Supplementary Information

Discovery and Functional Characterization of Kunitz-Type Toxins from the Tetrodotoxin-Bearing Flatworm *Planocera multitencaculata*

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Figure S1. The dorsal and ventral morphology of *Planocera multitentaculata*. The scale bar indicates 10 mm.

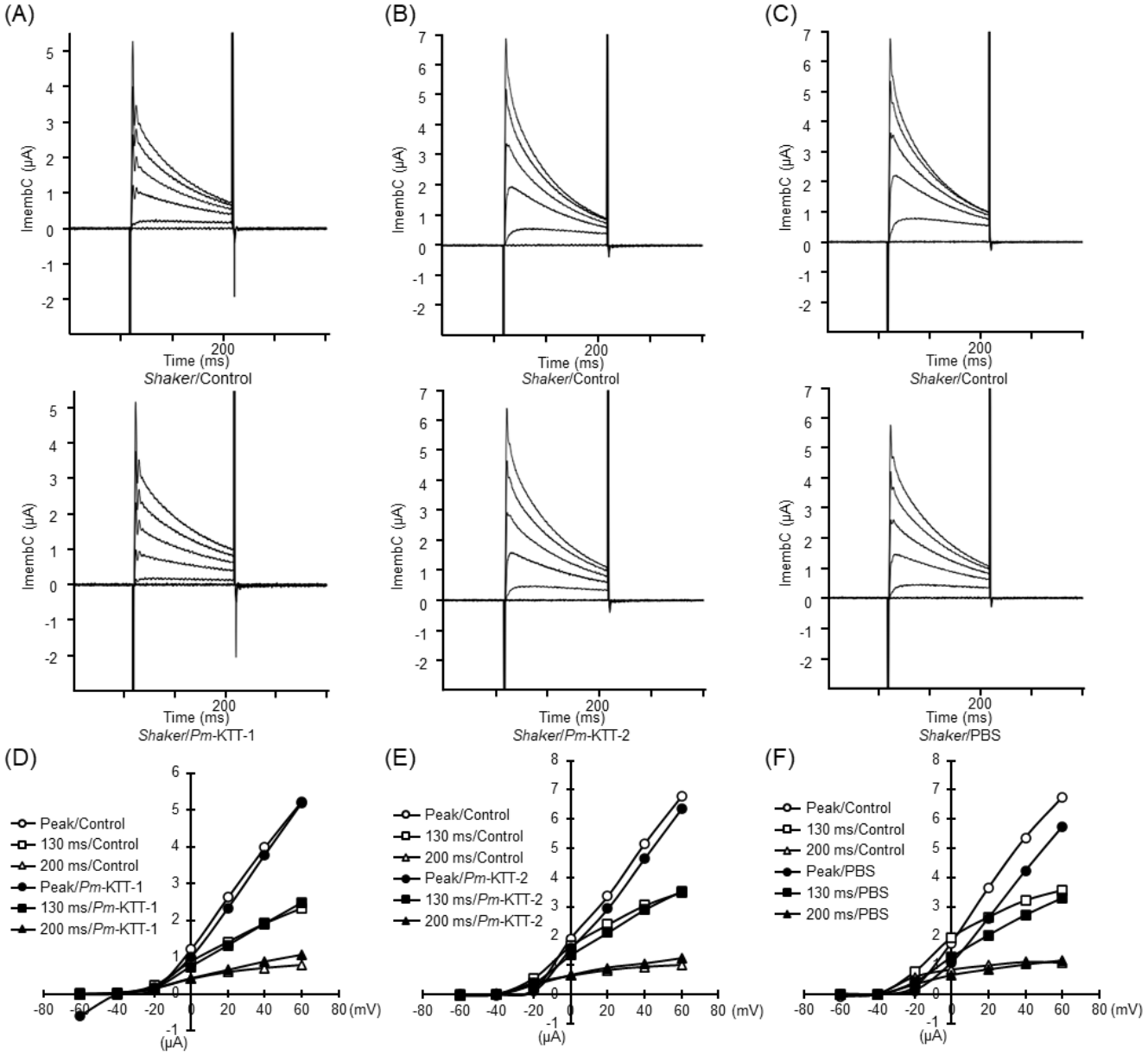

Figure S2. Activity of *Pm*-KTTs in oocytes expressing the *Shaker* (KV 1.x) channels. Currents in the *Shaker* channels were evoked using depolarizing steps from −60 mV to +60 mV from a holding potential of −80 mV, with a duration of 100 ms and 20 mV increments. (A, B, C) Voltage-dependent effects of *Pm*-KTTs in oocytes expressing the *Shaker* channels. (D, E, F) Normalized current–voltage relationships in control (white) and *Pm*-KTTs at 1 μM, and PBS (black).

