

Supplementary data

Supplementary Table 1: Clinical data evaluated during disease progression from inoculation to recovery

	Baseline	24 hours	48 hours	72 hours	96 hours	108 hours	120 hours	144 hours	168 hours	192 hours
Habitus: Units: (1 – 4) ^a										
LD mean/median (Range)	4/4 (4 – 4)	4/4 (4 – 4)	4/4 (4 – 4)	4/4 (4 – 4)	3/3 (3 – 3)	3.5/3.5 (3 – 4)	4/4 (4 – 4)	4/4 (4 – 4)	3/3 (3 – 3)	3.5/3.5 (3 – 4)
HD mean/median (Range)	4/4 (4 – 4)	4/4 (4 – 4)	3.33/3 (3 – 4)	2 (2 – 2)	1.67/2 (1 – 2)	NA	2/2 (2 – 2)	2/2 (2 – 2)	3/3 (3 – 3)	3/3 (3 – 3)
P value: LD vs HD	1.0000	1.0000	0.0172*	0.0000*	0.0000*	0.0000*	0.0000*	0.0000*	1.0000	0.3184
LD vs Base	1.0000	1.0000	1.0000	1.0000	0.0003*	0.5731	1.0000	1.0000	0.0003*	0.5731
HD vs Base	1.0000	1.0000	0.0082*	0.0000*	0.0000*	NA	0.0000*	0.0000*	0.0000*	0.0000*
Appetite: Units: (1 – 4) ^b										
LD mean/median (Range)	4/4 (4 – 4)	4/4 (4 – 4)	4/4 (4 – 4)	4/4 (4 – 4)	3/4 (3 – 3)	2/2 (1 – 3)	2.5/2.5 (2 – 3)	3/3 (3 – 3)	3/3 (3 – 3)	3/3 (3 – 3)
HD mean/median (Range)	4/4 (4 – 4)	4/4 (4 – 4)	3.33/3 (3 – 4)	3/3 (2 – 4)	1/1 (1 – 1)	NA	1/1 (1 – 1)	1/1 (1 – 1)	2/2 (1 – 3)	3/3 (3 – 3)
P value: LD vs HD	1.0000	1.0000	0.7364	0.0729	0.0000*	NA	0.0024*	0.0000*	0.1431	1.0000
LD vs Base	1.0000	1.0000	1.0000	1.0000	0.2575	0.0000*	0.0043*	0.2575	0.2575	0.2575
HD vs Base	1.0000	1.0000	0.8190	0.0486*	0.0000*	NA	0.0000*	0.0000*	0.0000*	0.1312
Temperature: Units °C										
LD mean (Range)	37.9 (37.6–38.3)	38 (37.8–38.2)	38.6 (38.6–38.6)	38.3 (37.9–38.7)	39.45 (39–39.9)	39.9 (39.6–40.2)	39.75 (39.6–39.9)	39.3 (39–39.6)	38.65 (38.5–38.8)	38.5 (38.4–38.6)
HD mean (Range)	38 (37.7–38.1)	37.73 (37.1–38.1)	38.97 (38.7–39.2)	39.4 (39.2–39.6)	38.93 (36.4–40.7)	NA	39.5 (39.3–39.7)	38.65 (38.5–38.8)	38.6 (38.6–38.6)	38.3 (38.1–38.5)
P value: LD vs HD	1.0000	1.0000	1.0000	0.2676	1.0000	NA	1.0000	1.0000	1.0000	1.0000
LD vs Base	NA	1.0000	1.0000	1.0000	0.0911	0.0051*	0.0143*	0.2068	1.0000	1.0000
HD vs Base	NA	1.0000	0.3976	0.0197*	0.4832	NA	0.0324*	1.0000	1.0000	1.0000
Pulse: Units: bpm										

