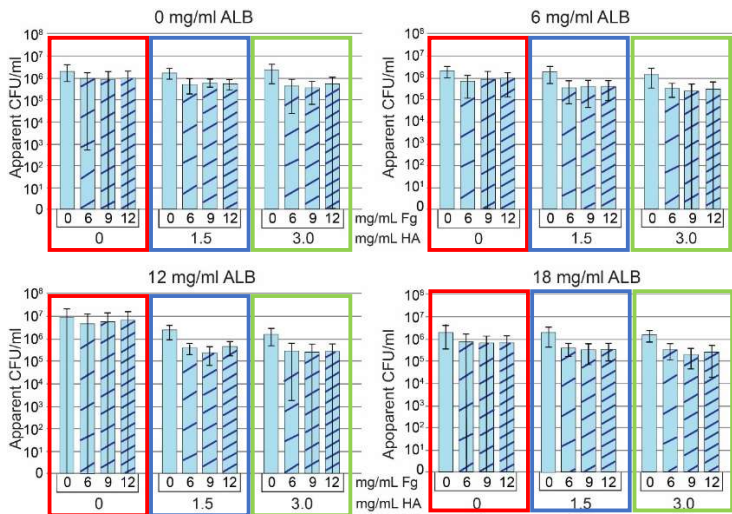


Supplemental Material A1: Statistical reasoning testing effects of HA, Fg, and Alb, Figure 3

A. Comparing 0, 1.5, and 3.0 mg/ml HA concentration groups with a fixed concentration of ALB to determine which concentrations are different from 0 for each given ALB concentration. Each table of comparisons is followed by a table comparing between group effects using a 2-way ANOVA with the Tukey post hoc test for multiple comparisons.



Statistical tables:

**0 mg/ml ALB, comparing HA groups
Multiple Comparison**

Dependent Variable: VAR0001						
Tukey HSD						
(I) HA	(J) HA	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0 mg/ml	1.5 mg/ml	345060.0000	205025.2000	0.217	-143271.7164	833391.7164
	3.0 mg/ml	271780.0000	205025.2000	0.385	-216551.7164	760111.7164
1.5 mg/ml	0 mg/ml	-345060.0000	205025.2000	0.217	-833391.7164	143271.7164
	3.0 mg/ml	-73280.0000	205025.2000	0.932	-561611.7164	415051.7164
3.0 mg/ml	0 mg/ml	-271780.0000	205025.2000	0.385	-760111.7164	216551.7164
	1.5 mg/ml	73280.0000	205025.2000	0.932	-415051.7164	561611.7164

Based on observed means. The error term is Mean Square(Error)=735618321014.038

n = 35 (HA 0 mg/ml); 35 (HA 1.5 mg/ml); 35 (HA 3.0 mg/ml)

Tests of Between-Subjects Effects

Dependent Variable = CFU/ml						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	
Corrected Model	4.121E+13 ^a	11	3.746E+12	5.093	0.000	
Intercept	9.234E+13	1	9.234E+13	125.521	0.000	
HA	2.306E+12	2	1.153E+12	1.567	0.214	
Fg	3.669E+13	3	1.223E+13	16.627	0.000	
HA*Fg	2.214E+12	6	3.690E+11	0.502	0.806	
Error	6.841E+13	93	7.356E+11			
Total	2.041E+14	105				
Corrected Total	1.096E+14	104				

^aR squared = 0.376 (Adjusted R squared = 0.302)

6 mg/ml ALB, comparing HA groups

Multiple Comparison

Dependent Variable: VAR0001						
Tukey HSD						
(I) HA	(J) HA	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0 mg/ml	1.5 mg/ml	379188.8889	183563.4230	0.102	-57803.3970	816181.1747
	3.0 mg/ml	547518.6111*	183563.4230	0.010	110526.3253	984510.8970
1.5 mg/ml	0 mg/ml	-379188.8889	183563.4230	0.102	-816181.1747	57803.3970
	3.0 mg/ml	168329.7222	183563.4230	0.631	-268662.5636	605322.0081
3.0 mg/ml	0 mg/ml	-547518.6111*	183563.4230	0.010	-984510.8970	-110526.3253
	1.5 mg/ml	-168329.7222	183563.4230	0.631	-605322.0081	268662.5636

Based on observed means. The error term is Mean Square(error) = 606519544925.000

*The mean difference is significant at the 0.05 level

n = 36 (HA 0 mg/ml); 36 (HA 1.5 mg/ml); 36 (HA 3.0 mg/mL)

Tests of Between-Subjects Effects

Dependent Variable = CFU/ml						
Source	Type III Sum of Squares	df	Mean Square	F	Sig	
Corrected Model	4.152E+13 ^a	11	3.774E+12	6.223	0.000	
Intercept	7.686E+13	1	7.686E+13	126.721	0.000	
HA	5.663E+12	2	2.831E+12	4.668	0.012	
Fg	3.518E+13	3	1.173E+13	19.334	0.000	
HA*Fg	6.755E+11	6	1.126E+11	0.186	0.980	
Error	5.823E+13	96	6.065E+11			
Total	1.766E+14	108				
Corrected Total	9.974E+13	107				

