

**Table S1.** Evaluation of Safety and Toxicity in control dogs and dogs submitted to different vaccine protocols.

Groups	Time	Weight loss	Fever	Edema/Nodule	Local pain
24–72h after 1 <sup>o</sup> dose					
Control		-	-	-	-
LBSap		-	1	3	-
Leishmune		-	-	2	-
Leish-Tec		-	-	-	-
24–72h after 2 <sup>o</sup> dose					
Control		-	-	-	-
LBSap		-	3	2	-
Leishmune		-	2	2	-
Leish-Tec		-	-	-	-
24–72h after 3 <sup>o</sup> dose					
Control		-	-	-	-
LBSap		-	4	7	1
Leishmune		-	-	5	1
Leish-Tec		-	-	-	-

Number of dogs in each of the vaccine groups that presented some of the physiological and / or behavioral changes evaluated, such as: Weight loss; Fever (rectal temperature above 39.5 °C); changes in the site of immunizations (nodule or edema; local pain); for 72 hours after each of the three vaccinations in the control groups (C); saponin-associated *L. braziliensis* vaccine (LBSap); Leishmune® vaccine; Leish-Tec® vaccine; Evaluation times: 24–72h 1st dose = twenty four to seventy-two hours after the first dose of immunization; 24–72h 2nd dose = twenty four to seventy-two hours after the second immunization dose; 24–72h 3rd dose = twenty four to seventy-two hours after the third dose of immunization. The number of dogs in each group was 7. The " - " represents that there was no change in that group.

**Table S2.** Leukogram of control dogs and dogs submitted to different vaccine protocols.

Groups	Times	Global Leukocytes	Lymphocytes	Monocytes	Neutrophils	Eosinophils
Reference values		7408–14440 (mm <sup>3</sup> )	2299–5119 (mm <sup>3</sup> )	147–601 (mm <sup>3</sup> )	3839–9379 (mm <sup>3</sup> )	150–710 (mm <sup>3</sup> )
T0						
Control <sup>a</sup>		10,660 ± 777	3359 ± 242	323 ± 136	6191 ± 1344	424 ± 196
LBSap <sup>b</sup>		10,414 ± 1389	3537 ± 564	354 ± 125	6158 ± 1132 <sup>††</sup>	230 ± 221
Leishmune <sup>c</sup>		12,020 ± 2367	3691 ± 704	376 ± 151	7160 ± 1844	493 ± 336
Leish-Tec <sup>d</sup>		11,625 ± 850	3961 ± 710	445 ± 200	7035 ± 1511	467 ± 387
T1						
Control <sup>a</sup>		10,057 ± 1756	3320 ± 676	358 ± 64	5974 ± 1228	516 ± 237
LBSap <sup>b</sup>		12,371 ± 1699 <sup>a</sup>	3003 ± 351	364 ± 82	8559 ± 1963 <sup>a</sup>	445 ± 292
Leishmune <sup>c</sup>		12,533 ± 2386	3336 ± 794	366 ± 218	7714 ± 2212	806 ± 343
Leish-Tec <sup>d</sup>		12,150 ± 2545	3467 ± 853	330 ± 54	7768 ± 1721	585 ± 351

Absolute values (mean ± standard deviation) of the leukogram of dogs submitted to different vaccine protocols: control (C); *L. braziliensis* vaccine plus saponin (LBSap); Leishmune® vaccine (LM); Leish-Tec® vaccine (LT); Evaluation times: T0 = before the first immunization; T1 = 15 days after the third immunization; The significant differences ( $p < 0.05$ ) are represented by the letters a, b, c, and d related to groups C, LBSap, LM, LT, respectively. The significant differences ( $p < 0.05$ ) in the longitudinal evaluation of each leukogram parameter are represented by the abbreviations T0 and T1.

**Table S3.** Erythrogram of control dogs and dogs submitted to different vaccine protocols.

Groups	Times	Red Blood Cells	Hemoglobin	Hematocrit	Platelets
Reference values		5.42–8.38 (10 <sup>6</sup> /mm <sup>3</sup> )	13.2–21.2 (g/dL)	33.7–57.3 (%)	171–384 (10 <sup>3</sup> /mm <sup>3</sup> )
T0					
Control <sup>a</sup>		7.20 ± 0.69	17.9 ± 2.1	50.2 ± 5.5	282 ± 71
LBSap <sup>b</sup>		6.81 ± 0.58	17.5 ± 1.5	44.4 ± 6.5	268 ± 74
Leishmune <sup>c</sup>		7.25 ± 1.06	18.4 ± 2.1	46.7 ± 6.4	245 ± 108
Leish-Tec <sup>d</sup>		7.22 ± 0.32	18.3 ± 1.1	48.6 ± 4.7	237 ± 37
T1					
Control <sup>a</sup>		7.15 ± 0.63	18.4 ± 2.3	44.9 ± 5.2	296 ± 63
LBSap <sup>b</sup>		7.13 ± 0.76	18.4 ± 2.1	44.9 ± 5.1	306 ± 93
Leishmune <sup>c</sup>		7.77 ± 0.67	19.7 ± 1.4	48.5 ± 4.0	287 ± 46
Leish-Tec <sup>d</sup>		7.16 ± 0.40	18.4 ± 1.0	44.5 ± 3.4	344 ± 31

Absolute values (mean ± standard deviation) of the erythrogram (total red blood cells, hemoglobin, hematocrit and platelets) of dogs submitted to different vaccine protocols: control (C); *L. braziliensis* plus saponin (LBSap); Leishmune<sup>®</sup> vaccine (LM); Leish-Tec<sup>®</sup> vaccine (LT); Evaluation times: T0 = before the first immunization; T1 = 15 days after the third immunization. The significant differences ( $p < 0.05$ ) are represented by the letters a, b, c, and d related to groups C, LBSap, LM, LT, respectively.