LD mean (Range)	116 (112 – 120)	142 (136 – 148)	130 (128 – 132)	138 (128 – 148)	124 (120 – 128)	128 (116 – 140)	158 (156 – 160)	162 (136 – 188)	124 (116 – 132)	132 (128 – 136)
HD mean (Range)	130 bpm (120 – 135)	133 bpm (128 – 140)	112 (96 – 124)	92 (88 – 96)	143 (128 – 168)	NA	164 (160 – 168)	138 (136 – 140)	128 (128 – 128)	130 (128 – 132)
P value: LD vs HD	1.0000	1.0000	0.3650	0.0000*	0.3010	NA	1.0000	0.0897	1.0000	1.0000
LD vs Base	NA	0.00631	1.0000	0.2428	1.0000	1.0000	0.0000*	0.0000*	1.0000	0.7671
HD vs Base	NA	1.0000	0.2719	0.0000*	1.0000	NA	0.0007*	1.0000	1.0000	1.0000
Respiration: Units: bpm										
LD mean (Range)	32 (32 – 32)	22 (20 – 24)	28 (24 – 32)	30 (24 – 36)	24 (20 – 28)	26 (20 – 32)	20 (16 – 24)	40 (32 – 48)	24 (16 – 32)	30 (20 – 40)
HD mean (Range)	29 (24 – 38)	21 (20 – 24)	27 (24 – 32)	23 (20 – 28)	43 (40 – 48)	NA	30 (24 – 36)	20 (20 – 20)	22 (20 – 24)	22 (20 – 24)
P value: LD vs HD	1.0000	1.0000	1.0000	1.0000	0.0004*	NA	0.4160	0.0006*	1.0000	1.0000
LD vs Base	NA	0.7315	1.0000	1.0000	1.0000	1.0000	0.2524	1.0000	1.0000	1.0000
HD vs Base	NA	1.0000	1.0000	1.0000	0.0081*	NA	1.0000	1.0000	1.0000	1.0000
Systolic blood pressure: Units: mmHg										
LD mean (Range)	136 (135 – 137)	130 (126 – 134)	141 (129 – 154)	133 (126 – 141)	140 (126 – 155)	137 (136 – 138)	142 (129 – 155)	121 (118 – 123)	129 (123 – 135)	123 (118 – 128)
HD mean (Range)	124 (122 – 125)	140 (131 – 146)	137 (130 – 149)	156 (145 – 161)	137 (109 – 162)	NA	134 (131 – 137)	132 (127 – 136)	137 (136 – 137)	132 (129 – 134)
P value: LD vs HD	1.0000	1.0000	1.0000	0.0568	1.0000	NA	1.0000	1.0000	1.0000	1.0000
LD vs Base	NA	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9082	1.0000	1.0000
HD vs Base	NA	0.1237	0.4730	0.0000*	0.4996	NA	1.0000	1.0000	1.0000	1.0000
Diastolic blood pressure: Units: mmHg										
LD mean (Range)	63 (63 – 63)	66 (63 – 68)	65 (63 – 67)	73 (66 – 80)	78 (68 – 88)	68 (57 – 80)	71 (61 – 81)	66 (63 – 69)	68 (65 – 70)	67 (65 – 68)
HD mean (Range)	65 (63 – 67)	74 (71 – 76)	72 (68 – 74)	76 (74 – 77)	74 (64 – 83)	NA	73 (67 – 79)	65 (65 – 65)	77 (73 – 81)	71 (71 – 71)
P value: LD vs HD	1.0000	0.8011	1.0000	1.0000	1.0000	NA	1.0000	1.0000	1.0000	1.0000
LD vs Base	NA	1.0000	1.0000	0.2596	0.0034*	1.0000	0.9945	1.0000	1.0000	1.0000

