

Table S4a. Associated taxonomies with Body mass index (BMI) at FDR < 0.05 level ^a

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
4212012	64	11	1.18	1.18371	1.52943	0.77395	0.44149	13.27102	1.92120	6.90768	0.00012	3.25878	0.00112	3.83894	0.00012
188348	65	10	4.90	5.29614	1.45878	3.63051	0.00053	2.72684	1.22619	2.22382	0.06153	3.77371	0.00016	3.77371	0.00016
4094259	51	24	6.17	-0.82249	1.15194	-0.71401	0.47753	1.86710	0.43689	4.27359	0.00034	2.03236	0.04212	3.58447	0.00034
4386018	57	18	11.89	4.24149	1.15012	3.68788	0.00044	0.33440	0.81125	0.41220	0.68602	2.77310	0.00555	3.51750	0.00044
165118	35	40	75.98	3.61296	0.99069	3.64691	0.00050	-0.12879	0.33146	-0.38856	0.69983	2.18922	0.02858	3.48157	0.00050
1952	7	68	202.57	6.45276	1.80900	3.56704	0.00065	0.27777	0.24021	1.15636	0.25177	3.22251	0.00127	3.41124	0.00065
4305923	60	15	42.80	2.93900	1.29645	2.26696	0.02640	1.15966	0.38415	3.01874	0.01069	3.37506	0.00074	3.37506	0.00074
183439	24	51	94.39	3.72449	1.06210	3.50672	0.00079	-0.20164	0.24648	-0.81806	0.41736	1.80093	0.07171	3.35790	0.00079
4227110	71	4	11.75	7.83335	2.24623	3.48733	0.00084	-2.09345	1.82709	-1.14579	0.45681	1.83608	0.06635	3.34071	0.00084
3134492	13	62	139.89	4.53815	1.31139	3.46057	0.00091	0.04086	0.24156	0.16914	0.86627	2.46452	0.01372	3.31696	0.00091
182656	64	11	2.55	-0.42446	1.51451	-0.28026	0.78008	-3.18090	0.66621	-4.77461	0.00140	-2.45635	0.01404	-3.19459	0.00140
4420570	64	11	16.27	4.73987	1.43516	3.30267	0.00149	-0.11364	0.56197	-0.20222	0.84479	2.10734	0.03509	3.17600	0.00149
839964	40	35	12.34	3.36831	1.02351	3.29093	0.00155	-0.13990	0.46583	-0.30033	0.76587	2.02775	0.04259	3.16546	0.00155
182911	39	36	7.17	3.27313	1.00115	3.26936	0.00165	0.74047	0.62182	1.19081	0.24222	3.05154	0.00228	3.14609	0.00165
213566	37	38	25.39	3.23748	1.00138	3.23302	0.00185	0.21706	0.40638	0.53414	0.59662	2.57575	0.01000	3.11339	0.00185
182603	71	4	2.00	5.80901	2.28794	2.53898	0.01328	6.28148	0.58718	10.69769	0.05934	3.08431	0.00204	3.08431	0.00204
229228	67	8	75.88	3.54541	1.68508	2.10400	0.03887	1.57907	0.48188	3.27692	0.02203	3.07974	0.00207	3.07974	0.00207
4321810	71	4	7.75	-7.10250	2.23202	-3.18209	0.00216	-1.89414	2.93973	-0.64432	0.63562	-2.50407	0.01228	-3.06745	0.00216
4378683	52	23	15.17	-3.46660	1.08996	-3.18049	0.00217	-0.29298	0.64184	-0.45647	0.65297	-2.48593	0.01292	-3.06600	0.00217
181432	34	41	60.73	3.16982	1.00887	3.14195	0.00244	-0.32718	0.35245	-0.92831	0.35911	1.49488	0.13494	3.03115	0.00244
227697	70	5	34.20	0.88382	2.14621	0.41181	0.68171	1.33111	0.06889	19.32777	0.00267	2.41391	0.01578	3.00365	0.00267
174516	43	32	22.66	3.10525	1.04540	2.97039	0.00404	0.59400	0.42570	1.39533	0.17351	2.99536	0.00274	2.99536	0.00274
2654263	56	19	5.68	3.56723	1.16986	3.04928	0.00321	1.89119	1.40638	1.34473	0.19747	2.99518	0.00274	2.99518	0.00274
356827	69	6	35.67	0.22292	1.99023	0.11201	0.91113	1.56080	0.17094	9.13053	0.00278	2.19418	0.02822	2.99143	0.00278
302049	58	17	3.94	-3.68755	1.20392	-3.06295	0.00308	0.38525	0.61742	0.62397	0.54268	-1.66220	0.09647	-2.95947	0.00308
197761	68	7	2.71	2.55979	1.82439	1.40309	0.16489	4.99352	0.91195	5.47562	0.00541	2.94872	0.00319	2.94872	0.00319
4457427	25	50	41.32	0.03437	1.13869	0.03018	0.97600	0.89259	0.29069	3.07058	0.00355	2.08322	0.03723	2.91604	0.00355
177222	43	32	5.00	-1.74233	1.06438	-1.63694	0.10601	-0.88400	0.34026	-2.59802	0.01458	-2.87015	0.00410	-2.87015	0.00410
158722	64	11	3.91	0.92343	1.51876	0.60802	0.54509	4.61883	1.17022	3.94698	0.00425	2.44929	0.01431	2.85869	0.00425
4429981	61	14	38.07	3.82990	1.29883	2.94873	0.00430	0.15568	0.77070	0.20199	0.84361	2.15847	0.03089	2.85526	0.00430
307113	63	12	1.67	-4.07104	1.38137	-2.94711	0.00432	1.04041	1.14275	0.91044	0.38632	-1.40535	0.15992	-2.85377	0.00432
4045882	63	12	1.67	-4.07104	1.38137	-2.94711	0.00432	1.04041	1.14275	0.91044	0.38632	-1.40535	0.15992	-2.85377	0.00432
188079	51	24	5.08	2.55770	1.10864	2.30707	0.02393	1.50412	0.80515	1.86814	0.07576	2.85253	0.00434	2.85253	0.00434
179291	68	7	11.29	0.20829	1.84245	0.11305	0.91030	-0.87150	0.14974	-5.82007	0.00434	-1.93726	0.05271	-2.85235	0.00434
366147	62	13	6.31	3.95561	1.34499	2.94100	0.00440	-0.53398	0.81869	-0.65224	0.52895	1.56877	0.11670	2.84819	0.00440
167950	70	5	4.80	5.96385	2.02914	2.93910	0.00442	-0.17127	0.85008	-0.06009	0.95754	1.97510	0.04826	2.84645	0.00442
338301	59	16	11.13	-1.34893	1.31826	-1.02326	0.30961	1.85743	0.54159	3.42958	0.00448	1.29129	0.19660	2.84219	0.00448
3799784	70	5	1.40	0.32812	2.15060	0.15257	0.87916	6.44509	0.43697	14.74943	0.00457	2.11300	0.03460	2.83621	0.00457
4387246	70	5	6.60	5.97544	2.04157	2.92689	0.00458	2.88063	1.97320	1.45988	0.28175	2.76596	0.00568	2.83526	0.00458
320915	69	6	19.33	-0.44244	1.97606	-0.22390	0.82347	-2.27599	0.29909	-7.16091	0.00471	-2.15620	0.03107	-2.82624	0.00471
4428929	69	6	1.83	4.03243	1.91627	2.10431	0.03884	3.89414	1.26576	3.07652	0.05428	2.82164	0.00478	2.82164	0.00478
179508	63	12	1.67	2.17952	1.43812	1.51553	0.13402	4.23522	1.36835	3.09513	0.01282	2.81931	0.00481	2.81931	0.00481
1614788	32	43	7.74	3.30910	1.03487	2.90771	0.00484	-0.85397	0.40207	-2.12393	0.03991	0.53952	0.58953	2.81768	0.00484
4472174	70	5	3.20	-5.34952	2.17440	-2.46023	0.01629	-1.62037	0.61095	-2.65221	0.11761	-2.80534	0.00503	-2.80534	0.00503
4357713	55	20	2.90	3.31381	1.14659	2.89014	0.00509	-0.70073	0.90806	-0.77167	0.45090	1.44790	0.14765	2.80155	0.00509
363430	67	8	71.88	-0.11196	1.73495	-0.06453	0.94872	-0.50663	0.10825	-4.68001	0.00543	-2.01133	0.04429	-2.78014	0.00543
147702	30	45	27.76	1.94792	1.07011	1.82030	0.07287	0.86086	0.39029	2.20568	0.03293	2.77649	0.00549	2.77649	0.00549
188676	22	53	17.13	1.41192	1.16990	1.20688	0.23143	1.01935	0.35951	2.83537	0.00659	2.76734	0.00565	2.76734	0.00565
186772	35	40	5.33	2.90910	1.02040	2.85092	0.00568	0.50955	0.55488	0.91830	0.36441	2.59686	0.00941	2.76551	0.00568
189548	70	5	2.60	5.72272	2.08610	2.74327	0.00767	-4.39082	0.33377	-13.15518	0.00573	-0.06840	0.94547	-2.76291	0.00573
187180	33	42	14.98	1.54183	1.06927	1.44194	0.15365	-1.00692	0.34567	-2.91298	0.00590	-0.93812	0.34818	-2.75344	0.00590
4391326	69	6	14.17	-5.33730	1.88204	-2.83591	0.00593	0.05655	0.64273	0.08799	0.93543	-1.88846	0.05896	-2.75169	0.00593
847934	67	8	1.88	4.66489	1.64624	2.83365	0.00597	-0.26458	2.67134	-0.09904	0.92495	1.87766	0.06043	2.74961	0.00597
2700883	18	57	11.93	1.97753	1.24813	1.58440	0.11749	-0.95997	0.33571	-2.84756	0.00622	-0.82775	0.40781	-2.73602	0.00622
183457	55	20	10.75	2.41614	1.17725	2.05236	0.04377	1.23952	0.62674	1.97772	0.06440	2.73342	0.00627	2.73342	0.00627
267718	64	11	2.82	-2.98471	1.47242	-2.02708	0.04636	-2.93536	1.38583	-2.11812	0.06702	-2.70373	0.00686	-2.70373	0.00686
2272791	64	11	2.82	-2.98471	1.47242	-2.02708	0.04636	-2.93536	1.38583	-2.11812	0.06702	-2.70373	0.00686	-2.70373	0.00686
197624	43	32	5.97	-2.86551	1.02988	-2.78236	0.00689	0.22237	0.60356	0.36844	0.71522	-1.65284	0.09836	-2.70232	0.00689
187388	62	13	2.62	3.73970	1.34581	2.77876	0.00695	0.41188	2.09437	0.19666	0.84803	2.04398	0.04096	2.69899	0.00695
207487	47	28	5.14	2.92705	1.05388	2.77742	0.00698	0.44096	0.82750	0.53288	0.59882	2.27960	0.02263	2.69775	0.00698
182647	63	12	29.67	-2.33134	1.43793	-1.62131	0.10932	-0.76240	0.28888	-2.63913	0.02695	-2.69652	0.00701	-2.69652	0.00701
194297	53	22	35.55	-1.28784	1.16778	-1.10281	0.27378	-0.87342	0.28922	-3.01994	0.00704	-2.67935	0.00738	-2.69478	0.00704

Table S4a. Associated taxonomies with Body mass index (BMI) at FDR < 0.05 level ^a (Cont.)

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
193644	59	16	2.25	0.54398	1.30575	0.41661	0.67820	3.01894	0.98078	3.07810	0.00881	2.14553	0.03191	2.61932	0.00881
186559	68	7	2.29	2.77604	1.87488	1.48065	0.14306	6.11929	1.75793	3.48097	0.02533	2.61687	0.00887	2.61687	0.00887
4403113	71	4	1.75	6.10114	2.27387	2.68315	0.00904	-5.01366	0.79608	-6.29796	0.10025	0.68365	0.49420	2.61048	0.00904
179760	67	8	2.75	4.44370	1.66469	2.66938	0.00939	0.46870	1.44088	0.32529	0.75813	2.05459	0.03992	2.59769	0.00939
4383924	68	7	2.29	-4.69991	1.76138	-2.66831	0.00941	0.94467	1.05375	0.89648	0.42067	-1.26674	0.20525	-2.59670	0.00941
2699610	45	30	2.03	2.78080	1.04443	2.66250	0.00956	0.62498	0.98588	0.63393	0.53146	2.27482	0.02292	2.59130	0.00956
197988	42	33	14.00	1.68549	1.06088	1.58877	0.11649	1.04809	0.47858	2.19000	0.03644	2.58921	0.00962	2.58921	0.00962
184426	46	29	5.07	2.80765	1.05562	2.65971	0.00963	0.09584	0.64757	0.14800	0.88349	1.93412	0.05310	2.58871	0.00963
4438983	49	26	30.96	-0.44387	1.13651	-0.39056	0.69728	-1.12546	0.39977	-2.81525	0.00982	-2.10089	0.03565	-2.58212	0.00982
197460	68	7	1.86	0.37402	1.84209	0.20304	0.83967	2.11479	0.45795	4.61792	0.00990	1.96698	0.04919	2.57942	0.00990
322835	38	37	7.84	1.35967	1.06246	1.27973	0.20475	1.65720	0.66344	2.49790	0.01749	2.57692	0.00997	2.57692	0.00997
4326573	70	5	11.00	5.40927	2.05529	2.63188	0.01038	-1.42962	1.91698	-0.74577	0.53355	1.37195	0.17008	2.56283	0.01038
4354235	10	65	52.98	3.97183	1.51090	2.62878	0.01047	0.09018	0.26262	0.34339	0.73246	2.05188	0.04018	2.55995	0.01047
327218	29	46	7.09	2.06293	1.07324	1.92214	0.05854	1.06951	0.60459	1.76898	0.08399	2.55944	0.01048	2.55944	0.01048
195294	53	22	2.59	1.80765	1.20818	1.49618	0.13898	2.50751	1.08815	2.30437	0.03266	2.55680	0.01056	2.55680	0.01056
186888	51	24	8.71	-2.89134	1.10528	-2.61593	0.01083	-0.15710	0.66074	-0.23777	0.81437	-1.96773	0.04910	-2.54799	0.01083
366451	66	9	4.89	1.08229	1.64550	0.65773	0.51281	3.03207	0.83338	3.63829	0.01086	2.26397	0.02358	2.54727	0.01086
182142	70	5	1.60	5.39933	2.06729	2.61179	0.01095	-0.19330	5.23494	-0.03692	0.97390	1.77584	0.07576	2.54413	0.01095
4350477	57	18	5.28	-3.16682	1.21481	-2.60683	0.01110	0.13757	0.84575	0.16266	0.87296	-1.68264	0.09245	-2.53951	0.01110
841907	52	23	37.48	-2.89859	1.11508	-2.59946	0.01132	0.06219	0.35625	0.17456	0.86318	-1.66899	0.09512	-2.53264	0.01132
313593	25	50	6.04	2.83083	1.08934	2.59866	0.01134	-0.70017	0.52193	-1.34150	0.18621	0.85561	0.39222	2.53190	0.01134
191660	69	6	1.67	4.91088	1.89013	2.59817	0.01136	-5.72879	1.19539	-4.79241	0.01728	0.10663	0.91508	2.53145	0.01136
193161	71	4	1.25	-3.27708	2.35336	-1.39251	0.16805	-14.03829	0.64380	-21.80544	0.02918	-2.51702	0.01184	-2.51702	0.01184
177515	14	61	56.00	3.40074	1.31714	2.58191	0.01186	-0.20488	0.32163	-0.63701	0.52663	1.33156	0.18300	2.51628	0.01186
4232048	66	9	1.89	0.42156	1.66417	0.25332	0.80075	3.62250	1.03070	3.51460	0.01260	1.94259	0.05207	2.49485	0.01260
321063	68	7	2.43	4.32975	1.78212	2.42955	0.01761	2.38980	1.78193	1.34113	0.25097	2.49019	0.01277	2.49019	0.01277
2829179	38	37	331.81	2.70483	1.06660	2.53594	0.01338	0.23528	0.22186	1.06049	0.29640	2.48728	0.01287	2.48728	0.01287
4456702	63	12	1.92	-0.37885	1.46176	-0.25918	0.79624	-6.07388	1.97268	-3.07900	0.01316	-1.93577	0.05290	-2.47937	0.01316
4484075	38	37	4.03	2.25627	1.04077	2.16788	0.03347	1.01713	0.72557	1.40184	0.17003	2.47379	0.01337	2.47379	0.01337
187751	45	30	57.10	0.82696	1.09118	0.75786	0.45101	0.58955	0.22314	2.64209	0.01354	2.27897	0.02267	2.46922	0.01354
180771	61	14	26.00	2.76157	1.33939	2.06181	0.04284	0.89786	0.56987	1.57555	0.14343	2.46669	0.01364	2.46669	0.01364
3443092	68	7	1.71	3.09503	1.88560	1.64141	0.10507	4.15042	1.63068	2.54521	0.06363	2.45756	0.01399	2.45756	0.01399
3785400	69	6	56.67	-3.22392	1.93797	-1.66355	0.10055	-0.70250	0.25114	-2.79729	0.06801	-2.45166	0.01422	-2.45166	0.01422
4301511	33	42	11.90	1.66505	1.06256	1.56702	0.12149	0.95054	0.48087	1.97673	0.05517	2.45086	0.01425	2.45086	0.01425
194215	57	18	4.33	1.46236	1.26517	1.15586	0.25156	1.54079	0.59768	2.57794	0.02100	2.44274	0.01458	2.44274	0.01458
2423305	57	18	7.61	-0.35599	1.26202	-0.28208	0.77869	-2.03083	0.73683	-2.75618	0.01470	-1.92379	0.05438	-2.43963	0.01470
1522739	71	4	2.25	-3.11914	2.35569	-1.32409	0.18966	-3.25676	0.16729	-19.46738	0.03267	-2.43786	0.01477	-2.43786	0.01477
179583	67	8	1.75	-0.37365	1.73444	-0.21543	0.83004	2.50601	0.69359	3.61311	0.01533	1.56259	0.11815	2.42449	0.01533
199279	55	20	1.95	-0.20446	1.23433	-0.16565	0.86890	-1.69420	0.63328	-2.67530	0.01598	-1.82044	0.06869	-2.40943	0.01598
270094	23	52	35.77	1.76807	1.14326	1.54651	0.12636	0.58372	0.30352	1.92315	0.06028	2.40934	0.01598	2.40934	0.01598
188047	12	63	20.89	3.49434	1.41705	2.46593	0.01605	0.31878	0.34067	0.93574	0.35316	2.35911	0.01832	2.40780	0.01605
189356	67	8	2.50	3.33224	1.72170	1.93544	0.05686	2.18251	1.22496	1.78170	0.13490	2.40375	0.01623	2.40375	0.01623
189877	70	5	2.40	5.31492	2.16467	2.45530	0.01649	2.26269	6.79115	0.33318	0.77068	1.90163	0.05722	2.39783	0.01649
326626	56	19	6.32	2.42131	1.19792	2.02126	0.04697	-2.02396	0.75736	-2.67240	0.01669	-0.28775	0.77354	-2.39350	0.01669
171559	61	14	1.57	0.80844	1.37471	0.58808	0.55832	-4.85406	1.72505	-2.81387	0.01685	-1.27604	0.20194	-2.38993	0.01685
194001	50	25	3.64	2.65948	1.09225	2.43485	0.01738	1.01235	1.06522	0.95037	0.35225	2.33972	0.01930	2.37863	0.01738
4469576	29	46	37.48	-1.84447	1.08061	-1.70687	0.09216	-0.56929	0.33307	-1.70923	0.09462	-2.37281	0.01765	-2.37281	0.01765
196371	69	6	3.33	-1.04039	1.99530	-0.52142	0.06367	-3.59689	0.75903	-4.73883	0.01782	-2.04247	0.04110	-2.36936	0.01782
177032	70	5	2.20	-3.75968	2.20948	-1.70161	0.09314	-3.65150	1.21213	-3.01245	0.09479	-2.36861	0.01786	-2.36861	0.01786
4410097	68	7	4.14	-3.20432	1.80202	-1.77818	0.07960	-2.54222	1.24918	-2.03511	0.11156	-2.36474	0.01804	-2.36474	0.01804
354850	62	13	2.77	0.44971	1.44839	0.31049	0.75708	-2.41990	0.85712	-2.82331	0.01806	-1.45319	0.14617	-2.36443	0.01806
4362300	70	5	2.60	1.07810	2.17201	0.49636	0.62115	4.93291	0.67380	7.32100	0.01815	2.02002	0.04338	2.36252	0.01815
194373	68	7	9.43	4.32862	1.79688	2.40896	0.01856	-0.58165	0.95461	-0.60930	0.57523	1.26850	0.20462	2.35429	0.01856
195937	27	48	9.63	2.59412	1.08004	2.40188	0.01889	-0.86391	0.44131	-1.95761	0.05650	0.31144	0.75547	2.34764	0.01889
158711	71	4	36.00	0.56522	2.39650	0.23585	0.81422	0.41946	0.01292	32.47746	0.01960	1.81655	0.06929	2.33400	0.01960
192244	58	17	5.65	2.94711	1.23888	2.37884	0.02002	-0.56350	0.90197	-0.62474	0.54219	1.21371	0.22486	2.32595	0.02002
1992	14	61	12.31	-1.38668	1.36911	-1.01284	0.31453	-0.82306	0.35135	-2.34255	0.02261	-2.32341	0.02016	-2.32341	0.02016
3203801	45	30	7.33	-1.61979	1.07734	-1.50351	0.13708	-0.99999	0.53477	-1.86994	0.07237	-2.32180	0.02024	-2.32180	0.02024
759816	68	7	5.43	-3.58119	1.79231	-1.99808	0.04949	-5.84242	3.75454	-1.55610	0.19467	-2.30607	0.02111	-2.30607	0.02111
4300690	42	33	100.88	0.73970	1.08021	0.68477	0.49569	-0.68648	0.28208	-2.43363	0.02112	-1.14875	0.25066	-2.30587	0.02112
185597	55	20	4.15	2.82025	1.19641	2.35726	0.02113	-1.06295	0.95894	-1.10847	0.28310	0.87132	0.38358	2.30561	0.02113
189708	67	8	2.25	0.35494	1.73802	0.20422	0.83876	4.30512	1.29985	3.31201	0.02119	1.77343	0.07616	2.30452	0.02119
4409280	16	59	162.36	1.37326	1.29732	1.05854	0.29335	0.58237							

Table S4a. Associated taxonomies with Body mass index (BMI) at FDR < 0.05 level^a (Cont.)

