Parameter Values

Initial values for flows, in ml per second

Q_{a1}	1.103
Q_{a2A}	0.544
Q_{a2B}	0.544
Q_{a3A}	0.546
Q_{a3B}	0.546
Q_{l1}	1.095
Q_{l2}	1.092
Q_{la}	1.028
Q_{lv}	1.131
Q_{p1}	1.101
Q_{p2}	1.089
Q_{p3}	1.090
Q_{rv}	1.131
Q_{v1A}	0.547
Q_{v1B}	0.547
Q_{v2}	1.093

Initial values for volumes, in ml

V_{a1}	0.946
V_{a2}	1.764
V_{a3A}	1.304
V_{a3B}	0.559
V_{l1}	0.464
V_{l2}	0.383
V_{la}	0.372
V_{lv}	0.420
V_{p1}	0.281
V_{p2}	0.172
V_{p3}	0.256
V_{ra}	0.296
V_{rv}	0.460
V_{v1A}	1.769
V_{v1B}	0.758
V_{v2}	8.519

Initial values for pressures, in mmHg and Pa

P_{a1}	143.932	19189
P_{a2}	133.168	17754
P_{a3A}	86.301	11506
P_{a3B}	36.986	4931
P_{aP}	143.932	19189
P_{as}	143.932	19189
P_{l1}	11.289	1505
P_{l2}	10.365	1382
P_{la}	5.897	786
P_{lv}	5.511	735
$P_{P\ 1}$	18.904	2520
$P_{P\ 2}$	17.593	2345
$P_{P\ 3}$	18.082	2411
P_{ra}	5.897	786
P_{rv}	5.511	735
P_{v1A}	13.587	1811
P_{v1B}	5.823	776
P_{v2}	12.645	1686

Elastance parameter values, in mmHg/ml and Pa/ml

E_{minlv}	15.04	2005
E_{maxlv}	764.4	102000
E_{minrv}	7.461	995
E_{maxrv}	160.5	21400
E_{ra}	18.42	2456
E_{la}	23.03	3070

Resistance parameter values, in mmHg s/ml and Pa s/ml

R_{0p}	2.952	394
$R_{0\,s}$	3.929	524
R_{a1}	12.873	1716
R_{a2}	36.933	4924
R_{a3A}	69.094	9212
R_{a3B}	69.094	9212
R_{l1}	5.229	697
R_{l2}	2.614	349
R_{la}	0.014	1.854
R_{p1}	3.546	473
R_{p2}	10.997	1466
R_{p3}	7.864	1048
R_{ra}	0.009	1.237
R_{v1A}	2.324	310
R_{v1B}	2.324	310
R_{v2}	5.540	739

Capacitance values, in ml/mmHg and ml/Pa

C_{a1}	0.003	1.998e-05
C_{a2}	0.006	4.218e-05
C_{a3A}	0.006	4.655e-05
C_{a3B}	0.006	4.655e-05
C_{l1}	0.023	1.714e-04
C_{l2}	0.017	1.286e-04
C_{p1}	0.008	5.714e-05
C_{p2}	0.005	3.809e-05
C_{p3}	0.006	4.572e-05
C_{v1A}	0.045	3.405e-04
C_{v1B}	0.045	3.405e-04
C_{v2}	0.253	1.900e-03

Inductance values, in mmHg s^2 /ml and Pa s

L_{a1}	0.004	0.470
L_{l2}	0.004	0.470
L_{la}	0.004	0.470
L_{lv}	0.029	3.914
L_{p1}	0.004	0.470
L_{ra}	0.004	0.470
L_{rv}	0.015	1.938
L_{v2}	0.004	0.470

Volume parameter values, in ml

V_{una1}	0.668
V_{una2}	1.205
V_{una3A}	0.651
V_{una3B}	0.651
V_{unv1A}	0.977
V_{unv1B}	0.977
V_{unv2}	6.312
V_{unp1}	0.163
V_{unp2}	0.098
V_{unp3}	0.173
V_{unl1}	0.244
V_{unl2}	0.244
$V_{max,lvb}$	0.005
$V_{max,lab}$	0.005
$V_{max,rvb}$	0.005
$V_{max,rab}$	0.005

Miscellaneous parameters

M	240	g; total animal mass
a_{φ}	0.9	heart elastance parameter
b_{φ}	0.25	heart elastance parameter
v_m	0.062	slope of viscosity versus temperature
k_{ambA}	0.0068	g/s; heat exchange parameter
k_{ambB}	0.0068	g/s; heat exchange parameter
k_{aA}	0.4	ml/s; heat exchange parameter
k_{aB}	0.4	ml/s; heat exchange parameter
k_{mrt}	6.17	metabolic rate unit conversion
r_e	[minus]0.94	small vascular resistance scaling exponent
r_{e1}	[minus]0.89	medium vascular resistance scaling exponent
r_{esys}	[minus]0.84	large vascular resistance scaling exponent
l_e	[minus]0.75	inductance scaling exponent
l_e	[minus]1.0	elastance scaling exponent
v_m	0.07	viscosity versus temperature slope