

Additional Table 5. Correlation and Hypergeometric Distribution Scores for Annotated Data Set with Correlation above 0.9

COGs	Gideon Lab	Correlation	Hypergeometric
COG0763	B01	0.95	1.71E-09
COG0774	B01	0.95	1.71E-09
COG0795	B01	0.94	2.46E-09
COG0811	B01	0.95	1.71E-09
COG0848	B01	0.95	1.71E-09
COG1043	B01	0.95	1.71E-09
COG1044	B01	0.95	1.71E-09
COG1137	B01	0.94	2.46E-09
COG1212	B01	0.95	1.71E-09
COG1519	B01	0.95	1.71E-09
COG1663	B01	0.95	1.71E-09
COG2877	B01	0.95	1.71E-09
COG4775	B01	0.94	2.46E-09
COG1098	B02	0.92	7.77E-07
COG2344	B02	0.92	7.77E-07
COG3601	B02	0.92	7.77E-07
COG3764	B02	1.00	2.59E-08
COG3857	B02	0.92	7.77E-07
COG3887	B02	0.92	7.77E-07
COG3906	B02	0.92	7.77E-07
COG3935	B02	0.92	7.77E-07
COG4109	B02	0.92	7.77E-07
COG4463	B02	0.92	7.77E-07
COG4465	B02	0.92	7.77E-07
COG4466	B02	0.92	7.77E-07
COG3014	B22	1.00	1.51E-05
COG3018	B22	1.00	1.51E-05
COG1188	B28	0.94	7.02E-09
COG2967	B29	0.99	8.04E-09
COG3123	B29	0.97	2.33E-07
COG3126	B29	0.91	2.33E-07
COG3127	B29	0.99	8.04E-09
COG3143	B29	0.97	2.33E-07
COG3147	B29	0.97	2.33E-07
COG3154	B29	0.99	8.04E-09
COG3157	B29	0.97	2.33E-07
COG3164	B29	0.97	2.33E-07
COG3242	B29	0.99	8.04E-09
COG3311	B29	0.91	2.33E-07
COG3313	B29	0.99	8.04E-09
COG3605	B29	0.91	2.33E-07
COG3852	B29	0.99	8.04E-09
COG3895	B29	0.91	2.33E-07
COG4172	B29	0.92	8.04E-08
COG4181	B29	0.97	2.33E-07

COG4206	B29	0.99	8.04E-09
COG4651	B29	0.99	8.04E-09
COG4783	B29	0.99	8.04E-09
COG4787	B29	0.97	2.33E-07
COG0114	B31	0.91	1.71E-07
COG0328	B31	0.91	1.71E-07
COG0753	B31	0.97	7.69E-06
COG0805	B31	0.91	1.71E-07
COG1607	B31	0.97	7.69E-06
COG1651	B31	0.91	1.71E-07
COG1825	B31	0.91	1.71E-07
COG1826	B31	0.91	1.71E-07
COG3717	FAC	0.97	3.95E-05
COG3730	FAP	0.95	2.58E-05
COG3731	FAP	0.95	2.58E-05
COG1956	FAT	0.90	4.42E-05
COG2182	FAT	0.94	3.40E-05
COG3091	FAT	0.90	4.42E-05
COG3833	FAT	0.94	3.40E-05
COG2850	FAU	0.95	3.37E-06
COG0643	G03	0.94	4.93E-09
COG0835	G03	0.94	4.93E-09
COG0840	G03	0.94	4.93E-09
COG1345	G03	0.94	4.93E-09
COG1516	G03	0.94	4.93E-09
COG2327	G44	1.00	4.91E-05