Supplementary Document: MCMC Summary

Within-Host Bayesian Joint Modeling of Longitudinal and Time-to-Event Data of Leishmania Infection

Felix M. Pabon-Rodriguez, Grant D. Brown, Breanna M. Scorza, and Christine A. Petersen

Supplementary Table. Summary of MCMC results for all interpretable parameters in the model. Each column represents the following: (1) Posterior mean, (2) Posterior median, (3) Posterior standard deviation (SD), (4) Lower bound of 95% credible interval (Cr-I), (5) Upper bound of 95% Cr-I, (6) Posterior probability of parameter being positive, (7) Posterior probability of parameter being negative, and (8) Indicator for strength of evidence based on posterior probability. The symbol * in last column is used to indicate which parameter shows a posterior probability greater or equal than 0.65. The results in this table are separated by model components. Last part of the table summarizes parameters associated with the survival submodel.

Pathogen Load (P)

Parameter	Post.Mean	Post.Median	Post.SD	Lower95	Upper95	P.great.0	P.less.0	Evidence
betaP[1]	0.3309	0.3315	0.0852	0.1627	0.4967	0.9999	0.0001	*
betaP[2]	3.4030	3.3862	0.4960	2.4751	4.4208	1.0000	0.0000	*
betaP[3]	-0.3678	-0.3647	0.4569	-1.2761	0.5227	0.2093	0.7907	*
betaP[4]	-0.4221	-0.4205	0.4821	-1.3781	0.5209	0.1872	0.8128	*
betaP[5]	-0.3095	-0.3088	0.3041	-0.9072	0.2807	0.1541	0.8459	*
betaP[6]	-0.5382	-0.5344	0.3545	-1.2459	0.1516	0.0616	0.9384	*
betaP[7]	1.7523	1.7418	0.5369	0.7354	2.8337	0.9994	0.0006	*
betaP[8]	0.7970	0.7897	0.3807	0.0665	1.5572	0.9843	0.0157	*
betaP[9]	0.3078	0.3083	0.0998	0.1090	0.5008	0.9989	0.0011	*
betaP[10]	3.1170	3.1061	0.5448	2.0736	4.2116	1.0000	0.0000	*
betaP[11]	-0.1978	-0.1950	0.4299	-1.0467	0.6419	0.3219	0.6781	*
betaP[12]	-0.2284	-0.2295	0.3009	-0.8171	0.3680	0.2208	0.7792	*
betaP[13]	0.0136	0.0172	0.2648	-0.5134	0.5267	0.5255	0.4745	
betaP[14]	-0.6560	-0.6551	0.3801	-1.4064	0.0868	0.0419	0.9581	*
betaP[15]	0.5468	0.5439	0.4553	-0.3445	1.4409	0.8870	0.1130	*
betaP[16]	0.3397	0.3391	0.3275	-0.2959	0.9834	0.8495	0.1505	*
betaP[17]	0.5222	0.5192	0.2001	0.1395	0.9296	0.9971	0.0029	*
betaP[18]	2.5534	2.5307	0.8224	0.9881	4.2106	0.9994	0.0006	*
betaP[19]	-0.6232	-0.6233	0.5678	-1.7371	0.4834	0.1359	0.8641	*
betaP[20]	0.0373	0.0329	0.6088	-1.1519	1.2476	0.5224	0.4776	
betaP[21]	-0.3605	-0.3555	0.4548	-1.2723	0.5136	0.2141	0.7859	*
betaP[22]	-0.1309	-0.1340	0.3970	-0.9011	0.6571	0.3671	0.6329	
betaP[23]	0.5191	0.5188	0.7850	-1.0388	2.0590	0.7479	0.2521	*
betaP[24]	0.4427	0.4432	0.6900	-0.9108	1.8099	0.7410	0.2590	*
alphaP[1]	-2.3296	-2.3307	0.8499	-3.9888	-0.6514	0.0035	0.9965	*
alphaP[2]	-0.5095	-0.5031	0.6452	-1.8032	0.7385	0.2149	0.7851	*
alphaP[3]	-0.1133	-0.1106	0.5503	-1.2064	0.9467	0.4202	0.5798	

alphaP[4]	0.0686	0.0654	0.4642	-0.8374	0.9875	0.5568	0.4432	
alphaP[5]	0.4362	0.4415	0.7595	-1.0598	1.9237	0.7164	0.2836	*
alphaP[6]	-0.5554	-0.5527	0.4351	-1.4181	0.2883	0.0989	0.9011	*

Antibody Levels (A)

