

Supplementary Table 1: Data of the days of disease, signs, symptoms, and laboratory findings of each patient collected from January to February 2016, in the city of São José do Rio Preto, São Paulo, Brazil.

Group / Patient ID	Age/Gender	Comorbidities	Days between onset of the symptoms and medical assessment	Signs and Symptoms	Laboratory findings
DENV-2 / IgG -					
2421	28/F	No	4	Myalgia, headache, fever	Ht 35.1; leuko 4,200; Plat 206,000
2427	17/F	No	3	Headache, retrorbital pain, myalgia, exanthema, mucosal bleeding (gingivorrhage)	Ht 13; Leuko 8,440; Plat 255,000
2430	N/A	N/A	N/A	N/A	N/A
2651	25/F	No	2	Myalgia, exanthema, headache, retrorbital pain	Ht 13.4; Leuko 3,910; Plat 189,000
2904	5/M	No	0	Fever, headache	Ht 14; Leuko 6,030; Plat 283,000
3523	5/M	No	3	Fever, abdominal pain, myalgia.	Ht 33.4; Leuko 6,760; Plat 137,000
DENV2/IgG+					
2056	45/M	No	1	Fever, headache, retrorbital pain, myalgia	Ht 12.9; Leuko 2,640; Plat 119,000
2149	55/F	No	4	Fever, headache, gingivorrhage, myalgia	Ht 45.1; Leuko 29,400; Plat 137,000
2153	21/F	No	2	Fever, headache, exanthema, retrorbital pain, myalgia	Ht 40.9; Leuko 1,450; Plat 165,000
2286	31/F	No	3	Fever, headache, retrorbital pain, myalgia	Ht 43.6; Leuko 1,920; Plat 188,000
2287	29/M	No	0	Fever	Ht 15.2; Leuko 3,770; Plat 135,000

2422	61/F	No	5	Headache, exanthema, myalgia	Ht 41; Leuko 4,230; PLat 208,000
2423	40/M	No Evolution	N/A	N/A	Ht 39.7; Leuko 10,050; Plat 182,000
2424	52/M	No	5	Fever, headache, retrorbital pain, myalgia	Ht 42; Leuko 5,020; Plat 162,000
2425	63/F	No	0	Fever, myalgia, abdominal pain, dyarrhea	Ht 11.9; Leuko 3,230; Plat 182,000
2426	34/M	No	6	Fever, headache, retrorbital pain, myalgia	Ht 39.8; Leuko 3,430; Plat 130,000
2429	26/F	N/A	N/A	N/A	N/A
2529	50/F	No	1	Myalgia, arthralgia, exanthema	Ht 39.9; Leuko 3,790; Plat 142,000,
2530	43/M	Hypertension	2	Fever, myalgia, exanthema, diarrhea	Ht 42.3; Leuko 3,290; Plat 106,000
2654	33/F	N/A		N/A	N/A

ZIKA/IgG-

2659	23/F	No	3	Fever, headache, myalgia, gingivorrhage, tourniquet test positive	Ht 38.5; Leuko 3,400; Plat 164,000
3226	52/F	No	2	Fever, headache, retrorbital pain, myalgia, tourniquet test positive	Ht 36.7; Leuko 3,570; Plat 174,000
16/253	38/M	No Evolution	N/A	N/A	N/A
114	6/F	No	3	Exanthema, fever, headache	Ht 36.0; Leuko 4,070; Plat 307,000
116	16/M	No	2	Fever, myalgia, joint pain, nausea, conjunctival hyperemia, headache, myalgia, exanthema	N/A
227	39/F	No	3	Fever, nausea, abdominal pain, sore throat, myalgia, exanthema	N/A
237	34/M	No	2	Fever, vomiting, nausea, conjunctival hyperemia, cough, headache, myalgia,	Ht 47.3; Leuko 2,810; Plat 188,000

