

**Table S1.** Keywords used for systematic searches in the Medline database (PubMed).

General Search Terms *	Search Terms Referring to the Clinical Status of Dogs	Search Terms Referring to a Parasite-Specific Immune Response
Visceral leishmaniasis; <i>Leishmania donovani</i> ; <i>Leishmania chagasi</i> ; <i>Leishmania infantum</i>	AND asymptomatic dog AND susceptible dog AND subclinical disease AND dogs	AND Immune response AND Immune system AND humoral AND cellular response AND Th1 response AND Th2 response AND cytokine

\* Each one of these keywords was searched along with each cluster of terms in the following columns.

**Table S2.** Keywords used in the secondary literature review in the Medline database (PubMed).

General Search Terms	Search Terms Referring to the Clinical Status of Dogs	Search Terms Added in the Secondary Review Referring to:					
		Phenotypic Characterization		Functional Characterization		Humoral Response	
		T- and B-Cell Markers	Activation Status of T Cells	Cytokine Profile	NO and ROS Production	Proliferative Capacity	IgG Subtype
Visceral leishmaniasis; <i>Leishmania donovani</i> ; <i>Leishmania chagasi</i> ; <i>Leishmania infantum</i>	AND asymptomatic dog; AND susceptible dog; AND subclinical disease AND dogs	CD5 CD3 CD4 CD8 Foxp3 T regulatory cell; Treg CD21	CD45RB CD45RA MHC-II Activated T cells Activation of T cells	IL-4 IL-12 IL-2 IL-6 IFN- $\gamma$ TNF- $\alpha$ IL-10 IL-18 TGF- $\beta$ IL-17	Nitric oxide; Oxidative stress; Reactive oxygen species	Lymphoproliferative	IgG1 IgG2

NO: Nitric oxide; ROS: Reactive oxygen species; Treg: regulatory T cells.

**Table S3.** Studies that analyze the lymphoproliferative response of PBMC upon *Leishmania* antigens from infected and control dogs.

	Antigens Used	Clinical Classification (Number of Dogs)	Geographical Location	Type of Infection	Lymphoproliferative Response (PR)	Reference	
SLA	10 $\mu$ g/mL	Common Antigens Used	Additional Antigens Used				
		-	AD ( $n = 6$ ) SD ( $n = 7$ ) CD	Barajas (Spain)	Experimental	PR upon SLA in PBMC from AD, but not in SD.	[1]
		-	AD ( $n = 7$ ) SD ( $n = 3$ ) CD	Portugal	Natural & Experimental	PR upon SLA in PBMC from both SD and AD.	[2]
		-	AD ( $n = 78$ ) OD ( $n = 2$ ) PD ( $n = 7$ )	Madrid (Spain)	Natural	PR upon SLA in 27% of AD dogs, but in none of SD dogs.	[3]
		P-8	AD ( $n = 8$ ) OD ( $n = 12$ ) PD ( $n = 1$ ) CD ( $n = 9$ )	Cali (Colombia) and Madrid (Spain)	Experimental	PR upon SLA and P-8 in PBMC from AD and OD, but not in SD.	[4]
	HSP-70, PFR-2, KMP-11	AD ( $n = 4$ ) OD ( $n = 5$ ) PD ( $n = 4$ ) CD ( $n = 2$ )	Spain	Experimental	PR upon SLA in PBMC from AD, but not in SD. PR upon HSP-70 and PFR-2 in PBMC was moderate.	[5]	
		AD ( $n = 7$ ) SD ( $n = 10$ ) CD ( $n = 10$ )	Naples area and Reggio Emilia (Italy)	Natural	PR upon rLeIF and rLdp23, but not SLA, only in PBMC from AD dogs.	[6]	
		AD ( $n = 2$ ) SD ( $n = 4$ ) CD ( $n = 20$ )	St Feliu de Codines (Spain)	Experimental	PR upon SLA in PBMC from both AD and SD.	[7]	
		AD ( $n = 132$ ) SD ( $n = 106$ ) CD ( $n = 20$ )	Barcelona and Mallorca (Spain)	Natural	PR upon SLA in PBMC from some AD dogs.	[8]	
	25 $\mu$ g/mL	f/t <i>L.c.</i> antigen	AD	Cali (Colombia)	Experimental	PR upon f/t <i>L.c.</i> antigen was	[9]