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
363442	70	5	1.60	4.81240	2.07152	2.32312	0.02300	-5.75146	3.09677	-1.85725	0.20440	0.71014	0.47762	2.27341	0.02300
3544699	68	7	4.43	-4.12458	1.77573	-2.32275	0.02302	-1.68556	1.78519	-0.94419	0.39853	-2.20427	0.02751	-2.27306	0.02302
187924	46	29	5.93	2.46750	1.06246	2.32244	0.02304	-1.37151	0.68744	-1.99509	0.05661	0.25914	0.79553	2.27277	0.02304
179319	67	8	2.50	-3.93430	1.69674	-2.31874	0.02325	2.58751	1.67415	1.54557	0.18287	-0.66278	0.50747	-2.26927	0.02325
211750	71	4	14.25	4.34059	2.32791	1.86459	0.06632	1.62204	0.44496	3.64533	0.17045	2.26773	0.02335	2.26773	0.02335
302333	63	12	2.50	1.24252	1.45756	0.85247	0.39678	-3.03195	1.11513	-2.71893	0.02365	-1.00083	0.31691	-2.26278	0.02365
47365	70	5	6.00	0.40116	2.16074	0.18566	0.85323	1.32934	0.20837	6.37964	0.02370	1.73025	0.08358	2.26196	0.02370
181140	59	16	3.06	-0.90595	1.30813	-0.69255	0.49082	1.97458	0.77120	2.56039	0.02372	1.11200	0.26614	2.26161	0.02372
4301298	44	31	50.84	0.64005	1.09457	0.58475	0.56054	-0.76522	0.32021	-2.38978	0.02383	-1.18638	0.23547	-2.25983	0.02383
198449	20	55	15.67	-1.01631	1.21113	-0.83915	0.40416	-0.76039	0.32669	-2.32760	0.02386	-2.18749	0.02871	-2.25937	0.02386
158217	66	9	3.67	3.70550	1.60688	2.30603	0.02399	0.84191	2.00813	0.41925	0.68963	1.87852	0.06031	2.25727	0.02399
189793	71	4	1.25	3.90422	2.37044	1.64704	0.10391	11.34500	2.14122	5.29837	0.11876	2.25299	0.02426	2.25299	0.02426
3926480	22	53	23.74	2.61708	1.13732	2.30109	0.02428	-0.37098	0.31678	-1.17109	0.24711	0.77443	0.43868	2.25260	0.02428
199190	69	6	2.00	3.41440	1.94475	1.75570	0.08339	3.59704	1.84765	1.94682	0.14673	2.25037	0.02443	2.25037	0.02443
4425571	30	45	21.82	2.44928	1.06638	2.29681	0.02454	-0.08789	0.34188	-0.25707	0.79838	1.40934	0.15873	2.24855	0.02454
275237	42	33	229.64	2.39206	1.04159	2.29655	0.02456	-0.09576	0.24420	-0.39213	0.69774	1.31517	0.18845	2.24831	0.02456
329313	70	5	1.20	0.64305	2.18224	0.29468	0.76909	-4.88817	0.78182	-6.25227	0.02464	-1.38129	0.16719	-2.24700	0.02464
198183	16	59	11.10	2.95129	1.28689	2.29335	0.02475	-0.26743	0.37831	-0.70691	0.48255	1.09113	0.27522	2.24529	0.02475
363646	58	17	13.29	2.83368	1.23684	2.29107	0.02489	-0.03179	0.55117	-0.05769	0.95481	1.54606	0.12209	2.24313	0.02489
174638	66	9	18.22	3.65503	1.59636	2.28961	0.02498	-0.19769	0.69955	-0.28260	0.78698	1.39407	0.16330	2.24175	0.02498
3887769	55	20	1.95	1.25025	1.21369	1.03012	0.30640	2.11529	0.90633	2.33390	0.02313	2.23840	0.02520	2.23840	0.02520
1000547	51	24	2.75	2.09717	1.12130	1.87029	0.06551	1.50036	1.09645	1.36837	0.18566	2.23821	0.02521	2.23821	0.02521
3251419	63	12	4.67	-3.22263	1.41065	-2.28450	0.02529	-0.61673	1.33946	-0.46043	0.65613	-1.89659	0.05788	-2.23692	0.02529
175373	70	5	1.60	-4.83026	2.11722	-2.28142	0.02548	1.03933	1.36105	0.76362	0.52488	-1.13007	0.25845	-2.23400	0.02548
4446669	60	15	12.40	-2.09376	1.31798	-1.58861	0.11653	-1.07164	0.62558	-1.71302	0.11240	-2.23233	0.02559	-2.23233	0.02559
4463108	70	5	4.80	0.52223	2.15575	0.24225	0.80928	-2.77526	0.45415	-6.11090	0.02575	-1.40617	0.15968	-2.22998	0.02575
4396297	33	42	7.98	2.37548	1.04473	2.27377	0.02596	-0.96391	0.47032	-2.04949	0.04718	0.17119	0.86407	2.22676	0.02596
688923	63	12	3.08	0.22256	1.48564	1.04981	0.88133	4.23127	1.59176	2.65823	0.02612	1.67844	0.09326	2.22440	0.02612
192437	26	49	16.29	2.46691	1.08727	2.26890	0.02627	0.27343	0.44793	0.61042	0.54459	1.99974	0.04553	2.22216	0.02627
197539	69	6	4.50	-1.49488	1.96640	-0.76021	0.44961	1.35457	0.33397	4.05598	0.02701	1.02910	0.30343	2.21143	0.02701
193763	63	12	3.17	0.88719	1.48485	0.59750	0.55205	3.49114	1.32360	2.63762	0.02702	1.98409	0.04725	2.21124	0.02702
816702	48	27	33.30	2.43313	1.07862	2.25578	0.02712	-0.03957	0.39577	-0.09997	0.92120	1.49257	0.13555	2.20974	0.02712
193873	65	10	1.10	2.85822	1.55592	1.83700	0.07034	7.95997	5.47236	1.45458	0.18911	2.20826	0.02723	2.20826	0.02723
184990	66	9	4.89	-1.68044	1.64473	-1.02171	0.31034	-1.10093	0.40593	-2.71210	0.03501	-2.20814	0.02723	-2.20814	0.02723
185814	24	51	7.24	2.51825	1.11956	2.24932	0.02755	-0.53974	0.40819	-1.32229	0.19234	0.63634	0.52455	2.20362	0.02755
3475269	67	8	2.38	-1.80463	1.72210	-1.04793	0.29818	-2.89091	1.03444	-2.79467	0.03823	-2.20101	0.02774	-2.20101	0.02774
308322	69	6	4.00	0.72569	1.97573	0.36730	0.71447	-2.50120	0.62343	-4.01203	0.02779	-1.29711	0.19459	-2.20025	0.02779
368490	59	16	12.25	1.10087	1.30605	0.84290	0.40208	1.11135	0.44876	2.47646	0.02779	2.14825	0.03169	2.20017	0.02779
198754	70	5	2.80	3.96227	2.09578	1.89060	0.06270	2.37909	1.31360	1.81112	0.21182	2.19901	0.02788	2.19901	0.02788
3946926	69	6	3.17	4.32411	1.92719	2.24374	0.02792	-0.21009	2.34592	-0.08956	0.93428	1.49616	0.13461	2.19834	0.02792
234443	67	8	6.88	2.12644	1.73491	1.22568	0.22431	2.16106	0.88425	2.44396	0.05837	2.19773	0.02797	2.19773	0.02797
191148	71	4	2.50	4.26313	2.33001	1.82966	0.07144	6.27986	1.95612	3.21038	0.19224	2.19674	0.02804	2.19674	0.02804
2530636	61	14	176.79	0.30809	1.37636	0.22384	0.82352	0.75212	0.29747	2.52834	0.02806	1.71086	0.08711	2.19650	0.02806
176269	9	66	145.11	0.43719	1.64749	0.26537	0.79148	0.43873	0.19524	2.24717	0.02814	1.73927	0.08199	2.19532	0.02814
363389	65	10	304.50	3.41274	1.52613	2.23620	0.02844	0.03187	0.32816	0.09712	0.92535	1.61566	0.10617	2.19119	0.02844
4433737	62	13	7.54	0.71895	1.42096	0.50596	0.61443	-1.24564	0.48863	-2.54922	0.02890	-1.18869	0.23456	-2.18481	0.02890
1835779	59	16	2.38	0.79107	1.30860	0.60451	0.54740	1.86683	0.76037	2.45517	0.02893	1.97006	0.04883	2.18443	0.02893
182653	70	5	8.80	-4.66877	2.09579	-2.22769	0.02903	0.20035	0.42913	0.46687	0.68651	-1.25832	0.20828	-2.18312	0.02903
164259	66	9	3.33	3.55504	1.60008	2.22179	0.02944	-0.40275	2.07998	-0.19363	0.85285	1.40859	0.15896	2.17753	0.02944
2831841	54	21	3.67	1.03230	1.18882	0.86835	0.38809	1.31375	0.55603	2.36274	0.02960	2.14853	0.03167	2.17539	0.02960
176108	64	11	2.18	0.39567	1.52815	0.25892	0.79643	-5.30171	2.06059	-2.64215	0.02961	-1.35570	0.17520	-2.17521	0.02961
361702	71	4	2.00	-4.84593	2.33321	-2.07694	0.04138	-5.12441	2.63994	-1.94111	0.30285	-2.17088	0.02994	-2.17088	0.02994
199677	54	21	2.90	-0.22591	1.19633	-0.18883	0.85075	-1.69433	0.72054	-2.35148	0.03029	-1.66485	0.09594	-2.16629	0.03029
178183	71	4	1.25	-1.25179	2.38028	-0.52590	0.60057	15.34949	0.74591	20.57833	0.03091	1.15586	0.24774	2.15820	0.03091
4094866	57	18	5.89	-2.67099	1.21434	-2.19954	0.03105	-0.62953	0.71924	-0.87527	0.39523	-2.12598	0.03350	-2.15642	0.03105
588471	64	11	315.64	-0.55796	1.51512	-0.36826	0.71376	-0.65723	0.25172	-2.61096	0.03108	-1.78390	0.07444	-2.15600	0.03108
4421070	52	23	2.96	2.26007	1.15937	1.94940	0.05514	1.41776	1.21794	1.16407	0.25810	2.15572	0.03111	2.15572	0.03111
4305372	70	5	27.60	-1.21748	2.14394	-0.56787	0.57189	-0.78765	0.14285	-5.51383	0.03135	-1.92180	0.05463	-2.15256	0.03135
4278525	48	27	3.67	-2.26326	1.08473	-2.08648	0.04048	-0.59482	0.58923	-1.00949	0.32281	-2.14787	0.03172	-2.14787	0.03172
193778	66	9	3.00	1.88940	1.63297	1.15703	0.25108	3.38041	1.45818	2.31824	0.05959	2.14361	0.03206	2.14361	0.03206
258099	64	11	4.64	3.21945	1.47293	2.18575	0.03209	-1.67410	1.72358	-0.97129	0.35985	0.86810	0.38534	2.14332	0.03209
2331530	71	4	1.50	-1.01006	2.38413	-0.42366	0.67308	-0.81432	0.04125	-19.74055	0.03222	-1.81272	0.06987	-2.14165	0.03222
194129	71	4	2.00	-0.45280	2.39683	-0.18892	0.85069	5.46473	0.27753	19.69075	0.03230	1.38056	0		

Table S4a. Associated taxonomies with Body mass index (BMI) at FDR < 0.05 level^a (Cont.)

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
184925	44	31	20.10	2.26155	1.05596	2.14171	0.03560	0.34729	0.49075	0.70768	0.48500	1.97972	0.04773	2.10146	0.03560
110192	60	15	20.60	-2.78505	1.30157	-2.13976	0.03576	0.42000	0.48975	0.85758	0.40792	-0.89948	0.36840	-2.09960	0.03576
308544	62	13	3.15	-2.46808	1.39302	-1.77175	0.08067	-1.07461	0.82531	-1.30206	0.22209	-2.09857	0.03585	-2.09857	0.03585
1726408	70	5	40.80	-3.88068	2.10091	-1.84714	0.06884	-1.79682	1.12478	-1.59749	0.25125	-2.09786	0.03592	-2.09786	0.03592
577170	14	61	25.00	-0.41519	1.38814	-0.29910	0.76573	-0.68982	0.32135	-2.14666	0.03601	-1.69333	0.09039	-2.09676	0.03601
330469	49	26	7.15	1.46921	1.11305	1.31998	0.19102	-1.06352	0.47785	-2.22562	0.03613	-0.55716	0.57742	-2.09551	0.03613
4399109	53	22	48.32	2.43712	1.14303	2.13216	0.03641	-0.31419	0.51856	-0.60590	0.55175	1.05870	0.28973	2.09237	0.03641
179826	60	15	2.20	-2.81273	1.32039	-2.13023	0.03657	-1.39380	1.58240	-0.88081	0.39572	-2.07877	0.03764	-2.09053	0.03657
218710	67	8	3.75	-2.70719	1.71509	-1.57845	0.11884	-2.70149	1.65583	-1.63151	0.16371	-2.08762	0.03683	-2.08762	0.03683
158415	64	11	104.45	2.82740	1.50078	1.88395	0.06361	0.28307	0.24261	1.16679	0.27690	2.08047	0.03748	2.08047	0.03748
1820776	64	11	40.09	3.11897	1.47180	2.11916	0.03753	-0.61859	0.57961	-1.06726	0.31700	0.76321	0.44534	2.07999	0.03753
122049	54	21	13.14	1.88374	1.17350	1.60523	0.11282	0.67765	0.48177	1.40659	0.17658	2.07677	0.03782	2.07677	0.03782
842594	70	5	2.60	-2.86921	2.14027	-1.34058	0.18427	-3.23578	1.16522	-2.77696	0.10890	-2.07244	0.03822	-2.07244	0.03822
178151	71	4	3.25	-4.07035	2.33554	-1.74279	0.08564	-1.17728	0.43574	-2.70182	0.22567	-2.07213	0.03825	-2.07213	0.03825
336559	19	56	226.68	2.52453	1.19640	2.11010	0.03833	0.06934	0.20970	0.33067	0.74220	1.69727	0.08965	2.07136	0.03833
289452	68	7	1.00	-3.77236	1.78818	-2.10961	0.03837	0.00000	0.00000	0.00000	1.00000	-1.46434	0.14310	-2.07089	0.03837
334336	45	30	6.80	1.18768	1.08547	1.09416	0.27753	1.06640	0.55554	1.91958	0.06554	2.07003	0.03845	2.07003	0.03845
4424598	51	24	3.33	2.35244	1.11805	2.10405	0.03887	-1.73924	1.06467	-1.63359	0.11725	0.35297	0.72411	2.06559	0.03887
184114	25	50	16.10	2.34300	1.11674	2.09880	0.03941	-0.19876	0.38336	-0.51848	0.60655	1.09241	0.27465	2.05990	0.03941
190490	65	10	5.00	-1.62254	1.56411	-1.03735	0.30304	-1.17713	0.52581	-2.23869	0.06019	-2.05719	0.03967	-2.05719	0.03967
195805	67	8	11.75	-2.28720	1.71636	-1.33258	0.18687	-1.13928	0.59315	-1.12927	0.11282	-2.05452	0.03993	-2.05452	0.03993
113542	45	30	17.70	-1.30428	1.08400	-1.20321	0.23284	-0.65992	0.37170	-1.77543	0.08710	-2.05342	0.04003	-2.05342	0.04003
185583	22	53	26.92	2.44084	1.16824	2.08933	0.04021	0.00494	0.33680	0.01468	0.98835	1.46100	0.14402	2.05156	0.04021
2341726	69	6	2.00	4.04615	1.93934	2.08636	0.04049	2.29635	4.02793	0.57011	0.60850	1.81085	0.07016	2.04873	0.04049
179695	71	4	2.50	-2.60565	2.36955	-1.09964	0.27515	1.54608	0.09866	15.67005	0.04057	0.67642	0.49877	2.04788	0.04057
4364405	41	34	10.06	-0.72159	1.09568	-0.65857	0.51227	-1.04422	0.48876	-2.13647	0.04064	-1.91093	0.05601	-2.04716	0.04064
4434579	62	13	83.77	2.86908	1.37671	2.08401	0.04071	0.39284	0.47891	0.82027	0.43118	2.00370	0.04510	2.04648	0.04071
4346374	70	5	2.40	4.37709	2.10059	2.08374	0.04073	-9.62428	4.72320	-2.03766	0.17847	0.49551	0.62024	2.04623	0.04073
216710	28	47	7.55	0.26297	1.12599	0.23355	0.81600	1.31078	0.62517	2.09667	0.04181	1.60382	0.10875	2.03545	0.04181
175612	70	5	65.20	2.38008	2.21210	1.07594	0.28555	-1.76498	0.37282	-4.73417	0.04184	-0.68390	0.49404	-2.03513	0.04184
2298935	20	55	31.00	2.43613	1.17654	2.07058	0.04198	0.11246	0.31250	0.35986	0.72041	1.69111	0.09082	2.03638	0.04198
1945397	66	9	9.00	-3.31040	1.60219	-2.06617	0.04241	-0.17723	1.70936	-0.10368	0.92080	-1.50535	0.13223	-2.02947	0.04241
4333652	67	8	2.13	0.69519	1.73325	0.40109	0.68954	-2.65548	0.98279	-2.70199	0.04268	-1.15069	0.24986	-2.02680	0.04268
4457064	59	16	11.19	-2.73032	1.32370	-2.06264	0.04276	0.29097	0.94391	0.30826	0.76277	-1.21922	0.22276	-2.02609	0.04276
3648884	62	13	5.62	-2.82765	1.37547	-2.05577	0.04343	-0.51233	1.25193	-0.40923	0.69100	-1.70910	0.08743	-2.01953	0.04343
4460786	61	14	5.00	-1.10821	1.37029	-0.80874	0.42133	-1.49831	0.65685	-2.28105	0.04346	-1.99646	0.04588	-2.01930	0.04346
189007	67	8	2.00	-0.98619	1.73488	-0.56845	0.57150	-7.39027	2.75546	-2.68205	0.04371	-1.82623	0.06782	-2.01683	0.04371
4445673	49	26	34.08	2.24509	1.09393	2.05232	0.04377	0.04805	0.31897	0.15065	0.88157	1.53104	0.12576	2.01624	0.04377
1736067	67	8	3.38	3.52071	1.71649	2.05111	0.04390	-0.56620	1.98127	-0.28578	0.78651	1.23337	0.21744	2.01509	0.04390
181466	69	6	3.17	-1.91269	1.96122	-0.97525	0.33270	-4.42934	1.50382	-2.94539	0.06025	-2.01360	0.04405	-2.01360	0.04405
4460021	54	21	8.24	-0.49680	1.19418	-0.41602	0.67863	-1.84935	0.85438	-2.16455	0.04411	-1.71642	0.08609	-2.01306	0.04411
193129	50	25	5.52	0.62969	1.14732	0.54884	0.58481	-1.27098	0.59662	-2.13031	0.04457	-1.03400	0.30114	-2.00866	0.04457
189208	55	20	3.80	0.53183	1.22099	0.43557	0.66445	-2.07842	0.95904	-2.16718	0.04471	-1.11268	0.26585	-2.00734	0.04471
1146771	69	6	2.83	-2.99570	1.94728	-1.53841	0.12833	-4.52146	2.66476	-1.69676	0.18831	-2.00557	0.04490	-2.00557	0.04490
354334	66	9	2.89	0.89699	1.64555	0.54510	0.58737	-6.66461	2.63811	-2.52628	0.04490	-1.03442	0.30094	-2.00555	0.04490
185575	14	61	187.34	2.82522	1.38650	2.03767	0.04526	0.03489	0.26164	0.13337	0.89436	1.50969	0.13112	2.00224	0.04526
583134	71	4	2.50	-4.73459	2.32651	-2.03506	0.04553	0.75144	1.36740	0.54954	0.68010	-1.12248	0.26166	-1.99975	0.04553
114348	67	8	7.25	1.72984	1.72293	1.00401	0.31874	4.89145	2.10018	2.32906	0.06729	1.99884	0.04563	1.99884	0.04563
2774254	69	6	13.50	-3.90064	1.91989	-2.03170	0.04588	-0.77310	0.87221	-0.88637	0.44070	-1.95695	0.05035	-1.99654	0.04588
845396	69	6	4.00	3.54972	1.92945	1.83976	0.06993	3.20869	2.64739	1.21202	0.31225	1.99609	0.04592	1.99609	0.04592
198248	56	19	23.58	0.75399	1.23875	0.60867	0.54466	-1.08786	0.50268	-2.16411	0.04593	-0.98308	0.32557	-1.99607	0.04593
180826	45	30	4.87	2.16642	1.06713	2.03014	0.04604	0.38402	0.72907	0.52673	0.60268	1.77880	0.07527	1.99505	0.04604
4434334	51	24	9.75	2.26822	1.11790	2.02899	0.04616	-0.12231	0.69743	-0.17537	0.86247	1.28744	0.19794	1.99395	0.04616
3211875	25	50	7.50	-0.22260	1.13740	-0.19571	0.84539	-1.06646	0.52118	-2.04622	0.04635	-1.54657	0.12197	-1.99218	0.04635
25461	70	5	1.60	-1.34377	2.14117	-0.62758	0.53226	15.08178	3.37368	4.47042	0.04657	0.96564	0.33422	1.99018	0.04657
4472721	4	71	28.08	-0.06419	2.43931	-0.02632	0.97908	-0.71691	0.35412	-2.02450	0.04685	-1.42404	0.15444	-1.98767	0.04685
184534	66	9	14.67	-2.23082	1.63543	-1.36405	0.17680	-1.14200	0.68155	-1.67561	0.14483	-1.98605	0.04703	-1.98605	0.04703
125270	61	14	3.50	-2.71407	1.34532	-2.01742	0.04738	-0.33335	1.00853	-0.33053	0.74721	-1.63003	0.10310	-1.98289	0.04738
2932557	61	14	2.79	2.40449	1.42134	1.69171	0.09503	-2.14154	0.96296	-2.22392	0.04803	-0.21751	0.82781	-1.97706	0.04803
2119418	32	43	269.07	1.37740	1.07161	1.28535	0.20279	0.37847	0.24449	1.54802	0.12949	1.97265	0.04854	1.97265	0.04854
1139021	55	20	43.05	1.37799	1.20764	1.14106	0.25763	-0.95896	0.45177	-2.12265	0.04877	-0.59296	0.55320	-1.97060	0.04877
158625	70	5	2.80	-4.19743	2.09648	-2.00213	0.04904	0.59973	2.34912	0.25530	0.82235	-1.23300	0.21757	-1.96826	0.04904
519880	70	5	3.80	2.48061	2.15851	1.14922	0.25427	-27.04683	6.23030	-4.34118	0.04918	-0.58476	0.55871	-1.96702	0.0