					exanthema	
244	46/M	No	2	Joint pain, conjunctival hyperemia, myalgia, exanthema	Ht 38.1; Leuko 3,990; Plat 174,000	
264	45/F	No	2	Fever, joint pain, conjunctival hyperemia, headache, myalgia, exanthema	N/A	
281	24/M	No	2	Fever, nausea, conjunctival hyperemia, headache, myalgia, exanthema	N/A	
ZIKA/IgG+						
1848	77/F	No	4	Fever, headache, myalgia, tourniquet test positive	Ht 40.1; Leuko 4,520; Plaq 110,000	
1855	49/M	no	2	Fever, myalgia, arthralgia	Ht 42.8; Leuko 3,200; Plat 145,000	
1856	44/F	No	3	Fever, headache, myalgia, nausea	Ht 33.6; Leuko 12,130; Plat 307,000	
1857	38/F	N/A	N/A	N/A	N/A	
1863	39/M	No	1	Fever, myalgia	Ht 40.3; Leuko 7,600; Plat 143,000	
2655	30/F	No	0	Fever, headache, retrorbital pain, myalgia, tourniquet test positive	Ht 42.2; Leuko 3720; Plat 171,000	
3212	39/F	No	1	Fever, myalgia, pruritus	Ht 38.3; Leuko 6,340; Plat 269,000	
3601	56/F	N/A	N/A	N/A	N/A	
16/18	38/F	Hypothyroidism / pregnancy	0	Exanthema	Ht 39.7; Leuko 6,650; Plat 202,000	
16/42	28/F	No	1	Exanthema, pruritus, myalgia	Ht 40.4; Leuko 5,150; Plat 283,000	
16/43	54/F	No	1	Exanthema, pruritus, conjunctivitis, fever	Ht 38.1; Leuko 3,450; Plat 187,000	

16/53	30/F	Pregnancy	N/A	No complaints	No
16/19	21/F	Pregnancy	2	Exanthema, pruritus	No
16/58	38/F	No	2	Fever, myalgia, retroorbital pain, conjunctivitis	Ht 40.6; Leuko 3,890; Plat 250,000
16/61	36/F	Pregnancy, Idiopathic thrombocytopenic purpura	1	Fever, myalgia	ht 40.6; Leuko 12,710; Plat 34,000
16/67	44/F	No	1	Exanthema, pruritus	Ht 40.2; Leuko 4,170; Plat 278,000
16/69	17/F	Pregnancy	1	Fever, exanthema, pruritus, retroorbital pain, myalgia	Ht 35.8; Leuko 6,940; Plat 215,000
41	75/F	No	2	Joint pain, conjunctival hyperemia, myalgia, exanthema	Ht 40.8; Leuko 3,580; Plat 163,000
117	65/F	No	2	Fever, joint pain, nausea, headache, myalgia, exanthema	N/A
144	46/F	No	1	Fever, joint pain, conjunctival hyperemia, sore throat, headache, myalgia, exanthema	N/A
164	15/F	No	4	Fever, joint pain, headache, myalgia, exanthema	N/A
190	59/F	No	3	Fever, joint pain, diarrhea, nausea, conjunctival hyperemia, myalgia, exanthema	Ht 39.7; Leuko 3,910; Plat 197,000
193	50/F	No	1	Joint pain, diarrhea, conjunctival hyperemia, exanthema	Ht 44.3; Leuko 4,820; Plat 220,000
218	11/F	No	3	Fever, joint pain, nausea, headache, myalgia, exanthema	Ht 39.1; Leuko 3,090; Plat 148,000

225	45/F	No	1	Fever, joint pain, exanthema	N/A
228	73/F	No	3	Fever, joint pain, diarrhea, headache, myalgia, exanthema	Ht 38,1; Leuko 5,790; Plat 205,000
229	11/F	No	3	Fever, joint pain, nausea, headache, myalgia, exanthema	Ht 39,1; Leuko 3,090; Plat 148,000
231	40/F	No	3	Fever, vomiting, joint pain, conjunctival hyperemia, headache, exanthema	Ht 38,3; Leuko 4,730; Plat 257,000
232	26/F	No	3	Joint pain, conjunctival hyperemia, exanthema	Ht 40,1; Leuko 2,810; Plat 240,000
235	51/F	No	2	Fever, conjunctival hyperemia, headache, exanthema	N/A
238	48/F	No	4	Fever, vomiting, joint pain, headache, myalgia, exanthema	N/A
239	59/F	No	2	Joint pain, conjunctival hyperemia, myalgia, exanthema	Ht 44,6; Leuko 3,990; Plat 174,000
255	47/F	No	3	Nausea, conjunctival hyperemia, sore throat, myalgia, exanthema	Ht 39,2; Leuko 4,240; Plat 267,000
256	58/F	No	4	Fever, nausea, conjunctival hyperemia, headache, myalgia, exanthema	Ht 38,3; Leuko 3,730; Plat 208,000
293	27/M	No	3	Fever, joint pain, nausea, conjunctival hyperemia, sore throat, headache, exanthema	N/A

N/A: not available

Supplementary Table 2: Comparative table of the cytokine levels and viral load of each patient.