			OD PD CD			similar and low in PBMC from all groups.	
AM	$1 \times 10^7$ amastigotes	rLdccys1	AD ( <i>n</i> = 18) OD ( <i>n</i> = 14) SD ( <i>n</i> = 17) CD ( <i>n</i> = 6)	Teresina (Brazil)	Natural	PR upon AM and rLdccys1 in PBMC from AD, but low or negative in OD and SD.	[10]
	1 $\mu$ g/mL	gp63	AD ( <i>n</i> = 5) SD ( <i>n</i> = 11) CD ( <i>n</i> = 3)	Kemisset and Rabat (Morocco)	Natural & Experimental	PR upon f/t <i>L.i.</i> antigen and gp63 in PBMC from AD, but not in SD.	[11]
	5 $\mu$ g/mL	rCPA, rCPB	AD ( <i>n</i> = 7) SD ( <i>n</i> = 4) CD ( <i>n</i> = 3)	Meshkinshahr (Iran)	Natural	PR upon all antigens in PBMC from AD, but low or negative in SD.	[12]
		rCPA, rCPB, CTE	AD ( <i>n</i> = 7) SD ( <i>n</i> = 6) CD ( <i>n</i> = 3)	Meshkinshahr (Iran)	Natural	PR upon all antigens in PBMC from AD, but not in SD.	[13]
f/t <i>L.i.</i> antigen	-		Infected resistant ( <i>n</i> = 4) Infected susceptible ( <i>n</i> = 3) Clinical ( <i>n</i> = 4) CD ( <i>n</i> = 2)	Iowa (USA)	Natural	PR upon f/t <i>L.i.</i> antigen in PBMC CD4 <sup>+</sup> T cells from infected resistant and susceptible dogs, but low in clinical dogs.	[14]
	10 $\mu$ g/mL	-	AD SD ( <i>n</i> > 18)	Iowa (USA)	Natural	PR upon f/t <i>L.i.</i> antigen in CD4 <sup>+</sup> and CD8 <sup>+</sup> T cells from AD, but not in SD.	[15]
	-		AD ( <i>n</i> = 37) CD ( <i>n</i> = 34)	Oporto (Portugal)	Natural	PR upon f/t <i>L.i.</i> antigen in 5% of AD dogs, but none in CD dogs.	[16]
	50 $\mu$ g/mL	-	AD ( <i>n</i> = 49) CD ( <i>n</i> = 25)	South of Alijo (Portugal)	Natural	PR upon f/t <i>L.i.</i> antigen in 41% of AD dogs, but none in CD dogs.	[17]

PR: proliferative response; PBMC: peripheral blood mononuclear cells; f/t antigen: freezed/thawed antigen; AM: amastigote extracts; SLA: soluble *Leishmania* antigen; AD: asymptomatic dogs; OD: oligosymptomatic dogs; SD: symptomatic dogs; PD: polysymptomatic; CD: control healthy dogs; *L.i.*: *Leishmania infantum*; *L.c.*: *Leishmania chagasi*.

