

		10	20	30	40	50	Ident.
A)							
<i>B. asper</i>	BaspAc-I	NLWQFGQMMNDVMRQNVVFQYLSYGCYCGAGGIGQPQDATDRCCQVHDCC					
<i>B. asper</i>	BaspPLA ₂ -II	NLWQFGQMMSDVMRKNVVFKEYLSYGCYCGWGGIGQPKDATDRCCFVHDCC					88%
<i>B. jararaca</i>	BJ-PLA ₂	DLWQFGQMMNDVMREYVVFNYLYYGCYCGWGGIGKPRDATDRCCFVHDCC					82%
<i>B. insularis</i>	BinTX-I	NLWQFGKMMNYVMGQSVVYKYFYFGCYCGWGGIGQPRDATDRCCFVHDCC					78%
<i>B leucurus</i>	Bl-PLA ₂	SLWQFGKMINYVMGESGVLQYLSYGCYCGLGQGQPTDATDRCCFVHDCC					75%
<i>B. jararacussu</i>	BthA-1	SLWQFGKMINYVMGESGVLQYLSYGCYCGLGQGQPTDATDRCCFVHDCC					75%
<i>B pirajai</i>	BpirPLA ₂ -I	NLWQFGKLIMKIAGESGVFKYLSYGCYCGLGQGQPTDATDRCCFVHDCC					68%
		.*****::: : : * :*: ***** ** *: * ***** *****					

		10	20	30	40	50	Ident.
B)							
<i>B. asper</i>	BaspAc-II	NLWQFGQMMNDVMRQNVVFQYLSYGCYCGDGGIGQPRDATDRCCFVHDCC					
<i>B. asper</i>	BaspPLA ₂ -II	NLWQFGQMMSDVMRKNVVFKEYLSYGCYCGWGGIGQPKDATDRCCFVHDCC					90%
<i>B. jararaca</i>	BJ-PLA ₂	DLWQFGQMMNDVMREYVVFNYLYYGCYCGWGGIGKPRDATDRCCFVHDCC					86%
<i>B. insularis</i>	BinTX-I	NLWQFGKMMNYVMGQSVVYKYFYFGCYCGWGGIGQPRDATDRCCFVHDCC					82%
<i>B leucurus</i>	Bl-PLA ₂	SLWQFGKMINYVMGESGVLQYLSYGCYCGLGQGQPTDATDRCCFVHDCC					77%
<i>B. jararacussu</i>	BthA-1	SLWQFGKMINYVMGESGVLQYLSYGCYCGLGQGQPTDATDRCCFVHDCC					77%
<i>B pirajai</i>	BpirPLA ₂ -I	NLWQFGKLIMKIAGESGVFKYLSYGCYCGLGQGQPTDATDRCCFVHDCC					70%
		.*****::: : : * :*: ***** ** *: * *****					

		10	20	30	40	50	Ident.
C)							
<i>B. asper</i>	BaspAc-III	QLWQFGQMTSDVMRQDVVFQYLSYGCYCGDGGIGQPQDATDRCCQVHDCC					
<i>B. asper</i>	BaspPLA ₂ -II	NLWQFGQMMSDVMRKNVVFKEYLSYGCYCGWGGIGQPKDATDRCCFVHDCC					85%
<i>B. jararaca</i>	BJ-PLA ₂	DLWQFGQMMNDVMREYVVFNYLYYGCYCGWGGIGKPRDATDRCCFVHDCC					79%
<i>B. insularis</i>	BinTX-I	NLWQFGKMMNYVMGQSVVYKYFYYSYGCYCGWGGIGQPRDATDRCCFVHDCC					73%
<i>B. leucurus</i>	Bl-PLA ₂	SLWQFGKMINYVMGESGVLQYLSYGCYCGLGQGQPTDATDRCCFVHDCC					73%
<i>B. jararacussu</i>	BthA-1	SLWQFGKMINYVMGESGVLQYLSYGCYCGLGQGQPTDATDRCCFVHDCC					73%
<i>B. pirajai</i>	BpirPLA ₂ -I	NLWQFGKLIMKIAGESGVFKYLSYGCYCGLGQGQPTDATDRCCFVHDCC					67%
		.*****:: : * :*: ***** ** *: * ***** *****					
D)							
<i>B. asper</i>	BaspAc-III	NLWQFGEMMSDVMRDNVVFQYLSYGCYCGDGGIGQPRDATDRCCFVHDCC					
<i>B. asper</i>	BaspPLA ₂ -II	NLWQFGQMMSDVMRKNVVFKEYLSYGCYCGWGGIGQPKDATDRCCFVHDCC					90%
<i>B. jararaca</i>	BJ-PLA ₂	DLWQFGQMMNDVMREYVVFNYLYYGCYCGWGGIGKPRDATDRCCFVHDCC					82%
<i>B. insularis</i>	BinTX-I	NLWQFGKMMNYVMGQSVVYKYFYYSYGCYCGWGGIGQPRDATDRCCFVHDCC					78%
<i>B. leucurus</i>	Bl-PLA ₂	SLWQFGKMINYVMGESGVLQYLSYGCYCGLGQGQPTDATDRCCFVHDCC					75%
<i>B. jararacussu</i>	BthA-1	SLWQFGKMINYVMGESGVLQYLSYGCYCGLGQGQPTDATDRCCFVHDCC					75%
<i>B. pirajai</i>	BpirPLA ₂ -I	NLWQFGKLIMKIAGESGVFKYLSYGCYCGLGQGQPTDATDRCCFVHDCC					70%
		.*****::: : . * :*: ***** ** *: * *****					