Table S4b. OTUs associated with Triglycerides at FDR < 0.05 level ^a

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
195123	59	16	3.75	-2.21729	24.85185	-0.08922	0.92915	48.95492	8.02948	6.09690	0.00004	2.84996	0.00437	4.11935	0.00004
2388088	58	17	3.82	95.10042	21.79403	4.36360	0.00004	39.05425	31.13143	1.25450	0.23020	3.74494	0.00018	4.09631	0.00004
178151	71	4	3.25	172.47685	40.31464	4.27827	0.00006	-248.98487	0.60620	-410.73177	0.00155	0.60777	0.54334	4.02468	0.00006
4442508	71	4	6.50	171.59973	40.95988	4.18946	0.00008	157.78946	81.41094	1.93818	0.30324	3.52082	0.00043	3.94968	0.00008
3327894	3	72	136.31	-193.62657	46.67167	-4.14870	0.00009	-1.56333	3.09463	-0.50518	0.61505	-3.12399	0.00178	-3.91510	0.00009
4437746	70	5	10.80	151.71499	36.61591	4.14342	0.00009	19.86678	73.27994	0.27111	0.81173	2.93366	0.00335	3.91062	0.00009
163494	59	16	3.44	19.66282	24.77447	0.79367	0.42999	128.77073	24.77472	5.19767	0.00017	3.21483	0.00131	3.75726	0.00017
177100	71	4	1.25	131.18782	42.91750	3.05674	0.00314	506.00000	16.58312	30.51295	0.02086	3.72249	0.00020	3.72249	0.00020
175729	54	21	4.29	-44.07819	22.18797	-1.98658	0.05078	-32.84108	8.43923	-3.89148	0.00107	-3.69459	0.00022	-3.69459	0.00022
174439	61	14	3.29	-54.76893	25.21380	-2.17218	0.03314	-27.31647	6.88011	-3.97036	0.00219	-3.67198	0.00024	-3.67198	0.00024
182653	70	5	8.80	142.58930	37.43193	3.80930	0.00029	1.45473	93.77599	0.01551	0.98903	2.57188	0.01011	3.62344	0.00029
318970	67	8	1.63	26.44487	34.24850	0.77215	0.44255	203.03638	23.93529	8.48272	0.00037	3.05864	0.00222	3.55768	0.00037
583134	71	4	2.50	136.03998	42.37249	3.21057	0.00198	261.23319	25.75264	10.14394	0.06256	3.50406	0.00046	3.50406	0.00046
4421273	40	35	9.49	-44.42512	19.87763	-2.23493	0.02853	-15.02770	5.07366	-2.96190	0.00572	-3.50243	0.00046	-3.50243	0.00046
3302039	68	7	2.29	102.11586	33.20857	3.07498	0.00297	175.24412	64.28930	2.72587	0.05267	3.47051	0.00052	3.47051	0.00052
187178	51	24	56.92	25.94119	21.60963	1.20045	0.23390	33.32894	8.43313	3.95214	0.00073	3.23079	0.00123	3.37866	0.00073
130763	70	5	9.20	133.13555	37.76472	3.52539	0.00074	73.01093	95.72293	0.76273	0.52531	2.83523	0.00458	3.74444	0.00074
519763	70	5	11.40	129.62156	37.96771	3.41400	0.00105	105.28224	75.14789	1.40100	0.29622	3.05477	0.00225	3.27552	0.00105
4020502	17	58	96.33	-78.91159	23.14056	-3.41010	0.00107	0.41016	3.01656	0.13597	0.89234	-2.21798	0.02656	-3.27205	0.00107
4379646	67	8	1.75	103.46286	30.53319	3.38854	0.00114	128.10936	312.41797	0.41006	0.69874	2.57375	0.01006	3.25282	0.00114
571642	40	35	5.00	-65.66006	19.57723	-3.35390	0.00127	-5.44005	7.57639	-0.71803	0.47795	-2.77997	0.00544	-3.22188	0.00127
170462	68	7	4.00	109.33597	32.83151	3.33021	0.00137	24.93031	105.12404	0.23715	0.82419	2.42031	0.01551	3.20068	0.00137
4444262	65	10	13.70	92.70458	27.91868	3.32052	0.00141	-20.86735	25.49646	-0.81844	0.44007	1.71115	0.08705	3.19200	0.00141
4378683	52	23	15.17	67.83950	20.54066	3.30269	0.00149	0.75949	16.67221	0.04555	0.96412	2.27759	0.02275	3.17601	0.00149
4469032	70	5	5.80	124.62234	37.97335	3.28184	0.00159	-59.90431	113.98038	-0.52557	0.65165	1.91330	0.05571	3.15730	0.00159
194089	68	7	2.14	95.52322	33.55399	2.84685	0.00575	248.08042	111.32062	2.22852	0.08976	3.15259	0.00162	3.15259	0.00162
309391	71	4	3.00	137.43994	42.12865	3.26239	0.00169	210.19327	157.74733	1.33247	0.40986	2.80294	0.00506	3.13982	0.00169
1835985	68	7	4.71	60.51589	34.16059	1.77151	0.08071	217.96757	43.58857	5.00057	0.00749	3.12608	0.00177	3.12608	0.00177
151870	70	5	4.80	125.13938	38.57312	3.24421	0.00179	-18.51976	99.83160	-0.18551	0.86994	2.09285	0.03636	3.12347	0.00179
4428929	69	6	1.83	113.13588	34.92739	3.23917	0.00182	-67.74654	141.44090	-0.47897	0.66470	1.89894	0.05757	3.11893	0.00182
191043	70	5	4.20	122.23330	38.16084	3.20311	0.00203	36.30152	169.23000	0.21451	0.85003	2.31613	0.02055	3.08643	0.00203
326662	70	5	1.40	121.82848	38.09906	3.19768	0.00206	-132.36471	222.86241	-0.59393	0.61279	1.82110	0.06859	3.08153	0.00206
194053	71	4	1.50	136.71756	43.00021	3.17946	0.00218	-381.49057	268.41610	-1.42127	0.39034	1.55993	0.11878	3.06508	0.00218
362955	66	9	16.44	-4.71435	31.37827	-0.15024	0.88099	41.96079	8.22838	5.09952	0.00222	2.05702	0.03968	3.05877	0.00222
186352	29	46	8.22	-62.79353	19.85743	-3.16222	0.00229	-3.54220	6.64189	-0.53331	0.59656	-2.53062	0.01139	-3.04949	0.00229
166689	69	6	4.00	110.94030	35.10651	3.16011	0.00231	-3.79122	117.39124	-0.03230	0.97626	1.21393	0.03285	3.04758	0.00231
191361	21	54	17.31	-66.88559	21.18813	-3.15675	0.00233	-2.84727	5.68569	-0.50078	0.61868	-2.50476	0.01225	-3.04454	0.00233
168439	44	31	33.58	33.56790	21.09612	1.59119	0.11595	25.12707	8.50586	2.95409	0.00629	3.04354	0.00234	3.04354	0.00234
183619	70	5	2.20	119.41571	38.42977	3.10738	0.00270	25.12318	131.64275	0.19084	0.86627	2.24027	0.02507	2.99982	0.00270
4343184	63	12	2.75	81.05727	26.17627	3.09659	0.00279	-53.77380	48.28355	-1.11371	0.29426	1.37265	0.16986	2.99003	0.00279
185802	31	44	91.45	-51.23176	19.71249	-2.59895	0.01134	-6.18315	3.56937	-1.73228	0.09074	-2.98658	0.00282	-2.98658	0.00282
179384	68	7	1.86	74.04184	33.77213	2.19239	0.03158	196.52116	67.13172	2.92740	0.04293	2.95151	0.00316	2.95151	0.00316
4331360	22	53	13.06	-0.47368	22.36086	-0.02118	0.98316	-26.35196	8.49753	-3.10113	0.00317	-2.10175	0.03557	-2.95122	0.00317
4391326	69	6	14.17	107.80488	35.36310	3.04851	0.00322	-30.98809	61.95396	-0.50018	0.65134	1.76382	0.07776	2.94633	0.00322
4468466	18	57	118.93	-41.07753	23.88759	-1.71962	0.08980	-8.62870	3.44402	-2.50542	0.01528	-2.91482	0.00356	-2.91482	0.00356
174571	64	11	2.82	72.60399	27.51598	2.63861	0.01020	87.88975	52.13012	1.68597	0.13029	2.88645	0.00390	2.88645	0.00390
230479	70	5	4.00	114.34613	38.40503	2.97737	0.00396	25.79741	144.49669	0.17853	0.87475	2.14895	0.03164	2.88145	0.00396
300374	43	32	6.13	-41.32386	20.28601	-2.03706	0.04532	-14.82788	6.82569	-2.17236	0.03814	-2.88143	0.00396	-2.88143	0.00396
169364	61	14	6.64	29.93819	25.80473	1.16018	0.24981	74.83746	20.62621	3.62827	0.00397	2.85067	0.00436	2.88064	0.00397
199524	61	14	1.29	43.37672	26.09974	1.66196	0.10087	186.45194	65.29559	2.85551	0.01564	2.86931	0.00411	2.86931	0.00411
4423553	37	38	12.08	-47.18898	19.60270	-2.40727	0.01864	-10.61398	6.07017	-1.74855	0.08914	-2.86568	0.00416	-2.86568	0.00416
176269	9	66	145.11	-87.11626	29.47532	-2.95557	0.00422	-1.38344	2.83137	-0.48861	0.62681	-2.36720	0.01792	-2.86151	0.00422
192462	20	55	44.05	-8.98919	22.91413	-0.39230	0.69600	17.92372	5.99021	2.99217	0.00423	1.74643	0.08074	2.86055	0.00423
4450415	70	5	2.60	100.83604	39.35611	2.56214	0.01250	198.67864	76.91674	2.58304	0.12286	2.85722	0.00427	2.85722	0.00427
168071	30	45	10.31	-58.05155	19.67982	-2.94980	0.00429	-1.37593	7.74837	-0.17758	0.85991	-2.14446	0.03200	-2.85624	0.00429
292041	71	4	1.50	13.80766	45.10377	0.30613	0.76039	-153.36851	1.04496	-146.77020	0.00434	-1.80139	0.07164	-2.85252	0.00434
2182669	70	5	6.80	7.27226	41.10219	0.17693	0.86006	-16.60887	1.10668	-15.00779	0.00441	-1.88862	0.05894	-2.84721	0.00441
185864	56	19	4.95	39.36651	23.08040	1.70563	0.09239	56.64785	21.84122	2.59362	0.01959	2.84044	0.00451	2.84044	0.00451
174288	49	26	3.69	-59.12423	20.26925	-2.91694	0.00471	8.63900	9.37280	0.92171	0.36625	-1.35950	0.17399	-2.82614	0.00471
185034	31	44	11.86	-35.19822	20.25176	-1.73803	0.08648	-15.02325	6.37969	-2.35485	0.02340	-2.81508	0.00488	-2.81508	0.00488
2157225	65	10	2.40	81.87876	28.23526	2.89988	0.00495	27.18942	78.15937	0.34787					

Table S4b. OTUs associated with Triglycerides at FDR < 0.05 level ^a (Cont.)

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
749837	61	14	2.71	67.39075	24.78876	2.71860	0.00821	61.09484	73.43342	0.83198	0.42312	2.43554	0.01487	2.64335	0.00821
190639	24	51	24.22	-47.30604	21.03556	-2.24886	0.02758	-7.42920	4.76555	-1.55894	0.12558	-2.64101	0.00827	-2.64101	0.00827
1010113	54	21	14.67	2.02378	22.58537	0.08961	0.92885	13.11867	4.43086	2.96075	0.00837	1.92764	0.05390	2.63680	0.00837
158950	69	6	5.83	92.56582	36.10961	2.56347	0.01245	81.23794	52.42039	1.54974	0.21898	2.63632	0.00838	2.63632	0.00838
4473788	66	9	2.11	80.38916	29.73540	2.70348	0.00856	-224.40974	86.06161	-2.60755	0.04025	0.40884	0.68266	2.62934	0.00856
132892	60	15	3.40	65.06886	24.21174	2.68749	0.00894	43.43479	50.67772	0.85708	0.40819	2.43357	0.01495	2.61450	0.00894
196982	58	17	2.88	-31.17575	24.04551	-1.29653	0.19893	40.77553	13.46519	3.02822	0.00903	0.93780	0.34835	2.61085	0.00903
4412540	23	52	179.63	-5.67105	22.03160	-0.25741	0.79760	-13.80607	5.08265	-2.71631	0.00910	-2.02580	0.04279	-2.60845	0.00910
336627	56	19	2.84	14.63388	23.29516	0.62819	0.53186	79.54714	26.82041	2.96592	0.00910	2.28628	0.02224	2.60813	0.00910
4450214	31	44	39.32	-27.13816	20.72865	-1.30921	0.19463	-18.00920	7.26243	-2.47977	0.01735	-2.59954	0.00934	-2.59954	0.00934
193534	68	7	2.43	88.73102	33.25662	2.66807	0.00942	26.57816	107.71742	0.24674	0.81726	1.99938	0.04557	2.59648	0.00942
188966	70	5	2.20	103.46094	38.79245	2.66704	0.00944	-246.62377	131.58052	-1.87432	0.20174	0.93260	0.35103	2.59552	0.00944
825808	43	32	39.38	10.55821	19.96602	-2.03136	0.04591	-7.34414	4.24532	-1.72994	0.09427	-2.59473	0.00947	-2.59473	0.00947
4407515	58	17	5.06	61.82362	23.20214	2.66457	0.00951	16.04877	27.04859	0.59333	0.56242	2.24327	0.02488	2.59322	0.00951
782953	15	60	127.50	-64.10696	24.30549	-2.63755	0.01023	3.17170	3.00913	1.05403	0.29632	-1.07745	0.28128	-2.56811	0.01023
194488	71	4	2.50	-58.87229	45.04644	-1.30692	0.19540	-93.92308	2.88128	-32.59769	0.01952	-2.56691	0.01026	-2.56691	0.01026
180215	70	5	2.00	-16.75253	40.98337	-0.40876	0.68393	33.63396	3.45490	9.73514	0.01039	1.52420	0.12746	2.56266	0.01039
173863	31	44	5.07	0.12133	21.18528	0.00573	0.99545	-29.39359	10.94683	-2.68512	0.01042	-1.80735	0.07071	-2.56169	0.01042
179695	71	4	2.50	113.53189	43.22146	2.62675	0.01053	51.62255	309.10137	0.16701	0.89465	1.90246	0.05711	2.55806	0.01053
147969	35	40	69.65	-10.64780	19.98958	-0.53345	0.04569	-6.27839	3.79455	-1.65458	0.10647	-2.55441	0.01064	-2.55441	0.01064
190301	56	19	3.21	-58.46819	22.37850	-2.61270	0.01093	0.98536	9.07411	0.10859	0.91488	-1.72399	0.08471	-2.54498	0.01093
183147	70	5	1.60	101.73995	39.01166	2.60794	0.01107	247.54682	320.13402	0.77326	0.52025	2.25107	0.02438	2.54054	0.01107
190100	70	5	1.60	101.91415	39.09090	2.60711	0.01109	156.77801	190.05281	0.82492	0.49615	2.27712	0.02278	2.53977	0.01109
2407149	33	42	5.76	-51.15777	19.62291	-2.60704	0.01109	-2.30358	6.35314	-0.36259	0.71887	-2.05038	0.04033	-2.53971	0.01109
187751	45	30	57.10	26.28048	20.51239	1.28120	0.20423	11.23512	4.55952	2.46410	0.02039	2.53755	0.01116	2.53755	0.01116
194471	63	12	1.92	47.53048	27.19976	1.74746	0.08482	106.06336	50.00205	2.12118	0.06292	2.53367	0.01129	2.53367	0.01129
199286	40	35	9.26	-31.24569	20.12071	-1.55291	0.12483	-14.49630	6.82252	-2.12477	0.04142	-2.52725	0.01150	-2.52725	0.01150
3747551	68	7	1.57	87.79126	33.86141	2.59266	0.01153	-83.50580	122.59605	-0.68115	0.53317	1.34572	0.17839	2.52631	0.01153
206513	51	24	5.46	-31.68956	21.44267	-1.47787	0.14380	-18.59210	8.25479	-2.25228	0.03513	-2.52340	0.01162	-2.52340	0.01162
172233	63	12	2.00	48.06567	27.16067	1.76968	0.08101	112.31128	54.64587	2.05526	0.07002	2.51492	0.01191	2.51492	0.01191
4350477	57	18	5.28	59.39946	23.02421	2.57987	0.01192	-17.68972	26.12239	-0.67719	0.50860	1.31052	0.19002	2.51438	0.01192
4405104	39	36	18.58	-22.27857	20.13056	-1.10670	0.27211	-23.49909	9.06066	-2.59353	0.01406	-2.51311	0.01197	-2.51311	0.01197
325850	63	12	69.92	68.47034	26.64869	2.56937	0.01226	3.15025	20.56974	0.15315	0.88166	1.87627	0.06062	2.50458	0.01226
189937	59	16	2.38	45.52820	24.54553	1.85485	0.06771	75.73118	41.03841	1.84537	0.08788	2.49864	0.01247	2.49864	0.01247
365621	70	5	2.40	100.81869	39.55011	2.54914	0.01293	-602.90982	406.31388	-1.48385	0.27611	0.98754	0.32338	2.48569	0.01293
3236435	37	38	40.37	-49.74473	19.54899	-2.54462	0.01308	6.70704	5.33173	1.25795	0.21674	-0.88121	0.37820	-2.48147	0.01308
2565100	67	8	6.25	38.95856	32.90137	1.18410	0.24027	179.87547	53.39242	3.36893	0.01991	2.47650	0.01327	2.47650	0.01327
4326869	71	4	2.75	-51.57389	44.72479	-1.15314	0.25267	-264.64863	7.72278	-34.26855	0.01857	-2.47339	0.01338	-2.47339	0.01338
197499	33	42	8.17	-50.11530	19.77543	-2.53422	0.01345	-1.32462	6.47480	-0.20458	0.83896	-1.89149	0.05856	-2.47175	0.01345
3507744	68	7	4.57	-20.35545	34.80143	-0.58490	0.56044	59.06433	13.99864	4.21929	0.01349	1.33537	0.18175	2.47069	0.01349
178242	46	29	7.38	-50.73766	20.07670	-2.52719	0.01369	6.94856	6.90439	1.00640	0.32350	-1.04502	0.29601	-2.46518	0.01369
196371	69	6	3.33	91.58361	36.28301	2.52415	0.01380	51.63088	136.83958	0.37731	0.73105	1.98418	0.04724	2.46233	0.01380
310380	70	5	4.00	-34.23186	41.37962	-0.82726	0.41082	-241.29679	28.90696	-8.34736	0.01405	-2.31820	0.02044	-2.45599	0.01405
4405423	60	15	4.40	4.75524	25.77278	0.18451	0.85413	-51.18804	17.82959	-2.87096	0.01406	-1.60638	0.10819	-2.45561	0.01406
302049	58	17	3.94	48.30662	23.55919	2.05044	0.04396	46.90615	30.37866	1.54405	0.14488	2.45530	0.01408	2.45530	0.01408
195081	48	27	6.33	-50.82587	20.28079	-2.50611	0.01447	11.31309	7.16308	1.57936	0.12734	-0.65110	0.51498	-2.44545	0.01447
184465	58	17	1.94	34.91331	24.11439	1.44782	0.15201	82.67188	37.16405	2.22451	0.04307	2.44340	0.01455	2.44340	0.01455
2700883	18	57	11.93	24.68613	23.86645	1.03434	0.30444	16.66597	6.68503	2.49303	0.01576	2.43338	0.01496	2.43338	0.01496
189334	70	5	3.00	97.46562	39.13854	2.49027	0.01507	6.63829	223.16518	0.02975	0.97897	1.73735	0.08233	2.43062	0.01507
4449427	31	44	29.41	49.24041	19.79426	2.48761	0.01518	0.87771	8.31831	0.10551	0.91648	1.79110	0.07328	2.42813	0.01518
183681	43	32	5.41	-49.00989	19.71313	-2.48615	0.01523	0.24300	6.87756	0.02460	0.98054	-1.69873	0.08937	-2.42676	0.01523
2017729	51	24	3.92	-8.27528	22.25828	-0.37178	0.71115	68.63617	26.04498	2.63529	0.01547	1.45018	0.14701	2.42119	0.01547
191792	19	56	14.52	-55.41859	22.38435	-2.47577	0.01565	1.85411	5.15189	0.35989	0.72036	-1.45597	0.14540	-2.41703	0.01565
4457427	25	50	41.32	-51.16154	20.70227	-2.47130	0.01583	-1.66139	4.10426	-0.40480	0.68746	-1.99060	0.04652	-2.41284	0.01583
180421	62	13	3.85	36.64920	26.81960	1.36651	0.17603	109.53120	46.94106	2.33338	0.04181	2.39603	0.01657	2.39603	0.01657
4479397	70	5	1.60	56.79051	40.10896	1.41591	0.16111	62.48330	14.09396	4.43334	0.04730	2.39352	0.01669	2.39352	0.01669
184996	70	5	2.80	-48.81048	40.66515	-1.20030	0.23396	-39.03632	6.78003	-5.75754	0.02887	-2.38686	0.01699	-2.38686	0.01699
322835	38	37	7.84	-47.77160	19.55197	-2.44331	0.01701	-4.88765	6.97818	-0.70042	0.48843	-2.17745	0.02945	-2.38658	0.01701
4301511	33	42	11.90	-47.90802	19.66652	-2.43602	0.01733	-4.48482	6.98823	-0.65014	0.51941	-2.13827	0.03249	-2.37973	0.01733
323135	48	27	24.15	-47.42779	20.40843	-2.32393	0.02296	-7.18108	6.46540	-1.11069	0.27770	-2.37564	0.01752	-2.37564	0.01752
315846	67	8	20.50	-6.10638	33.58215	-0.18183	0.85622	16.45910	4.73879	3.47327	0.01779	1.54775	0.12168	2.37003	0.01779
349246	69	6	2.00	90.47741											

Table S4b. OTUs associated with Triglycerides at FDR < 0.05 level ^a (Cont.)