**Table S4.** Studies that analyze the cytokine production profile of infected and control dogs.

Cytokine Profile	Cytokines Evaluated	Detection Technique	Clinical Classification (Number of Dogs)	Geographical Location	Type of Infection	Antigen Stimulation (PBMC/ PB /Serum)	Main Findings †	Reference
Th1	IFN- $\gamma$	CPE assay	AD ( <i>n</i> = 6) SD ( <i>n</i> = 7) CD (-)	Barajas (Spain)	Experimental	SLA (PBMC)	IFN- $\gamma$ activity only in AD.	[18]
Th2	IL-4, IL-10	FC	AD ( <i>n</i> = 7) SD ( <i>n</i> = 7) CD ( <i>n</i> = 7)	USA and Natal (Brazil)	Natural	Unstimulated (PBMC)	↑ % IL10 <sup>+</sup> B cells in SD (***) and AD (*) versus CD. ↑ % IL-4 <sup>+</sup> IgD <sup>hi</sup> B cells in SD versus CD (*).	[19]
Mixed Th1/Th2 profile	IFN- $\gamma$ , IL-4	FC	AD ( <i>n</i> = 23) SD ( <i>n</i> = 22) CD ( <i>n</i> = 30)	Campania region (Italy)	Natural	Unstimulated (PBMC)	↑ % IFN- $\gamma$ + IL-4 <sup>+</sup> T cells in infected dogs versus CD (*).	[20]
			AD-I ( <i>n</i> = 34) AD-II ( <i>n</i> = 20) OD ( <i>n</i> = 8) SD ( <i>n</i> = 42) CD ( <i>n</i> = 28)	Belo Horizonte (Brazil)	Natural	SLA (PB)	↑ % IFN- $\gamma$ + CD4 <sup>+</sup> , IFN- $\gamma$ +, and IL-4 + CD8 <sup>+</sup> T cells in AD-II and SD versus AD-I and CD (****).	[21]
			AD ( <i>n</i> = 20) SD ( <i>n</i> = 20) CD ( <i>n</i> = 20)	Atenas (Greece)	Natural	SLA (PB)	↑ % IL-4 + CD4 <sup>+</sup> T cells in SD versus CD (***).	[22]
	IFN- $\gamma$ , IL-10	ELISA	Infected resistant ( <i>n</i> = 4) Infected suscep-	Iowa (USA)	Natural	f/t <i>L.i.</i> antigen (PBMC)	↑ IFN- $\gamma$ in subclinical and resistant dogs versus clinical dogs and	[14]

