

Supplementary Data Tables

In combined treatments, cholesterol is denoted by “PEG”, celastrol is denoted by “CEL”, and BDNF is denoted by “BDNF”.

Cell Counts

All cell counts are given in units x described by $(x \times 2 \times 10^4 \frac{\text{cells}}{\text{mL}})$

Table 1. Cholesterol Optimization Trials: Day 08

0.00 mM cholesterol	0.05 mM cholesterol	0.10 mM cholesterol	0.15 mM cholesterol
162	78	52	45.2
113	68.7	54.5	34.3
262	168	153	40.4
322	138	123	49.2
111	131	54.5	60
122	115	43.2	40.8

Table 2. Cholesterol Optimization Trials: Day 12

0.00 mM cholesterol	0.05 mM cholesterol	0.10 mM cholesterol	0.15 mM cholesterol
338	160	88.7	104
286	242	92	73.3
298	72.7	109	120
250	73.3	120	101
268	91.3	117	114
346	75.3	94.7	101

Table 3. Celastrol Optimization Trials: Day 08

0.0 μM celastrol	1.0 μM celastrol	2.0 μM celastrol	3.0 μM celastrol
166	145	116	142
165	142	121	147
174	151	133	123
163	122	178	115
186	118	153	162
164	155	138	130

Table 4. Celestrol Optimization Trials: Day 12

0.0 μ M celestrol	1.0 μ M celestrol	2.0 μ M celestrol	3.0 μ M celestrol
110	54	121	63.5
118	61.5	135	51
250	63	101	77.5
181	68	286	63.5
167	63.5	115	88
172	115	103	52

Table 5. BDNF Optimization Trials: Day 08

0 ng BDNF/mL	50 ng BDNF/mL	75 ng BDNF/mL	100 ng BDNF/mL
75.5	143	226	361
76	111	184	185
58.5	126	183	166
60.5	128	194	181
91.5	105	182	201
81	106	198	169

Table 6. BDNF Optimization Trials: Day 12

0 ng/mL	50 ng/mL	75 ng/mL	100 ng/mL
155	143	145	151
102	113	141	136
178	137	128	125
128	135	197	131
139	106	149	111
113	131	142	105

Table 7. Combined Treatment Trials: Day 08

BDNF/PEG	BDNF/CEL	PEG/CEL	PEG/BDNF/CEL
265	178	113	142
186	140	109	127
154	55	68.5	131
208	72	101	108
223	122	78.5	148
264	169	61	129

Table 8. Combined Treatment Trials: Day 12

BDNF/PEG	BDNF/CEL	PEG/CEL	PEG/BDNF/CEL
132	70	47.3	76
182	60.5	42	58
114	72.5	38.3	84
119	59.5	61.5	55.5
77	53.5	60	54.5
84.5	65.5	51.5	72.5

Beta-amyloid

All beta-amyloid values are given in absorbance units.

Table 9. Cholesterol Optimization Trials: Day 08

0.00 mM cholesterol	0.05 mM cholesterol	0.10 mM cholesterol	0.15 mM cholesterol
0.076	0.046	0.042	0.042
0.042	0.048	0.043	0.042
0.054	0.045	0.040	0.051
0.083	0.053	0.047	0.042
0.067	0.06	0.057	0.087
0.075	0.065	0.061	0.144

Table 10. Cholesterol Optimization Trials: Day 12

0.00 mM cholesterol	0.05 mM cholesterol	0.10 mM cholesterol	0.15 mM cholesterol
0.073	0.065	0.042	0.044
0.101	0.044	0.042	0.044
0.119	0.047	0.043	0.044
0.140	0.040	0.045	0.045
0.131	0.050	0.046	0.047
0.229	0.063	0.053	0.049

Table 11. Celastrol Optimization Trials: Day 08

0.0 μ M celastrol	1.0 μ M celastrol	2.0 μ M celastrol	3.0 μ M celastrol
0.144	0.125	0.111	0.136
0.124	0.108	0.097	0.115
0.088	0.110	0.087	0.101
0.064	0.093	0.063	0.086
0.149	0.106	0.069	0.071
0.139	0.047	0.040	0.055

Table 12. Celestrol Optimization Trials: Day 12

0.0 μ M celestrol	1.0 μ M celestrol	2.0 μ M celestrol	3.0 μ M celestrol
0.071	0.044	0.051	0.039
0.109	0.039	0.052	0.039
0.100	0.042	0.043	0.040
0.110	0.042	0.093	0.043
0.098	0.051	0.055	0.044
0.120	0.053	0.067	0.060

Table 13. BDNF Optimization Trials: Day 08

0 ng BDNF/mL	50 ng BDNF/mL	75 ng BDNF/mL	100 ng BDNF/mL
0.046	0.044	0.043	0.046
0.044	0.042	0.044	0.045
0.038	0.051	0.044	0.039
0.061	0.063	0.048	0.056
0.067	0.082	0.063	0.050
0.099	0.108	0.090	0.065