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
186133	60	15	12.33	-45.98717	24.77520	-1.85618	0.06752	-8.12557	5.27906	-1.53921	0.14970	-2.31139	0.02081	-2.31139	0.02081
198754	70	5	2.80	-56.93224	40.10147	-1.41970	0.16001	-21.44762	5.64250	-3.80108	0.06277	-2.30933	0.02093	-2.30933	0.02093
4079463	59	16	4.19	-22.29402	24.91801	-0.89470	0.37393	-24.19937	9.22253	-2.62394	0.02103	-2.26035	0.02380	-2.30748	0.02103
316732	14	61	101.10	7.89002	26.03172	0.30309	0.76269	-11.71085	4.93732	-2.37190	0.02104	-1.41802	0.15618	-2.30733	0.02104
3997242	71	4	1.00	103.78485	44.00119	2.35868	0.02106	0.00000	0.00000	0.00000	1.00000	1.63127	0.10283	-2.30696	0.02106
187883	64	11	2.45	-39.76123	28.54934	-1.39272	0.16799	-28.67722	13.13143	-2.18386	0.06050	-2.30223	0.02132	-2.30223	0.02132
198930	67	8	2.88	-41.32565	32.50083	-1.27153	0.20763	-54.06759	20.58156	-2.62699	0.04670	-2.29745	0.02159	-2.29745	0.02159
4458576	23	52	72.92	-0.53224	22.12432	-0.02406	0.98087	14.75022	6.21511	2.37328	0.02160	1.60754	0.10794	-2.29738	0.02160
3903651	21	54	29.11	29.56909	22.39833	1.32015	0.19097	12.75872	6.44541	1.97950	0.05317	2.29192	0.02191	2.29192	0.02191
196664	21	54	29.11	29.56909	22.39833	1.32015	0.19097	12.75872	6.44541	1.97950	0.05317	2.29192	0.02191	2.29192	0.02191
4447950	14	61	232.70	17.30970	26.17808	0.66123	0.51058	8.25941	3.51021	2.35297	0.02204	2.08432	0.03713	2.28973	0.02204
2403301	57	18	52.33	-38.44138	23.67794	-1.62351	0.10885	-8.67227	4.98683	-1.73903	0.10250	-2.28835	0.02212	-2.28835	0.02212
192244	58	17	5.65	-54.76460	23.49365	-2.33104	0.02256	0.90976	8.61323	0.10562	0.91738	-1.53948	0.12369	-2.28088	0.02256
179267	45	30	6.03	-40.35553	20.16209	-2.00156	0.04910	-8.31587	6.45589	-1.28811	0.20864	-2.28044	0.02258	-2.28044	0.02258
198587	23	52	10.27	-37.36723	21.56507	-1.73277	0.08742	-10.25507	6.66537	-1.53856	0.13035	-2.27824	0.02271	-2.27824	0.02271
189997	71	4	1.50	1.15733	45.13493	0.02564	0.97961	166.77451	6.09576	27.35910	0.02326	1.62261	0.10467	2.26916	0.02326
4463532	50	25	4.52	21.41429	21.45106	0.99829	0.32148	38.86307	16.39041	2.37109	0.02691	2.26569	0.02347	2.26569	0.02347
198956	46	29	2.59	-33.35409	20.74317	-1.60796	0.11222	-17.80628	10.66404	-1.66975	0.10697	-2.26293	0.02364	-2.26293	0.02364
180352	70	5	4.00	-68.84537	39.89800	-1.72553	0.08872	22.36105	3.50075	6.38750	0.02364	0.39646	0.69176	2.26287	0.02364
232222	70	5	6.60	-35.97630	40.59184	-0.88629	0.37841	21.25173	3.33615	6.37014	0.02377	0.97582	0.32915	2.26085	0.02377
191483	60	15	2.33	20.45718	25.24011	0.81050	0.42032	59.95420	23.17769	2.58672	0.02380	2.16812	0.03015	2.26032	0.02380
4329132	69	6	2.83	63.65980	36.87160	1.72653	0.08854	202.90912	100.63059	2.01638	0.13714	2.25545	0.02411	2.25545	0.02411
158855	67	8	11.63	-39.80098	32.51657	-1.22402	0.22493	19.67791	6.15779	3.19561	0.02411	0.73667	0.46132	2.25532	0.02411
183686	51	24	11.63	44.78100	21.09007	2.12332	0.03716	16.24957	14.36342	1.13132	0.27068	2.25246	0.02429	2.25246	0.02429
840376	64	11	17.09	0.58765	28.66581	0.02050	0.98370	32.59523	11.80323	2.76155	0.02462	1.60358	0.10881	2.24738	0.02462
174443	52	23	5.65	-39.41158	21.55842	-1.82813	0.07167	-16.19527	11.34105	-1.42802	0.16872	-2.24686	0.02465	-2.24686	0.02465
4469007	13	62	62.66	-4.60304	26.81843	-0.17164	0.86420	-11.39746	4.96020	-2.29778	0.02514	-1.70435	0.08832	-2.23929	0.02514
35260	69	6	14.50	-69.94902	36.46915	-1.91803	0.05907	-10.08927	6.17893	-1.63285	0.20101	-2.23894	0.02516	-2.23894	0.02516
552235	68	7	4.57	76.96918	33.66694	2.28619	0.02519	4.23333	82.63947	0.05123	0.96160	1.61692	0.10590	2.23852	0.02519
4398588	63	12	4.00	-10.40146	27.71216	-0.37534	0.70851	-32.59845	12.17097	-2.67838	0.02527	-1.84630	0.06485	-2.23720	0.02527
175148	50	25	5.04	-47.39022	20.87941	-2.26971	0.02622	-5.99276	7.73416	-0.77484	0.44668	-2.10993	0.03486	-2.22293	0.02622
180307	70	5	1.80	89.15115	39.32119	2.26725	0.02638	607.14019	587.78010	1.03294	0.41018	1.15256	0.03135	2.22060	0.02638
4299126	56	19	41.21	37.91930	22.98491	1.64975	0.10335	23.75111	14.91958	1.59194	0.13096	2.21972	0.02644	2.21972	0.02644
186732	18	57	11.37	1.13647	23.83635	0.04768	0.96210	17.89702	7.84218	2.28215	0.02645	1.60309	0.10891	2.21960	0.02645
2497335	29	46	20.37	-13.31593	20.76661	-0.64122	0.52342	16.20784	7.06461	2.29423	0.02672	1.11542	0.26467	2.21554	0.02672
208539	67	8	3.38	71.79815	31.74409	2.26178	0.02673	-64.47749	60.90414	-1.05867	0.33819	0.88931	0.37384	2.21542	0.02673
4469576	29	46	37.48	17.66814	20.76826	0.85073	0.39774	14.66200	6.39131	2.29405	0.02673	2.16448	0.03043	2.21537	0.02673
197890	60	15	4.20	43.02557	24.95242	1.72430	0.08894	47.54074	31.16646	1.52538	0.15308	2.21306	0.02689	2.21306	0.02689
188047	12	63	20.89	-60.93498	27.00489	-2.25644	0.02708	-4.9129	4.87253	-0.86019	0.39311	-2.16683	0.03025	-2.21037	0.02708
176062	41	34	33.12	-36.87512	20.92547	-1.76221	0.08228	-8.99778	6.34090	-1.41901	0.16587	-2.20844	0.02721	-2.20844	0.02721
194696	69	6	2.50	82.79768	36.84148	2.24740	0.02768	-196.58317	112.94388	-1.74054	0.18014	0.60915	0.54242	2.20181	0.02768
263518	41	34	22.88	-28.78536	20.23656	-1.42244	0.15922	-9.69650	5.56465	-1.74824	0.09032	-2.19303	0.02831	-2.19303	0.02831
191180	68	7	2.14	75.36356	33.72509	2.23464	0.02854	-219.62505	120.35642	-1.82479	0.14208	0.51028	0.60986	2.18972	0.02854
179826	60	15	2.20	14.66326	25.72088	0.57009	0.57039	100.85475	40.56138	2.48647	0.02862	1.94893	0.05130	2.18873	0.02862
180257	69	6	2.50	77.14763	36.31339	2.12450	0.03706	129.26654	107.05085	1.20752	0.31375	2.18670	0.02876	2.18670	0.02876
291090	65	10	19.70	64.37866	28.85791	2.23088	0.02880	-0.61572	28.62875	-0.02151	0.98344	1.53117	0.12573	2.18615	0.02880
180462	68	7	2.29	75.31237	33.75962	2.23084	0.02881	-232.69295	106.65093	-2.18182	0.09455	0.36363	0.71613	2.18611	0.02881
190980	71	4	2.00	97.60779	43.75834	2.23061	0.02882	261.58737	367.86899	0.71109	0.60649	1.90989	0.05615	2.18589	0.02882
186468	62	13	3.46	44.48865	26.27467	1.69321	0.09474	53.20290	34.67023	1.53454	0.15591	2.18489	0.02890	2.18489	0.02890
175535	13	62	10.56	-59.11020	26.52919	-2.22812	0.02900	-5.67483	6.21380	-0.91326	0.36482	-2.18478	0.02890	-2.18478	0.02890
177040	58	17	4.71	11.46621	24.26971	0.47245	0.63803	-6.17285	25.60002	-2.42862	0.02922	1.87451	0.06086	2.18051	0.02922
311947	52	23	38.52	-37.15756	21.55272	-1.72403	0.08899	-9.96520	6.95519	-1.43277	0.16737	-2.17890	0.02934	-2.17890	0.02934
183030	65	10	4.90	-64.18760	28.87632	-2.22285	0.02937	1.84904	8.02197	0.23050	0.82430	-1.38346	0.16652	-2.17853	0.02937
562244	67	8	18.25	-3.84209	32.90030	-0.11678	0.90736	22.59323	7.48547	3.01828	0.02947	1.45714	0.14508	2.17708	0.02947
195436	37	38	4.76	-43.80452	19.74541	-2.21847	0.02968	1.87247	6.96292	0.23515	0.81546	-1.37249	0.16991	-2.17438	0.02968
192127	38	37	4.57	-43.53959	19.62766	-2.21828	0.02969	0.04467	5.16672	0.00865	0.99315	-1.53132	0.12569	-2.17420	0.02969
189450	66	9	2.44	58.59327	30.73744	1.90625	0.06061	128.24232	96.21839	1.33283	0.23097	2.17379	0.02972	2.17379	0.02972
850841	68	7	17.14	-30.77180	34.89092	-0.88194	0.38074	7.79352	2.36625	3.29362	0.03011	0.91363	0.36091	2.16860	0.03011
3756485	44	31	5.19	-39.17592	20.29770	-1.93007	0.05754	-10.01165	8.40536	-1.19110	0.24361	-2.16743	0.03020	-2.16743	0.03020
211907	42	33	3.91	-44.44179	20.16538	-2.20387	0.03073	4.32890	6.42731	0.67352	0.50577	-1.05719	0.29042	-2.16052	0.03073
344525	35	40	4.93	-4.66459	20.32584	-0.22949	0.81914	25.76227	11.47582	2.24492	0.03084	1.36508	0.17223	2.15917	0.03084
358781	21	54	282.70	-47.44914	22.04635	-2.15224	0.03473	-2.02599	2.14130	-0.94615	0.34854	-2.15591			

Table S4b. OTUs associated with Triglycerides at FDR < 0.05 level ^a (Cont.)

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
180341	70	5	1.60	-40.02909	40.49389	-0.98852	0.32621	71.01187	13.55847	5.23745	0.03458	0.80010	0.42365	2.11329	0.03458
210095	69	6	2.83	58.72751	36.73604	1.59864	0.11428	340.34626	183.16459	1.85814	0.16012	2.10993	0.03486	2.10993	0.03486
197458	65	10	2.40	-38.12312	29.49843	-1.29238	0.20036	25.08899	9.66463	2.59596	0.03563	0.58021	0.56177	2.10108	0.03563
4427290	43	32	17.88	-25.33008	20.43265	-1.23969	0.21912	12.03329	5.46772	2.20079	0.03587	0.61488	0.53863	2.09845	0.03587
216550	67	8	34.75	43.04540	32.87647	1.30931	0.19459	24.77391	12.09462	2.04834	0.09584	2.09477	0.03619	2.09477	0.03619
184394	57	18	4.67	14.24159	24.28375	0.58647	0.55940	68.76863	29.89382	2.30043	0.03619	1.89397	0.05823	2.09474	0.03619
4439487	62	13	4.31	-51.23971	26.10853	-1.96257	0.05356	-9.66298	8.90679	-1.08490	0.30343	-2.09267	0.03638	-2.09267	0.03638
4479443	65	10	2.90	59.26078	29.01317	2.04255	0.04476	50.29553	49.41583	1.01780	0.32465	2.09010	0.03661	2.09010	0.03661
176318	46	29	31.45	-15.63404	20.78516	-0.75217	0.45440	-14.03128	6.38056	-2.19907	0.03697	-2.00410	0.04506	-2.08612	0.03697
186090	64	11	4.09	55.60762	28.47208	1.95306	0.05470	51.19910	46.58712	1.09900	0.30374	2.08575	0.03700	2.08575	0.03700
215231	42	33	3.91	-41.51987	19.83661	-2.09309	0.03986	-7.80261	8.65428	-0.90159	0.37446	-2.08123	0.03741	-2.08123	0.03741
185584	45	30	5.60	-40.45630	20.39153	-1.98398	0.05107	-8.51460	8.45440	-1.00712	0.32282	-2.07859	0.03766	-2.07859	0.03766
184525	65	10	1.70	-45.66193	29.43911	-1.55106	0.12527	-33.20005	21.10459	-1.57312	0.15969	-2.07828	0.03768	-2.07828	0.03768
4381749	55	20	4.10	-44.80400	22.33716	-2.00581	0.04864	-9.94617	10.03171	-0.99147	0.33536	-2.07547	0.03794	-2.07547	0.03794
191153	11	64	130.27	-58.75910	27.86037	-2.10906	0.03842	-2.52817	4.06322	-0.62221	0.53612	-1.90145	0.05724	-2.07036	0.03842
3474081	70	5	2.00	-28.65714	40.51467	-0.70733	0.48165	48.56801	9.80857	4.95159	0.03845	0.96618	0.33396	2.07004	0.03845
212686	61	14	3.07	45.01801	25.50414	1.78053	0.07921	51.28357	41.40454	1.23860	0.24127	2.06978	0.03847	2.06978	0.03847
176297	68	7	2.00	71.31843	33.83512	2.10782	0.03853	-176.10191	132.65282	-1.32754	0.25503	0.65829	0.51035	2.06919	0.03853
215468	68	7	3.57	-53.75607	34.38502	-1.56336	0.12235	-18.95715	11.25971	-1.68363	0.16754	-2.06837	0.03861	-2.06837	0.03861
4379889	55	20	4.70	16.60081	23.01108	0.72143	0.47298	53.69522	23.99379	2.23788	0.03891	1.96775	0.04910	1.96775	0.03891
195937	27	48	9.63	-43.32982	20.63266	-2.10006	0.03923	-4.16877	6.36709	-0.65474	0.51597	-1.91722	0.05521	-2.06179	0.03923
293883	58	17	13.82	-21.40866	24.10232	-0.88824	0.37737	21.43180	9.43769	2.27087	0.03947	0.83193	0.40545	2.05928	0.03947
4439469	10	65	24.65	13.20769	29.79212	0.44333	0.65886	13.05191	6.21000	2.10176	0.03964	1.76701	0.07723	2.05744	0.03964
188449	67	8	3.50	-66.96702	31.96559	-2.09497	0.03969	3.49068	9.46243	0.36890	0.72731	-1.20790	0.22708	-2.05694	0.03969
193709	21	54	7.06	-46.00061	21.97118	-2.09368	0.03981	7.83309	8.27586	0.94650	0.34836	-0.79049	0.42924	-2.05571	0.03981
3424669	69	6	2.33	75.98308	36.31415	2.09238	0.03993	-2.60735	184.99395	-0.01409	0.98964	1.44355	0.14887	2.05447	0.03993
361507	66	9	143.67	24.05141	31.08120	0.77383	0.44157	14.23496	5.45257	2.61069	0.04008	1.99576	0.04596	2.05289	0.04008
177828	63	12	3.08	-56.11179	26.86050	-2.08901	0.04024	-6.32096	9.09121	-0.69528	0.50443	-1.92247	0.05455	-2.05125	0.04024
2066056	59	16	7.56	-50.49231	24.17159	-2.08891	0.04025	4.21614	6.71089	0.62825	0.54072	-1.01783	0.30876	-2.05116	0.04025
184770	50	25	4.28	-44.20894	21.17769	-2.08752	0.04038	-4.96994	8.96057	-0.55465	0.58473	-1.83588	0.06638	-2.04984	0.04038
4324985	67	8	4.63	-66.51257	31.90392	-2.08478	0.04064	12.03707	10.76482	1.11819	0.31431	-0.73610	0.46167	-2.04722	0.04064
589329	67	8	1.63	-30.08565	32.66293	-0.92109	0.36008	-38.74674	14.86474	-2.60662	0.04786	-2.04622	0.04074	-2.04622	0.04074
953855	67	8	1.63	66.31854	32.05907	2.06864	0.04217	-65.16558	129.69108	-0.50247	0.63668	1.10272	0.27015	2.03182	0.04217
173876	45	30	23.07	-41.61592	20.12937	-2.06742	0.04229	4.14216	5.94896	0.69628	0.49220	-0.95025	0.34199	-2.03066	0.04229
193528	10	65	122.38	2.38509	29.83729	0.07994	0.93651	-11.32880	5.48366	-2.06592	0.04302	-1.37451	0.16928	-2.02350	0.04302
4332078	59	16	3.81	9.33070	24.91611	0.37448	0.70914	86.14523	38.42803	2.24173	0.04306	1.69432	0.09020	2.02313	0.04306
187868	68	7	1.71	-25.56174	34.75370	-0.73551	0.46442	44.95000	15.37254	2.92405	0.04307	0.91319	0.36114	2.02304	0.04307
177660	66	9	3.44	-63.03137	30.61994	-2.05851	0.04316	-8.00742	24.08623	-0.33245	0.75086	-1.65439	0.09805	-2.02215	0.04316
312770	67	8	4.88	-47.43889	32.37564	-1.46527	0.14720	-13.56219	8.19078	-1.65579	0.15867	-2.02166	0.04321	-2.02166	0.04321
198209	69	6	2.33	-26.88959	37.25051	-0.72186	0.47272	53.30309	15.79519	3.37464	0.04326	0.92144	0.35682	2.02117	0.04326
186866	48	27	10.22	41.31081	20.72631	1.99316	0.05003	15.79267	17.24843	0.91560	0.36898	2.02094	0.04329	2.02094	0.04329
199344	64	11	3.27	-36.48136	28.34375	-1.28710	0.20218	-36.13552	20.33738	-1.77680	0.11350	-2.02092	0.04329	-2.02092	0.04329
234443	67	8	6.88	-13.02119	33.15773	-0.39770	0.69570	-25.30199	9.40661	-2.68981	0.04331	-1.70544	0.08811	-2.02072	0.04331
3430935	69	6	17.33	-36.60956	37.24305	-0.98299	0.32890	-15.43985	5.25544	-2.93788	0.06061	-2.01711	0.04368	-2.01711	0.04368
199081	64	11	5.36	57.23552	27.91238	2.05054	0.04395	13.49510	44.39096	0.30401	0.76888	1.63227	0.10262	2.01454	0.04395
186997	40	35	4.14	-7.72703	20.30765	-0.38050	0.70470	30.51314	14.55102	2.09698	0.04399	1.15629	0.24756	2.01423	0.04399
553611	45	30	9.03	-41.39126	20.40109	-2.02888	0.04617	10.85141	5.13887	2.11163	0.04411	0.01355	0.98919	2.01300	0.04411
194672	36	39	8.36	-29.34645	20.01261	-1.46640	0.14689	-11.54542	8.12299	-1.42133	0.16383	-2.01024	0.04441	-2.01024	0.04441
4094866	57	18	5.89	44.46619	23.16957	1.91916	0.05893	27.48103	27.96941	0.98254	0.34142	2.00826	0.04462	2.00826	0.04462
4340358	62	13	4.85	-29.73159	26.60440	-1.11754	0.26748	-24.50329	12.75516	-1.92105	0.08366	-2.00727	0.04472	-2.00727	0.04472
185164	40	35	9.03	-31.55273	19.99885	-1.57773	0.11901	-9.25878	7.09041	-1.30582	0.20092	-2.00667	0.04479	-2.00667	0.04479
182431	52	23	7.65	-44.05041	21.57865	-2.04139	0.04488	-4.04268	7.58839	-0.53275	0.60008	-1.78904	0.07361	-2.00580	0.04488
147702	30	45	27.76	-10.87441	20.68496	-0.52572	0.60070	-16.19948	7.83595	-2.06733	0.04490	-1.78825	0.07374	-2.00557	0.04490
288651	26	49	32.88	-42.34579	20.76412	-2.03937	0.04508	9.72487	6.09121	1.59654	0.11722	-0.30922	0.75715	-2.00387	0.04508
539647	60	15	19.27	-50.23989	24.66023	-2.03728	0.04530	10.45396	5.96488	1.75258	0.10516	-0.26979	0.78732	-2.00188	0.04530
4480861	48	27	61.48	-41.98303	20.62267	-2.03577	0.04545	-0.50362	4.92345	-0.10229	0.91938	-1.48609	0.13725	-2.00043	0.04545
194104	70	5	3.20	81.33446	39.97806	2.03448	0.04559	123.22147	157.51848	0.78227	0.51597	1.87296	0.06107	1.99919	0.04559
4431545	44	31	4.13	22.37017	20.62569	1.08458	0.28173	32.33352	17.83162	1.81327	0.08052	1.99694	0.04583	1.99694	0.04583
370086	45	30	20.33	-41.86603	20.60485	-2.03185	0.04586	-1.28577	5.93926	-0.21649	0.83024	-1.56347	0.11794	-1.99669	0.04586
1860112	60	15	8.60	38.23811	25.05052	1.52644	0.13128	30.67974	22.01897	1.39333	0.18879	1.99633	0.04590	1.99633	0.04590
185949	70	5	3.60	-22.74211	40.57511	-0.56049	0.57688	38.85712	8.63679	4.49902	0.04602	1.01630	0.30949	1.99521	0.04602
306299	50	25	7.36	25.92770	21.43467	1.19399	0.23640	31.20253	18.25723	1.70905	0.10151	1.99517	0.04602	1.99517</	

Table S4c. OTUs associated with High-density lipoprotein (HDL) at FDR < 0.05 level ^a