						CD (*).
		tible ( <i>n</i> = 3)				↑ IL-10 with disease progression (*).
		Clinical ( <i>n</i> = 4)				
		CD ( <i>n</i> = 2)				
	FC and ELISA	AD SD ( <i>n</i> > 18)	Iowa (USA)	Natural	f/t <i>L.i.</i> antigen (PBMC)	↑ IL-10 <sup>+</sup> CD4 <sup>+</sup> T cells in SD versus AD (**). ↓ IFN-γ <sup>+</sup> CD4 <sup>+</sup> (*) and CD8 <sup>+</sup> (ns) T cells in SD versus AD.
						[15]
	ELISA	State I ( <i>n</i> = 10) State IIa ( <i>n</i> = 27) State IIb ( <i>n</i> = 9) State III ( <i>n</i> = 10) State IV ( <i>n</i> = 4)	Catalunya and Baleares (Spain)	Natural	SLA (PB)	↑ IFN-γ in stage I and IIa dogs versus stage IIb, III, and IV (*). Similar levels of IL-10 between groups.
						[23]
	ELISA	AD ( <i>n</i> = 18) OD ( <i>n</i> = 14) SD ( <i>n</i> = 17) CD ( <i>n</i> = 6)	Teresina (Brazil)	Natural	rLdccys (PBMC)	↑ IFN-γ in AD and OD. ↑ IL-4 only in SD. ↑ IL-10 in SD and OD.
IFN-γ, IL-4, IL-10						[10]
	ELISA and RT-qPCR	AD OD PD CD	Cali (Colombia)	Experimental	SLA (PBMC)	↑ IFN-γ in PD versus AD and OD (*). Similar levels of IL-10 between groups.
						[9]
IFN-γ, TNF-α, IL-4, IL-10	RT-qPCR	AD ( <i>n</i> = 13) SD ( <i>n</i> = 9)	Apulian region (Italy)	Natural	SLA (PBMC)	↑ IFN-γ, TNF-α, IL-4, and IL-10 in SD versus AD (*).
						[24]
IFN-γ, TNF-α, IL-4, IL-10, IL- 18	RT-qPCR	AD ( <i>n</i> = 8) OD ( <i>n</i> = 12) PD ( <i>n</i> = 1) CD ( <i>n</i> = 9)	Cali (Colombia) and Madrid (Spain)	Experimental	SLA and P-8 (PBMC)	↑ IFN-γ and TNF-α in AD versus PD. Similar levels of IL-4 between groups. ↓ IL-10 in AD and OD. ↑ IL-18 in PD.
						[5]
		AD ( <i>n</i> = 4) OD ( <i>n</i> = 5) PD ( <i>n</i> = 4) CD ( <i>n</i> = 2)	Spain	Experimental	SLA, HSP-70, PFR-2 and KMP-11 (PBMC)	↑ IFN-γ and TNF-α in AD versus SD. Similar levels of IL-4 between groups.
						[5]
IFN-γ, TNF-α, Semiquanti- tative RT- PCR IL-4, IL-10, IL- 18, IL-2, IL-6		AD ( <i>n</i> = 7) CD ( <i>n</i> = 5)	Unknown	Experimental	SLA (PBMC)	↑ IFN-γ (*), IL-4 (*), IL-10 (ns), and IL-2 (ns) in AD versus CD.