**Table S4.** Biochemical analyses of hepatic function of control dogs and dogs submitted to different vaccine protocols.

Groups	Times	TGO/AST	TGP/ALT	Gama-GT	Alkaline phosphatase	Total Bilirubin
Reference values		26.1–48.1 (U/L)	31.2–63.2 (U/L)	0.6–7.8 (U/L)	11.8–51.0 (U/L)	0.05–0.69 (mg/dL)
T0						
Control <sup>a</sup>		38.7 ± 5.6	49.4 ± 5.9	3.7 ± 1.9	28.0 ± 9.9	0.42 ± 0.17
LBSap <sup>b</sup>		34.7 ± 5.8	45.3 ± 6.3	4.9 ± 1.8	28.6 ± 8.2	0.44 ± 0.13
Leishmune <sup>c</sup>		37.4 ± 3.4	48.4 ± 8.8	4.8 ± 2.1	24.3 ± 5.7	0.49 ± 0.15
Leish-Tec <sup>d</sup>		38.2 ± 5.1	49.0 ± 10.6	5.1 ± 1.6	32.0 ± 9.5	0.28 ± 0.08
T1						
Control <sup>a</sup>		38.3 ± 4.1	44.0 ± 10.1	5.9 ± 0.9	36.0 ± 8.2	0.27 ± 0.16
LBSap <sup>b</sup>		38.0 ± 4.1	44.3 ± 10.2	6.0 ± 1.7	42.3 ± 5.2	0.26 ± 0.14
Leishmune <sup>c</sup>		41.0 ± 4.9	52.2 ± 11.2	6.8 ± 1.3	36.8 ± 6.8	0.39 ± 0.21
Leish-Tec <sup>d</sup>		40.1 ± 4.6	49.8 ± 7.5	4.5 ± 2.4	30.0 ± 5.4	0.29 ± 0.18

Absolute values (mean ± standard deviation) of hepatic function (TGO / AST, TGP / ALT, Gamma-GT, alkaline phosphatase, total bilirubin) of dogs submitted to different vaccine protocols: control (C); *L. braziliensis* plus saponin (LBSap); Leishmune<sup>®</sup> vaccine (LM); Leish-Tec<sup>®</sup> vaccine (LT); Evaluation times: T0 = before the first immunization, T1 = 15 days after the third immunization. The significant differences ( $p < 0.05$ ) are represented by the letters a, b, c, and d related to groups C, LBSap, LM, LT, respectively.

**Table S5.** Biochemical analyses of the proteinogram and renal function of control dogs and of dogs submitted to different vaccine protocols.

Groups	Times	Total Protein	Albumin	Globulin	Ratio A/G	Urea	Creatinine
Reference values		6.4–8.9 (g/dL)	1.5–6.7 (g/dL)	0.7–6.3 (g/dL)	0.05–3.25	28.0–40.1 (mg/dL)	0.6–1.5 (mg/dL)
T0							
Control <sup>a</sup>		7.5 ± 0.6	4.9 ± 0.6	2.6 ± 0.9	2.2 ± 1.1	35.6 ± 1.0	1.2 ± 0.3
LBSap <sup>b</sup>		7.3 ± 0.6	4.6 ± 0.5	2.7 ± 0.8	1.9 ± 0.7	36.2 ± 1.0	1.2 ± 0.2
Leishmune <sup>c</sup>		7.8 ± 0.6	5.0 ± 1.0	2.7 ± 0.8	2.1 ± 1.1	36.7 ± 1.5	1.0 ± 0.1
Leish-Tec <sup>d</sup>		7.5 ± 0.8	4.7 ± 0.4	2.8 ± 1.0	1.9 ± 0.9	36.9 ± 1.5	1.1 ± 0.2
T1							
Control <sup>a</sup>		6.7 ± 1.9	2.4 ± 0.6	3.5 ± 1.3	0.7 ± 0.4	29.5 ± 1.6	1.1 ± 0.1

<b>LBSap<sup>b</sup></b>	6.7 ± 1.9	2.3 ± 0.9	4.1 ± 1.0	0.5 ± 0.2	32.1 ± 3.1	1.0 ± 0.1
<b>Leishmune<sup>c</sup></b>	6.7 ± 1.0	2.5 ± 0.9	4.2 ± 0.5	0.6 ± 0.2	30.9 ± 5.9	1.0 ± 0.1
<b>Leish-Tec<sup>d</sup></b>	6.8 ± 1.2	2.2 ± 0.7	5.1 ± 1.1	0.4 ± 0.1	30.1 ± 1.5	1.0 ± 0.1

Absolute values (mean ± standard deviation) of the proteinogram (total protein, albumin, globulin and albumin / globulin - A / G ratio) and renal function (urea and creatinine) of dogs submitted to different vaccine protocols: control (C); *L. braziliensis* plus saponin (LBSap); Leishmune<sup>®</sup> vaccine (LM); Leish-Tec<sup>®</sup> vaccine (LT). Evaluation times: T0 = before the first immunization, T1 = 15 days after the third immunization. The significant differences ( $p < 0.05$ ) are represented by the letters a, b, c, and d related to groups C, LBSap, LM, LT, respectively.