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
299302	66	9	3.33	17.62727	3.94662	4.46642	0.0003	1.96800	10.36870	0.18980	0.85572	3.08572	0.00203	4.18204	0.00003
345301	65	10	4.90	13.79417	3.94346	3.49798	0.00081	11.54877	3.40796	3.38876	0.01162	4.15331	0.00003	4.15331	0.00003
4324985	67	8	4.63	17.97815	4.18987	4.29086	0.00005	10.11734	8.87482	1.14001	0.30593	3.57730	0.00035	4.03528	0.00005
35260	69	6	14.50	19.50821	4.82356	4.04436	0.00013	9.70897	3.60326	2.69450	0.07413	3.96825	0.00007	3.96825	0.00007
177828	63	12	3.08	14.68128	3.55464	4.13017	0.00010	-3.83281	6.09315	-0.62904	0.54496	2.32922	0.01985	3.89935	0.00010
3826120	71	4	1.75	23.67715	5.82352	4.06578	0.00012	-7.51531	51.89484	-0.14482	0.90844	2.63713	0.00836	3.84446	0.00012
749837	61	14	2.71	2.37180	3.70953	0.63938	0.52460	-30.34829	5.25162	-5.77884	0.00012	-2.26537	0.02349	-3.83998	0.00012
189459	70	5	2.00	21.30268	5.26876	4.04321	0.00013	-10.82277	20.66139	-0.52382	0.65267	2.38656	0.01701	3.82516	0.00013
190980	71	4	2.00	22.50777	5.89703	3.81680	0.00028	-9.85350	45.46907	-0.21671	0.86414	2.44577	0.01445	3.62995	0.00028
218710	67	8	3.75	16.28590	4.31329	3.77575	0.00033	-0.92213	9.18546	-0.10039	0.92394	2.47401	0.01336	3.59425	0.00033
180352	70	5	4.00	19.73198	5.33380	3.69942	0.00042	-17.21734	16.48598	-1.04436	0.40595	1.90676	0.05655	3.52760	0.00042
925131	69	6	76.17	18.09452	4.89841	3.69396	0.00043	-25.20579	12.92924	-1.94952	0.14634	1.46389	0.14322	3.52282	0.00043
199335	66	9	2.78	14.88843	4.10316	3.62853	0.00053	18.45221	10.92839	1.68847	0.14229	3.48798	0.00049	3.48798	0.00049
589989	71	4	4.75	21.06672	6.18516	3.40601	0.00108	101.10681	16.04890	6.29992	0.10022	3.47346	0.00051	3.47346	0.00051
1599042	63	12	21.33	13.24711	3.64254	3.63677	0.00052	-3.13136	4.42606	-0.70748	0.49718	1.97546	0.04822	3.47266	0.00052
196724	70	5	1.60	15.60220	5.55728	2.80752	0.00642	30.49865	5.37812	5.67087	0.02972	3.46439	0.00053	3.46439	0.00053
186913	70	5	2.00	20.04026	5.52797	3.62525	0.00054	-13.29087	20.14783	-0.65967	0.57727	2.05425	0.03995	3.46253	0.00054
174443	52	23	5.65	8.23427	2.99858	2.74606	0.00761	7.66099	3.24795	2.35872	0.02862	3.43469	0.00059	3.43469	0.00059
174792	59	16	4.13	3.73691	3.57408	1.04556	0.29926	17.27877	3.87030	4.46445	0.00064	3.14886	0.00164	3.41514	0.00064
337161	62	13	9.46	12.35754	3.54168	3.48917	0.00083	0.01305	4.65352	0.00280	0.99782	2.36533	0.01801	3.34235	0.00083
323903	59	16	5.06	6.69106	3.44924	1.93986	0.05631	8.19809	2.47053	3.31835	0.00555	3.31063	0.00093	3.31063	0.00093
1044419	70	5	155.80	18.54577	5.38472	3.44415	0.00096	2.01872	10.11859	0.19951	0.86031	2.45956	0.01391	3.30236	0.00096
177567	67	8	2.38	12.89635	4.45258	2.89637	0.00500	24.42468	10.34620	2.36074	0.06469	3.29134	0.00100	3.29134	0.00100
187196	71	4	2.25	20.47051	5.98244	3.42177	0.00103	-31.69466	23.96901	-1.32232	0.41220	1.74119	0.08165	3.28244	0.00103
198422	45	30	6.37	-0.43555	2.96303	-0.14699	0.88355	5.73123	1.57951	3.62848	0.00117	2.19139	0.02842	3.24557	0.00117
186030	67	8	2.25	14.73935	4.37715	3.36734	0.00122	2.91703	14.12332	0.20654	0.84452	2.42538	0.01529	3.23389	0.00122
370357	69	6	2.33	17.25459	5.13028	3.36328	0.00124	2.17277	14.67361	0.14807	0.89168	2.38044	0.01729	3.23026	0.00124
3134492	13	62	139.89	3.53904	3.80994	0.92890	0.35605	-2.20122	0.65553	-3.35791	0.00138	-1.60931	0.10755	-3.19883	0.00138
310633	71	4	10.00	20.08285	6.03538	3.32752	0.00138	6.67886	13.00793	0.51345	0.69802	2.53587	0.01122	3.19827	0.00138
188316	68	7	2.29	15.46694	4.65931	3.31958	0.00142	23.96252	17.82645	1.34421	0.25005	3.06981	0.00214	3.19115	0.00142
291054	70	5	14.20	18.10862	5.45606	3.31899	0.00142	7.52789	8.81516	0.85397	0.48308	2.75204	0.00592	3.19063	0.00142
362955	66	9	16.44	8.42441	4.37383	1.92609	0.05804	-15.97840	2.96730	-5.38483	0.00169	-0.88026	0.37872	-3.14027	0.00169
4439360	7	68	95.34	4.66983	4.95560	0.94233	0.34917	-2.67298	0.81664	-3.27312	0.00171	-1.55632	0.11963	-3.13717	0.00171
179499	68	7	2.86	15.14678	4.68682	3.23178	0.00186	-11.49899	10.45738	-1.09961	0.33324	1.51650	0.12939	3.11227	0.00186
185597	55	20	4.15	3.55513	3.33415	1.06628	0.28986	9.93404	2.70091	3.67803	0.00186	2.94821	0.00320	3.11098	0.00186
181560	60	15	6.00	10.95721	3.39655	3.22598	0.00189	3.08662	4.32610	0.71349	0.48919	2.68605	0.00723	3.10705	0.00189
352747	67	8	2.88	14.01221	4.39544	3.18789	0.00212	-3.71022	9.21262	-0.40273	0.70379	1.90387	0.05693	3.07270	0.00212
299755	71	4	5.00	19.28252	6.07152	3.17590	0.00220	-9.61323	91.28508	-0.10531	0.93320	2.10579	0.03522	3.06186	0.00220
300662	71	4	4.00	-0.78656	6.47309	-0.12151	0.90362	3.95724	0.01401	282.37870	0.00225	2.07423	0.03806	3.05448	0.00225
4439487	62	13	4.31	11.32469	3.58970	1.35477	0.00234	6.50974	4.84996	1.34222	0.20920	3.03952	0.00237	3.04276	0.00234
193969	61	14	21.43	11.11664	3.52854	3.15049	0.00237	-0.55228	3.61776	-0.15266	0.88143	2.04335	0.04102	3.03888	0.00237
183822	68	7	2.00	14.76980	4.68894	3.14992	0.00238	-16.23800	15.42116	-1.05297	0.35176	1.49000	0.13622	3.03837	0.00238
319197	70	5	1.40	13.49346	5.60215	2.40862	0.01857	73.77130	18.10403	4.07486	0.05528	3.01981	0.00253	3.01981	0.00253
186851	60	15	7.20	10.65624	3.41245	3.12275	0.00258	-4.34971	4.61320	-0.94288	0.36434	1.48961	0.13633	3.01376	0.00258
4405146	49	26	51.81	8.81930	2.86746	3.07564	0.00297	-1.68362	1.32528	-1.27039	0.21665	1.22719	0.21975	2.97101	0.00297
4391262	49	26	15.23	-0.55207	3.10316	-0.17790	0.85930	2.47946	0.74916	3.30967	0.00306	1.96898	0.04895	2.96183	0.00306
184534	66	9	14.67	12.86452	4.21851	3.04954	0.00321	-9.39345	3.90109	-2.40790	0.05272	0.71424	0.47508	2.94727	0.00321
3785400	69	6	56.67	15.33582	5.02956	3.04914	0.00321	-10.07777	2.97832	-3.38371	0.04297	0.65261	0.51401	2.94690	0.00321
215468	68	7	3.57	14.22853	4.70705	3.02281	0.00347	3.04877	9.88238	0.30851	0.77310	2.27070	0.02317	2.92292	0.00347
337285	64	11	4.00	11.61347	3.86571	3.00423	0.00366	4.31380	6.99879	0.61636	0.55478	2.47246	0.01342	2.90597	0.00366
1102370	45	30	18.37	8.09690	2.83664	2.85440	0.00563	2.23568	1.63243	1.36954	0.18211	2.90125	0.00372	2.90125	0.00372
177503	62	13	2.85	10.31740	3.64967	2.82694	0.00608	8.29932	5.70825	1.45392	0.17662	2.89536	0.00379	2.89536	0.00379
175729	54	21	4.29	7.16654	3.14529	2.27849	0.02567	6.09643	3.07317	1.98376	0.06275	2.89363	0.00381	2.89363	0.00381
181826	60	15	3.47	6.92039	3.53113	1.95982	0.05389	10.50687	4.30979	2.43791	0.03128	2.88589	0.00390	2.88589	0.00390
177660	66	9	3.44	12.66617	4.24833	2.98145	0.00391	3.34835	17.35082	0.19298	0.85334	2.17084	0.02994	2.88517	0.00391
229348	64	11	13.64	11.46800	3.86893	2.96413	0.00411	-4.75054	3.29744	-1.44067	0.18764	1.09726	0.27253	2.86934	0.00411
105287	64	11	3.09	3.17775	4.15862	0.76413	0.44728	9.94492	2.50469	3.97053	0.00412	2.56615	0.01028	2.86914	0.00412
4111715	50	25	5.60	-1.73332	3.14098	-0.55184	0.58277	2.95515	0.92315	3.20115	0.00412	1.64007	0.10099	2.86876	0.00412
701221	66	9	2.11	10.67676	4.28582	2.49118	0.01504	21.00520	10.97443	1.91401	0.10413	2.86848	0.00412	2.86848	0.00412
4295707	49	26	67.85	8.52019	2.87618	2.96233	0.00413	0.40298	1.40831	0.28614	0.77733	2.22774	0.02590	2.86770	0.00413
2309802	69	6	4.50	11.57522	5.18436	2.23272	0.02868	17.16839	5.92114	2.89951	0.06253	2.86409	0.00418	2.86409	0.00418
293883	58	17	13.82	9.67151	3.27045	2.95724	0.00420	1.31984	2.69372	0.48997	0.631				

Table S4c. OTUs associated with High-density lipoprotein (HDL) at FDR < 0.05 level ^a (Cont.)

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
172878	71	4	3.25	15.75979	6.20616	2.53938	0.01327	36.93982	10.66263	3.46442	0.17890	2.70166	0.00690	2.70166	0.00690
4323555	70	5	2.60	-3.10597	5.79985	-0.53553	0.59394	-10.01477	0.85345	-11.73452	0.00718	-2.27782	0.02274	-2.68819	0.00718
158855	67	8	11.63	7.73045	4.60594	1.67837	0.09761	-5.03253	1.15402	-4.36088	0.00728	-0.72621	0.46771	-2.68356	0.00728
191251	24	51	13.16	-0.89823	3.14401	-0.28570	0.77593	-2.38373	0.85158	-2.79920	0.00736	-2.09649	0.03604	-2.68026	0.00736
312586	69	6	3.00	13.96949	5.08851	2.74530	0.00763	10.51387	19.84381	0.52983	0.63294	2.22432	0.02613	2.66806	0.00763
253471	71	4	7.25	15.59584	6.19092	2.51915	0.01398	15.64514	4.80297	3.25739	0.18962	2.66533	0.00769	2.66533	0.00769
300374	43	32	6.13	6.03575	2.89543	2.08457	0.04066	3.52385	1.97762	1.78187	0.08525	2.66441	0.00771	2.66441	0.00771
191483	60	15	2.33	-5.00453	3.57526	-1.39977	0.16588	-6.44760	2.34774	-2.74630	0.01772	-2.65654	0.00789	-2.65654	0.00789
180312	51	24	4.92	3.71362	3.08292	1.20458	0.23231	6.91502	2.47323	2.79594	0.01083	2.64645	0.00813	2.64645	0.00813
113919	61	14	93.21	9.62924	3.54437	2.71677	0.00825	1.04774	1.86362	0.56220	0.58525	2.53382	0.02421	2.64165	0.00825
180136	45	30	7.27	3.01905	3.05016	0.98980	0.32558	7.16313	2.51740	2.84545	0.00836	2.55981	0.01047	2.63707	0.00836
168439	44	31	33.58	-7.60837	2.93351	-2.59361	0.01150	-0.99332	0.80851	-1.22858	0.22946	-2.63677	0.00837	-2.63677	0.00837
178015	65	10	2.70	11.02965	4.06985	2.71009	0.00840	-14.64466	12.28010	-1.19255	0.27190	1.08665	0.27719	2.63546	0.00840
4421273	40	35	9.49	5.87661	2.85487	2.05845	0.04317	2.75777	1.56814	1.75862	0.08820	2.63542	0.00840	2.63542	0.00840
2298935	20	55	31.00	0.23284	3.27730	0.07105	0.94356	-2.46648	0.90111	-2.73715	0.00846	-1.81178	0.07002	-2.63304	0.00846
4481861	69	6	5.17	13.78793	5.09539	2.70596	0.00850	-11.94548	5.46068	-2.18755	0.11652	0.75101	0.45264	2.61363	0.00850
3138798	31	44	219.93	-5.55266	2.86972	-1.93491	0.05693	-0.88308	0.47648	-1.85336	0.07104	-2.62273	0.00872	-2.62273	0.00872
176062	41	34	33.12	7.84513	2.91106	2.69494	0.00876	1.75235	1.59044	1.10180	0.27903	2.61906	0.00882	2.62141	0.00876
851733	59	16	70.75	-4.24930	3.50354	-1.21286	0.22915	-1.34752	0.46378	-2.90549	0.01228	-2.62097	0.00877	-2.62097	0.00877
368261	70	5	2.20	-5.40532	5.82918	-0.92729	0.35688	2.61971	0.24699	10.60668	0.00877	1.20172	0.22947	2.62082	0.00877
2250985	34	41	10.93	-5.34829	2.84594	-1.87927	0.06425	-1.85415	0.97858	-1.89473	0.06576	-2.60957	0.00907	-2.60957	0.00907
3903651	21	54	29.11	-8.28147	3.08903	-2.68093	0.00910	-0.58679	0.67143	-0.87394	0.38625	-2.45710	0.01401	-2.60841	0.00910
196664	21	54	29.11	-8.28147	3.08903	-2.68093	0.00910	-0.58679	0.67143	-0.87394	0.38625	-2.45710	0.01401	-2.60841	0.00910
111135	70	5	11.00	14.83936	5.54200	2.67762	0.00918	-0.27015	10.27993	-0.02628	0.98142	1.82579	0.06788	2.60534	0.00918
4468234	1	74	18.84	0.00000	0.00000	0.00000	0.00000	-2.35815	0.88092	-2.67692	0.00922	-1.84111	0.06560	-2.60373	0.00922
183698	66	9	4.00	11.54758	4.32898	2.66751	0.00943	-2.97801	10.77117	-0.27648	0.79146	1.64864	0.09922	2.59595	0.00943
305141	61	14	9.14	8.91168	3.56825	2.49749	0.01479	-8.67442	2.76678	-3.13521	0.00949	-0.11068	0.91187	-2.59391	0.00949
157470	64	11	2.73	5.43436	4.04985	1.34187	0.18386	15.76314	5.41324	2.91196	0.01953	2.59100	0.00957	2.59100	0.00957
360508	42	33	9.12	6.31233	2.82518	2.23431	0.02857	4.51120	2.97952	1.51407	0.14047	2.59043	0.00959	2.59043	0.00959
346639	66	9	4.67	11.36127	4.28058	2.65415	0.00978	0.81080	6.46756	0.12536	0.90433	1.91183	0.05590	2.58354	0.00978
177062	65	10	3.70	9.91395	4.10379	2.41580	0.01824	11.08487	7.79551	1.42196	0.19803	2.57947	0.00990	2.57947	0.00990
2506486	41	34	4.32	-7.37126	2.78195	-2.64967	0.00990	-0.68254	1.23900	-0.55088	0.58567	-2.20936	0.02715	-2.57938	0.00990
191660	69	6	1.67	11.08908	5.18745	2.13768	0.03594	30.49819	14.30504	2.13199	0.12278	2.57445	0.01004	2.57445	0.01004
1522739	71	4	2.25	3.72494	6.43723	0.57866	0.56463	-33.30790	0.53109	-62.71624	0.01015	-1.41046	0.15840	-2.57068	0.01015
3709990	63	12	3.08	-6.54669	3.96537	-1.65172	0.10295	-5.71672	2.46507	-2.31909	0.04555	-2.56697	0.01026	-2.56697	0.01026
180473	54	21	4.05	8.12393	3.08269	2.63534	0.01029	-0.97962	2.94750	-0.33236	0.74346	1.58305	0.11341	2.56605	0.01029
4483337	17	58	50.33	1.86103	3.48801	0.53355	0.59529	-1.81917	0.68811	-2.64373	0.01066	-1.43003	0.15271	-2.55355	0.01066
4444262	65	10	13.70	-3.56985	4.26389	-0.83723	0.40523	4.24689	1.23243	3.44594	0.01075	1.21509	0.22433	2.55071	0.01075
306299	50	25	7.36	-7.73511	2.95613	-2.61664	0.01081	1.81627	1.45256	1.25039	0.22429	-0.94289	0.34573	-2.54864	0.01081
4319785	66	9	131.67	11.20635	4.28371	2.61604	0.01083	2.86017	2.71133	1.05489	0.33209	2.48761	0.01286	2.54809	0.01083
308322	69	6	4.00	10.39503	5.20966	1.99534	0.04979	47.91467	20.42151	2.34628	0.10064	2.54805	0.01083	2.54805	0.01083
189960	44	31	4.84	-2.73631	2.94160	-0.93021	0.35537	-3.20956	1.17637	-2.72836	0.01087	-2.45442	0.01411	-2.54685	0.01087
182188	56	19	3.68	7.47559	3.21793	2.32311	0.02300	5.54774	3.99784	1.38768	0.18426	2.54640	0.01088	2.54640	0.01088
4480861	48	27	61.48	7.56556	2.89679	2.61170	0.01096	1.05257	1.54711	0.68035	0.50279	2.27275	0.02304	2.54405	0.01096
3746307	70	5	3.20	14.47322	5.57101	2.59795	0.01137	-17.13554	7.44351	-2.30208	0.14794	0.76677	0.44322	2.53124	0.01137
4377144	70	5	7.40	12.07259	5.63672	2.14178	0.03560	19.11823	8.06383	2.37086	0.14118	2.52644	0.01152	2.52644	0.01152
538322	45	30	6.60	1.97788	2.95556	0.66921	0.50550	5.09757	1.88707	2.70132	0.01178	2.25169	0.02434	2.51852	0.01178
4483037	54	21	2.67	-8.08739	3.13400	-2.58054	0.01190	7.07890	1.39505	0.50815	0.61752	-1.42527	0.15408	-2.51500	0.01190
192818	71	4	1.25	1.97686	6.48379	0.30489	0.76133	-13.64865	0.25640	-53.23167	0.01196	-1.56245	0.11818	-2.51338	0.01196
194371	59	16	3.44	8.73377	3.38712	2.57853	0.01197	2.15402	4.51317	0.47727	0.64109	2.10668	0.03515	2.51313	0.01197
107044	30	45	60.24	-2.35746	2.94709	-0.79993	0.42638	-1.81929	0.69381	-2.62217	0.01212	-2.33631	0.01948	-2.50865	0.01212
1607319	64	11	1.27	-6.56641	4.13925	-1.58638	0.11704	-9.45141	4.05103	-2.33309	0.04793	-2.50693	0.01218	-2.50693	0.01218
187267	53	22	8.50	6.39578	3.14383	2.03439	0.04560	4.59906	2.84294	1.61771	0.12221	2.50647	0.01219	2.50647	0.01219
1000547	51	24	2.75	-6.82274	3.00151	-2.27310	0.02600	-2.76388	2.03122	-1.36070	0.18803	-2.50496	0.01225	-2.50496	0.01225
2840201	65	10	3.90	10.49178	4.08379	2.56913	0.01227	-13.83767	7.73605	-1.78873	0.11680	0.66185	0.50807	2.50436	0.01227
199182	63	12	4.08	9.90358	3.85704	2.56766	0.01231	8.08833	8.86250	0.91265	0.38522	2.38387	0.01713	2.50299	0.01231
184940	68	7	6.14	12.24342	4.77070	2.56638	0.01236	3.61748	6.24903	0.57889	0.59370	2.14626	0.03185	2.50179	0.01236
188317	68	7	1.57	8.56320	4.94126	1.73300	0.08738	28.30567	11.39574	2.48388	0.06793	2.49954	0.01244	2.49954	0.01244
187917	40	35	10.09	2.18348	2.90103	0.75265	0.45411	3.79141	1.43198	2.64766	0.01247	2.29598	0.02168	2.49842	0.01247
182167	41	34	9.29	0.47862	2.96528	0.16141	0.87223	4.45152	1.68211	2.64639	0.01267	1.87654	0.06058	2.49300	0.01267
4333652	67	8	2.13	11.47846	4.49672	2.55263	0.01281	8.20165	15.44828	0.53091	0.61821	2.11237	0.03465	2.48895	0.01281
188764	66	9	1.67	2.69748	4.47432	0.60288	0.54848	28.74267	8.22038	3.49651	0.01288	2.18290	0.02904	2.48705	0.01288

Table S4c. OTUs associated with High-density lipoprotein (HDL) at FDR < 0.05 level ^a (Cont.)

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
184770	50	25	4.28	7.45445	2.99046	2.49274	0.01498	-0.04027	2.62548	-0.01534	0.98790	1.70962	0.08734	2.43293	0.01498
188333	69	6	3.50	10.82773	5.18823	2.08698	0.04043	21.87608	11.93717	1.83260	0.16424	2.43263	0.01499	2.43263	0.01499
185802	31	44	91.45	5.89708	2.86324	2.05958	0.04305	1.29567	0.90151	1.43722	0.15824	2.42833	0.01517	2.42833	0.01517
172777	28	47	7.26	-6.33421	2.90813	-2.17810	0.03267	-1.09183	0.82947	-1.31629	0.19489	-2.42701	0.01522	-2.42701	0.01522
4480359	28	47	8.09	4.22748	2.95591	1.43018	0.15699	2.83832	1.36692	2.07643	0.04373	2.42676	0.01523	2.42676	0.01523
3265161	34	41	8.24	-4.41657	2.88149	-1.53274	0.12972	-2.37416	1.20472	-1.97071	0.05607	-2.42231	0.01542	-2.42231	0.01542
306315	64	11	3.18	9.82768	3.97811	2.47044	0.01586	0.15485	9.05292	0.01711	0.98677	1.71729	0.08593	2.41203	0.01586
4405423	60	15	4.40	-2.36862	3.67357	-0.64477	0.52112	5.79639	2.07330	2.79573	0.01617	1.24691	0.21243	2.40501	0.01617
845444	61	14	2.64	8.79374	3.57255	2.46147	0.01623	-4.70108	4.83064	-0.97318	0.35138	1.04065	0.29804	2.40362	0.01623
4202174	40	35	9.69	6.83659	2.79141	2.44915	0.01675	-1.45942	1.50997	-0.96652	0.34103	1.01818	0.30859	2.39206	0.01675
235212	69	6	44.00	12.63518	5.16029	2.44854	0.01678	-2.94776	10.72238	-0.27492	0.80123	1.51301	0.13028	2.39148	0.01678
339494	61	14	100.57	8.75624	3.57678	2.44808	0.01680	0.09176	2.73103	0.03360	0.97380	1.71395	0.08654	2.39105	0.01680
189820	68	7	2.71	2.71259	4.97842	0.54487	0.58753	9.01001	2.28522	3.94273	0.01692	2.07242	0.03823	2.38842	0.01692
179018	54	21	9.76	7.57805	3.11099	2.43590	0.01733	-0.83004	2.30205	-0.36057	0.72262	1.43165	0.15225	2.37961	0.01733
553611	45	30	9.03	3.86565	2.96297	1.30466	0.19617	-4.16320	1.64272	-2.53433	0.01738	-0.76800	0.44249	-2.37867	0.01738
4468466	18	57	118.93	1.43663	3.47915	0.41293	0.68089	1.57718	0.64471	2.44635	0.01772	1.96767	0.04911	2.37145	0.01772
198696	71	4	2.75	14.52341	6.21993	2.33498	0.02234	34.90798	16.77692	2.08071	0.28521	2.37113	0.01773	2.37113	0.01773
4405482	59	16	1.56	-6.74376	3.45311	-1.95295	0.05471	-3.80534	2.50841	-1.51703	0.15320	-2.36845	0.01786	-2.36845	0.01786
2388088	58	17	3.82	-8.13916	3.36848	-2.41627	0.01822	-0.62350	2.20203	-0.28315	0.78121	-1.86600	0.06204	-2.36117	0.01822
3232988	68	7	11.00	11.38190	4.79824	2.37210	0.02036	7.36985	6.33520	1.16332	0.30937	2.35902	0.01832	2.35902	0.01832
363646	58	17	13.29	-4.78305	3.42089	-1.39819	0.16635	-2.56578	1.21143	-2.11798	0.05255	-2.34944	0.01880	-2.34944	0.01880
198210	52	23	5.78	3.58029	3.16285	1.13198	0.26140	5.11932	2.16742	2.36194	0.02843	2.34361	0.01910	2.34361	0.01910
43950	67	8	2.38	-3.49443	4.72817	-0.73907	0.46227	12.28831	3.60741	3.40641	0.01912	1.13711	0.25549	2.34323	0.01912
177697	59	16	2.00	8.19570	3.42562	2.39247	0.01935	-5.00641	5.86493	-0.85362	0.40877	1.06966	0.28477	2.33878	0.01935
189083	40	35	32.46	6.71275	2.80792	2.39065	0.01944	-0.89712	1.31529	-0.68207	0.50010	1.17573	0.23970	2.33707	0.01944
4370025	59	16	7.63	-6.99729	3.53484	-1.97952	0.05158	3.03951	1.14141	2.66295	0.01952	0.27489	0.78340	2.33536	0.01952
4444277	64	11	102.55	9.39930	3.94447	2.38291	0.01982	-3.59030	1.99628	-1.79849	0.10981	0.51669	0.60537	2.32978	0.01982
177518	62	13	4.23	6.72113	3.74592	1.79425	0.07697	-11.83318	4.27767	-2.76627	0.01991	-0.39557	0.69242	-2.32796	0.01991
189937	59	16	2.38	-3.70750	3.56405	-1.04025	0.30171	-7.70806	3.01890	-2.55327	0.02404	-2.32583	0.02003	-2.32583	0.02003
178759	64	11	12.27	9.38274	3.94826	2.37643	0.02014	0.66146	4.60866	0.14353	0.88942	1.74140	0.08161	2.32368	0.02014
195214	66	9	3.44	9.25278	4.37167	2.11653	0.03776	9.80179	7.29770	1.34313	0.22780	2.32180	0.02024	2.32180	0.02024
2403301	57	18	52.33	7.85916	3.31846	2.36832	0.02056	1.24943	1.81053	0.69009	0.50068	2.11387	0.03453	2.31604	0.02056
1602805	48	27	5.70	-4.35234	2.97749	-1.46175	0.14816	-2.60140	1.36018	-1.91254	0.06781	-2.31387	0.02068	-2.31387	0.02068
175184	64	11	2.55	4.18140	4.12754	1.01305	0.31443	9.92349	3.55798	2.78908	0.02359	2.31201	0.02078	2.31201	0.02078
191043	70	5	4.20	-6.37491	5.78074	-1.10278	0.27379	13.11592	1.92312	6.82014	0.02083	0.86033	0.38961	2.31106	0.02083
182797	69	6	2.83	12.39385	5.24864	2.36135	0.02092	-23.37186	31.27050	-0.74741	0.50907	1.16615	0.24356	2.30947	0.02092
190676	61	14	24.79	8.58277	3.64596	2.35405	0.02130	-4.57878	2.91270	-1.57201	0.14425	0.59570	0.55138	2.30259	0.02130
213394	59	16	41.63	-6.66359	3.48260	-1.91340	0.05967	-0.88872	0.61335	-1.44895	0.17104	-2.29956	0.02147	-2.29956	0.02147
579541	63	12	7.67	8.97303	3.82887	2.34352	0.02187	-5.93500	5.81260	-1.02106	0.33389	0.93787	0.34831	2.29266	0.02187
3754778	68	7	18.86	11.27637	4.82182	2.33861	0.02214	1.56475	6.82810	0.22916	0.82998	1.76972	0.07677	2.28803	0.02214
195015	63	12	3.33	-3.88252	3.92690	-0.98870	0.32612	4.20029	1.52415	2.75582	0.02226	0.92198	0.35654	2.28584	0.02226
586453	64	11	7.36	-8.07804	3.99195	-2.02358	0.04673	-1.87272	1.39493	-1.34251	0.21628	-2.28061	0.02257	-2.28061	0.02257
864465	51	24	3.08	-1.79239	3.17444	-0.56463	0.57408	-5.91891	2.40542	-2.46066	0.02262	-2.00954	0.04448	-2.27986	0.02262
59563	66	9	17.89	5.66046	4.41243	1.28284	0.20366	3.61265	1.48528	2.43231	0.05100	2.27876	0.02268	2.27876	0.02268
157162	70	5	3.00	13.04286	5.60318	2.32776	0.02274	21.12212	20.42321	1.03422	0.40970	2.19359	0.02826	2.27779	0.02274
175612	70	5	65.20	-2.97478	6.02417	-0.49381	0.62295	-4.30214	0.66853	-6.43522	0.02331	-1.95165	0.05098	-2.26837	0.02331
2203165	69	6	2.67	-9.31685	5.39010	-1.72851	0.08818	8.65283	2.01919	4.28529	0.02335	0.39779	0.69079	2.26762	0.02335
188735	30	45	7.40	-6.71530	2.89885	-2.31654	0.02338	0.21021	1.08517	0.19371	0.84733	-1.46702	0.14237	-2.26720	0.02338
173965	60	15	2.40	-1.34340	3.62099	-0.37100	0.71172	6.70568	2.59112	2.58794	0.02375	1.33759	0.18103	2.26119	0.02375
4318284	69	6	28.83	-10.39242	5.20328	-1.99728	0.04957	-1.39834	0.89926	-1.55499	0.21779	-2.25994	0.02382	-2.25994	0.02382
177520	44	31	6.06	3.11699	2.93072	1.06356	0.29108	4.85956	2.15941	2.25041	0.03246	2.25878	0.02390	2.25878	0.02390
184990	66	9	4.89	9.98163	4.32606	2.30732	0.02392	-2.51763	6.97759	-0.36082	0.73060	1.35352	0.17589	2.25849	0.02392
193161	71	4	1.25	14.31682	6.22947	2.29824	0.02445	-11.51370	119.01938	-0.93694	0.52072	1.13680	0.25562	2.24991	0.02445
4302904	51	24	5.77	-3.75655	3.11089	-1.20755	0.23117	-3.22354	1.53170	-2.10454	0.04755	-2.24769	0.02460	-2.24769	0.02460
4414420	71	4	1.75	-5.06823	6.44214	-0.78673	0.43402	-5.17015	0.20021	-25.82325	0.02464	-2.14205	0.03219	-2.24699	0.02464
366147	62	13	6.31	-5.06882	3.80567	-1.33191	0.18709	-3.45260	1.65350	-2.08806	0.06334	-2.24582	0.02472	-2.24582	0.02472
184426	46	29	5.07	3.85419	2.95914	1.30247	0.19691	3.85344	1.96402	1.96202	0.06055	2.23955	0.02512	2.23955	0.02512
843569	69	6	10.83	11.89433	5.20935	2.28326	0.02537	-9.84103	4.74599	-2.07355	0.12980	0.50973	0.61024	2.23575	0.02537
194660	47	28	5.07	5.08739	2.93628	1.73260	0.08745	4.02719	2.69654	1.49347	0.14783	2.23181	0.02563	2.23181	0.02563
4332078	59	16	3.81	7.84483	3.44234	2.27893	0.02564	-6.71919	5.40126	-1.24400	0.23546	0.73910	0.45985	2.23165	0.02564
577294	65	10	2.10	-9.41964	4.14054	-2.27498	0.02589	0.95464	2.75436	0.34659	0.73908	-1.33986	0.18029	-2.22791	0.02589
186876	70	5	2.40	-1.56945	5.84146	-0.26867	0.78895	11.11952	1.82586	6.09001	0.02592	1.38575	0.16582	2.22742	0.02592
336281	67	8	50.00	10.35414	4.55428	2.27350	0.02598	-0.19698							