^aR squared = 0.416 (Adjusted R squared = 0.349)

12 mg/ml ALB, comparing HA groups

Multiple Comparison						
Dependent Variable: VAR0001						
Tukey HSD						
(I) HA	(J) HA	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0 mg/ml	1.5 mg/ml	5436143.46*	1254727.036	0.000109	2448133.648	8424153.280
	3.0 mg/ml	5730383.33*	1236672.469	0.000034	2785368.706	8675397.961
1.5 mg/ml	0 mg/ml	-5436143.46*	1254727.036	0.000109	-8424153.28	-2448133.65
	3.0 mg/ml	294239.8693	1254724.036	0.970149	-2693759.95	3282249.685
3.0 mg/ml	0 mg/ml	-5730383.33*	1236672.469	0.000034	-8675397.96	-2785368.71
	1.5 mg/ml	-294239.8693	1254727.036	0.970149	-3282249.69	2693769.947

Based on observed means. The error term is Mean Square(Error) = 27528458302387.730

*The mean difference is significant at the 0.05 level.

n = 36 (HA 0 mg/ml); 34 (HA 1.5 mg/ml) 36 (HA 3.0 mg/mL)

Tests of Between-Subjects Effects

Dependent Variable = CFU/ml						
Source	Type III Sum of Squares	df	Mean Square	F	Sig	
Corrected Model	8.804E+14 ^a	11	8.003E+13	2.907	0.002	
Intercept	7.182E+14	1	7.182E+14	26.091	0.000	
HA	7.471E+14	2	3.735E+14	13.569	0.000	
Fg	1.117E+14	3	3.723E+13	1.352	0.262	
HA*Fg	2.508E+13	6	4.180E+12	0.152	0.988	
Error	2.588E+15	94	2.753E+13			
Total	4.211E+15	106				
Corrected Total	3.468E+15	105				

^aR squared = 0.254 (Adjusted R squared = 0.167)

18 mg/ml ALB, comparing HA groups

Multiple Comparison						
Dependent Variable: VAR0001						
Tukey HSD						
(I) HA	(J) HA	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0 mg/ml	1.5 mg/ml	290572.2222	205908.2994	0.339	-199614.4225	780758.8669
	3.0 mg/ml	431616.6667	205908.2994	0.096	-58569.9780	921803.3114
1.5 mg/ml	0 mg/ml	-290572.2222	205908.2994	0.339	-780758.8669	199614.4225
	3.0 mg/ml	141044.4444	205908.2994	0.773	-349142.2003	631231.0892
3.0 mg/ml	0 mg/ml	-431616.6667	205908.2994	0.096	-921803.3114	58569.9780
	1.5 mg/ml	-141044.4444	205908.2994	0.773	-631231.0892	349142.2003

Based on observed means. The error term is Mean Square(Error) = 763168099629.630

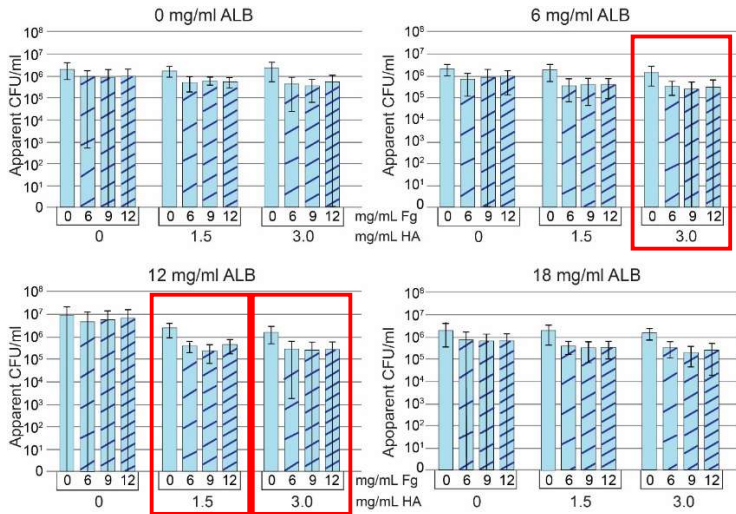
n = 36 (HA 0 mg/ml); 36 (HA 1.5 mg/ml) 36 (HA 3.0 mg/mL)

Tests of Between-Subjects Effects

Dependent Variable = CFU/ml						
Source	Type III Sum of Squares	df	Mean Square	F	Sig	
Corrected Model	5.104E+13 ^a	11	4.640E+12	6.080	0.000	
Intercept	7.875E+13	1	7.875E+13	103.190	0.000	
HA	3.487E+12	2	1.744E+12	2.285	0.107	
Fg	4.737E+13	3	1.579E+13	20.688	0.000	
HA*Fg	1.855E+11	6	3.091E+10	0.041	1.000	
Error	7.326E+13	96	7.632E+11			
Total	2.031E+14	108				
Corrected Total	1.243E+14	107				

^aR squared = 0.411 (Adjusted R squared = 0.343)