Parameter	Post.Mean	Post.Median	Post.SD	Lower95	Upper95	P.great.0	P.less.0	Evidence
betaA[1]	0.1207	0.1201	0.0143	0.0940	0.1502	1.0000	0.0000	*
betaA[2]	0.0772	0.0770	0.0554	-0.0301	0.1869	0.9198	0.0802	*
betaA[3]	-0.0682	-0.0670	0.0541	-0.1779	0.0348	0.0993	0.9007	*
betaA[4]	0.0276	0.0272	0.0536	-0.0772	0.1349	0.6990	0.3010	*
betaA[5]	0.0093	0.0094	0.0380	-0.0658	0.0828	0.5999	0.4001	
betaA[6]	0.0359	0.0355	0.0441	-0.0495	0.1240	0.7938	0.2062	*
betaA[7]	0.0013	0.0006	0.0585	-0.1122	0.1184	0.5046	0.4954	
betaA[8]	-0.0732	-0.0727	0.0418	-0.1575	0.0075	0.0377	0.9623	*
betaA[9]	0.1310	0.1305	0.0157	0.1016	0.1631	1.0000	0.0000	*
betaA[10]	0.0094	0.0091	0.0613	-0.1107	0.1310	0.5604	0.4396	
betaA[11]	-0.0292	-0.0287	0.0528	-0.1351	0.0724	0.2923	0.7077	*
betaA[12]	0.0272	0.0271	0.0371	-0.0449	0.1002	0.7692	0.2308	*
betaA[13]	0.0473	0.0476	0.0330	-0.0184	0.1114	0.9248	0.0752	*
betaA[14]	0.0020	0.0021	0.0454	-0.0868	0.0918	0.5181	0.4819	
betaA[15]	-0.0228	-0.0230	0.0531	-0.1282	0.0816	0.3329	0.6671	*
betaA[16]	-0.0904	-0.0898	0.0431	-0.1768	-0.0072	0.0161	0.9839	*
betaA[17]	0.1081	0.1078	0.0219	0.0661	0.1527	1.0000	0.0000	*
betaA[18]	0.2193	0.2139	0.0963	0.0480	0.4219	0.9953	0.0047	*
betaA[19]	-0.0031	-0.0023	0.0547	-0.1142	0.1009	0.4835	0.5165	
betaA[20]	0.0018	0.0026	0.0559	-0.1102	0.1101	0.5191	0.4809	
betaA[21]	0.0260	0.0260	0.0434	-0.0604	0.1106	0.7293	0.2707	*
betaA[22]	0.0310	0.0304	0.0406	-0.0469	0.1124	0.7773	0.2227	*
betaA[23]	-0.0671	-0.0653	0.0718	-0.2134	0.0699	0.1714	0.8286	*
betaA[24]	0.0763	0.0746	0.0646	-0.0475	0.2073	0.8855	0.1145	*
alphaA[1]	-0.6019	-0.5975	0.1857	-0.9775	-0.2489	0.0002	0.9998	*
alphaA[2]	-0.1609	-0.1589	0.1214	-0.4029	0.0724	0.0896	0.9104	*
alphaA[3]	-0.0525	-0.0527	0.1084	-0.2658	0.1590	0.3140	0.6860	*
alphaA[4]	0.1087	0.1077	0.0640	-0.0135	0.2375	0.9578	0.0422	*
alphaA[5]	0.5641	0.5596	0.1860	0.2127	0.9408	0.9995	0.0005	*
alphaA[6]	0.0896	0.0890	0.0596	-0.0250	0.2084	0.9370	0.0630	*

Disease Status (D)

Parameter	Post.Mean	Post.Median	Post.SD	Lower95	Upper95	P.great.0	P.less.0	Evidence
betaD2[1]	0.1190	0.1197	0.0603	-0.0018	0.2366	0.9734	0.0266	*
betaD2[2]	0.2068	0.1828	0.2409	-0.2115	0.7481	0.8179	0.1821	*
betaD2[3]	0.1905	0.1707	0.2221	-0.1980	0.6859	0.8170	0.1830	*
betaD2[4]	-0.3565	-0.3227	0.2602	-0.9490	0.0560	0.0541	0.9459	*
betaD2[5]	0.0364	0.0283	0.1599	-0.2598	0.3751	0.5756	0.4244	
betaD2[6]	0.0934	0.0904	0.1721	-0.2443	0.4416	0.7133	0.2867	*
betaD2[7]	0.0260	0.0098	0.2305	-0.3949	0.5354	0.5191	0.4809	
betaD2[8]	-0.1779	-0.1648	0.1833	-0.5697	0.1526	0.1561	0.8439	*
betaD2[9]	0.0942	0.0900	0.0709	-0.0328	0.2466	0.9213	0.0787	*
betaD2[10]	-0.1291	-0.1073	0.2486	-0.6872	0.3218	0.3029	0.6971	*
betaD2[11]	-0.0867	-0.0826	0.2027	-0.5025	0.3139	0.3233	0.6767	*
betaD2[12]	0.0406	0.0378	0.1703	-0.2953	0.3881	0.5951	0.4049	
betaD2[13]	-0.1046	-0.0966	0.1557	-0.4328	0.1835	0.2502	0.7498	*
betaD2[14]	-0.2513	-0.2338	0.2082	-0.7062	0.1098	0.0955	0.9045	*
betaD2[15]	0.1609	0.1432	0.2199	-0.2281	0.6479	0.7734	0.2266	*
betaD2[16]	-0.1047	-0.0918	0.1880	-0.5124	0.2379	0.2944	0.7056	*
betaD2[17]	0.1780	0.1712	0.0891	0.0205	0.3713	0.9871	0.0129	*
betaD2[18]	0.1272	0.1036	0.2718	-0.3645	0.7355	0.6825	0.3175	*
betaD2[19]	-0.3612	-0.3206	0.2854	-1.0258	0.0802	0.0670	0.9330	*
betaD2[20]	-0.0543	-0.0467	0.2104	-0.5014	0.3527	0.3985	0.6015	
betaD2[21]	0.0734	0.0659	0.1787	-0.2661	0.4571	0.6587	0.3413	*
betaD2[22]	-0.2462	-0.2307	0.1903	-0.6562	0.0874	0.0795	0.9205	*
betaD2[23]	0.0498	0.0408	0.2512	-0.4392	0.5795	0.5753	0.4247	
betaD2[24]	-0.0557	-0.0506	0.2437	-0.5622	0.4339	0.4003	0.5997	
betaD3[1]	0.4319	0.4206	0.1277	0.2139	0.7149	1.0000	0.0000	*
betaD3[2]	-0.9633	-0.8977	0.5522	-2.2332	-0.0757	0.0143	0.9857	*
betaD3[3]	1.0814	1.0037	0.6738	-0.0214	2.6240	0.9726	0.0274	*
betaD3[4]	-0.3206	-0.3044	0.4889	-1.3451	0.6007	0.2501	0.7499	*
betaD3[5]	0.4208	0.3996	0.4146	-0.3416	1.3001	0.8543	0.1457	*
betaD3[6]	0.8425	0.7979	0.4971	-0.0164	1.9548	0.9725	0.0275	*
betaD3[7]	-0.0708	-0.0717	0.5529	-1.1817	1.0334	0.4434	0.5566	
betaD3[8]	0.4535	0.4159	0.5154	-0.4546	1.5832	0.8194	0.1806	*
betaD3[9]	0.5870	0.5673	0.1921	0.2694	1.0205	1.0000	0.0000	*
betaD3[10]	-0.5988	-0.5322	0.5687	-1.9090	0.3330	0.1224	0.8776	*
betaD3[11]	0.1353	0.1413	0.5003	-0.8872	1.1143	0.6190	0.3810	
betaD3[12]	-0.1020	-0.1010	0.4034	-0.8991	0.6931	0.3957	0.6043	
betaD3[13]	0.2635	0.2532	0.3996	-0.5024	1.0818	0.7489	0.2511	*
betaD3[14]	0.3250	0.3063	0.4547	-0.5253	1.2770	0.7671	0.2329	*
betaD3[15]	0.0250	0.0166	0.5374	-1.0302	1.1113	0.5130	0.4870	
betaD3[16]	0.6797	0.6148	0.6033	-0.3262	2.0643	0.8940	0.1060	*
betaD3[17]	1.0354	0.9597	0.4571	0.3710	2.1366	0.9998	0.0002	*
betaD3[18]	-0.1478	-0.1091	0.7079	-1.6858	1.1634	0.4311	0.5689	
betaD3[19]	0.2090	0.1969	0.6645	-1.0860	1.5895	0.6284	0.3716	
betaD3[20]	0.4302	0.3653	0.7005	-0.7967	2.0051	0.7323	0.2677	*
betaD3[21]	-0.2307	-0.1953	0.6392	-1.6134	0.9508	0.3642	0.6358	
betaD3[22]	-0.4629	-0.4032	0.6584	-1.9316	0.6860	0.2329	0.7671	*