Table 14. BDNF Optimization Trials: Day 12

0 ng BDNF/mL	50 ng BDNF/mL	75 ng BDNF/mL	100 ng BDNF/mL
0.041	0.044	0.043	0.046
0.040	0.046	0.043	0.047
0.039	0.053	0.046	0.045
0.046	0.050	0.049	0.046
0.047	0.052	0.049	0.048
0.068	0.051	0.053	0.052

Table 15. Combined Treatment Trials: Day 08

BDNF/PEG	BDNF/CEL	PEG/CEL	PEG/BDNF/CEL
0.040	0.038	0.038	0.038
0.043	0.040	0.040	0.039
0.040	0.040	0.040	0.039
0.041	0.042	0.042	0.039
0.050	0.051	0.041	0.042
0.066	0.057	0.099	0.052

Table 16. Combined Treatment Trials: Day 12

BDNF/PEG	BDNF/CEL	PEG/CEL	PEG/BDNF/CEL
0.040	0.039	0.040	0.041
0.040	0.039	0.038	0.039
0.039	0.039	0.039	0.040
0.040	0.040	0.040	0.040
0.048	0.041	0.041	0.045
0.057	0.058	0.057	0.064

Beta-Amyloid per Cell

Table 17. Cholesterol Optimization Trials: Day 08

0.00 mM cholesterol	0.05 mM cholesterol	0.10 mM cholesterol	0.15 mM cholesterol
0.000469	0.000590	0.000808	0.000929
0.000372	0.000699	0.000789	0.001223
0.000206	0.000268	0.000261	0.001262
0.000258	0.000384	0.000382	0.000854
0.000604	0.000458	0.001046	0.001450
0.000615	0.000565	0.001412	0.003529

Table 18. Cholesterol Optimization Trials: Day 12

0 mM cholesterol	0.05 mM cholesterol	0.10 mM cholesterol	0.15 mM cholesterol
0.000216	0.000406	0.000474	0.000423
0.000353	0.000182	0.000457	0.000600
0.000399	0.000647	0.000394	0.000367
0.000560	0.000545	0.000375	0.000446
0.000489	0.000547	0.000393	0.000412
0.000662	0.000836	0.000560	0.000485

Table 19. Celestrol Optimization Trials: Day 08

0.0 μ M celestrol	1.0 μ M celestrol	2.0 μ M celestrol	3.0 μ M celestrol
0.000867	0.000862	0.000957	0.000958
0.000752	0.000761	0.000802	0.000782
0.000506	0.000728	0.000654	0.000821
0.000393	0.000762	0.000354	0.000748
0.000801	0.000898	0.000451	0.000438
0.000848	0.000303	0.000290	0.000423

Table 20. Celestrol Optimization Trials: Day 12

0.0 μ M celestrol	1.0 μ M celestrol	2.0 μ M celestrol	3.0 μ M celestrol
0.000645	0.000815	0.000421	0.000614
0.000924	0.000634	0.000385	0.000765
0.000400	0.000667	0.000426	0.000516
0.000608	0.000618	0.000325	0.000677
0.000587	0.000803	0.000478	0.000500
0.000698	0.000461	0.000650	0.001154

Table 21. BDNF Optimization Trials: Day 08

0 ng BDNF/mL	50 ng BDNF/mL	75 ng BDNF/mL	100 ng BDNF/mL
0.000609	0.000308	0.000190	0.000127
0.000579	0.000378	0.000239	0.000243
0.000650	0.000405	0.000240	0.000235
0.001008	0.000492	0.000247	0.000309
0.000732	0.000781	0.000346	0.000249
0.001222	0.001019	0.000455	0.000385

Table 22. BDNF Optimization Trials: Day 12

0 ng BDNF/mL	50 ng BDNF/mL	75 ng BDNF/mL	100 ng BDNF/mL
0.000265	0.000308	0.000297	0.000305
0.000392	0.000407	0.000305	0.000346
0.000219	0.000387	0.000359	0.000360
0.000359	0.000370	0.000249	0.000351
0.000338	0.000491	0.000329	0.000432
0.000602	0.000389	0.000373	0.000495

Table 23. Combined Treatment Trials: Day 08

BDNF/PEG	BDNF/CEL	PEG/CEL	PEG/BDNF/CEL
0.000282	0.000336	0.000213	0.000143
0.000339	0.000367	0.000286	0.000210
0.000305	0.000584	0.000727	0.000253
0.000380	0.000416	0.000583	0.000188
0.000338	0.000650	0.000336	0.000188
0.000512	0.000934	0.000586	0.000197

Table 24. Combined Treatment Trials: Day 12

BDNF/PEG	BDNF/CEL	PEG/CEL	PEG/BDNF/CEL
0.000526	0.000824	0.000571	0.000311
0.000690	0.000929	0.000628	0.000214
0.000464	0.001017	0.000538	0.000351
0.000721	0.000650	0.000672	0.000336
0.000881	0.000683	0.000766	0.000584
0.000786	0.001126	0.000087	0.000757