						[25]
	ELISA and Milliplex Map Kit	AD ( <i>n</i> = 22) Stage I ( <i>n</i> = 21) Stage III ( <i>n</i> = 15)	Camaçari (Brazil)	Natural	Unstimulated (serum)	↑ IL-10 in dogs with stage I and II (ns). ↑ IL-18 and IL-6 in AD (ns).
						[26]
IFN-γ, TNF-α, IL-10, IL-18, IL-2, IL-6, IL-7, IL-8, IL-15	Luminex assay	AD ( <i>n</i> = 20) CD ( <i>n</i> = 8)	NE areas of Brazil	Natural & Experimental	Unstimulated (serum)	↑ IFN-γ, IL-10, IL-18, and IL-6 in AD versus CD (**). ↓ TNF-α, IL-2, and IL-8 in AD versus CD (**). Similar levels of IL-7 and IL-15 between groups.
						[27]
IFN-γ, IL-4, IL-2, IL-12	RT-qPCR	AD ( <i>n</i> = 13) SD ( <i>n</i> = 29) CD ( <i>n</i> = 11) TD ( <i>n</i> = 11)	E areas from Portugal and Brazil	Natural	Unstimulated (PB)	↑ IFN-γ, IL-4, IL-2, and IL-12 in SD versus CD (*). ↑ IL-4 in AD versus CD (*).
						[28]
IFN-γ, IL-4, IL-10, IL-18, IL-2, IL-12, IL- 18	RT-qPCR	AD ( <i>n</i> = 20) ADD ( <i>n</i> = 20) SD ( <i>n</i> = 20) CD ( <i>n</i> = 20)	Campania (Italy)	Natural	Unstimulated (PB)	↑ IFN-γ, IL-4, IL-10, IL-18, and IL-2 in AD. ↑ IL-18 in ADD and, later in the infection, ↑ all cytokines analyzed. ↑ Th1 and Th2 cytokines in SD.
						[29]

CPE: cytopathic effect inhibition assay; FC: flow cytometry; RT-qPCR: quantitative reverse transcription polymerase chain reaction; PBMC: peripheral blood mononuclear cells; PB: peripheral blood; f/t antigen: freezed/thawed antigen; SLA: soluble *Leishmania* antigen; AD: asymptomatic dogs; AD-I: asymptomatic dogs with negative serology; AD-II: asymptomatic dogs with positive serology; ADD: asymptomatic dogs who progressed overt the disease; OD: oligosymptomatic dogs; SD: symptomatic dogs; PD: polysymptomatic dogs; CD: control healthy dogs; TD: treated infected dogs; E: endemic areas; NE: non-endemic areas; *L.i.*: *Leishmania infantum*; *L.c.*: *Leishmania chagasi*.