betaD3[23]	0.0456	0.0265	0.7215	-1.3561	1.5494	0.5171	0.4829	
betaD3[24]	0.4077	0.3530	0.7507	-0.9536	2.0671	0.7100	0.2900	*
alphaD2[1]	0.7345	0.7309	0.6529	-0.5288	2.0272	0.8705	0.1295	*
alphaD2[2]	0.2068	0.2072	0.5469	-0.8659	1.2842	0.6477	0.3523	
alphaD2[3]	0.0666	0.0653	0.4885	-0.8912	1.0153	0.5542	0.4458	
alphaD2[4]	0.6832	0.6841	0.3434	0.0080	1.3544	0.9763	0.0237	*
alphaD2[5]	0.1412	0.1454	0.7068	-1.2508	1.5290	0.5799	0.4201	
alphaD2[6]	-0.0615	-0.0618	0.3317	-0.7132	0.5913	0.4257	0.5743	
alphaD3[1]	1.6677	1.6664	0.7960	0.1120	3.2131	0.9820	0.0180	*
alphaD3[2]	0.9882	0.9872	0.7658	-0.5075	2.5010	0.9016	0.0984	*
alphaD3[3]	1.1736	1.1707	0.6933	-0.1770	2.5378	0.9556	0.0444	*
alphaD3[4]	0.7760	0.7699	0.6662	-0.5213	2.0915	0.8808	0.1192	*
alphaD3[5]	0.1425	0.1458	0.8565	-1.5445	1.8194	0.5672	0.4328	
alphaD3[6]	-0.3173	-0.3147	0.6347	-1.5694	0.9180	0.3093	0.6907	*

Inflammatory Responses (I1, I2, I3)