Table S4c. OTUs associated with High-density lipoprotein (HDL) at FDR < 0.05^a level (Cont.)

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
3756485	44	31	5.19	3.50648	2.94608	1.19022	0.23787	4.55065	2.29809	1.98019	0.05759	2.17730	0.02946	2.17730	0.02946
807548	70	5	5.60	10.68571	5.67208	1.88392	0.06361	21.58441	12.29857	1.75503	0.22134	2.17636	0.02953	2.17636	0.02953
184209	50	25	2.80	-6.61241	2.97864	-2.21994	0.02957	-1.79854	2.07964	-0.86483	0.39646	-2.13810	0.03251	-2.17578	0.02957
307984	65	10	3.30	-2.93791	4.34048	-0.67686	0.50066	5.97263	2.19926	2.71574	0.02995	1.05876	0.28971	2.17076	0.02995
4300127	65	10	324.60	7.80503	4.16574	1.87362	0.06504	2.54212	1.90217	1.33643	0.22321	2.16587	0.03032	2.16587	0.03032
157631	71	4	11.25	13.79636	6.26213	2.20314	0.03079	-16.73865	4.72058	-3.54589	0.17499	0.56816	0.56992	2.15984	0.03079
4365130	16	59	116.85	-7.64795	3.47312	-2.20204	0.03087	-0.35028	0.56412	-0.62094	0.53716	-1.96286	0.04966	-2.15879	0.03087
4212012	64	11	1.18	8.85015	4.02317	2.19980	0.03103	-6.41594	17.53517	-0.36589	0.72393	1.27523	0.20223	2.15666	0.03103
288521	63	12	8.83	-8.42247	3.83119	-2.19840	0.03114	1.67747	1.99684	0.84006	0.42263	-0.95704	0.33855	-2.15533	0.03114
192437	26	49	16.29	6.47436	2.94865	2.19570	0.03134	0.27846	1.31687	0.21146	0.83346	1.67092	0.09474	2.15277	0.03134
299441	69	6	9.83	8.95229	5.28125	1.69511	0.09438	5.40630	3.01901	1.79075	0.17126	2.15025	0.03154	2.15025	0.03154
362765	46	29	4.90	-4.11079	2.95822	-1.38962	0.16893	-2.09731	1.21699	-1.72335	0.09670	-2.14729	0.03177	-2.14729	0.03177
182735	59	16	4.38	-4.92118	3.61829	-1.36009	0.17805	-3.34295	1.83720	-1.81959	0.09192	-2.14406	0.03203	-2.14406	0.03203
2018038	61	14	3.21	7.87091	3.60415	2.18384	0.03223	-1.37558	5.22348	-0.26335	0.79715	1.33253	0.18269	2.14151	0.03223
840376	64	11	17.09	-2.23961	4.08825	-0.54782	0.58551	-4.97413	1.93267	-2.57370	0.03294	-1.89377	0.05826	-2.13285	0.03294
176753	68	7	3.14	0.59852	4.99631	0.11979	0.90498	10.31550	3.22550	3.19811	0.03296	1.59236	0.11130	2.13257	0.03296
175485	11	64	27.86	0.24025	4.12938	0.05818	0.95377	-1.87797	0.86189	-2.17891	0.03321	-1.46480	0.14297	-2.12952	0.03321
199286	40	35	9.26	1.84293	2.91521	0.63218	0.52927	3.36741	1.51428	2.22377	0.03335	1.94950	0.05124	2.12790	0.03335
19080	62	13	64.00	-4.49425	3.87853	-1.15875	0.25039	0.88311	0.35854	2.46310	0.03350	0.69060	0.48982	2.12606	0.03350
312882	57	18	4.50	-3.51069	3.41423	-1.02825	0.30727	3.88645	1.66078	2.34014	0.03351	0.78129	0.43463	2.12587	0.03351
1820776	64	11	40.09	4.86953	4.06504	1.19790	0.23488	6.64395	3.16643	2.09825	0.06913	1.12519	0.03357	1.12519	0.03357
3211875	25	50	7.50	-2.71437	3.06223	-0.88640	0.37835	-2.46462	1.12838	-2.18422	0.03397	-2.12229	0.03381	-2.12229	0.03381
186133	60	15	12.33	1.90868	3.61746	0.52763	0.59938	5.41269	2.26614	2.38850	0.03423	1.86864	0.06167	2.11737	0.03423
3235048	48	27	23.07	4.08237	2.99485	1.36313	0.17709	3.05976	1.79149	1.70794	0.10055	2.11563	0.03438	2.11563	0.03438
341730	67	8	2.50	-5.83037	4.64928	-1.25404	0.21388	-5.95694	2.72343	-2.18730	0.08037	-2.11531	0.03440	-2.11531	0.03440
184464	45	30	150.53	6.18295	2.87525	2.15041	0.03488	-0.34095	0.96056	-0.35494	0.72539	1.24342	0.21371	2.10973	0.03488
182874	55	20	43.10	3.28269	3.25793	1.00760	0.31702	-3.67520	1.60323	-2.29237	0.03491	-0.78400	0.43304	-2.10935	0.03491
183970	69	6	4.67	11.17740	5.20973	2.14548	0.03529	2.74858	10.32287	0.26626	0.80729	1.66097	0.09672	2.10505	0.03529
3186216	63	12	1.67	8.26326	3.85407	2.14404	0.03541	-9.06866	10.26657	-0.88332	0.40004	0.89246	0.37215	2.10367	0.03541
1943669	69	6	1.33	0.78150	5.35306	0.14599	0.88434	16.33430	4.50046	3.62947	0.03601	1.58556	0.11284	2.09685	0.03601
180216	56	19	47.32	-4.91385	3.34063	-1.47094	0.14567	2.00308	0.87643	2.28551	0.03626	0.45181	0.65141	2.09397	0.03626
363321	67	8	5.63	-1.28274	4.69365	-0.27329	0.78541	7.75375	2.73122	2.83893	0.03629	1.28790	0.19778	2.09364	0.03629
306704	70	5	8.60	2.81252	5.83498	0.48201	0.63126	-6.91384	1.35528	-5.10141	0.03634	-1.14064	0.25402	-2.09306	0.03634
4458576	23	52	72.92	-0.85770	3.16027	-0.27140	0.78686	-1.88586	0.87762	-2.14882	0.03662	-1.66906	0.09510	-2.09002	0.03662
4256470	6	69	44.28	-9.04712	5.24848	-1.72376	0.08904	-0.84505	0.67028	-1.26073	0.21184	-2.08524	0.03705	-2.08524	0.03705
193654	59	16	4.25	-1.42912	3.56035	-0.40140	0.68932	-5.63856	2.43016	-2.32024	0.03723	-1.75574	0.07913	-2.08321	0.03723
4060501	46	29	13.69	-6.15238	2.90154	-2.12039	0.03742	0.56037	1.20861	0.46365	0.64676	-1.14755	0.25115	-2.08116	0.03742
358798	51	24	5.58	-0.17732	3.20076	-0.05540	0.95597	4.98157	2.24645	2.21753	0.03775	1.43001	0.15271	2.07755	0.03775
2438203	43	32	7.66	-3.35223	2.90786	-1.15282	0.25280	-2.90890	1.56535	-1.85831	0.07330	-2.07502	0.03799	-2.07502	0.03799
858999	70	5	2.20	11.14017	5.66006	1.96821	0.05290	12.59902	9.55762	1.31822	0.31816	2.07467	0.03802	2.07467	0.03802
3856408	60	15	2.47	-0.64267	3.66249	-0.17547	0.86120	-5.19396	2.22862	-2.33057	0.03803	-1.59054	0.11171	-2.07452	0.03803
356745	35	40	7.15	3.71726	2.88326	1.28926	0.20144	3.06995	1.80846	1.69755	0.09799	2.07335	0.03814	2.07335	0.03814
301253	40	35	35.94	5.95000	2.81920	2.11053	0.03829	-0.77370	1.47576	-0.52427	0.60370	1.09791	0.27224	2.07177	0.03829
176104	38	37	14.35	1.22775	2.92650	0.41953	0.67608	3.30555	1.53556	2.15267	0.03853	1.75858	0.07865	2.06918	0.03853
174885	68	7	2.86	-7.13107	4.91203	-1.45176	0.15091	-3.83259	2.06005	-1.86044	0.13633	-2.06893	0.03855	-2.06893	0.03855
4329572	69	6	3.00	-10.91623	5.18565	-2.10508	0.03877	1.09123	2.89389	0.37708	0.73121	-1.21839	0.22308	-2.06658	0.03877
1646171	59	16	7.25	-7.22280	3.43481	-2.10282	0.03898	-1.05312	1.47800	-0.71253	0.48873	-1.94932	0.05126	-2.06442	0.03898
2953981	67	8	3.50	-9.55658	4.55855	-2.09641	0.03956	-1.22582	2.44128	-0.50212	0.63691	-1.78922	0.07358	-2.05831	0.03956
4438999	61	14	3.93	-2.03534	3.71226	-0.54828	0.58520	-4.66480	1.99923	-2.33330	0.03964	-1.84082	0.06565	-2.05750	0.03964
180107	61	14	3.93	-2.03534	3.71226	-0.54828	0.58520	-4.66480	1.99923	-2.33330	0.03964	-1.84082	0.06565	-2.05750	0.03964
555547	59	16	3.56	7.18998	3.43505	2.09312	0.03986	-2.14329	4.48764	-0.47760	0.64087	1.12337	0.26128	2.05518	0.03986
332732	47	28	16.50	-3.84262	2.96741	-1.29494	0.19948	1.69724	0.78310	2.16733	0.03994	0.54543	0.58546	2.05439	0.03994
206513	51	24	5.46	4.89791	3.05656	1.60242	0.11344	3.86221	2.83274	1.36342	0.18719	2.05192	0.04018	2.05192	0.04018
365717	62	13	3.69	-7.81546	3.74338	-2.08781	0.04035	3.28889	3.13608	1.04873	0.31899	-0.74499	0.45628	-2.05011	0.04035
4428313	48	27	160.15	0.37137	3.01981	0.12298	0.90247	-1.35312	0.62484	-2.16555	0.04051	-1.36190	0.17323	-2.04856	0.04051
355187	69	6	3.50	10.77307	5.19229	2.07482	0.04158	-4.19572	16.95523	-0.24746	0.82052	1.28046	0.20038	2.03772	0.04158
3186388	60	15	1.80	-7.29929	3.52238	-2.07226	0.04182	-0.91401	3.36567	-0.27157	0.79057	-1.62695	0.10375	-2.03528	0.04182
4379646	67	8	1.75	-9.45478	4.56467	-2.07130	0.04192	7.40625	15.61294	0.47437	0.65523	-1.12278	0.26153	-2.03436	0.04192
186624	68	7	1.14	-0.86873	4.98347	-0.13780	0.89078	34.09677	11.55594	2.95059	0.04194	1.34121	0.17985	2.03407	0.04194
725212	65	10	5.30	8.61283	4.16050	2.07014	0.04203	0.45977	3.07565	0.14949	0.88538	1.53966	0.12364	2.03326	0.04203
175642	71	4	3.25	6.76047	6.42130	1.05282	0.29594	68.61899	7.28972	9.41312	0.06738	2.03245	0.04211	2.03245	0.04211
4336939	61	14	9.07	7.52354	3.63754	2.06830	0.04220	3.54790	4.51954	0.78501	0.44902	1.97180	0.04863	2.03150	0.04220
192347	61	14	1.57	6.76390	3.71209	1.82213	0.07259	9.54382	8.43351	1.13165	0.28185	2.03052	0.04230		

Table S4c. OTUs associated with High-density lipoprotein (HDL) at FDR < 0.05 level ^a (Cont.)

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
327209	67	8	3.00	8.80193	4.59939	1.91372	0.05963	8.58688	8.19939	1.04726	0.34294	2.00244	0.04524	2.00244	0.04524
2058521	60	15	3.13	-4.81946	3.57931	-1.34648	0.18237	5.28382	2.36585	2.23337	0.04534	0.47238	0.63666	2.00153	0.04534
180523	65	10	1.20	8.44456	4.14709	2.03626	0.04540	0.07714	22.53905	0.00342	0.99736	1.41719	0.15643	2.00090	0.04540
4413347	71	4	2.00	2.15577	6.51441	0.33092	0.74166	25.95507	1.85530	13.98967	0.04543	1.64778	0.09940	2.00066	0.04543
3141094	37	38	3.21	-3.65062	2.86679	-1.27342	0.20697	-2.61438	1.62843	-1.60546	0.11738	-1.99958	0.04555	-1.99958	0.04555
4427290	43	32	17.88	-5.83634	2.86984	-2.03369	0.04567	-0.53660	0.86273	-0.62198	0.53881	-1.84770	0.06465	-1.99844	0.04567
576400	69	6	2.67	10.62105	5.22295	2.03354	0.04568	-10.45265	31.45136	-0.33234	0.76150	1.19839	0.23077	1.99829	0.04568
196597	70	5	2.40	11.53299	5.67213	2.03327	0.04571	-37.42343	51.70579	-0.72378	0.54441	0.98421	0.32501	1.99804	0.04571
553080	28	47	17.00	1.81997	3.00434	0.60578	0.54656	2.66477	1.29666	2.05510	0.04584	1.83835	0.06601	1.99691	0.04584
111771	68	7	2.29	1.41162	4.98264	0.28331	0.77775	6.60811	2.30920	2.86164	0.04585	1.61149	0.10707	1.99674	0.04585
287790	54	21	33.05	3.12276	3.21565	0.97111	0.33474	3.20585	1.61853	1.98071	0.06311	1.99615	0.04592	1.99615	0.04592
192983	44	31	4.39	4.66682	2.96916	1.57176	0.12039	3.14849	2.43449	1.29329	0.20648	1.99153	0.04642	1.99153	0.04642
308386	51	24	81.96	3.55190	3.10337	1.14453	0.25619	2.44311	1.38897	1.75894	0.09315	1.99011	0.04658	1.99011	0.04658
310380	70	5	4.00	11.69708	5.77964	2.02384	0.04670	51.85262	71.09571	0.72934	0.54165	1.83802	0.06606	1.98903	0.04670
215097	70	5	17.80	2.22721	5.87566	0.37906	0.70576	-4.73434	1.06205	-4.45772	0.04682	-1.13872	0.25482	-1.98794	0.04682
265871	7	68	161.65	9.81761	4.85603	2.02174	0.04692	-0.50177	0.70003	-0.71678	0.47608	0.90113	0.36752	1.98701	0.04692
183030	65	10	4.90	8.38265	4.15012	2.01986	0.04712	-1.63515	2.42654	-0.67386	0.52202	0.95105	0.34158	1.98522	0.04712
656881	54	21	8.67	-0.97245	3.29060	-0.29552	0.76844	2.38835	1.12297	2.12681	0.04752	1.19304	0.23285	1.98162	0.04752
1061772	62	13	2.46	-1.60995	3.82460	-0.42095	0.67505	8.09224	3.58647	2.25632	0.04767	1.10387	0.26965	1.98034	0.04767
3887769	55	20	1.95	-1.89495	3.30108	-0.57404	0.56773	-4.32207	2.02493	-2.13443	0.04767	-1.80435	0.07118	-1.98034	0.04767
197890	60	15	4.20	-7.12737	3.54066	-2.01301	0.04785	-1.24207	2.20561	-0.56314	0.58371	-1.78660	0.07400	-1.97866	0.04785
2831841	54	21	3.67	-6.32698	3.14688	-2.01056	0.04812	0.61574	1.12027	0.54963	0.58933	-1.01577	0.30974	-1.97632	0.04812
209845	63	12	5.67	-2.28564	4.02686	-0.56760	0.57207	-4.14822	1.82028	-2.27889	0.04865	-1.79367	0.07287	-1.97164	0.04865
302333	63	12	2.50	-1.09751	3.96222	-0.27699	0.78258	7.15892	3.14145	2.27886	0.04865	1.19901	0.23052	1.97162	0.04865
110192	60	15	20.60	7.08739	3.53528	2.00476	0.04875	-1.42531	2.67173	-0.53348	0.60344	1.02624	0.30478	1.97078	0.04875
180421	62	13	3.85	-7.57263	3.77831	-2.00423	0.04881	-0.67186	3.63115	-0.18503	0.85691	-1.52069	0.12834	-1.97027	0.04881

^a Statistics associated to the two part model for association analysis between the trait and OTUs adjusting for age and gender. The binomial analysis that tests for association of detecting a microbe represented by an OTU with the trait, where s.e. represents the standard error of the estimate, *t*-value of a *t* test for the estimate and its associated probability (*P* value). The quantitative analysis tests for association between the trait and the abundance of the OTU for the subjects where that OTU is present, where s.e. represents the standard error of the estimate, *t*-value of a *t* test for the estimate and its associated probability (*P* value). The Meta analysis combine the effect of both binary and quantitative analysis, a meta *P* value was derived using an unweighted Z method. The final association *P* value per OTU-trait pair was assigned from the minimum of *P* values from the binary analysis, quantitative analysis, and meta-analysis.