*chagasi*. † These results refer to cytokine production after stimulation with *Leishmania* antigens, in those articles where PBMC/peripheral blood stimulation is carried out.  $p < 0.05$  (\*),  $p < 0.01$  (\*\*),  $p < 0.001$  (\*\*\*),  $p < 0.0001$  (\*\*\*\*), and not significant (ns).

**Table S5.** Studies that analyze the humoral response in infected and control dogs.

Isotype Analyzed	Subclass Analyzed	Detection Technique	Antigen (Type of Antibody)	Clinical Classification (Number of Dogs)	Geographical Location	Type of Infection	Main Findings	Reference
IgG	IgG1, IgG2	ELISA	L <i>i.</i> antigens (polyclonal)	AD ( <i>n</i> = 6) TSD ( <i>n</i> = 8) CD ( <i>n</i> = 22)	France	Natural	IgG2 associated with AD.	[30]
			L <i>i.</i> antigens (polyclonal)	AD ( <i>n</i> = 1) OD ( <i>n</i> = 1) SD ( <i>n</i> = 2) CD ( <i>n</i> = 1)	Caceres (Spain)	Experimental	IgG1 associated with SD.	[31]
			L <i>i.</i> sonicated promastigotes (polyclonal)	AD ( <i>n</i> = 11) SD ( <i>n</i> = 139) TSD ( <i>n</i> = 25) TD ( <i>n</i> = 6)	Priorat and Barcelona (Spain)	Natural & Experimental	IgG1 associated with SD.	[32]
			SLA (polyclonal)	AD ( <i>n</i> = 7) SD ( <i>n</i> = 3) CD	Portugal	Natural & Experimental	Similar IgG1 levels among groups. IgG2 associated with SD.	[2]
			SLA (polyclonal)	AD SD CD	Alto Douro region (Portugal)	Natural	IgG2 associated with SD.	[33]
			f/t L <i>i.</i> antigen, rCPA, rCPB, and CTE (polyclonal)	AD ( <i>n</i> = 7) SD ( <i>n</i> = 6) CD ( <i>n</i> = 3)	Meshkinshahr (Iran)	Natural	IgG2 associated with AD.	[13]
			f/t L <i>i.</i> antigen (polyclonal)	AD ( <i>n</i> = 13) SD ( <i>n</i> = 42) CDE ( <i>n</i> = 21) CDNE ( <i>n</i> = 18)	E and NE areas from Brazil	Natural	IgG2 associated with SD.	[34]
			Protein A (polyclonal)	AD ( <i>n</i> = 29) SD ( <i>n</i> = 23) CDE ( <i>n</i> = 3) CDNE ( <i>n</i> = 19)	Spain and France	Natural	IgG1 associated with SD. ↑ IgG2 in AD and SD.	[35]
			SLA (polyclonal)	AD ( <i>n</i> = 12) OD ( <i>n</i> = 12) SD ( <i>n</i> = 16) CD ( <i>n</i> = 20)	Minas Gerais (Brazil)	Natural	IgG1 associated with AD. IgG2 associated with SD.	[36]
			P-8 and SLA (polyclonal)	AD ( <i>n</i> = 8) OD ( <i>n</i> = 12) PD ( <i>n</i> = 1) CD ( <i>n</i> = 9)	Cali (Colombia) and Madrid (Spain)	Experimental	IgG1 associated with SD.	[4]
IgG	IgG1, IgG2	ELISA	L <i>i.</i> antigen (polyclonal)	AD ( <i>n</i> = 2) SD ( <i>n</i> = 4) CD ( <i>n</i> = 20)	St Feliu de Codines (Spain)	Experimental	IgG1 associated with SD.	[7]
			SLA (polyclonal)	AD ( <i>n</i> = 116) SD ( <i>n</i> = 72)	Alto Douro (Portugal)	Natural	IgG2 associated with SD.	[37]
			SLA (polyclonal)	AD ( <i>n</i> = 7) OD ( <i>n</i> = 22) SD ( <i>n</i> = 13)	Belo Horizonte (Brazil)	Natural	Similar IgG1 levels among groups. IgG2 associated with SD.	[38]
			L <i>i.</i> antigen (polyclonal)	AD ( <i>n</i> = 24) SD ( <i>n</i> = 21) CDNE ( <i>n</i> = 24) CDE ( <i>n</i> = 64)	Spain	Natural	Similar IgG1 levels among groups. IgG2 associated with SD.	[39]
			SLA (polyclonal)	AD OD PD CD	Cali (Colombia)	Experimental	Similar IgG1 and IgG2 levels among groups.	[9]
			CLA (monoclonal)	AD ( <i>n</i> = 37) SD ( <i>n</i> = 22)	Brazil	Natural	IgG1 and IgG2 ↑ in SD.	[40]
			f/t L <i>i.</i> antigen (polyclonal)	Infected resistant ( <i>n</i> = 4)	Iowa (USA)	Natural	IgG1 and IgG2 ↑ in susceptible infected and clinical	[14]

