

Supplementary Materials: Alternative mRNA Splicing in Three Venom Families Underlying a Possible Production of Divergent Venom Proteins of the Habu Snake, *Protobothrops flavoviridis*

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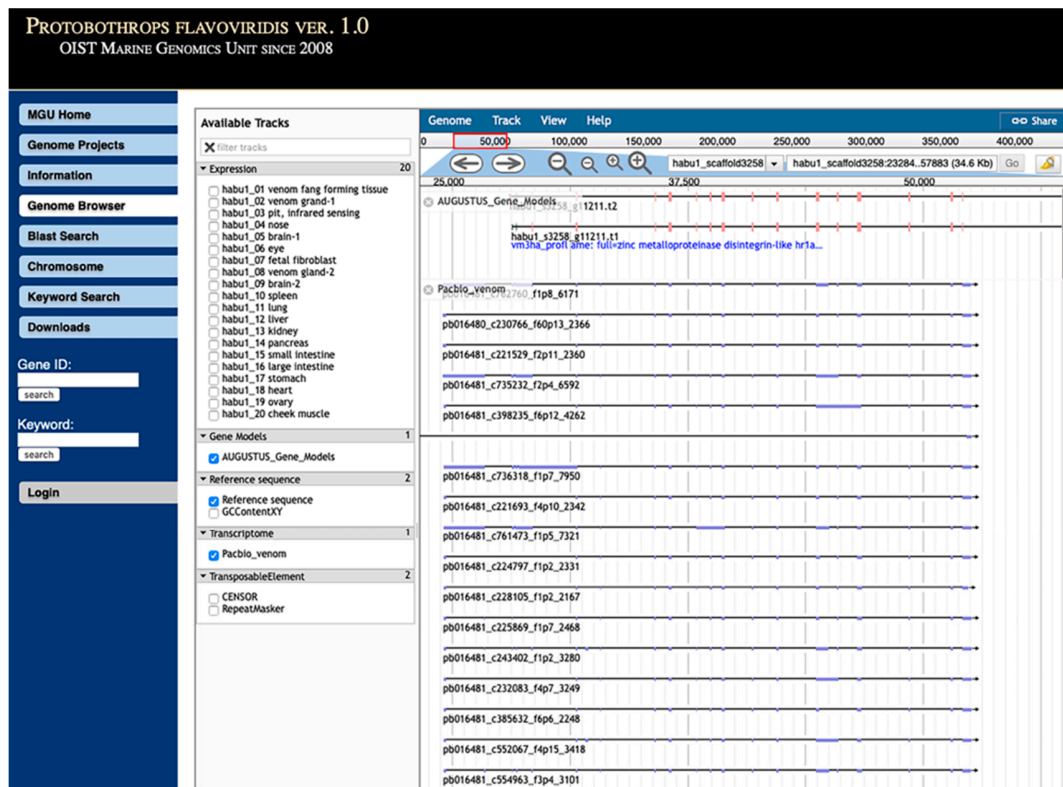


Figure S1. Representative example of Augustus Gene model, *svMP05_HR1a*, with partial Pacbio transcript data.

Table S1. Metalloproteinase (MP) genes and representative transcripts expressed in the habu venom glands.

Gene	Name	Gene Model ID	Transcripts (IsoSeq Reads)	No. of Transcript Valiants in Venom Gland
svMP01	HV1, Vascular apoptosis-inducing protein	habu1_s2862_g10314 a	pb016480_c42639_f26p8_2 346	6
			pb016481_c232850_f1p14_2554	
			pb016481_c414810_f1p10_2224	