Table S4d. OTUs associated with Low-density lipoprotein (LDL) at FDR < 0.05 level ^a

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
4342104	59	16	5.38	-0.88834	5.95581	-0.14916	0.88185	-10.98124	1.92748	-5.69721	0.00007	-2.90906	0.00363	-3.96541	0.00007
178064	41	34	11.62	0.80299	4.75263	0.16896	0.86630	-8.93219	2.02240	-4.41663	0.00011	-2.61038	0.00904	-3.85998	0.00011
740158	66	9	3.44	26.12882	6.60018	3.95880	0.00017	-2.83192	5.21451	-0.54308	0.60664	2.28951	0.02205	3.75273	0.00017
187946	70	5	1.40	21.37459	9.20398	2.32232	0.02305	14.78806	0.79246	18.66102	0.00286	3.71594	0.00020	3.71594	0.00020
324015	70	5	2.40	-33.43605	8.70734	-3.83999	0.00026	-32.34373	25.44928	-1.27091	0.33158	-3.26755	0.00108	-3.65008	0.00026
187517	61	14	14.14	21.06695	5.54269	3.80086	0.00030	3.09742	4.55291	0.68031	0.51037	3.02243	0.00251	3.61610	0.00030
311947	52	23	38.52	17.28304	4.71044	3.66909	0.00046	-1.26185	2.79722	-0.45111	0.65676	2.16137	0.03067	3.50103	0.00046
194374	70	5	2.00	-21.57047	9.17216	-2.35173	0.02143	-39.12257	4.58833	-8.52654	0.01348	-3.37382	0.00074	-3.37382	0.00074
851733	59	16	70.75	13.90437	5.54136	2.50920	0.01435	3.86261	1.49837	2.57787	0.02295	3.33940	0.00084	3.33940	0.00084
4484075	38	37	4.03	15.18892	4.39600	3.45517	0.00093	-4.38594	2.97841	-1.47258	1.50006	1.32430	0.18540	3.31216	0.00093
315982	71	4	2.25	33.30952	9.80708	3.39648	0.00111	-13.56585	11.28947	-1.20164	0.44186	1.76129	0.07819	3.25990	0.00111
4416614	30	45	21.09	5.63321	4.78478	1.17732	0.24295	-6.17669	1.77187	-3.48597	0.00116	-1.47104	0.14128	-3.24802	0.00116
4388068	69	6	18.83	24.17466	8.25996	2.92673	0.00458	6.07410	2.35206	2.58246	0.08161	3.23611	0.00121	3.23611	0.00121
3946926	69	6	3.17	27.29196	8.19991	3.23832	0.00138	1.96050	10.29749	1.06439	0.36523	2.90228	0.00370	3.19899	0.00138
329798	65	10	5.80	21.11079	6.50161	3.24701	0.00177	-0.38698	4.84459	-0.07988	0.93857	2.15591	0.03109	3.12599	0.00177
275237	42	33	229.64	10.86722	4.59273	2.36618	0.02067	2.38419	1.12840	2.11289	0.04304	3.06696	0.00216	3.06696	0.00216
4398588	63	12	4.00	19.20976	6.06397	1.36785	0.00225	-3.45409	5.47678	-0.63068	0.54393	1.73079	0.08349	3.05459	0.00225
522582	61	14	27.86	17.89411	5.69572	3.14168	0.00244	-0.76225	3.16630	-0.24074	0.81419	1.97698	0.04804	3.03091	0.00244
303320	70	5	2.40	26.02100	9.16116	2.84036	0.00586	7.45560	3.14542	2.37031	0.14124	2.98893	0.00280	2.98893	0.00280
190453	60	15	17.07	11.63798	5.88280	1.97831	0.05172	5.53893	2.13016	2.60024	0.02322	2.98068	0.00288	2.98068	0.00288
196957	22	53	9.45	-9.00398	5.09603	-1.76686	0.08149	-4.76128	1.87110	-2.54464	0.01407	-2.96808	0.00300	-2.96808	0.00300
188262	71	4	1.00	30.99613	10.29887	3.00966	0.00360	0.00000	0.00000	0.00000	1.00000	2.05834	0.03956	2.91093	0.00360
290284	69	6	3.50	13.77370	8.60691	1.60031	0.11391	38.07767	7.02055	5.42374	0.01230	2.88807	0.00388	2.88807	0.00388
3907189	67	8	1.88	21.43065	7.26824	2.94853	0.00430	-16.40488	10.31099	-1.59101	0.17248	1.05416	0.29181	2.85508	0.00430
180421	62	13	3.85	-17.56717	5.99120	-2.93216	0.00451	1.18999	6.79918	0.17502	0.86456	-1.88763	0.05908	-2.84009	0.00451
3325758	28	47	17.45	4.14986	4.86838	0.85241	0.39681	-4.58239	1.53114	-2.99279	0.00452	-1.40858	0.15896	-2.83935	0.00452
157424	48	27	265.70	-7.77339	4.86883	-1.59656	0.11474	3.18072	1.01550	3.13216	0.00452	0.89228	0.37224	2.83911	0.00452
182647	63	12	29.67	-17.84602	6.11716	-2.91737	0.00471	0.03623	2.51661	0.01439	0.98883	-1.98876	0.04673	-2.82653	0.00471
166689	69	6	4.00	23.98735	8.27182	2.89989	0.00495	-5.87308	11.00322	-0.53376	0.63052	1.64721	0.09951	2.81050	0.00495
4309301	13	62	21.26	17.11552	5.92146	2.89042	0.00508	-2.11228	1.39001	-1.51961	0.13395	0.92143	0.35682	2.80181	0.00508
4483570	71	4	5.25	-28.91487	10.00572	-2.88984	0.00509	-4.38204	13.78066	-0.31798	0.80400	-2.15628	0.03106	-2.80127	0.00509
198754	70	5	2.80	-25.07785	9.01543	-2.78166	0.00690	-15.66293	8.53552	-1.83503	0.20793	-2.80081	0.00510	-2.80081	0.00510
192462	20	55	44.05	14.55947	5.07011	2.87163	0.00536	-0.22045	1.35137	-0.16313	0.87105	1.85419	0.06371	2.78455	0.00536
232900	67	8	5.38	-20.84384	7.26226	-2.87016	0.00538	5.22908	2.95984	1.76668	0.13753	-0.91794	0.35865	-2.78320	0.00538
184248	62	13	4.38	-3.51732	6.24363	-0.56334	0.57495	10.89764	3.08131	3.53670	0.00539	1.57133	0.11611	2.78297	0.00539
41229	70	5	19.20	-16.47291	9.29383	-1.77246	0.08055	-6.40309	1.11462	-5.76914	0.02876	-2.78199	0.00540	-2.78199	0.00540
4288931	60	15	21.40	16.26011	5.67422	2.86561	0.00545	-0.67602	3.49311	-0.19353	0.84978	1.83114	0.06708	2.77902	0.00545
3141342	60	15	4.33	2.64516	5.98503	0.44196	0.65984	-16.05184	4.77594	-3.36098	0.00566	-1.64508	0.09995	-2.76663	0.00566
1599042	63	12	21.33	17.40825	6.13678	2.83671	0.00592	4.26915	4.76930	0.89513	0.39403	2.54895	0.01808	2.75243	0.00592
4296763	70	5	102.80	-5.82722	9.48350	-0.61446	0.54085	-3.40194	0.26343	-12.91382	0.00594	-2.37760	0.01743	-2.75091	0.00594
1679707	62	13	3.23	-16.79015	5.94245	-2.82546	0.00611	7.62029	4.87507	1.56311	0.14909	-0.91875	0.35822	-2.74207	0.00611
186913	70	5	2.00	26.30931	9.31248	2.82517	0.00611	1.66314	15.78070	0.10539	0.92568	2.00470	0.04500	2.74180	0.00611
730906	53	22	2.91	-14.18083	5.04214	-2.81246	0.00633	-4.25170	4.17520	-1.01832	0.32132	-2.63174	0.00849	-2.73009	0.00633
750071	55	20	247.60	11.58759	5.19352	2.23116	0.02879	3.06767	1.74494	1.75804	0.09673	2.72047	0.00652	2.72047	0.00652
302333	63	12	2.50	-2.15856	6.46778	-0.33374	0.73955	-17.75142	5.07464	-3.49807	0.00674	-2.15079	0.03149	-2.70923	0.00674
180552	60	15	4.27	-8.88813	5.83295	-1.52378	0.13194	-12.93252	4.87103	-2.65499	0.02098	-2.69742	0.00699	-2.69742	0.00699
2331530	71	4	1.50	9.36121	10.48980	0.89241	0.37515	-37.54324	0.41251	-91.01093	0.00699	-1.28002	0.20054	-2.69710	0.00699
825808	43	32	39.38	-12.63515	4.55329	-2.77495	0.00703	-1.24808	1.63706	-0.76239	0.45198	-2.43781	0.01478	-2.69547	0.00703
191792	19	56	14.52	10.20674	5.30641	1.92347	0.05837	3.19653	1.63250	1.95806	0.05550	2.69255	0.00709	2.69255	0.00709
161007	68	7	1.43	-21.40135	7.75189	-2.76079	0.00731	-15.68725	15.65006	-1.00238	0.37288	-2.52683	0.01151	-2.68239	0.00731
4425368	68	7	19.71	-10.65979	8.06752	-1.32132	0.19058	-6.59063	1.54941	-4.25363	0.01312	-2.67949	0.00737	-2.67949	0.00737
564320	66	9	5.78	13.24153	7.11481	1.86112	0.06681	18.85883	7.77264	2.42631	0.05142	2.67351	0.00751	2.67351	0.00751
315223	62	13	6.62	-1.40114	6.25449	-0.22402	0.82338	-10.39660	3.11633	-3.33617	0.00754	-2.04725	0.04063	-2.67204	0.00754
347243	71	4	2.25	27.72727	10.15788	2.73411	0.00787	-12.63501	20.75306	-0.60883	0.65184	1.56023	0.11870	2.65771	0.00787
1841174	31	44	9.09	-9.62928	4.68442	-2.05560	0.04345	-3.47876	1.97568	-1.76079	0.08573	-2.64297	0.00822	-2.64297	0.00822
4383922	69	6	2.00	-22.64861	8.34203	-2.71500	0.00829	-7.50364	9.39308	-0.79885	0.48277	-2.36305	0.01813	-2.64001	0.00829
4454531	48	27	12.30	-12.68433	4.72714	-2.68330	0.00904	1.69457	2.74605	0.61709	0.54299	-1.41585	0.15682	-2.61061	0.00904
289734	19	56	17.04	-7.82875	5.36297	-1.45978	0.14870	-3.73840	1.62514	-2.30035	0.02539	-2.60180	0.00927	-2.60180	0.00927
192912	68	7	4.00	-18.95798	7.82235	-2.42356	0.01788	-8.24358	5.24131	-1.57281	0.19087	-2.59935	0.00934	-2.59935	0.00934
194320	44	31	3.90	12.14700	4.58861	2.64721	0.00996	-1.18671	3.41837	-0.34716	0.73107	1.57924	0.11428	2.57709	0.00996
185861	66	9	2.33	18.45330	6.97165	2.64691	0.00997	13.86493	18.01223	0.76975	0.47066	2.33219	0.01969	2.57681	0.00997
197540	69	6	4.33	19.67821	8.46956	2.32340	0.02299	21.18513	11.80569	1.79435	0.17064	2.57			

Table S4d. OTUs associated with Low-density lipoprotein (LDL) at FDR < 0.05 level ^a (Cont.)

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
177222	43	32	5.00	-11.78192	4.58412	-2.57016	0.01223	0.31382	2.61503	0.12001	0.90531	-1.68741	0.09152	-2.50532	0.01223
175922	69	6	2.67	21.46556	8.36072	2.56743	0.01232	8.09196	6.61350	1.22355	0.30846	2.48989	0.01278	2.50277	0.01232
511378	69	6	4.67	-21.44740	8.36077	-2.56524	0.01239	3.27548	7.31088	0.44803	0.68451	-1.48098	0.13861	-2.50073	0.01239
4307484	39	36	3.86	3.00200	4.72340	0.63556	0.52708	-8.35818	3.17152	-2.63539	0.01270	-1.31485	0.18856	-2.49195	0.01270
186687	60	15	2.60	-14.51348	5.68532	-2.55280	0.01281	-1.54854	5.88471	-0.26315	0.79690	-1.94205	0.05213	-2.48911	0.01281
178478	34	41	4.98	1.27133	4.80131	0.26479	0.79193	-5.56927	2.15322	-2.58649	0.01365	-1.55741	0.11937	-2.46631	0.01365
760544	63	12	4.67	-8.76776	6.53087	-1.34251	0.18365	-9.28375	3.63697	-2.55261	0.03106	-2.46489	0.01371	-2.46489	0.01371
360636	32	43	29.30	1.27715	4.79847	0.26616	0.79088	-3.37064	1.31305	-2.56703	0.01410	-1.54817	0.12158	-2.45462	0.01410
197499	33	42	8.17	11.60486	4.61760	2.51318	0.01420	-0.34621	2.85142	-0.12142	0.90399	1.64858	0.09923	2.45207	0.01420
193968	17	58	13.78	7.28338	5.58655	1.30374	0.19648	-3.71631	1.47181	-2.52500	0.01448	-1.81558	0.41474	-2.44505	0.01448
300235	60	15	1.60	-14.21473	5.67404	-2.50522	0.01450	4.46741	7.88620	0.56648	0.58151	-1.33886	0.18062	-2.44462	0.01450
656881	54	21	8.67	-12.87293	5.15750	-2.49596	0.01485	0.11916	2.16502	0.05504	0.95671	-1.68410	0.09216	-2.43599	0.01485
198909	49	26	7.35	7.90776	5.06270	0.15619	0.87632	-7.34490	2.79113	-2.63151	0.01492	-1.61132	0.10711	-2.43439	0.01492
294791	69	6	2.67	1.62642	8.73296	0.18624	0.85278	-21.00166	4.16585	-5.04139	0.01505	-1.58791	0.11231	-2.43122	0.01505
4435309	70	5	7.80	22.83528	9.17929	2.48770	0.01517	4.16809	8.92702	0.46691	0.68649	2.00240	0.04524	2.42821	0.01517
782953	15	60	127.50	-9.95535	5.82218	-1.70990	0.09159	-1.73077	0.97519	-1.77480	0.08127	-2.42568	0.01528	-2.42568	0.01528
3826120	71	4	1.75	-18.05304	10.32667	-1.74820	0.08469	-8.13602	1.14236	-7.12211	0.08881	-2.42242	0.01542	-2.42242	0.01542
291644	63	12	3.08	-5.17380	6.47949	-0.79849	0.42721	19.54576	6.56809	2.97587	0.01555	1.14923	0.25046	2.41923	0.01555
19611	55	20	3.95	12.76410	5.15883	2.47422	0.01571	1.20255	4.00213	0.30048	0.76746	1.91717	0.05522	2.41558	0.01571
4418787	65	10	7.20	-13.66774	6.78117	-2.01554	0.04758	-6.32340	3.92928	-1.60930	0.15159	-2.41480	0.01574	-2.41480	0.01574
332588	58	17	2.88	-13.42256	5.42941	-2.47220	0.01579	10.09564	5.91530	1.70670	0.10995	-0.57648	0.56429	-2.41368	0.01579
2046330	67	8	5.88	18.17297	7.36124	2.46874	0.01593	-2.27283	12.74650	-0.17831	0.86548	1.58465	0.11305	2.41044	0.01593
177062	65	10	3.70	6.87323	6.91951	0.99331	0.32388	-19.62657	6.21263	-3.15914	0.01595	-1.00664	0.31411	-2.41012	0.01595
1150984	40	35	97.49	-9.09981	4.65098	-1.95653	0.05428	-1.55809	1.03099	-1.51126	0.14053	-2.40302	0.01626	-2.40302	0.01626
4429981	61	14	38.07	14.32305	5.83648	2.45406	0.01655	-6.29013	3.48664	-1.80407	0.09864	0.52694	0.59824	2.39666	0.01655
4469032	70	5	5.80	18.38960	9.25001	1.98806	0.05061	13.27955	5.85506	2.26805	0.15144	2.39656	0.01655	2.39656	0.01655
537219	63	12	1.92	10.49846	6.33782	1.65648	0.10198	16.85988	8.54719	1.97256	0.08001	2.39424	0.01665	2.39424	0.01665
208739	32	43	3.77	1.64480	4.81147	0.34185	0.73346	-5.40268	2.17100	-2.48856	0.01709	-1.44552	0.14831	-2.38480	0.01709
189235	68	7	8.29	19.11760	7.84773	2.43607	0.01732	-6.71625	7.03295	-0.95497	0.39367	1.07961	0.28032	2.37977	0.01732
184342	68	7	1.86	-19.09065	7.86798	-2.42637	0.01776	5.55774	9.70181	0.57286	0.59741	-1.30287	0.19262	-2.37067	0.01776
4311621	67	8	2.50	17.91572	7.40311	2.42003	0.01804	0.96770	9.36737	0.10331	0.92174	1.74157	0.08158	2.36470	0.01804
1110312	66	9	8.44	0.42777	7.31895	0.05845	0.95355	-12.45536	3.86404	-3.22340	0.01806	-1.63069	0.10296	-2.36439	0.01806
171559	61	14	1.57	-14.12991	5.85675	-2.41258	0.01839	10.99410	8.69877	1.26387	0.23240	-0.82273	0.41066	-2.35770	0.01839
180341	70	5	1.60	-21.99111	9.15306	-2.40260	0.01886	-3.00282	8.34702	-0.35975	0.75347	-1.88258	0.05976	-2.34831	0.01886
186732	18	57	11.37	1.10321	5.56063	0.19840	0.84329	-4.23834	1.75178	-2.41945	0.01894	-1.51957	0.12862	-2.34668	0.01894
230479	70	5	4.00	17.46260	9.27159	1.88345	0.06368	12.67720	5.39774	2.34861	0.14332	2.34616	0.01897	2.34616	0.01897
180121	71	4	3.25	24.43042	10.20386	2.39423	0.01926	-7.59061	44.31301	-0.17130	0.89200	1.55893	0.11901	2.34044	0.01926
3195500	46	29	5.17	-11.18393	4.67708	-2.39122	0.01941	5.33190	3.06658	1.73871	0.09392	-0.46847	0.63945	-2.33761	0.01941
179744	56	19	16.32	12.51322	5.23732	2.38924	0.01950	0.14947	2.90370	0.05148	0.95958	1.68745	0.09152	2.33574	0.01950
4419459	55	20	16.10	12.29083	5.16602	2.37917	0.02000	1.05787	2.88320	0.36691	0.71821	1.90007	0.05742	2.32626	0.02000
337161	62	13	9.46	9.33447	6.15498	1.51657	0.13375	8.03199	4.01682	1.99959	0.07344	2.32607	0.02001	2.32607	0.02001
187388	62	13	2.62	-1.22387	6.25571	-0.19564	0.84544	9.18356	3.32662	2.76062	0.02011	1.50570	0.13214	2.32432	0.02011
1602805	48	27	5.70	-10.27774	4.78211	-2.14920	0.03498	-4.21752	3.50291	-1.20400	0.24033	-2.32126	0.02027	-2.32126	0.02027
196061	68	7	5.57	-19.34828	8.16781	-2.36885	0.02053	-3.14524	7.53506	-0.41741	0.69781	-1.91260	0.05580	-2.31654	0.02053
193053	18	57	11.40	11.32337	5.37773	2.10560	0.03873	2.26632	1.86034	1.21823	0.22843	2.31329	0.02071	2.31329	0.02071
2280825	68	7	3.14	18.63227	7.88003	2.36449	0.02075	15.36177	15.38578	0.99844	0.37457	2.26301	0.02364	2.31243	0.02075
301578	61	14	14.29	-12.39692	6.07513	-2.04060	0.04496	-3.63350	2.73609	-1.32799	0.21108	-2.30209	0.02133	-2.30209	0.02133
2423305	57	18	7.61	12.64728	5.37668	2.35225	0.02140	2.61544	2.65562	0.98487	0.34031	2.30124	0.02138	2.30124	0.02138
158855	67	8	11.63	4.08597	7.65094	0.53405	0.59495	8.79437	2.66272	3.30277	0.02141	2.00277	0.04520	2.30068	0.02141
4377149	49	26	11.12	11.23167	4.79301	2.34334	0.02188	-1.45942	2.29166	-0.63684	0.53052	1.17753	0.23898	2.29249	0.02188
174831	43	32	34.69	10.82683	4.62079	2.34307	0.02189	-0.32078	1.78948	-0.17926	0.85898	1.49522	0.13486	2.29224	0.02189
187126	57	18	3.22	-12.51394	5.34099	-2.34300	0.02190	4.39269	3.42318	1.28322	0.21889	-0.75143	0.45240	-2.29217	0.02190
198190	69	6	1.50	-11.92948	8.60899	-1.38570	0.17012	38.48179	8.76711	4.38933	0.02190	0.65067	0.51526	2.29201	0.02190
190991	63	12	1.92	-14.59073	6.23319	-2.34081	0.02202	5.66536	6.64691	0.87632	0.40364	-1.02881	0.30357	-2.29011	0.02202
4254313	71	4	1031.50	23.95371	10.24013	2.33920	0.02210	0.33957	1.04991	0.32343	0.80086	1.79663	0.07239	2.28858	0.02210
4354103	66	9	34.22	16.39973	7.02284	2.33520	0.02232	-0.38447	4.18372	-0.09190	0.92977	1.55329	0.12035	2.28481	0.02232
183579	57	18	3.67	-12.58890	5.39147	-2.33497	0.02234	-0.66967	3.11961	-0.21467	0.83292	-1.76462	0.07763	-2.28459	0.02234
197760	70	5	2.00	2.20635	9.55392	0.23094	0.81802	-48.64536	7.50535	-6.48299	0.02298	-1.44514	0.14842	-2.27383	0.02298
688701	64	11	3.27	-3.34517	6.67787	-0.50093	0.61795	16.57325	5.91239	2.80314	0.02309	1.25387	0.20989	2.27201	0.02309
544996	65	10	5.00	5.82627	7.04130	0.82744	0.41072	-6.94180	2.39636	-2.89681	0.02309	-1.02481	0.30545	-2.27193	0.02309
1508541	40	35	4.03	-10.61321	4.57547	-2.31959	0.02320	-0.42923	3.12458	-0.13737	0.89160	-1.70155	0.08884	-2.27008	0.02320
4366834	61	14	113.14	9.63545	5.99526	1.60718	0.11239	4.13712	2.34583	1.76361	0.10552	2.26713	0.02338	2.26713	0.02338
199430	38	37	3.59	-10.60373	4.58387	-2.31327	0.02357	1.00751	2.						

Table S4d. OTUs associated with Low-density lipoprotein (LDL) at FDR < 0.05 level ^a (Cont.)