Parameter	Post.Mean	Post.Median	Post.SD	Lower95	Upper95	P.great.0	P.less.0	Evidence
betaI1[1]	-0.0210	-0.0208	0.0152	-0.0513	0.0082	0.0788	0.9212	*
betaI1[2]	0.0608	0.0586	0.0611	-0.0536	0.1869	0.8437	0.1563	*
betaI1[3]	-0.0013	-0.0017	0.0743	-0.1495	0.1481	0.4902	0.5098	
betaI1[4]	0.0320	0.0294	0.0746	-0.1100	0.1871	0.6652	0.3348	*
betaI1[5]	-0.1007	-0.0971	0.0663	-0.2423	0.0195	0.0519	0.9481	*
betaI1[6]	0.0154	0.0145	0.0699	-0.1216	0.1581	0.5871	0.4129	
betaI1[7]	-0.0159	-0.0157	0.0771	-0.1706	0.1382	0.4137	0.5863	
betaI1[8]	-0.0971	-0.0951	0.0581	-0.2165	0.0115	0.0406	0.9594	*
betaI1[9]	-0.0146	-0.0146	0.0180	-0.0501	0.0208	0.2064	0.7936	*
betaI1[10]	-0.0070	-0.0075	0.0645	-0.1340	0.1221	0.4506	0.5494	
betaI1[11]	-0.0724	-0.0707	0.0738	-0.2244	0.0698	0.1529	0.8471	*
betaI1[12]	-0.0232	-0.0211	0.0693	-0.1673	0.1098	0.3738	0.6262	
betaI1[13]	-0.0266	-0.0249	0.0651	-0.1618	0.0982	0.3394	0.6606	*
betaI1[14]	-0.0162	-0.0197	0.0756	-0.1579	0.1455	0.3880	0.6120	
betaI1[15]	0.0628	0.0577	0.0798	-0.0820	0.2357	0.7899	0.2101	*
betaI1[16]	-0.0949	-0.0921	0.0638	-0.2274	0.0212	0.0585	0.9415	*
betaI1[17]	0.0045	0.0051	0.0296	-0.0548	0.0612	0.5700	0.4300	
betaI1[18]	-0.0123	-0.0108	0.0840	-0.1841	0.1532	0.4426	0.5574	
betaI1[19]	0.1570	0.1484	0.0939	-0.0017	0.3638	0.9735	0.0265	*
betaI1[20]	-0.0457	-0.0418	0.0769	-0.2088	0.0976	0.2725	0.7275	*
betaI1[21]	0.0420	0.0400	0.0683	-0.0906	0.1832	0.7401	0.2599	*
betaI1[22]	0.0752	0.0722	0.0649	-0.0454	0.2093	0.8867	0.1133	*
betaI1[23]	-0.0905	-0.0846	0.0906	-0.2846	0.0747	0.1434	0.8566	*
betaI1[24]	-0.0933	-0.0834	0.0950	-0.3061	0.0671	0.1504	0.8496	*
betaI2[1]	0.0049	0.0037	0.0196	-0.0306	0.0465	0.5792	0.4208	
betaI2[2]	-0.0085	-0.0074	0.0523	-0.1175	0.0974	0.4268	0.5732	
betaI2[3]	-0.0573	-0.0437	0.0704	-0.2301	0.0486	0.1829	0.8171	*
betaI2[4]	0.0232	0.0148	0.0613	-0.0813	0.1697	0.6305	0.3695	
betaI2[5]	-0.0362	-0.0288	0.0553	-0.1661	0.0577	0.2472	0.7528	*
betaI2[6]	0.0064	0.0030	0.0554	-0.0996	0.1286	0.5312	0.4688	
betaI2[7]	-0.0479	-0.0352	0.0698	-0.2200	0.0591	0.2352	0.7648	*
betaI2[8]	-0.0226	-0.0182	0.0506	-0.1325	0.0720	0.3269	0.6731	*
betaI2[9]	0.0061	0.0055	0.0211	-0.0346	0.0489	0.6116	0.3884	
betaI2[10]	-0.0033	-0.0018	0.0556	-0.1212	0.1092	0.4810	0.5190	
betaI2[11]	0.0178	0.0116	0.0609	-0.0932	0.1580	0.6058	0.3942	
betaI2[12]	0.0048	0.0056	0.0552	-0.1143	0.1152	0.5548	0.4452	
betaI2[13]	0.0312	0.0255	0.0542	-0.0673	0.1533	0.7248	0.2752	*
betaI2[14]	-0.0143	-0.0104	0.0581	-0.1429	0.0990	0.4042	0.5958	
betaI2[15]	0.0466	0.0362	0.0654	-0.0592	0.2025	0.7759	0.2241	*
betaI2[16]	0.0096	0.0082	0.0515	-0.0947	0.1167	0.5804	0.4196	
betaI2[17]	0.0458	0.0453	0.0287	-0.0082	0.1041	0.9511	0.0489	*
betaI2[18]	0.0037	0.0046	0.0616	-0.1300	0.1280	0.5445	0.4555	
betaI2[19]	0.0356	0.0270	0.0641	-0.0763	0.1855	0.7218	0.2782	*
betaI2[20]	-0.0206	-0.0163	0.0590	-0.1497	0.0936	0.3580	0.6420	
betaI2[21]	-0.0206	-0.0159	0.0552	-0.1434	0.0824	0.3525	0.6475	
betaI2[22]	-0.0114	-0.0080	0.0531	-0.1260	0.0917	0.4203	0.5797	