			pb016481_c226062_f1p7_2 212 pb016481_c752203_f1p11_ 7361 pb016481_c228853_f1p2_2 147	
svMP02	flavorase	habu1_s2862_g10314 b	pb016480_c42674_f12p2_2 354 pb016481_c222143_f4p19_ 2794 pb016480_c250326_f1p0_3 778 pb016481_c222615_f5p4_2 265 pb016481_c256167_f6p4_2 038 pb016481_c258735_f1p9_2 479 pb016481_c410155_f1p8_5 215	7
svMP03	VMP-III -like	habu1_s2862_g10314 c	pb016481_c734840_f87p35 _2366 pb016481_ c414110_f1p21_2536 pb016481_c391324_f1p7_2 138	3
svMP04	jerdonitin-like	habu1_s3258_g11210	pb016481_c222387_f3p5_2 004 pb016480_c233699_f1p1_1 828 pb016480_c230845_f9p5_6 405 pb016480_c82997_f1p2_18 88 pb016480_c762_f8p5_1452 pb016481_c393071_f2p3_3 717	6
svMP05	HR1a	habu1_s3258_g11211	pb016480_c385632_f6p6_2 248 pb016480_c180398_f1p4_2 640 pb016480_c115296_f1p1_2 355 pb016480_c571407_f1p13_ 3809 pb016481_c225869_f1p7_2 468 pb016481_c213417_f2p3_2 140	18

			pb016481_c224762_f1p4_2384	
			pb016480_c51356_f1p0_1633	
			pb016481_c397883_f1p10_3413	
			pb016481_c573285_f1p11_2295	
			pb016481_c416405_f2p2_3343	
			pb016480_c46823_f3p11_2793	
			pb016481_c552067_f4p15_3418	
			pb016481_c398235_f6p12_4262	
			pb016481_c735002_f9p14_6755	
			pb016481_c232083_f4p7_3249	
			pb016480_c298560_f3p10_6743	
			pb016481_c761473_f1p5_7321	
svMP06	H2 metalloproteinase (metalloprotease P-Iia)	habu1_s14911_g21429	pb016481_c225249_f1p9_1815	2
			pb016480_c164899_f9p15_3671	
			pb016480_c226_f26p9_2010	
			pb016481_c412727_f2p12_1989	
			pb016481_c552023_f10p36_4003	
			pb016480_c230957_f2p12_3969	
svMP07	HR2a	habu1_s14911_g21430a	pb016481_c222038_f23p8_2094	13
			pb016481_c410202_f2p6_4970	
			pb016480_c182477_f1p6_4962	
			pb016481_c569924_f3p28_4139	
			pb016481_c735029_f6p24_6129	
			pb016480_c301942_f1p9_7082	

			pb016480_c92848_f1p2_11 57	
			pb016480_c181237_f1p2_4 088	
			/pb016480_c164930_f2p0_ 4266	
			pb016480_c222_f46p26_19 97	
			pb016481_c734849_f1820p 63_1998	
			pb016481_c222359_f4p23_ 2219	
			pb016481_c222126_f12p24 _3060	
			pb016480_c9689_f1p6_190 5	
			pb016480_c359165_f2p11_ 1737	
			pb016481_c80731_f1p5_14 84	
			pb016481_c557711_f1p8_1 601	
svMP08	flavoridin	habu1_s14911_g2143 0b	pb016481_c222549_f3p4_2 038	17
			pb016481_c222077_f17p8_ 3057	
			pb016481_c552171_f2p7_3 985	
			pb016481_c740798_f1p7_5 424	
			pb016481_c576234_f1p8_3 948	
			pb016481_c417811_f8p12_ 4120	
			pb016481_c589782_f1p11_ 3503	
			pb016481_c394718_f2p10_ 2465	
			pb016481_c585605_f1p3_3 986	
			pb016481_c917376_f5p9_2 037	
			pb016481_c228750_f1p2_2 017	
svMP09	HR1b	habu1_s399953_g248 64a	pb016481_c415369_f1p4_2 324	6
			pb016481_c222397_f4p4_2 395	
			pb016481_c568766_f1p6_4	

			063 pb016481_c559926_f1p7_4 374	
svMP10	Mt-b/ elegantin-like	habu1_s399953_g248 64b	pb016481_c16287_f13p13_ 2020 pb016480_c97939_f1p3_18 45	2
svMP11	NaMP	habu1_s2862_g10314 d	habu1_s2862_g10314.t2	1

Table S2. Serine protease (SP) genes and representative transcripts expressed in the habu venom glands.