Group	Cytokines (pg/mL)										Viral Load (GE/mL)	Viral Load (Log ₁₀)
	IFN- γ	IL-10	IL-13	IL-17	IL-9	IL-1 β	IL-2	IL-4	IL-6	IL-8		
DENV2/ IgG-												
2421	40.57	0.14	0	2.07	1.51	1.55	0.64	0.02	2.42	29.26	381.955	2.58
2427	14.81	3.2	508	2.65	5.79	13.3	4.09	0.18	15.6	941	65,923.391	4.82
2430	46.01	18.61	591	9.17	4.48	3.39	3.92	2.95	21.64	146	undetermined	
2651	15.2	0	0	1.09	0.46	1.82	0.4	0	9.72	1272	5,069.282	3.71
2904	38.1	426	1.03	2.18	1.27	11.56	0.78	0.05	95.4	629	56,969.691	4.76
3523	33.18	18.61	0.39	1.18	0.99	1.61	1.03	0	16.83	123	19,037.061	4.28
DENV2/IgG+												
2056	40.57	0.14	0	0.64	0.16	0.62	0.47	0	2.84	21.64	201,948.176.000	8.31
2149	8.39	50.88	0	0.93	0.5	2.72	0.78	0	0.83	230	81,072.836	4.91
2153	236	17.69	0	1.01	0.42	0.96	0.6	0	3.39	30	35,212.434	4.55
2286	219	100	0	0.78	0.27	1.09	0.55	0	1.17	41.6	9,426.285	3.97
2287	21.64	52.17	555	1.75	1.68	1.21	1.96	0.02	3.11	62.21	224,237.824.000	8.35
2422	36.69	132	0	0.93	0.38	0.73	0.47	0	1.27	20.57	2,631.594	3.42
2423	52.17	43.75	0	1.36	0.5	1.41	0.6	0	9.17	123	3,276.827	3.52
2424	7.26	111	0	0.67	0.31	0.67	0.23	0	2.12	78.01	6,367.691	3.80
2425	3.62	48.38	0	1.18	0.38	0.9	0.69	0	1.32	102	5,972.523.008.000	9.78
2426	203	0.04	0	1.27	0.46	1.03	0.51	0.01	9.72	45.43	325,583.625	5.51
2429	* 16.41	103	261	2.29	1.85	1.97	1.83	0.08	5.48	65.42	15,269.444	4.18
2529	12.24	0.11	0.61	1.27	0.38	0.73	0.4	0	0.24	242	2,852.932	3.46
2530	261	894	174	2.41	7.69	1.55	6.29	0.03	19.57	139	5,871.356	3.77
2654	465	0	0	1.18	0.38	0.96	0.51	* 0.01	3.39	100	14,049.039	4.15
ZIKV/IgG-												