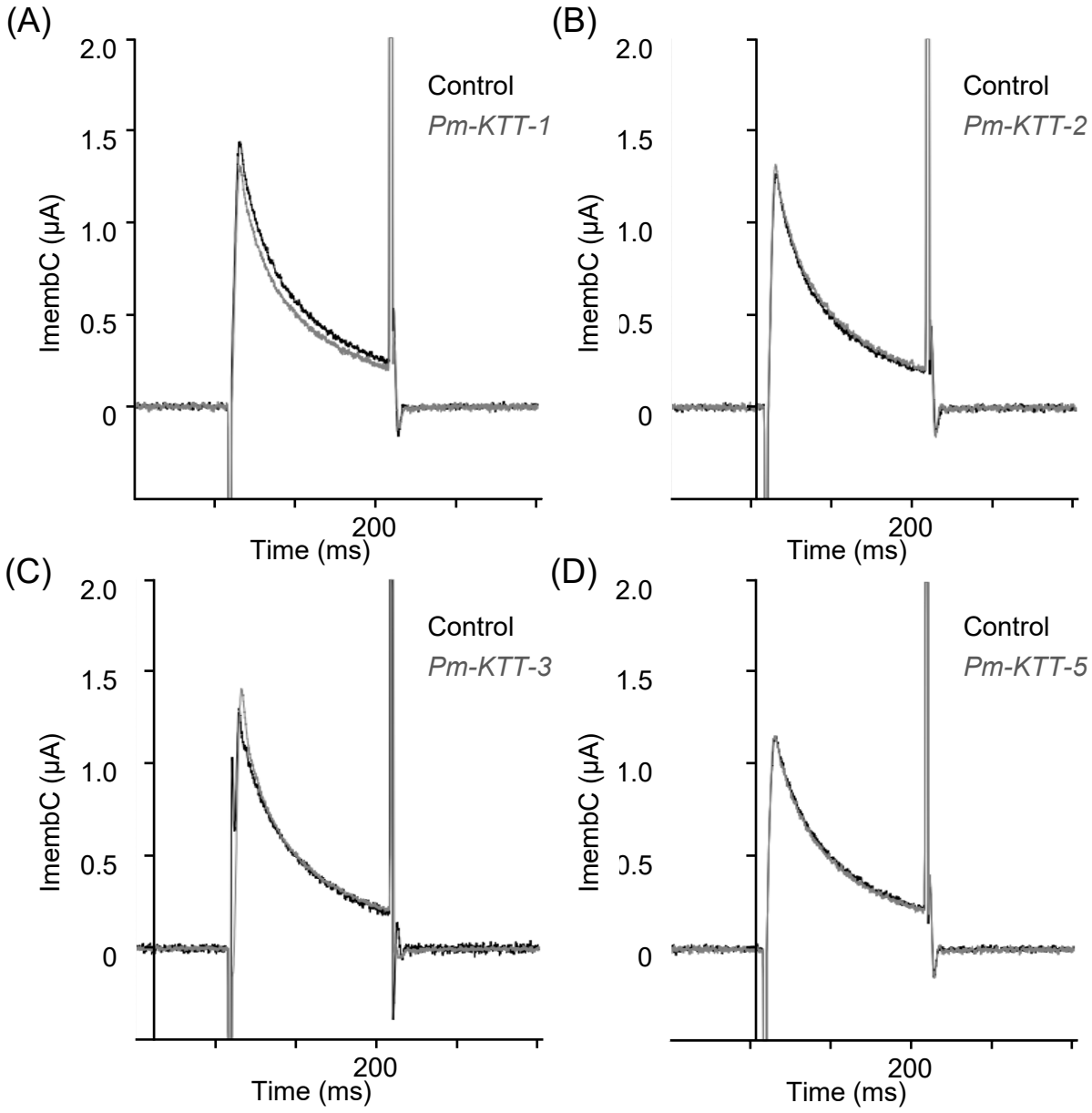

Figure S3. Acyivity of *Pm*-KTTs in oocytes expressing the *Shal* (K_V 4.x) channels. Currents were evoked by a single depolarizing step to +20 mV from a holding potential of −80 mV, with a duration of 100 ms, in control (black) and *Pm*-KTTs at 1 μM (gray).

Table S1. Primers designed to amplify the DNA fragments encoding mature *Pm*-KTT polypeptides

Polypeptide name	Direction	Sequence
Pm-KTT-2	Forward	GTAATACCATATGGAGCTGCCAGAAGAGTGC
	Reverse	CTAGGATCCTAATGATGATGATGATGATGCTGACACCTATCGGTGCA
Pm-KTT-3	Forward	GTAATACCATATGGAGCTGCCAGAAGAGTGC
	Reverse	CTAGGATCCTAATGATGATGATGATGATGGTTCTTTTTTTGACACCT
Pm-KTT-4	Forward	GTAATACCATATGAAGCTGCCAGAAGAATGC
	Reverse	CTAGGATCCTAATGATGATGATGATGATGGTTCTTTTTTTGACACCT
Pm-KTT-5	Forward	GTAATACCATATGGAGCTGCCAGAAGAGTGC
	Reverse	CTAGGATCCTAATGATGATGATGATGATGGTTCTTTTTTTGACACCT