

# Transcriptome Sequencing and Comparison of Venom Glands Revealed Intraspecific Differentiation and Expression Characteristics of Toxin and Defensin Genes in *Mesobuthus martensii* Populations

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**Figure S1.** The *Mesobuthus martensii* populations and its relatives from sub-wet area, sub-arid area, and arid area. The populations of *M. martensii*: 1 & 1', the females and males from Baoding; 2&2', the females and males from Helan; 3&3' , the females and males from Luoyang; 4&4', the females and males from Lanzhou; 5&5', the females and males from Suide; 6&6', the females and males from Shuozhou; 7&7', the females and males from Tianshui; 8&8', the females and males from Weinan; 9&9', the females and males from Wuzhong; 10&10, the females and males from Yuncheng. The populations of *M. eupeus*: 11&11', the females and males from Yinchuan; 12&12', the females and males from Zhongwei (between Lanzhou and Yinchuan).

**Table S1.** Measurement data of the male *Mesobuthus martensii* (means±SD, \*\*:  $p < 0.001$ , Kruskal-Wallis H test (KW test)) Body length (BL), number of adult individuals (NI), number of pectinal teeth (NP), number of large granules in the lateral sides of movable fingers (NM), number of large granules in the lateral sides of fixed fingers (NF). BD, Baoding; HL, Helan; LY, Luoyang; LZ, Lanzhou; SD, Suide; SZ, Shuozhou; TS, Tianshui; WN, Weinan; WZ, Wuzhong; YC, Yuncheng.

	WN	LY	BD	YC	TS	SZ	SD	LZ	WZ	HL	KW test
NI	66	48	32	34	56	59	46	44	22	36	$p$
BL	54.200±3	55.600±3	52.400±4	50.100±3	50.400±1	51.900±3	48.500±2	48.700±2	49.222±2	49.500±2.12	.000 **
	.615	.836	.274	.035	.265	.604	.014	.497	.224	1	
NP	25.091±1	25.375±1	23.094±1	26.500±1	24.268±1	22.746±1	24.304±1	24.909±1	24.545±1	24.750±1.51	.000 **
	.200	.214	.376	.562	.272	.169	.051	.074	.224	9	
NM	13.529±.	13.727±.	13.375±.	13.588±.	12.873±.	12.932±.	13.109±.	12.933±.	12.682±.	12.778±.485	.000 **
	657	660	492	701	695	487	674	495	568		
NF	11.328±0	11.432±.	10.871±.	11.588±0	10.745±.	10.967±.	10.978±.	10.609±.	10.636±.	10.750±.500	.000 **
	.561	501	500	657	552	367	500	493	492		

**Table S2.** Measurement data of the female *Mesobuthus martensii* (means±SD, \*\*:  $p < 0.001$ , Kruskal-Wallis H test (KW test)) Body length (BL), number of adult individuals (NI), number of pectinal teeth (NP), number of large granules in the lateral sides of movable fingers (NM), number of large granules in the lateral sides of fixed fingers (NF). BD, Baoding; HL, Helan; LY, Luoyang; LZ, Lanzhou; SD, Suide; SZ, Shuozhou; TS, Tianshui; WN, Weinan; WZ, Wuzhong; YC, Yuncheng.

	WN	LY	BD	YC	TS	SZ	SD	LZ	WZ	HL	KW test	
NI	46	47	39	57	35	52	58	61	54	42	$p$	
BL	60.700±2.058	58.700±2.830	63.300±3.401	59.800±5.138	52.200±2.348	57.700±3.592	55.300±2.263	55.600±2.503	56.200±2.530	54.400±1.633	.000	**
NP	20.674±.871	20.213±.977	19.410±.966	21.246±1.040	20.886±1.451	18.827±.834	20.362±.831	20.475±1.074	19.981±.900	20.167±1.034	.000	**
NM	13.521±.652	13.604±.536	13.538±.822	13.436±.631	12.861±.487	12.870±.702	13.172±.653	12.883±.555	12.759±.642	12.952±.539	.000	**
NF	11.391±.537	11.292±.544	11.026±.628	11.526±.601	10.914±.374	10.750±.622	11.207±.554	10.629±.683	10.704±.571	11.024±.474	.000	**