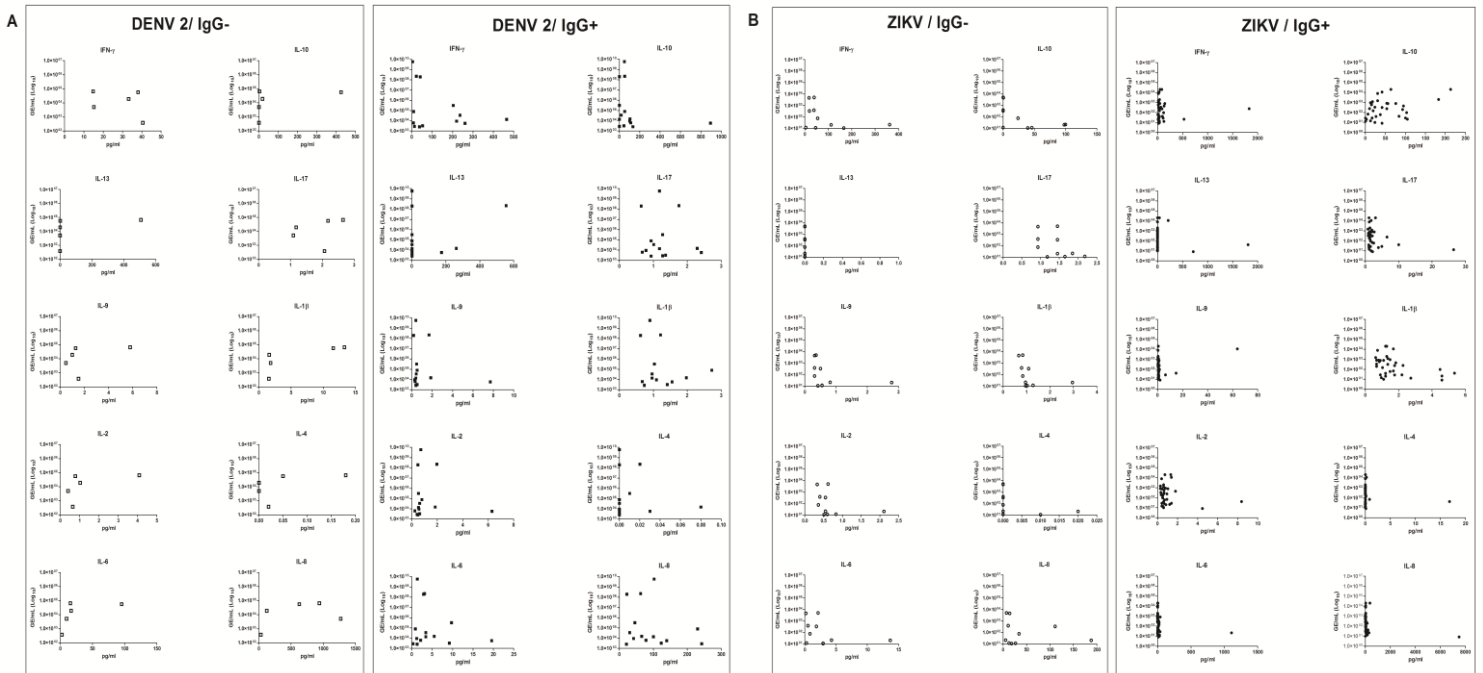
2659	39.07	0.02	0	0.93	0.31	0.79	0.4	0	0.5	10.92	385.009	2.59
3226	112	97.83	0	1.45	2.78	2.96	2.11	0.02	13.67	188	20.518	1.31
16/253	4.27	0.02	0	2.18	0.55	1.28	0.83	0	0.28	12.59	11.760	1.07
114	362	100	0	1.85	0.81	0.96	0.55	0	4.27	5.48	21.385	1.33
116	39.56	0.11	0	1.45	0.36	0.84	0.62	0	2.12	7.26	5,021.485	3.70
227	54.86	23.93	0	0.93	0.31	0.84	0.36	0	0.83	34.02	75.983	1.88
237	19.57	0.08	0	1.45	0.5	1.09	0.55	0	1.85	111	337.100	2.53
244	166	39.56	0	1.18	0.42	0.96	0.51	0.01	2.92	18.14	10.736	1.03
264	18.14	0.42	0	0.93	0.31	0.67	0.33	0	0.18	14.05	4,667.002	3.67
281	46.01	46.01	0	1.65	0.55	1.03	0.6	0	2.92	26.46	11.464	1.06

