d (Fragment) OS=O:	33	93.7	41.77	LVQNPPKPIGSES	Oxi	
				99	99	AEESGPAAGR		
				37.4	37.41	NWNINTK		

Figure S1. Mass spectrometry results of the trypsin digest of the 10kDa peak showing the presence of kunitz peptides and natriuretic peptides in addition to short-chain neurotoxins.

Mass Spectrometry

Mass spectrometry (SCIEX 6600 TripleTof) of this band gave a 78% sequence coverage at 95% confidence as being a 3FTx neurotoxin previously recorded in *O. scutellatus* venom.

Fraction 38 min from the RP-HPLC was injected directly into the Q-Exactive Orbitrap. The mass spectra and intact mass spec were recorded for at least 5 min. The spectra were then averaged, and the monoisotopic peak was found to be 1345.2 Da ($z = 5$) (Figure S2). The protein is 6.7 kDa.

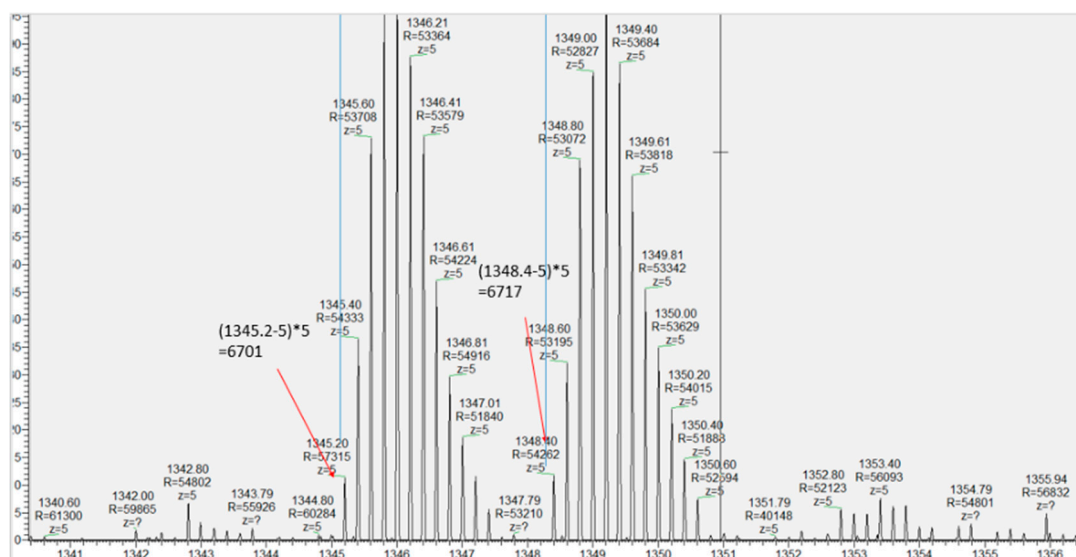


Figure S2. Intact mass spectra of 38 min peak on Q-Exactive Orbitrap showing the mass of the monoisotopic peak to be 6.7 kDa, corresponding to the mass from 3FTxs previously recorded from *O. scutellatus*.

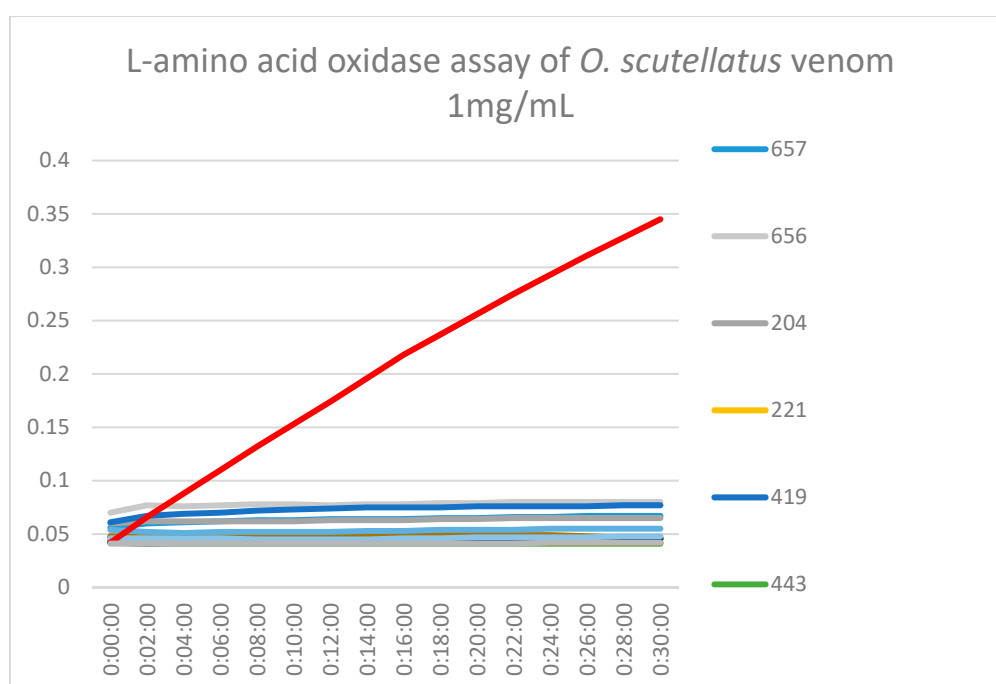


Figure S3. LAAO assay of all 13 taipans with venom of the elapid *Suta suta* as a positive control (red).