B. After selecting the groups where significance occurred for the different HA concentrations, we compared the different Fg concentrations within each HA concentration. N.B., Fg in 6 mg/ml ALB-60% HA are only compared within that group. For the Fg values in 12 mg/ml Alb, the groups in 1.5 mg/ml HA and in 3.0 mg/ml HA are compared within the group. Comparisons are performed with 1-way ANOVA



6 mg/ml ALB, 3 mg/ml HA

Multiple Comparison						
Dependent Variable: VAR0001						
Tukey HSD						
(I) Fg	(J) Fg	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0 mg/ml	6 mg/ml	1188903.33*	300138.9922	0.002	375718.2531	2002088.414
	9 mg/ml	1265392.22*	300138.9922	0.001	452207.1420	2078577.302
	12 mg/ml	1211170.00*	300138.9922	0.002	397984.9198	2024355.080
6 mg/ml	0 mg/ml	-1188903.33*	300138.9922	0.002	-2002088.41	-375718.2531
	9 mg/ml	76488.8889	300138.9922	0.994	-736696.1913	889673.9691
	12 mg/ml	22266.6667	300138.9922	1.000	-790918.4136	835451.7469
9 mg/ml	0 mg/ml	-1265392.22	300138.9922	0.001	-2078577.30	-452207.1420
	6 mg/ml	-76488.8889	300138.9922	0.994	-889673.9691	736696.1913
	12 mg/ml	-54222.2222	300138.9922	0.998	-867407.3024	758962.8580
12 mg/ml	0 mg/ml	-1211170.00	300138.9922	0.002	-2024355.08	-397984.9198
	6 mg/ml	-22266.6667	300138.9922	1.000	-835451.7469	790918.4136
	9 mg/ml	54222.2222	300138.9922	0.998	-758962.8580	867407.3024

Based on observed means. The error term is Mean square (Error) = 405375365886.111

*The mean difference is significant at the 0.05 level

n = 9 for each of the Fg conditions (0, 6, 9, 12 mg/ml)

12 mg/ml ALB, 1.5 mg/ml HA

Multiple Comparison						
Dependent Variable: VAR0001						
Tukey HSD						
(I) Fg	(J) Fg	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0 mg/ml	6 mg/ml	2030222.22*	402854.3528	0.000117	934817.1756	312567.269
	9 mg/ml	2172133.33*	415252.7621	0.000069	1043015.656	3301251.011
	12 mg/ml	1967383.33*	415252.7621	0.000272	838265.6558	3096501.011
6 mg/ml	0 mg/ml	-2030222.22*	402854.3528	0.000117	-3125627.27	-
	9 mg/ml	141911.1111	415252.7621	0.985996	-987206.5664	1271028.789
	12 mg/ml	-62838.8889	415252.7621	0.998736	-1101056.57	1066278.789
9 mg/ml	0 mg/ml	-2172133.33*	415252.7621	0.000069	-3301251.01	-1043015
	6 mg/ml	-141911.1111	415252.7621	0.985996	-1271028.79	987206.5664
	12 mg/ml	-204750.0000	427291.5670	0.963115	-1366602.50	957102.5049
12 mg/ml	0 mg/ml	-1967383.33*	415252.7621	0.000272	-3096501.01	-
	6 mg/ml	62838.8889	415252.7621	0.998736	-1066278.79	1191956.566
	9 mg/ml	204750.0000	427291.5670	0.963115	-957102.5049	1366602.505

Based on observed means. The error term is Mean Square(Error) = 730312332962.963

*The mean difference is significant at the 0.05 level.

n = 9 (Fg 0 mg/ml); 9 (Fg 6 mg/ml); 8 (Fg 9 mg/ml); 9 (Fg 12 mg/ml)

12 mg/ml ALB, 3 mg/ml HA

Multiple Comparison						
Dependent Variable: VAR0001						
Tukey HSD						
(I) Fg mg/ml	(J) Fg mg/ml	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0	6	1325733.33*	299408.8785	0.000575	514526.3951	2136940.272
	9	1356000.00*	299408.8785	0.000432	544793.0618	2167206.938
	12	1352088.89*	299408.8785	0.000449	540881.9507	2163295.827
6	0	-1325733.33*	299408.8785	0.000575	-2136940.27	-514526.3951
	9	30266.6667	299408.8785	0.999622	-780940.2716	841473.6049
	12	26355.5556	299408.8785	0.999750	-784851.3827	837562.4938
9	0	-1356000.00*	299408.8785	0.000432	-2167206.94	-544793.0618
	6	-30266.6667	299408.8785	0.999622	-841473.6049	780940.2716
	12	-3911.1111	299408.8785	0.999999	-815118.0493	807295.8271
12 mg/ml	0	-1352088.89*	299408.8785	0.000449	-2163295.83	-540881.9507
	6	-26355.5556	299408.8785	0.999750	-837562.4938	784851.3827
	9	3911.1111	299408.8785	0.999999	-807295.8271	815118.0493

Based on observed means. The error term is Mean Square(Error) = 403405544444.445

*The mean difference is significant at the 0.05 level.

n = 9 (Fg 0 mg/ml); 9 (Fg 6 mg/ml); 9 (Fg 9 mg/ml); 9 (Fg 12 mg/ml)