			Infected susceptible ( <i>n</i> = 3) Clinical ( <i>n</i> = 4) CD ( <i>n</i> = 2)		groups.	
		SLA (polyclonal)	AD ( <i>n</i> = 20) SD ( <i>n</i> = 20) CD ( <i>n</i> = 5)	Belo Horizonte (Brazil)	Natural IgG1 associated with AD. IgG2 associated with SD. [41]	
		SLA (polyclonal)	AD-I ( <i>n</i> = 8) AD-II ( <i>n</i> = 10) SD ( <i>n</i> = 16) CD ( <i>n</i> = 7)	Belo Horizonte (Brazil)	Natural Low IgG1 levels in all groups. IgG2 ↑ in AD-II and SD. [42]	
		<i>L.c.</i> and <i>L.b.</i> antigens (polyclonal)	AD ( <i>n</i> = 12) SD ( <i>n</i> = 25) CD ( <i>n</i> = 17)	Rio de Janeiro (Brazil)	Natural IgG1 and IgG2 ↑ in SD. [43]	
		SLA (polyclonal)	AD ( <i>n</i> = 10) SD ( <i>n</i> = 68) CD ( <i>n</i> = 7)	Fortaleza (Brazil)	Natural IgG1 associated with AD. IgG2 associated with SD. [44]	
		CLA or SLA (polyclonal)	AD <sup>+</sup> ( <i>n</i> = 21) AD <sup>-</sup> ( <i>n</i> = 62) SD <sup>+</sup> ( <i>n</i> = 52) SD <sup>-</sup> ( <i>n</i> = 25)	Araçatuba (Brazil)	Natural IgG1 associated with SD. [45]	
		SLA (polyclonal)	AD ( <i>n</i> = 28) SD ( <i>n</i> = 22)	Vila Santana do Cafezal (Brazil)	Natural IgG1 associated with SD. IgG2 high in both AD and SD. [46]	
		SLA, LACK & LeIF (polyclonal)	AD ( <i>n</i> = 26) SD ( <i>n</i> = 34) CD ( <i>n</i> = 26) CDE ( <i>n</i> = 45)	Tunisia	Natural IgG1 and IgG2 ↑ in SD. [47]	
		LiAg or A2 protein (polyclonal)	AD ( <i>n</i> = 10) SD ( <i>n</i> = 10) VD ( <i>n</i> = 12) CD ( <i>n</i> = 12)	Barra Mansa (Brazil)	Natural IgG1 associated with SD. IgG2 associated with AD. [48]	
		Portions of r-pot B domain (polyclonal)	AD ( <i>n</i> = 11) OD ( <i>n</i> = 12) SD ( <i>n</i> = 15) CD ( <i>n</i> = 10) CDE ( <i>n</i> = 17)	Minas Gerais (Brazil)	Natural IgG1 and IgG2 associated with AD. [49]	
Western Blot		<i>L.i.</i> antigens (polyclonal)	AD ( <i>n</i> = 78) OD ( <i>n</i> = 2) PD ( <i>n</i> = 7)	Madrid (Spain)	Natural IgG2 associated with SD. [3]	
		Promastigote extract (polyclonal)	AD ( <i>n</i> = 9) SD ( <i>n</i> = 5) CD ( <i>n</i> = 52)	Attiki area (Greece)	Natural IgG2:IgG1 ratio ↑ in AD versus SD. [50]	
IgM	-	CLA (monoclonal)	AD OD PD ( <i>n</i> = 126)	Salvaterra (Brazil)	Natural IgG1, IgG2, IgG3, and IgG4 associated with SD. [51]	
		ELISA	CLA (monoclonal)	AD ( <i>n</i> = 120) SD ( <i>n</i> = 24) VD ( <i>n</i> = 40)	Belo Horizonte (Brazil)	Natural IgG1 and IgG4 associated with AD. IgG2 associated with SD. Low IgG3 levels in AD and SD. [52]
			<i>L.c.</i> lysate (polyclonal and monoclonal)	AD ( <i>n</i> = 45) SD ( <i>n</i> = 45) VD ( <i>n</i> = 37) CDNE ( <i>n</i> = 45)	Sao Paolo (Brazil)	Natural Using pAb, IgG1 and IgG2 ↑ in AD and SD. Using mAb, IgG1, IgG3 and IgG4 ↑ in SD. [53]
			SLA (polyclonal)	AD SD CD	Alto Douro region (Portugal)	Natural Low IgM values in infected dogs. [33]
		ELISA	SLA (polyclonal)	AD ( <i>n</i> = 12) OD ( <i>n</i> = 12) SD ( <i>n</i> = 16) CD ( <i>n</i> = 20)	Minas Gerais (Brazil)	Natural ↑ IgM in all infected dogs. [36]
			<i>L.i.</i> antigen (polyclonal)	AD ( <i>n</i> = 2) SD ( <i>n</i> = 4)	St Feliu de Codines (Spain)	Experimental IgM appeared in SD later in the infection. [7]