HD vs Base	NA	0.1042	0.7464	0.0132*	0.0978	NA	0.8259	1.0000	0.0440*	1.0000
MAP: Units: mmHg										
LD mean (Range)	89 (89 – 89)	89 (86 – 91)	91 (86 – 96)	94 (87 – 101)	100 (89 – 112)	92 (84 – 101)	96 (85 – 107)	86 (83 – 88)	90 (86 – 93)	87 (84 – 89)
HD mean (Range)	86 (74 – 87)	98 (92 – 100)	95 (91 – 102)	105 (101 – 110)	97 (80 – 111)	NA	94 (92 – 96)	89 (87 – 90)	98 (96 – 101)	93 (92 – 94)
P value: LD vs HD	1.0000	0.9777	1.0000	0.4789	1.0000	NA	1.0000	1.0000	1.0000	1.0000
LD vs Base	NA	1.0000	1.0000	1.0000	0.2399	1.0000	1.0000	1.0000	1.0000	1.0000
HD vs Base	NA	0.0357*	0.3337	0.0000*	0.0840	NA	1.0000	1.0000	0.1641	1.0000

^a Habitus: 1+ Lethargic and non-responsive; 2+ Lethargic but responsive; 3+ Alert and responsive; 4+ Bright alert and responsive. ^b Appetite: 1+ Refusal to eat; 2+ Eats when hand or syringe fed; 3+ Eating unassisted but inadequate intake; 4+ Eating very well. * Significant difference when applying linear mixed models, P<0.05.

Supplementary Table 2: Clinicopathological indicators of inflammation during the course of *B. rossi* infection and after treatment

	Baseline	24 hours	48 hours	72 hours	96 hours	108 hours	120 hours	144 hours	168 hours	192 hours
Parasitaemia: Units: %										
LD mean (Range)	0	0	0	0.075 (0.05–0.1)	3.88 (3.15–4.61)	5.76 (4.71–6.81)	0.047 (0.044–0.051)	0.0015 (0.001–0.002)	0	0
HD mean (Range)	0	0.05 (0.05–0.05)	0.916 (0.69–1.06)	10.877 (6.74–14.81)	46.763 (34.95–59.8)	NA	0.072 (0.059–0.085)	0.0005 (0–0.001)	0	0
P value: LD vs HD	1.0000	<0.001*	<0.001*	<0.001*	<0.001*	NA	1.000	<0.001*	1.000	1.000
LD vs Base	NA	1.000	1.000	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	1.000	1.000
HD vs Base	NA	<0.001*	<0.001*	<0.001*	<0.001*	NA	<0.001*	<0.001*	1.000	1.000
Haematocrit: Units: L/L										
LD mean (Range)	0.38 (0.37–0.39)	0.38 (0.39–0.36)	0.41 (0.4–0.41)	0.38 (0.36–0.4)	0.39 (0.37–0.4)	0.39 (0.3–0.42)	0.28 (0.26–0.29)	0.25 (0.24–0.25)	0.25 (0.24–0.26)	0.28 (0.27–0.29)
HD mean (Range)	0.36 (0.35–0.38)	0.38 (0.33–0.42)	0.4 (0.38–0.42)	0.34 (0.31–0.36)	0.22 (0.12–0.28)	NA	0.17 (0.14–0.19)	0.2 (0.17–0.23)	0.26 (0.22–0.29)	0.25 (0.23–0.26)
P value: LD vs HD	1.0000	1.000	1.000	0.898	<0.001*	NA	0.001*	1.000	1.000	1.000
LD vs Base	NA	1.000	1.000	1.000	<0.001*	1.000	0.003*	<0.001*	<0.001*	0.006*
HD vs Base	NA	1.000	1.000	1.000	1.000	NA	<0.001*	<0.001*	<0.001*	0.000*
Mature neutrophils: Units: x 10⁹/L										
LD mean (Range)	4.68 (2.39–6.98)	3.56 (2.99–4.13)	3.1 (2.55–3.65)	2.96 (2.13–3.78)	2.71 (1.63–3.78)	1.49 (1.17–1.81)	2.49 (1.62–3.36)	1.9 (1.28–2.51)	2.92 (1.49–4.35)	4.2 (3.874.53)
HD mean (Range)	3.96 (3.33–5.06)	2.44 (2.21–2.74)	2.78 (2.4–3.18)	1.79 (1.36–2.44)	1.57 (1.12–1.88)	NA	2.64 (1.73–3.54)	7.23 (6.16–8.3)	17.64 (12.21–23.07)	27.35 (23.75–30.94)
P value: LD vs HD	1.0000	1.000	1.000	0.501	0.551	NA	1.000	<0.001*	<0.001*	<0.001*
LD vs Base	NA	1.000	1.000	1.000	0.172	<0.001*	0.064	<0.001*	0.250	1.000
HD vs Base	NA	0.048*	0.508	<0.001*	<0.001*	NA	0.334	0.006*	<0.001*	<0.001*