Fig. S1: Multiple alignment of isolated acidic PLA₂s from *B. asper* snake venom and PLA₂s sequences from other bothropic venoms. (A): BaspAc-I (B) BaspAc-II (C) BaspAc-III e (D) BaspAc-IV. Sequences used for multiple alignment have the following access numbers: BaspPLA₂-II (gi: 292630844), BJ-PLA₂ (gi: 3914258), BinTX-I (gi: 26006832), Bl-PLA₂ (gi: 357580468), BthA-1 (gi: 93278528), BpirPLA₂-I (gi: 357580469)

		10	20	30	40	50	Ident.
<i>B. asper</i>	BaspB-II	SLVELGKMILQETGKNPLTSYG	VYGCNCGVGS	RHKPKDATDRCCYVHKCC			
<i>B. asper</i>	Myotoxin IVa	SLVELGKMILQETGKNPVTSYG	AYGCNCGVLGRGKPKDATDRCCYVHKCC				96%
<i>C. atrox</i>	Cax-K49	SLVELGKMILQETGKNPVTSYG	AYGCNCGVLGHGKPKDATDRCCYVHKCC				92%
<i>B atrox</i>	Myotoxin I	SLVELGKMILQETGKNPAKSYG	AYGCNCGVLGRGKPKDATDRCCYVHKCC				94%
<i>B moojeni</i>	MjTX-II	SLVELGKMILQETGKNPAKSYG	AYGCNCGVLGRGKPKDATDRCCYVHKCC				90%
<i>B asper</i>	M1-3-3	SLVELGKMILQETGKNPLTSYG	AYGCNCGVGGRGKPKDATDRCCYVHKCC				90%
<i>B matogrossensis</i>	BmatTX-I	SLFELGKMILQETGKNPAKSYG	AYGCNCGVLGRGKPKDATDRCCYVHKCC				88%
		** .***** .*** ***** .: *****:*****					

Fig. S2: Multiple alignment of BaspB-II and PLA₂s sequences from other snake venoms. Sequences used for multiple alignment have the following access numbers: Myotoxin IVa (gi: 164421989), Cax-K49 (gi: 26397690), Myotoxin I (gi: 82201805), MjTX-II (gi: 17865560), M1-3-3 (gi: 6492260), BmatTX-I (gi: 667467097).

<i>B.asper</i> snake venom (µg/ml)	Leishmanicidal activity (%)	SD (%)
100	80,2	0,6
50	78,0	1,0
25	69,7	2,1
12,5	56,6	1,4
6,25	43,7	0,8

BaspAc-I (µg/ml)	Leishmanicidal activity (%)	SD (%)
100	31,2	0,8
50	33,1	1,2
25	28,7	2,7
12,5	11,2	0,5
6,25	13,6	1,2

BaspAc-III (µg/ml)	Leishmanicidal activity (%)	SD (%)
100	14,4	2,4
50	15,2	1,7
25	14,5	1,4
12,5	10,9	1,2
6,25	12,2	2,5

BaspAc-IV (µg/ml)	Leishmanicidal activity (%)	SD (%)
100	30,2	3,1
50	28,7	2,8
25	25,4	1,1
12,5	18,0	2,1
6,25	10,7	1,5

BaspAc-II (µg/ml)	Leishmanicidal activity (%)	SD (%)
100	25,5	2,1
50	19,2	4,4
25	14,0	1,2
12,5	10,2	3,2
6,25	10,8	0,7

<i>B.asper</i> snake venom (µg/ml)	Tripanocidal activity (%)	SD (%)
100	60,4	2,8
50	55,6	1,1
25	49,9	1,9
12,5	36,4	2,4
6,25	32,7	2,0

BaspAc-I (µg/ml)	Tripanocidal activity (%)	SD (%)
100	16,0	1,4
50	12,7	2,1
25	14,3	3,3
12,5	11,1	1,6
6,25	0,5	1,5

BaspAc-III (µg/ml)	Tripanocidal activity (%)	SD (%)
100	33,8	1,6
50	33,7	2,1
25	34,0	0,8
12,5	33,4	2,5
6,25	14,6	1,4

BaspAc-IV (µg/ml)	Tripanocidal activity (%)	SD (%)
100	31,7	2,2
50	29,2	1,3
25	29,1	3,2
12,5	28,9	2,8
6,25	25,4	1,1

BaspAc-II (µg/ml)	Tripanocidal activity (%)	SD (%)
100	30,7	2,7
50	28,9	2,2
25	28,0	2,6
12,5	8,6	0,5
6,25	0,0	1,7