		CD ( <i>n</i> = 20)				
IgA	- ELISA	<i>L.i.</i> antigen (polyclonal)	AD ( <i>n</i> = 132) SD ( <i>n</i> = 106) CD ( <i>n</i> = 20)	Barcelona and Mallorca (Spain)	Natural	IgM associated with SD. [8]
		SLA (polyclonal)	AD-I ( <i>n</i> = 8) AD-II ( <i>n</i> = 10) SD ( <i>n</i> = 16) CD ( <i>n</i> = 7)	Belo Horizonte (Brazil)	Natural	IgM ↑ in AD-II and SD. [42]
IgA	- ELISA	SLA (polyclonal)	AD ( <i>n</i> = 10) SD ( <i>n</i> = 68) CD ( <i>n</i> = 7)	Fortaleza (Brazil)	Natural	IgM associated with SD. [44]
		<i>L.i.</i> antigen (polyclonal)	AD ( <i>n</i> = 2) SD ( <i>n</i> = 4) CD ( <i>n</i> = 20)	St Feliu de Codines (Spain)	Experimental	IgA ↑ with time in SD. [7]
IgA	- ELISA	<i>L.i.</i> antigen (polyclonal)	AD ( <i>n</i> = 132) SD ( <i>n</i> = 106) CD ( <i>n</i> = 20)	Barcelona and Mallorca (Spain)	Natural	IgA associated with SD. [8]
		SLA (polyclonal)	AD ( <i>n</i> = 12) OD ( <i>n</i> = 12) SD ( <i>n</i> = 16) CD ( <i>n</i> = 20)	Minas Gerais (Brazil)	Natural	IgA associated to SD. [36]
IgE	- ELISA	SLA (polyclonal)	AD-I ( <i>n</i> = 8) AD-II ( <i>n</i> = 10) SD ( <i>n</i> = 16) CD ( <i>n</i> = 7)	Belo Horizonte (Brazil)	Natural	IgA ↑ in AD-II and SD. [42]
		SLA (polyclonal)	AD ( <i>n</i> = 10) SD ( <i>n</i> = 68) CD ( <i>n</i> = 7)	Fortaleza (Brazil)	Natural	IgA ↑ in infected dogs. [44]
IgE	- ELISA	f/t <i>L.i.</i> antigen (polyclonal)	AD ( <i>n</i> = 13) SD ( <i>n</i> = 42) CDE ( <i>n</i> = 21) CDNE ( <i>n</i> = 18)	E and NE areas from Brazil	Natural	IgE associated with SD. [34]
		Protein A (polyclonal)	AD ( <i>n</i> = 29) SD ( <i>n</i> = 23) CDE ( <i>n</i> = 3) CDNE ( <i>n</i> = 19)	Spain & France	Natural	IgE associated with SD. [35]
IgE	- ELISA	SLA (polyclonal)	AD ( <i>n</i> = 12) OD ( <i>n</i> = 12) SD ( <i>n</i> = 16) CD ( <i>n</i> = 20)	Minas Gerais (Brazil)	Natural	IgE associated to SD. [36]
		SLA (polyclonal)	AD-I ( <i>n</i> = 8) AD-II ( <i>n</i> = 10) SD ( <i>n</i> = 16) CD ( <i>n</i> = 7)	Belo Horizonte (Brazil)	Natural	IgE associated with SD. [42]
IgE	- ELISA	SLA (polyclonal)	AD ( <i>n</i> = 10) SD ( <i>n</i> = 68) CD ( <i>n</i> = 7)	Fortaleza (Brazil)	Natural	IgE is not correlated with clinical signs. [44]
		CLA or SLA (polyclonal)	AD <sup>+</sup> ( <i>n</i> = 21) AD <sup>-</sup> ( <i>n</i> = 62) SD <sup>+</sup> ( <i>n</i> = 52) SD <sup>-</sup> ( <i>n</i> = 25)	Araçatuba (Brazil)	Natural	IgE ↑ in all infected dogs. [45]

CLA: crude *Leishmania* antigen; f/t antigen: freezed/thawed antigen; SLA: soluble *Leishmania* antigen; AD: asymptomatic dogs; AD-I: asymptomatic dogs with negative serology; AD-II: asymptomatic dogs with positive serology ; OD: oligosymptomatic dogs; PD: poly-symptomatic dogs; SD: symptomatic dogs; TSD: treated symptomatic dogs; TD: treated infected dogs; CD: control healthy dogs; CDE: control healthy dogs from endemic areas; CDNE: control healthy dogs from non-endemic areas; VD: vaccinated healthy dogs; AD<sup>+</sup> : asymptomatic dogs infected with *L. chagasi*; AD<sup>-</sup>: asymptomatic dogs uninfected with *L. chagasi*; SD<sup>+</sup> : symptomatic dogs infected with *L. chagasi*; SD<sup>-</sup>: symptomatic dogs uninfected with *L. chagasi*; E: endemic areas; NE: non-endemic areas; pAb: polyclonal antibodies; mAb: monoclonal antibodies; *L.i.*: *Leishmania infantum*; *L.c.*: *Leishmania chagasi*; *L.b.*: *Leishmania braziliensis*.

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