betaI2[23]	-0.0362	-0.0256	0.0693	-0.1999	0.0794	0.2958	0.7042	*
betaI2[24]	0.0234	0.0161	0.0656	-0.0942	0.1767	0.6358	0.3642	
betaI3[1]	-0.0056	-0.0057	0.0191	-0.0434	0.0321	0.3817	0.6183	
betaI3[2]	0.0174	0.0143	0.0544	-0.0843	0.1339	0.6165	0.3835	
betaI3[3]	0.0207	0.0179	0.0586	-0.0909	0.1457	0.6359	0.3641	
betaI3[4]	0.0261	0.0229	0.0579	-0.0824	0.1494	0.6749	0.3251	*
betaI3[5]	0.0093	0.0085	0.0520	-0.0931	0.1153	0.5734	0.4266	
betaI3[6]	0.0097	0.0092	0.0545	-0.0992	0.1213	0.5744	0.4256	
betaI3[7]	0.0382	0.0334	0.0622	-0.0738	0.1756	0.7321	0.2679	*
betaI3[8]	0.0125	0.0118	0.0501	-0.0864	0.1142	0.6011	0.3989	
betaI3[9]	0.0113	0.0106	0.0232	-0.0326	0.0585	0.6814	0.3186	*
betaI3[10]	-0.0150	-0.0142	0.0567	-0.1318	0.0976	0.3888	0.6112	
betaI3[11]	-0.0373	-0.0343	0.0595	-0.1643	0.0733	0.2550	0.7450	*
betaI3[12]	0.0136	0.0108	0.0576	-0.0946	0.1358	0.5844	0.4156	
betaI3[13]	-0.0249	-0.0235	0.0540	-0.1369	0.0796	0.3153	0.6847	*
betaI3[14]	-0.0298	-0.0278	0.0589	-0.1532	0.0832	0.2965	0.7035	*
betaI3[15]	0.0134	0.0115	0.0599	-0.1026	0.1389	0.5855	0.4145	
betaI3[16]	-0.0159	-0.0141	0.0519	-0.1233	0.0836	0.3809	0.6191	
betaI3[17]	0.1007	0.0992	0.0314	0.0429	0.1675	0.9996	0.0004	*
betaI3[18]	0.0081	0.0093	0.0624	-0.1214	0.1313	0.5685	0.4315	
betaI3[19]	0.0258	0.0236	0.0615	-0.0935	0.1544	0.6715	0.3285	*
betaI3[20]	-0.0231	-0.0202	0.0587	-0.1483	0.0877	0.3446	0.6554	*
betaI3[21]	0.0303	0.0259	0.0569	-0.0718	0.1558	0.7012	0.2988	*
betaI3[22]	-0.0332	-0.0300	0.0555	-0.1519	0.0695	0.2715	0.7285	*
betaI3[23]	-0.0183	-0.0171	0.0638	-0.1507	0.1071	0.3793	0.6207	
betaI3[24]	-0.0287	-0.0236	0.0652	-0.1741	0.0890	0.3324	0.6676	*
alphaI1[1]	-1.6763	-1.6757	0.3078	-2.2853	-1.0692	0.0000	1.0000	*
alphaI1[2]	-0.3421	-0.3430	0.2393	-0.8133	0.1341	0.0748	0.9252	*
alphaI1[3]	-0.2302	-0.2310	0.2149	-0.6532	0.1941	0.1401	0.8599	*
alphaI1[4]	-0.0694	-0.0685	0.1263	-0.3195	0.1780	0.2893	0.7107	*
alphaI1[5]	-0.5677	-0.5663	0.3061	-1.1734	0.0283	0.0312	0.9688	*
alphaI1[6]	0.1472	0.1464	0.1205	-0.0862	0.3869	0.8920	0.1080	*
alphaI2[1]	-0.2769	-0.2809	0.4069	-1.0605	0.5258	0.2483	0.7517	*
alphaI2[2]	-0.0412	-0.0358	0.3501	-0.7403	0.6330	0.4585	0.5415	
alphaI2[3]	0.0593	0.0650	0.3205	-0.5785	0.6747	0.5819	0.4181	
alphaI2[4]	-0.4285	-0.4275	0.1981	-0.8229	-0.0411	0.0147	0.9853	*
alphaI2[5]	-0.3650	-0.3682	0.4336	-1.2075	0.4899	0.1997	0.8003	*
alphaI2[6]	-0.0116	-0.0105	0.1908	-0.3861	0.3591	0.4770	0.5230	
alphaI3[1]	-0.8113	-0.8199	0.4447	-1.6669	0.0704	0.0364	0.9636	*
alphaI3[2]	-0.7361	-0.7337	0.3907	-1.5129	0.0130	0.0274	0.9726	*
alphaI3[3]	-0.5211	-0.5185	0.3593	-1.2352	0.1758	0.0721	0.9279	*
alphaI3[4]	-0.0373	-0.0344	0.2316	-0.4968	0.4137	0.4405	0.5595	
alphaI3[5]	-0.0407	-0.0458	0.4869	-0.9839	0.9229	0.4629	0.5371	
alphaI3[6]	-0.4412	-0.4389	0.2234	-0.8840	-0.0085	0.0229	0.9771	*

Regulatory Responses (R1, R2, R3)