ZIKV/IgG+

1848	16.83	16.83	0	1.09	6.29	0.9	0.43	0.01	1.72	16.41	27.483	1.44
1855	95.4	84.13	1809	10.01	14.81	5.34	8.39	16.83	15.2	219	41.416	1.62
1856	126	0.42	0	26.46	0.87	2.72	0.55	0.01	27.82	158	12.991	1.11
1857	88.47	53.5	0	1.36	0.38	1.75	0.6	0	23.33	95.4	233.536	2.37
1863	527	105	0	3.92	0.75	4.59	1.2	0.01	1108	288	21.639	1.34
2655	63.8	23.93	0	0.85	0.34	0.67	0.33	0	0.5	16.83	337.058	2.53
3212	37.62	26.46	0	1.01	0.7	1.21	0.6	0	0.9	25.48	39.216	1.59
3601	120	103	0.01	1.55	1.59	4.48	0.51	0.01	13.67	52.17	96.267	1.98
16/18	22.75	17.69	0	1.96	0.7	1.34	0.6	0.02	0.75	8.15	1,203.898	3.08
16/42	1831	10.3	0	6.47	1.35	2.26	0.93	0.02	0.56	6.47	245.707	2.39
16/43	34.89	56.26	0	1.36	0.38	0.9	0.43	0	1.08	18.14	765.413	2.88
16/53	39.56	53.5	0	1.27	0.34	0.79	0.29	0	38.58	46.01	827.721	2.92
16/19	38.58	183	0	1.36	0.46	1.28	0.6	0	1.27	27.13	1,954.334	3.29
16/58	144	76.08	0	2.65	1.13	1.09	1.03	0.01	4.09	18.61	785.352	2.90
16/61	83.08	213	0.51	1.09	0.65	1.28	0.73	0	6.12	28.53	20,187.725	4.31
16/67	43.75	15.2	0	1.96	0.46	0.67	0.29	0	0.5	6.85	803.041	2.90
16/69	23.33	12.94	0	1.85	0.5	1.48	0.78	0.01	1.27	17.69	935.548	2.97
41	38.58	93.03	0	1.18	0.32	0.67	0.36	0	19.57	146	197.092	2.30

117	34.45	12.94	0	1.18	0.38	0.96	0.43	0	1.37	88.47	14.181	1.15
144	111	100	0	4.94	0.87	2.19	1.38	0.03	37.62	17.69	27.236	1.44
164	17.25	6.47	0	2.07	0.55	1.68	0.93	0.83	1.08	32.35	67.069	1.83
190	50.24	63.8	37.62	3.03	0.59	1.21	1.32	0.02	1.27	362	20,532.117	4.31
193	29.26	41.6	0	2.07	0.55	1.34	0.64	0	17.69	30	310.290	2.49
218	14.43	15.2	0	0.93	0.87	0.84	0.64	0.01	0.36	3.62	575.328	2.76
225	52.17	1.89	54.86	1.5	0.55	1.03	0.58	0	0.68	248	undetermined	
228	37.15	19.57	0	1.36	0.7	1.03	0.51	0.14	21.64	26.46	149.894	2.18
229	10.3	2.6	0	1.09	1.06	1.21	0.83	0.01	0.45	49.61	20.365	1.31
231	21.1	41.6	713	2.18	2.04	4.59	4.48	0.11	13.67	7489	8.392	0.92
232	27.13	0.25	0	1.55	0.57	1.75	0.64	0.01	0.9	174	27.053	1.43
235	15.2	30.77	0	0.78	0.21	0.62	0.29	0	3.39	6.47	1,474.916	3.17
238	30	41.6	213	1.75	63.8	1.68	1.38	0.23	2.58	25.8	10,888.601	4.04
239	35.78	23.93	0	1.75	0.65	1.09	0.6	0	27.13	7.26	10.192	1.01
255	129	95.4	0	1.45	0.55	1.82	1.79	0.01	6.85	19.57	447.297	2.65
256	19.57	30.77	0	1.18	0.38	0.73	0.4	0	1.37	22.19	7,904.634	3.90
293	4.7	37.62	0	2.53	0.99	1.48	0.69	0.02	6.47	46.01	60.045	1.78

*This data was excluded from the cytokine analysis due to the low levels of beads required for the reading.



Supplementary Figure 1: Cytokines versus viral load profiles in DENV 2 and ZIKV patients during primary and secondary dengue infections. **(a)** Cytokines and viral load levels measured in DENV 2-positive patients with primary (IgG-) DENV infection (n=06) and secondary (IgG+) DENV infection (n=14). The Mann Whitney U test demonstrated no significant *p* value. **(b)** Cytokines and viral load levels measured in ZIKV-positive patients with primary (IgG-) DENV infection (n=10) and secondary (IgG+) DENV infection (n=35). The Mann Whitney U test demonstrated no significant *p* value.