HD vs Base										
Band neutrophils: Units: x 10⁹/L										
LD mean (Range)	0.11 (0–0.21)	0	0.1 (0–0.19)	0.06 (0.05–0.06)	0.14 (0.1–0.17)	0.24 (0.07–0.4)	0.17 (0.17–0.17)	0	0	0.16 (0.09–0.23)
HD mean (Range)	0.14 (0.13–0.17)	0.04 (0–0.08)	0.15 (0.08–0.14)	0.14 (0.11–0.18)	0.37 (0.16–0.8)	NA	1.81 (0.88–2.74)	0.67 (0.39–0.95)	2.77 (2.28–3.25)	6.45 (4.32–8.57)
P value: LD vs HD	0.4287 NA	0.278 0.167	0.331 1.000	1.000 1.000	1.000 1.000	NA 0.413	0.003* 0.481	<0.001* 0.167	<0.001* 0.167	<0.001* 0.798
LD vs Base	NA	0.052	1.000	1.000	1.000	NA	<0.001*	0.114	<0.001*	<0.001*
HD vs Base										
Monocytes: Units: x 10⁹/L										
LD mean (Range)	0.55 (0.39–0.75)	0.3 (0.28–0.32)	0.5 (0.47–0.53)	0.5 (0.27–0.72)	0.32 (0.22–0.41)	0.32 (0.15–0.48)	0.27 (0.17–0.37)	0.54 (0.51–0.56)	0.61 (0.53–0.68)	0.65 (0.6–0.7)
HD mean (Range)	0.52 x 10 ⁹ /L (0.46–0.65)	0.28 (0.2–0.32)	0.27 (0.2–0.34)	0.42 (0.3–0.61)	0.58 (0.36–0.71)	NA	0.73 (0.54–0.91)	1.86 (1.27–2.45)	3.13 (2.69–3.57)	3.04 (1.8–4.28)
P value: LD vs HD	1.000 NA	1.000 0.393	0.111 1.000	1.000 1.000	0.155 0.406	NA 0.120	0.003* 0.053	<0.001* 1.000	<0.001* 1.000	<0.001* 1.000
LD vs Base	NA	0.044*	0.024*	1.000	1.000	NA	1.000	<0.001*	<0.001*	<0.001*
HD vs Base										
C- reactive protein: Units: mg/L										
LD mean (Range)	25 (10–40)	10 (10–10)	NA	13 (11–15)	NA	178 (160–197)	NA	150 (131–168)	NA	55 (53–57)
HD mean (Range)	14.33 (10–21.5)	20 (15–26)	NA	150 (135–163)	125 (92–160)	NA	81.5 (81–82)	59 (54–64)	NA	21 (19–23)
P value: LD vs HD	0.612 NA	0.020* 0.035*	NA NA	<0.001* 0.749	NA NA	NA <0.001*	NA NA	<0.001* <0.001*	NA NA	<0.001* <0.001*
LD vs Base	NA	0.709	NA	<0.001*	<0.001*	NA	<0.001*	<0.001*	NA	0.721
HD vs Base										

* Significant difference when applying linear mixed models, P<0.05.