Parameter	Post.Mean	Post.Median	Post.SD	Lower95	Upper95	P.great.0	P.less.0	Evidence
betaR1[1]	0.0005	0.0006	0.0141	-0.0296	0.0295	0.5246	0.4754	
betaR1[2]	-0.0060	-0.0021	0.0305	-0.0814	0.0493	0.4395	0.5605	
betaR1[3]	-0.0002	0.0001	0.0293	-0.0651	0.0605	0.5040	0.4960	
betaR1[4]	-0.0019	-0.0005	0.0293	-0.0689	0.0572	0.4832	0.5168	
betaR1[5]	-0.0009	-0.0001	0.0278	-0.0635	0.0557	0.4975	0.5025	
betaR1[6]	0.0143	0.0064	0.0337	-0.0342	0.1048	0.6611	0.3389	*
betaR1[7]	-0.0037	-0.0013	0.0302	-0.0738	0.0539	0.4600	0.5400	
betaR1[8]	0.0041	0.0017	0.0279	-0.0500	0.0698	0.5509	0.4491	
betaR1[9]	-0.0010	-0.0005	0.0155	-0.0349	0.0305	0.4799	0.5201	
betaR1[10]	0.0008	0.0003	0.0296	-0.0620	0.0655	0.5079	0.4921	
betaR1[11]	-0.0016	-0.0006	0.0296	-0.0677	0.0591	0.4817	0.5183	
betaR1[12]	-0.0022	-0.0008	0.0287	-0.0673	0.0558	0.4760	0.5240	
betaR1[13]	-0.0047	-0.0018	0.0284	-0.0728	0.0488	0.4438	0.5562	
betaR1[14]	0.0025	0.0008	0.0292	-0.0555	0.0696	0.5261	0.4739	
betaR1[15]	-0.0056	-0.0022	0.0304	-0.0784	0.0505	0.4393	0.5607	
betaR1[16]	0.0022	0.0008	0.0282	-0.0551	0.0666	0.5233	0.4767	
betaR1[17]	-0.0028	-0.0020	0.0177	-0.0413	0.0337	0.4308	0.5692	
betaR1[18]	0.0019	0.0005	0.0305	-0.0590	0.0712	0.5147	0.4853	
betaR1[19]	-0.0066	-0.0027	0.0307	-0.0806	0.0488	0.4251	0.5749	
betaR1[20]	-0.0024	-0.0010	0.0293	-0.0691	0.0565	0.4699	0.5301	
betaR1[21]	-0.0080	-0.0033	0.0301	-0.0843	0.0430	0.4062	0.5938	
betaR1[22]	0.0000	-0.0002	0.0284	-0.0599	0.0626	0.4955	0.5045	
betaR1[23]	0.0062	0.0023	0.0321	-0.0506	0.0844	0.5654	0.4346	
betaR1[24]	0.0003	0.0000	0.0306	-0.0646	0.0675	0.4998	0.5002	
betaR2[1]	0.0385	0.0382	0.0165	0.0070	0.0718	0.9923	0.0077	*
betaR2[2]	-0.0009	-0.0006	0.0725	-0.1428	0.1414	0.4963	0.5037	
betaR2[3]	0.2432	0.2405	0.1183	0.0165	0.4834	0.9827	0.0173	*
betaR2[4]	0.0434	0.0449	0.1149	-0.1892	0.2648	0.6534	0.3466	*
betaR2[5]	0.3593	0.3564	0.0980	0.1759	0.5571	0.9999	0.0001	*
betaR2[6]	-0.1078	-0.1084	0.0997	-0.3017	0.0879	0.1421	0.8579	*
betaR2[7]	0.1793	0.1779	0.1232	-0.0584	0.4232	0.9291	0.0709	*
betaR2[8]	0.0026	0.0032	0.0654	-0.1280	0.1288	0.5203	0.4797	
betaR2[9]	0.0491	0.0484	0.0199	0.0117	0.0902	0.9961	0.0039	*
betaR2[10]	0.0151	0.0158	0.0796	-0.1426	0.1708	0.5781	0.4219	
betaR2[11]	0.2665	0.2643	0.1132	0.0506	0.4972	0.9924	0.0076	*
betaR2[12]	0.2056	0.2059	0.1103	-0.0130	0.4227	0.9677	0.0323	*
betaR2[13]	0.2968	0.2943	0.0986	0.1103	0.4952	0.9991	0.0009	*
betaR2[14]	-0.1891	-0.1876	0.1061	-0.4027	0.0148	0.0348	0.9652	*
betaR2[15]	-0.0354	-0.0352	0.1214	-0.2732	0.2025	0.3860	0.6140	
betaR2[16]	-0.0436	-0.0432	0.0672	-0.1757	0.0882	0.2569	0.7431	*
betaR2[17]	0.0770	0.0765	0.0346	0.0096	0.1474	0.9870	0.0130	*
betaR2[18]	-0.0351	-0.0330	0.1229	-0.2826	0.2036	0.3907	0.6093	
betaR2[19]	0.0551	0.0536	0.1180	-0.1725	0.2923	0.6783	0.3217	*
betaR2[20]	0.1932	0.1917	0.1220	-0.0441	0.4373	0.9464	0.0536	*
betaR2[21]	0.2700	0.2671	0.1044	0.0732	0.4844	0.9968	0.0032	*
betaR2[22]	0.0274	0.0271	0.0817	-0.1325	0.1884	0.6302	0.3698	