Gene	Name	Gene Model ID	Transcripts (Representative Site)	No. of Transcript Valiants in Venom Gland
svSP01	TLf1/flavoxobi n	habu1_s7597_g18190 a	pb016481_c628_f19p22_189 7 pb016481_c809_f3p8_1564 pb016481_c386030_f8p29_3 626 pb016481_c410809_f2p9_40 11 pb016481_c402832_f1p16_3 015 pb016481_ c581593_f1p4_3745 pb016481_ c768983_f1p7_7228	7
svSP02	TLf2		pb016481_ c578021_f1p16_2130 pb016481_ c240059_f1p15_2688 pb016481_ c53649_f1p1_1022 pb016481_ c1002973_f1p2_969 pb016481_c79772_f1p2_185 pb016481_ c735101_f3p4_5942	6
svSP03	TLf3	habu1_s7597_g18190 b	pb016481_ c254265_f2p2_2454 pb016480_ c578021_f1p16_2130 pb016481_c663_f11p12_157 8 pb016481_ c746_f5p6_1124 pb016481_ c552114_f3p6_3482 pb016480_ c424167_f1p1_3699	6

svSP04	habu1_s6789_g17480	<p>pb016480_ c54903_f1p3_2873 pb016481_ c389086_f1p3_2991 pb016481_c222250_f5p18_2 824 pb016481_ c401044_f1p7_2131 pb016481_ c249172_f1p8_3106 pb016481_ c185672_f1p0_2196 pb016481_c575210_f1p3_38 45 pb016480_c167245_f1p2_39 15</p>	8
svSP05	habu1_s6789_g17481 a	<p>pb016480_c5437_f4p4_1540 pb016480_c639_f14p4_1553 pb016481_c237569_f1p19_1 959 pb016481_c720_f4p14_1676 pb016481_c79772_f1p2_185 1 pb016481_c422554_f7p13_3 481</p>	6
svSP06	habu1_s4106_g13431 a	<p>pb016481_c782298_f2p3_62 39 pb016481_c222442_f2p0_26 03 pb016481_c3562_f3p0_1298 pb016481_c734984_f12p12_ 6638 pb016480_c230851_f5p19_8 340 pb016481_c579606_f1p14_5 087 pb016480_c124259_f1p4_26 64</p>	7
svSP07	habu1_s4106_g13431 b	<p>pb016481_c395211_f1p12_2 348 pb016481_c10307_f1p3_173 3 pb016480_c51061_f1p2_188 6 pb016481_c9384_f1p12_122 6 pb016481_c241758_f2p27_2 330 pb016481_c244787_f3p7_23</p>	9

			21 pb016481_c423385_f1p9_42 52 pb016481_c576381_f1p1_43 16 pb016481_c575991_f1p3_52 33	
svSP08		habu1_s6789_g17481 b	pb016481_c1327_f9p6_1578 pb016481_c572213_f1p3_11 14 pb016481_c89829_f1p1_125 2	3
svSP09		habu1_s7597_g18190 c	pb016481_c243922_f1p5_26 91 pb016481_c223329_f2p3_19 02 pb016481_c1003251_f1p1_8 15	3
svSP10		habu1_s4106_g13432	pb016481_c944_f4p2_1299 pb016481_c735101_f3p4_59 42 pb016481_c750442_f1p4_62 80	3
svSP11	Jerdonobin-II like, GPV-PA	habu1_s22023_g2246 9	pb016481_c240059_f1p15_2 688 pb016480_c344_f6p31_1937 pb016481_c552365_f2p5_35 47	3