betaR2[23]	-0.0162	-0.0162	0.1365	-0.2848	0.2537	0.4519	0.5481	
betaR2[24]	-0.1833	-0.1809	0.1221	-0.4305	0.0478	0.0628	0.9372	*
betaR3[1]	0.0232	0.0228	0.0187	-0.0130	0.0613	0.8966	0.1034	*
betaR3[2]	0.1508	0.1520	0.0937	-0.0353	0.3329	0.9436	0.0564	*
betaR3[3]	0.6398	0.6308	0.2185	0.2275	1.0973	0.9991	0.0009	*
betaR3[4]	0.3820	0.3847	0.2404	-0.0988	0.8454	0.9440	0.0560	*
betaR3[5]	0.7092	0.7042	0.1695	0.3862	1.0535	1.0000	0.0000	*
betaR3[6]	-0.1703	-0.1717	0.1645	-0.4842	0.1575	0.1508	0.8492	*
betaR3[7]	-0.2688	-0.2684	0.1987	-0.6597	0.1187	0.0871	0.9129	*
betaR3[8]	0.0326	0.0322	0.0867	-0.1370	0.2033	0.6448	0.3552	
betaR3[9]	-0.0052	-0.0052	0.0218	-0.0478	0.0378	0.4068	0.5932	
betaR3[10]	0.3510	0.3518	0.1056	0.1419	0.5570	0.9995	0.0005	*
betaR3[11]	0.5852	0.5722	0.2116	0.2031	1.0406	0.9990	0.0010	*
betaR3[12]	0.4090	0.4112	0.2235	-0.0340	0.8437	0.9651	0.0349	*
betaR3[13]	0.6963	0.6915	0.1667	0.3747	1.0328	1.0000	0.0000	*
betaR3[14]	-0.1048	-0.1045	0.1680	-0.4345	0.2217	0.2703	0.7297	*
betaR3[15]	-0.5818	-0.5831	0.1855	-0.9407	-0.2129	0.0012	0.9988	*
betaR3[16]	0.1824	0.1831	0.0938	-0.0027	0.3649	0.9732	0.0268	*
betaR3[17]	-0.0340	-0.0338	0.0408	-0.1139	0.0460	0.2032	0.7968	*
betaR3[18]	0.3079	0.3091	0.1714	-0.0265	0.6439	0.9644	0.0356	*
betaR3[19]	0.6147	0.6060	0.2086	0.2276	1.0531	0.9994	0.0006	*
betaR3[20]	0.2567	0.2576	0.2349	-0.2116	0.7149	0.8659	0.1341	*
betaR3[21]	0.7035	0.6992	0.1787	0.3630	1.0719	0.9999	0.0001	*
betaR3[22]	0.0658	0.0642	0.1357	-0.1948	0.3394	0.6867	0.3133	*
betaR3[23]	-0.3015	-0.3001	0.2290	-0.7582	0.1468	0.0929	0.9071	*
betaR3[24]	0.6123	0.6107	0.1728	0.2778	0.9539	0.9998	0.0002	*
alphaR1[1]	-2.0246	-2.0280	0.3840	-2.7691	-1.2604	0.0000	1.0000	*
alphaR1[2]	-0.3496	-0.3439	0.3641	-1.0848	0.3496	0.1662	0.8338	*
alphaR1[3]	-0.1680	-0.1647	0.3327	-0.8301	0.4729	0.3094	0.6906	*
alphaR1[4]	0.1907	0.1904	0.2036	-0.2091	0.5901	0.8260	0.1740	*
alphaR1[5]	-0.9138	-0.9133	0.4598	-1.8227	-0.0204	0.0229	0.9771	*
alphaR1[6]	0.0513	0.0510	0.1948	-0.3308	0.4335	0.6041	0.3959	
alphaR2[1]	1.2782	1.2756	0.3436	0.6085	1.9738	0.9998	0.0002	*
alphaR2[2]	0.5342	0.5311	0.2444	0.0635	1.0262	0.9866	0.0134	*
alphaR2[3]	0.4456	0.4428	0.2196	0.0168	0.8874	0.9788	0.0212	*
alphaR2[4]	0.0991	0.0989	0.1294	-0.1553	0.3547	0.7799	0.2201	*
alphaR2[5]	-0.0689	-0.0671	0.3145	-0.6876	0.5411	0.4153	0.5847	
alphaR2[6]	0.2933	0.2898	0.1247	0.0587	0.5481	0.9936	0.0064	*
alphaR3[1]	2.3673	2.3558	0.4991	1.4062	3.3667	1.0000	0.0000	*
alphaR3[2]	0.5795	0.5727	0.3674	-0.1214	1.3136	0.9460	0.0540	*
alphaR3[3]	0.5307	0.5253	0.3322	-0.1047	1.1960	0.9468	0.0532	*
alphaR3[4]	0.0630	0.0606	0.2275	-0.3775	0.5197	0.6056	0.3944	
alphaR3[5]	-0.5481	-0.5536	0.4811	-1.4770	0.4081	0.1281	0.8719	*
alphaR3[6]	0.1173	0.1130	0.2162	-0.2971	0.5558	0.7059	0.2941	*

Standard Deviations and Covariance Matrix

Parameter	Post.Mean	Post.Median	Post.SD	Lower95	Upper95	P.great.0	P.less.0	Evidence
sigmaP	2.6228	2.6108	0.2351	2.2015	3.1185	1.0000	0.0000	*
sigmaA	0.3656	0.3646	0.0288	0.3123	0.4252	1.0000	0.0000	*
SigmaIR[1, 1]	0.8172	0.8134	0.0762	0.6807	0.9771	1.0000	0.0000	*
SigmaIR[2, 1]	0.1629	0.1613	0.0872	-0.0054	0.3397	0.9713	0.0287	*
SigmaIR[3, 1]	-0.0620	-0.0620	0.1059	-0.2716	0.1457	0.2773	0.7227	*
SigmaIR[4, 1]	0.5127	0.5097	0.0794	0.3656	0.6769	1.0000	0.0000	*
SigmaIR[5, 1]	0.0966	0.0962	0.0465	0.0067	0.1897	0.9822	0.0178	*
SigmaIR[6, 1]	-0.0040	-0.0038	0.0448	-0.0920	0.0833	0.4645	0.5355	
SigmaIR[1, 2]	0.1629	0.1613	0.0872	-0.0054	0.3397	0.9713	0.0287	*
SigmaIR[2, 2]	2.1928	2.1821	0.1994	1.8321	2.6117	1.0000	0.0000	*
SigmaIR[3, 2]	1.9109	1.9016	0.2091	1.5286	2.3472	1.0000	0.0000	*
SigmaIR[4, 2]	0.4117	0.4086	0.1317	0.1619	0.6786	0.9996	0.0004	*
SigmaIR[5, 2]	0.7222	0.7183	0.0901	0.5571	0.9099	1.0000	0.0000	*
SigmaIR[6, 2]	0.1866	0.1858	0.0741	0.0435	0.3353	0.9946	0.0054	*
SigmaIR[1, 3]	-0.0620	-0.0620	0.1059	-0.2716	0.1457	0.2773	0.7227	*
SigmaIR[2, 3]	1.9109	1.9016	0.2091	1.5286	2.3472	1.0000	0.0000	*
SigmaIR[3, 3]	3.4600	3.4437	0.2989	2.9186	4.0897	1.0000	0.0000	*
SigmaIR[4, 3]	0.2887	0.2859	0.1525	-0.0018	0.5968	0.9744	0.0256	*
SigmaIR[5, 3]	0.4394	0.4367	0.0992	0.2525	0.6425	1.0000	0.0000	*
SigmaIR[6, 3]	0.1965	0.1944	0.0921	0.0207	0.3823	0.9855	0.0145	*
SigmaIR[1, 4]	0.5127	0.5097	0.0794	0.3656	0.6769	1.0000	0.0000	*
SigmaIR[2, 4]	0.4117	0.4086	0.1317	0.1619	0.6786	0.9996	0.0004	*
SigmaIR[3, 4]	0.2887	0.2859	0.1525	-0.0018	0.5968	0.9744	0.0256	*
SigmaIR[4, 4]	1.4292	1.4234	0.1404	1.1731	1.7233	1.0000	0.0000	*
SigmaIR[5, 4]	0.1395	0.1386	0.0641	0.0163	0.2684	0.9867	0.0133	*
SigmaIR[6, 4]	0.0105	0.0105	0.0596	-0.1070	0.1280	0.5712	0.4288	
SigmaIR[1, 5]	0.0966	0.0962	0.0465	0.0067	0.1897	0.9822	0.0178	*
SigmaIR[2, 5]	0.7222	0.7183	0.0901	0.5571	0.9099	1.0000	0.0000	*
SigmaIR[3, 5]	0.4394	0.4367	0.0992	0.2525	0.6425	1.0000	0.0000	*
SigmaIR[4, 5]	0.1395	0.1386	0.0641	0.0163	0.2684	0.9867	0.0133	*
SigmaIR[5, 5]	0.6210	0.6180	0.0577	0.5171	0.7427	1.0000	0.0000	*
SigmaIR[6, 5]	0.2708	0.2689	0.0438	0.1903	0.3615	1.0000	0.0000	*
SigmaIR[1, 6]	-0.0040	-0.0038	0.0448	-0.0920	0.0833	0.4645	0.5355	
SigmaIR[2, 6]	0.1866	0.1858	0.0741	0.0435	0.3353	0.9946	0.0054	*
SigmaIR[3, 6]	0.1965	0.1944	0.0921	0.0207	0.3823	0.9855	0.0145	*
SigmaIR[4, 6]	0.0105	0.0105	0.0596	-0.1070	0.1280	0.5712	0.4288	
SigmaIR[5, 6]	0.2708	0.2689	0.0438	0.1903	0.3615	1.0000	0.0000	*
SigmaIR[6, 6]	0.5541	0.5513	0.0547	0.4551	0.6693	1.0000	0.0000	*

Hazard Parameters

Parameter	Post.Mean	Post.Median	Post.SD	Lower95	Upper95	P.great.0	P.less.0	Evidence
shape	5.6023	5.5076	1.1786	3.5594	8.1241	1.0000	0.0000	*
scale	0.3870	0.2212	0.4731	0.0012	1.5117	1.0000	0.0000	*
assoc[1]	0.3344	0.3242	0.1633	0.0458	0.6844	0.9898	0.0102	*
assoc[2]	0.1818	0.1898	0.7461	-1.3096	1.6201	0.5993	0.4007	
assoc[3]	1.7938	1.7803	0.7478	0.3697	3.2852	0.9941	0.0059	*
assoc[4]	0.7717	0.7701	0.7498	-0.7030	2.2497	0.8506	0.1494	*
assoc[5]	0.4134	0.3940	0.7873	-1.0641	2.0253	0.6955	0.3045	*
assoc[6]	1.2198	1.2072	0.7310	-0.1810	2.6545	0.9545	0.0455	*
assoc[7]	-0.3956	-0.3902	0.8327	-2.0408	1.2367	0.3163	0.6837	*
assoc[8]	-0.2899	-0.3033	0.6338	-1.5022	0.9915	0.3142	0.6858	*
gammaS[1]	-1.9522	-1.5086	1.8841	-6.7302	0.4132	0.0917	0.9083	*
gammaS[2]	0.5945	0.5140	0.8419	-0.9506	2.4268	0.7719	0.2281	*
gammaS[3]	-0.1994	-0.1944	0.7188	-1.6395	1.2822	0.3743	0.6257	
gammaS[4]	-0.1581	-0.1479	0.6698	-1.5178	1.1914	0.4017	0.5983	
gammaS[5]	-0.7895	-0.6332	1.0718	-3.2503	1.0019	0.2231	0.7769	*
gammaS[6]	-0.1477	-0.1303	0.6847	-1.5620	1.2087	0.4141	0.5859	