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
232222	70	5	6.60	20.89464	9.19952	2.27127	0.02612	7.18856	5.99562	1.19897	0.35333	2.22920	0.02580	2.22920	0.02580
1566691	69	6	2.33	-19.33250	8.50209	-2.27385	0.02596	-3.41588	12.62621	-0.27054	0.80429	-1.74984	0.08015	-2.22684	0.02596
663500	55	20	69.10	11.36734	5.18094	2.19407	0.03146	2.02326	1.97203	1.02598	0.31928	2.22538	0.02606	2.22538	0.02606
515299	70	5	14.60	-1.68632	9.48650	-0.17776	0.85941	-14.28656	2.35783	-6.05921	0.02617	-1.69759	0.08958	-2.22364	0.02617
182289	34	41	10.37	-8.72602	4.64148	-1.88001	0.06415	-2.34816	1.79101	-1.31109	0.19770	-2.21979	0.02643	-2.21979	0.02643
3465233	56	19	7.47	-0.38312	5.45073	-0.07029	0.94416	-8.06888	3.30135	-2.44411	0.02648	-1.61864	0.10552	-2.21906	0.02648
2341726	69	6	2.00	-8.85261	8.76251	-1.01028	0.31574	-9.69267	2.60847	-3.71584	0.03390	-2.20932	0.02715	-2.20932	0.02715
288651	26	49	32.88	0.12993	4.98313	0.02607	0.97927	-2.87694	1.26169	-2.28023	0.02728	-1.54259	0.12293	-2.20754	0.02728
4338990	54	21	11.48	8.27520	5.18534	1.59589	0.11489	3.85943	2.39106	1.61411	0.12390	2.20277	0.02761	2.20277	0.02761
197426	70	5	4.80	-14.65043	9.38497	-1.56105	0.12290	-13.52442	5.08152	-2.66149	0.11692	-2.19949	0.02784	-2.19949	0.02784
181918	69	6	2.50	0.59898	8.73785	0.06855	0.94554	20.29125	5.07391	3.99914	0.02802	1.60178	0.10920	2.19695	0.02802
4358921	59	16	1.69	-12.52384	5.59247	-2.23941	0.02822	-5.51719	6.44680	-0.85580	0.40760	-2.13712	0.03259	-2.19423	0.02822
180825	71	4	2.25	-20.13912	10.26693	-1.96155	0.05368	-22.44619	8.93889	-2.51107	0.24127	-2.19289	0.02832	-2.19289	0.02832
4020046	64	11	7.64	-14.54489	6.50600	-2.23561	0.02848	7.58041	4.36869	1.73517	0.12093	-0.45237	0.65100	-2.19063	0.02848
509709	68	7	1.71	8.88624	8.08137	1.09960	0.27517	-39.01595	11.63859	-3.35229	0.02851	-0.77710	0.43710	-2.19022	0.02851
229088	71	4	7.25	19.52727	10.27896	1.89973	0.06147	12.75541	4.63564	2.75160	0.22192	2.18604	0.02881	2.18604	0.02881
4425571	30	45	21.82	-9.56951	4.74944	-2.01487	0.04765	-1.66457	1.48188	-1.12328	0.26770	-2.18413	0.02895	-2.18413	0.02895
310247	70	5	2.00	-20.61426	9.26096	-2.22593	0.02915	35.96538	37.50569	0.95893	0.43878	-0.99505	0.31971	-2.18146	0.02915
4472130	40	35	5.14	10.21205	4.59527	2.22230	0.02941	1.62555	3.72024	0.43695	0.66508	1.84620	0.06486	2.17801	0.02941
518820	70	5	10.40	20.63366	9.31245	2.21571	0.02987	-24.44225	125.55012	-0.19468	0.86363	1.41421	0.15730	2.17176	0.02987
312311	68	7	2.57	-7.30610	8.10506	-0.90142	0.37037	-34.84946	10.57684	-3.29488	0.03008	-2.16718	0.03022	-2.16907	0.03008
185864	56	19	4.95	1.73437	5.48959	0.31594	0.75296	-8.71835	3.69074	-2.36223	0.03117	-1.30117	0.19320	-2.15487	0.03117
4379449	68	7	31.43	-0.87960	8.20209	-0.10724	0.91490	-5.75344	1.76883	-3.25267	0.03130	-1.59816	0.11001	-2.15328	0.03130
581201	48	27	4.33	10.64822	4.85181	2.19469	0.03141	3.34470	4.66840	0.71646	0.48062	2.02028	0.03355	2.15181	0.03141
4483045	67	8	1.50	-15.04771	7.49127	-2.00870	0.04832	-19.46028	16.31954	-1.19245	0.28658	-2.14974	0.03158	-2.14974	0.03158
199293	8	67	15.46	-11.36520	7.57708	-1.49995	0.13800	-2.18053	1.38343	-1.57618	0.11992	-2.14848	0.03168	-2.14848	0.03168
4433737	62	13	7.54	-2.12816	6.28482	-0.33862	0.73588	8.33726	3.34656	2.49130	0.03192	1.27853	0.20106	2.14542	0.03192
195436	37	38	4.76	-10.07244	4.61203	-2.18395	0.03222	3.99175	2.31523	1.72413	0.09351	-0.32841	0.74260	-2.14162	0.03222
591439	69	6	2.67	15.08804	8.59941	1.75454	0.08359	21.18671	12.71306	1.66653	0.19420	2.14145	0.03224	2.14145	0.03224
184238	31	44	10.70	10.21115	4.69852	2.17327	0.03305	-2.18242	2.04100	-1.06929	0.29120	0.76082	0.44676	2.13147	0.03305
168439	44	31	33.58	-0.15940	5.00842	-0.03183	0.97470	-3.48171	1.55291	-2.24205	0.03306	-1.52950	0.12614	-2.13132	0.03306
4438999	61	14	3.93	4.97028	6.04554	0.82214	0.41371	-9.33750	3.83606	-2.43414	0.03317	-0.92822	0.35330	-2.13008	0.03317
180107	61	14	3.93	4.97028	6.04554	0.82214	0.41371	-9.33750	3.83606	-2.43414	0.03317	-0.92822	0.35330	-2.13008	0.03317
191148	71	4	2.50	22.15507	10.20323	2.17138	0.03320	4.27399	27.50356	0.15540	0.90186	1.59310	0.11114	2.12967	0.03320
367813	65	10	18.50	11.84985	6.82684	1.73577	0.08688	7.25809	5.05213	1.43664	0.19397	2.12910	0.03325	2.12910	0.03325
299407	55	20	11.20	6.94225	5.28890	1.31261	0.19348	5.07175	2.79515	1.81448	0.08729	2.12854	0.03329	2.12854	0.03329
158423	60	15	79.60	0.38358	5.92762	0.06471	0.94858	4.82657	2.01114	2.39992	0.03352	1.54873	0.12145	2.12575	0.03352
4443846	46	29	6.10	-8.72608	4.82393	-1.80891	0.07464	-3.18156	2.53804	-1.25355	0.22116	-2.12565	0.03353	-2.12565	0.03353
113654	67	8	2.88	-9.90391	7.57691	-1.30712	0.19533	-34.62786	16.31350	-2.12265	0.08721	-2.12504	0.03358	-2.12504	0.03358
4315788	68	7	10.43	10.71832	8.06020	1.32978	0.18779	14.39060	6.58315	2.18597	0.09411	2.11512	0.03442	2.11512	0.03442
183604	65	10	3.50	-14.57335	6.76876	-2.15303	0.03467	1.47711	3.14414	0.46980	0.65278	-1.17544	0.23982	-2.11223	0.03467
175844	49	26	104.65	-10.37505	4.83180	-2.14724	0.03514	0.87230	1.48705	0.58660	0.56319	-1.08089	0.27975	-2.10672	0.03514
180462	68	7	2.29	-14.92898	7.95301	-1.87715	0.06455	-16.28100	12.36019	-1.31721	0.25815	-2.10656	0.03516	-2.10656	0.03516
187179	61	14	9.86	-12.80080	5.96275	-2.14679	0.03518	-0.82618	3.10108	-0.26642	0.79485	-1.67324	0.09428	-2.10629	0.03518
192741	49	26	10.42	10.37239	4.83213	2.14654	0.03520	-2.51507	2.28985	-1.09836	0.28341	0.73071	0.46496	2.10606	0.03520
3507744	68	7	4.57	-16.90750	7.89232	-2.14227	0.03555	5.87076	3.98831	1.47199	0.21500	-0.60957	0.54215	-2.10199	0.03555
535955	64	11	2.36	8.92343	6.61762	1.34843	0.18175	13.25453	7.19462	1.84228	0.10268	2.09825	0.03588	2.09825	0.03588
209760	65	10	2.20	-3.62594	6.96750	-0.52041	0.60438	8.34548	3.22090	2.59104	0.03589	1.11726	0.26388	2.09817	0.03589
192438	52	23	12.48	-7.77997	5.10533	-1.52389	0.13192	-3.28416	2.16076	-1.51991	0.14419	-2.09796	0.03591	-2.09796	0.03591
189271	68	7	1.29	1.91240	8.13619	0.23505	0.81484	23.58218	7.59865	3.10347	0.03610	1.64755	0.09944	2.09581	0.03610
319275	44	31	5.61	-5.46129	4.80729	-1.13604	0.25971	-5.30709	2.77666	-1.91132	0.06625	-2.09574	0.03611	-2.09574	0.03611
195252	67	8	4.00	15.85947	7.43458	2.13320	0.03632	-2.74168	7.13861	-0.38406	0.71672	1.22366	0.22108	2.09336	0.03632
187386	53	22	3.86	-2.14958	5.19411	-0.41385	0.68021	-6.75550	3.00246	-2.24999	0.03649	-1.77028	0.07668	-2.09138	0.03649
365385	56	19	7.63	-5.50662	5.40387	-1.02716	0.30779	-6.81965	3.27177	-2.08439	0.05351	-2.08643	0.03694	-2.08643	0.03694
4381555	62	13	3.92	-9.91791	6.30598	-1.57278	0.12015	-6.57244	4.36275	-1.50649	0.16286	-2.08571	0.03700	-2.08571	0.03700
197179	69	6	3.83	18.01847	8.47897	2.12508	0.03701	-18.11228	6.58765	-2.74943	0.07078	0.19708	0.84376	2.08562	0.03701
1986406	71	4	1.75	21.71645	10.22529	2.12380	0.03712	-20.90929	24.96693	-0.83748	0.55616	1.05773	0.29018	2.08441	0.03712
183454	67	8	15.75	14.75480	7.52768	1.96007	0.05386	5.33735	4.70240	1.13503	0.30783	2.08439	0.03712	2.08439	0.03712
539647	60	15	19.27	-0.16128	5.91782	-0.02725	0.97833	5.84996	2.50299	2.33719	0.03758	1.45118	0.14673	2.07944	0.03758
48084	35	40	36.20	9.74876	4.60219	2.11829	0.03760	-0.86021	1.41023	-0.60998	0.54560	1.04284	0.29702	2.07916	0.03760
182483	60	15	53.40	12.27166	5.79618	2.11720	0.03770	-1.60375	2.43407	-0.65888	0.52242	1.01717	0.30907	2.07812	0.03770
199761	25	50	9.80	-10.30836	4.88136	-2.11178	0.03818	-0.72255	1.93611	-0.37320	0.71068	-1.72810	0.08397	-2.07296	0.03818
182577	43	32	3.63	-6.77656	4.71760	-1.43644	0.15521	-5.00074	3.22103	-1.					

Table S4d. OTUs associated with Low-density lipoprotein (LDL) at FDR < 0.05 level ^a (Cont.)

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
4462107	69	6	2.67	-17.63967	8.47461	-2.08147	0.04095	17.23641	10.41733	1.65459	0.19658	-0.53225	0.59455	-2.04407	0.04095
4434579	62	13	83.77	-9.46807	6.16375	-1.53609	0.12890	4.41660	1.88322	2.34525	0.04097	0.37149	0.71027	2.04382	0.04097
941096	61	14	3.00	-3.40332	6.09694	-0.55820	0.57844	10.13533	4.38219	2.31285	0.04109	1.05142	0.29307	2.04260	0.04109
1046997	70	5	2.20	-19.13633	9.21668	-2.07627	0.04144	41.96582	16.81099	2.49633	0.12992	-0.37102	0.71063	-2.03911	0.04144
3138798	31	44	219.93	-9.67748	4.66854	-2.07291	0.04176	-0.69154	0.90844	-0.76123	0.45088	-1.97273	0.04853	-2.03590	0.04176
588471	64	11	315.64	-11.63387	6.66689	0.86005	0.39261	2.83990	1.18346	2.39965	0.04320	2.03410	0.04194	2.03410	0.04194
113542	45	30	17.70	9.72484	4.69996	2.06913	0.04212	-1.62757	2.09181	-0.77807	0.44329	0.89495	0.37081	2.03229	0.04212
180216	56	19	47.32	-7.48430	5.46507	-1.36948	0.17511	-2.90041	1.81801	-1.59537	0.13019	-2.02893	0.04247	-2.02893	0.04247
359445	67	8	4.13	15.43281	7.48200	2.06266	0.04275	2.11211	5.64371	0.37424	0.72357	1.68278	0.09242	2.02611	0.04275
163494	59	16	3.44	-11.63567	5.64195	-2.06235	0.04278	4.36595	6.43363	0.67861	0.50928	-0.96581	0.33414	-2.02582	0.04278
4458227	66	9	16.11	9.60854	7.19460	1.33552	0.18591	-9.83031	3.84348	-2.55766	0.04304	-0.49534	0.62036	-2.02328	0.04304
174862	70	5	2.80	-14.51379	9.40316	-1.54350	0.12709	-96.79624	48.16774	-2.00957	0.18221	-2.02208	0.04317	-2.02208	0.04317
3318103	59	16	2.38	-0.27603	5.78411	-0.04772	0.96207	13.99893	6.25365	2.23852	0.04332	1.39519	0.16296	2.02066	0.04332
211720	60	15	46.73	3.75318	5.92501	0.63345	0.52845	4.25210	1.88265	2.25857	0.04332	1.87451	0.06086	2.02058	0.04332
4451906	44	31	4.68	5.46640	4.83881	1.12970	0.26235	5.69919	3.16867	1.79861	0.08287	2.01887	0.04350	2.01887	0.04350
182911	39	36	7.17	-7.17050	4.66477	-1.53716	0.12864	-2.93806	2.16330	-1.35814	0.18363	-2.01465	0.04394	-2.01465	0.04394
197970	27	48	8.15	-9.90085	4.83607	-2.04729	0.04428	0.71590	1.91403	0.37403	0.71014	-1.15949	0.24625	-2.01144	0.04428
793109	68	7	13.57	13.97993	8.17689	1.70969	0.09163	6.13411	4.56736	1.34303	0.25040	2.00552	0.04491	2.00552	0.04491
188851	43	32	293.06	6.86774	4.79102	1.43346	0.15605	1.65990	1.14291	1.45235	0.15714	2.00340	0.04513	2.00340	0.04513
197539	69	6	4.50	12.68150	8.59460	1.47552	0.14443	12.39950	6.89900	1.79729	0.17014	2.00198	0.04529	2.00198	0.04529
350832	71	4	7.25	14.44295	10.39355	1.38961	0.16893	32.94819	7.67109	4.29511	0.14563	2.00168	0.04532	2.00168	0.04532
4357713	55	20	2.90	8.45181	5.25865	1.60722	0.11238	5.49913	4.26651	1.28891	0.21469	1.99993	0.04551	1.99993	0.04551
194735	71	4	2.25	20.85830	10.24940	2.03507	0.04553	30.14229	93.03498	0.32399	0.80054	1.59270	0.11123	1.99976	0.04553
4395096	48	27	4.19	-3.56369	4.91390	-0.72523	0.47066	6.01772	2.85405	2.10849	0.04561	0.90336	0.36633	1.99894	0.04561
36647	71	4	1.00	-20.82529	10.24151	-2.03342	0.04570	0.00000	0.00000	0.00000	1.00000	-1.41293	0.15768	-1.99818	0.04570
174571	64	11	2.82	-13.26388	6.53973	-2.02820	0.04624	-0.40650	7.51616	-0.05408	0.95819	-1.44647	0.14805	-1.99319	0.04624
4449055	60	15	2.53	-8.73611	5.83936	-1.49607	0.13900	-7.90382	5.57877	-1.41677	0.18198	-1.98992	0.04660	-1.98992	0.04660
841907	52	23	37.48	2.36605	5.14556	0.45982	0.64703	-4.66353	2.20072	-2.11909	0.04679	-1.08207	0.27922	-1.98817	0.04679
4436046	62	13	15.46	12.31058	6.08737	2.02232	0.04686	1.91411	3.65093	0.52428	0.61151	1.76458	0.07763	1.98757	0.04686
303326	71	4	2.25	20.79149	10.28947	2.02066	0.04704	-33.59815	22.26129	-1.50926	0.37253	0.77374	0.43908	1.98598	0.04704
2438203	43	32	7.66	-6.19707	4.73546	-1.30865	0.19481	-3.68890	2.37273	-1.55471	0.13086	-1.98498	0.04715	-1.98498	0.04715
4397092	57	18	5.94	9.43213	5.61595	1.67953	0.09738	5.07835	4.24984	1.19495	0.25066	1.98444	0.04721	1.98444	0.04721
182269	71	4	3.25	-9.42730	10.60116	-0.88927	0.37682	-15.60806	1.34625	-11.59377	0.05477	-1.98303	0.04736	-1.98303	0.04736
214036	39	36	11.44	-9.30230	4.61972	-2.01361	0.04779	0.65922	2.23043	0.29556	0.76942	-1.19226	0.23316	-1.97924	0.04779
157162	70	5	3.00	0.10857	9.48663	0.01144	0.99090	-5.79899	1.31705	-4.40302	0.04791	-1.39074	0.16431	-1.97820	0.04791
3544699	68	7	4.43	-15.92721	7.91541	-2.01218	0.04794	13.71178	11.27838	1.21576	0.29092	-0.65179	0.51454	-1.97787	0.04794
179267	45	30	6.03	-9.45764	4.70356	-2.01074	0.04810	-2.07545	2.67559	-0.77570	0.44467	-1.93806	0.05262	-1.97650	0.04810
191153	11	64	130.27	4.84967	6.67443	0.72660	0.46982	2.46685	1.22384	2.01566	0.04825	1.90774	0.05642	1.97519	0.04825
368236	67	8	2.13	-6.36010	7.63890	-0.83259	0.40783	-23.84230	9.24825	-2.57804	0.04955	-1.97392	0.04839	-1.97392	0.04839
43950	67	8	2.38	7.86195	7.69359	1.02188	0.31026	16.16711	7.23981	2.23309	0.07587	1.97272	0.04853	1.97272	0.04853
4379646	67	8	1.75	-14.97473	7.46609	-2.00570	0.04865	39.62625	27.01240	1.46696	0.20230	-0.49261	0.62229	-1.97167	0.04865
4111715	50	25	5.60	-7.61745	5.06027	-1.50534	0.13661	-3.26704	2.43879	-1.33961	0.19405	-1.97087	0.04874	-1.97087	0.04874
193672	43	32	6.75	9.31388	4.66087	1.99832	0.04946	-2.13200	2.68440	-0.79422	0.43352	0.83539	0.40350	1.96461	0.04946
185222	71	4	1.25	6.00101	10.50966	0.57100	0.56978	-25.09735	1.96561	-12.76820	0.04976	-0.98546	0.32440	-1.96204	0.04976
157327	31	44	5.41	-9.35015	4.68836	-1.99433	0.04990	1.08507	2.47003	0.43930	0.66275	-1.07811	0.28098	-1.96079	0.04990

^a Statistics associated to the two part model for association analysis between the trait and OTUs adjusting for age and gender. The binomial analysis that tests for association of detecting a microbe represented by an OTU with the trait, where s.e. represents the standard error of the estimate, t-value of a t test for the estimate and its associated probability (P value). The quantitative analysis tests for association between the trait and the abundance of the OTU for the subjects where that OTU is present, where s.e. represents the standard error of the estimate, t-value of a t test for the estimate and its associated probability (P value). The Meta analysis combine the effect of both binary and quantitative analysis, a meta P value was derived using an unweighted Z method. The final association P value per OTU-trait pair was assigned from the minimum of P values from the binary analysis, quantitative analysis, and meta-analysis.

Table S4e. OTUs associated with Total cholesterol (TC) at FDR < 0.05 level ^a

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
207340	71	4	2.00	-1.97281	12.83521	-0.15370	0.87827	16.00000	0.00000	743.20468	0.00000	5.77705	0.00000	8.32315	0.00000
324015	70	5	2.40	-48.08228	10.17661	-4.72478	0.00001	-9.58050	30.00679	-0.31928	0.77978	-3.30522	0.00095	-4.39467	0.00001
389371	60	15	4.07	-28.67954	6.40380	-4.47852	0.00003	9.47758	4.06824	2.32965	0.03809	-1.49783	0.13418	-4.19209	0.00003
4342104	59	16	5.38	-9.60323	7.17084	-1.33921	0.18472	-15.22414	2.62694	-5.79538	0.00006	-3.76929	0.00016	-4.00420	0.00006
198754	70	5	2.80	-41.14252	10.49688	-3.91950	0.00020	-19.94406	7.10899	-2.80547	0.10704	-3.76924	0.00016	-3.76924	0.00016
3115852	65	10	2.20	25.95953	7.92211	3.27685	0.00162	16.36467	6.66430	2.45557	0.04375	3.65525	0.00026	3.65525	0.00026
361507	66	9	143.67	30.22423	8.12948	3.71785	0.00039	1.24020	1.94140	0.63882	0.54654	2.93215	0.00337	3.54373	0.00039
184248	62	13	4.38	-9.54302	7.54261	-1.26522	0.20987	15.20222	3.21518	4.72826	0.00081	1.48260	0.13818	3.35062	0.00081
180421	62	13	3.85	-24.58014	7.16158	-3.43222	0.00100	-1.87036	9.24480	-0.20231	0.84373	-2.46701	0.01362	-3.29175	0.00100
4347159	35	40	67.45	3.59414	5.77001	0.62290	0.53532	-5.15779	1.46392	-3.52328	0.00115	-1.85993	0.06290	-3.25025	0.00115
539647	60	15	19.27	-0.77631	7.21163	-0.10765	0.91458	7.98557	2.00165	3.98950	0.00180	2.13185	0.03302	3.12216	0.00180
760544	63	12	4.67	-21.43375	7.65218	-2.80100	0.00654	-12.16997	6.65957	-1.82744	0.10090	-3.08298	0.00205	-3.08298	0.00205
348304	53	22	3.86	-20.19467	6.35729	-3.17661	0.00219	9.33380	4.16605	2.24045	0.03721	-0.69228	0.48876	-3.06251	0.00219
194374	70	5	2.00	-19.76244	11.36347	-1.73912	0.08629	-62.98963	7.35475	-8.56448	0.01336	-2.96230	0.00305	-2.96230	0.00305
157424	48	27	265.70	-7.05658	5.98033	-1.17996	0.24190	3.60379	1.12006	3.21749	0.00368	1.22612	0.22015	2.90425	0.00368
196957	22	53	9.45	-9.89474	6.23576	-1.58677	0.11695	-6.68415	2.53652	-2.63517	0.01117	-2.90275	0.00370	-2.90275	0.00370
3236435	37	38	40.37	-3.70670	5.78750	-0.64047	0.52390	6.23049	2.04063	3.05322	0.00431	1.56798	0.11689	2.85480	0.00431
193654	59	16	4.25	-19.60743	6.70559	-2.92404	0.00462	-4.16101	6.95905	-0.59793	0.56016	-2.41495	0.01574	-2.83265	0.00462
740158	66	9	3.44	24.50788	8.39309	2.92001	0.00467	-2.62862	5.90241	-0.44535	0.67169	1.70067	0.08900	2.82895	0.00467
311718	71	4	3.25	17.87391	12.70858	1.40644	0.16389	-8.77365	0.06714	-130.66925	0.00487	-1.00642	0.31421	-2.81538	0.00487
4296763	70	5	102.80	-13.56549	11.47719	-1.18195	0.24111	-6.21280	0.44219	-14.05010	0.00503	-2.81250	0.00492	-2.81250	0.00492
4383922	69	6	2.00	-29.13657	10.10697	-2.88282	0.00519	-12.01821	8.30465	-1.44717	0.24366	-2.80066	0.00510	-2.80066	0.00510
177792	32	43	6.26	-4.36808	5.83940	-0.74803	0.45688	7.83040	2.64419	2.96136	0.00513	1.45284	0.14627	2.79862	0.00513
1044419	70	5	155.80	-31.41750	10.95516	-2.86783	0.00542	-2.25102	3.68229	-0.61131	0.60322	-2.33404	0.01959	-2.78105	0.00542
4464173	25	50	6.98	-16.60061	5.79693	-2.86369	0.00548	0.33690	2.37784	0.14168	0.88794	-1.86417	0.06230	-2.77725	0.00548
216599	20	55	35.02	0.88005	6.57290	0.13389	0.89386	-5.07634	1.76883	-2.86988	0.00592	-1.85159	0.06408	-2.75196	0.00592
174943	70	5	4.60	31.14306	11.00374	2.83023	0.00602	2.40381	5.20527	0.46180	0.68959	2.22447	0.02612	2.74646	0.00602
4469032	70	5	5.80	18.66595	11.36758	1.64203	0.10494	15.58326	2.46071	6.33283	0.02404	2.74205	0.00611	2.74205	0.00611
3318103	59	16	2.38	-0.09158	7.04933	-0.01299	0.98967	17.71583	5.44881	3.25132	0.00631	1.92203	0.05460	2.73111	0.00631
515299	70	5	14.60	-16.04482	11.40830	-1.40642	0.16390	-17.75530	2.09920	-8.45813	0.01369	-2.72754	0.00638	-2.72754	0.00638
199710	50	25	5.20	-10.74935	6.00832	-1.78908	0.07781	-7.43506	3.36680	-2.20834	0.03794	-2.71459	0.00664	-2.71459	0.00664
3907189	67	8	1.88	24.88858	8.90699	2.79428	0.00666	-10.76851	10.95066	-0.98337	0.37059	1.28548	0.19863	2.71331	0.00666
297385	68	7	2.57	-20.03704	9.74438	-2.05627	0.04338	-22.54206	9.36102	-2.40808	0.07371	-2.69297	0.00708	-2.69297	0.00708
4309301	13	62	21.26	20.07851	7.24730	2.77048	0.00712	-0.68737	1.72327	-0.39887	0.69143	1.62240	0.10472	2.69134	0.00712
196061	68	7	5.57	-27.06290	9.83047	-2.75296	0.00747	-7.10729	9.18274	-0.77398	0.48214	-2.38861	0.01691	-2.67515	0.00747
2157225	65	10	2.40	5.90157	8.45699	0.69783	0.48753	20.39533	5.57924	3.65557	0.00812	2.36271	0.01814	2.64713	0.00812
300235	60	15	1.60	-18.65437	6.86683	-2.71659	0.00825	6.39341	11.25001	0.56830	0.58031	-1.47683	0.13972	-2.64149	0.00825
1952	7	68	202.57	-1.18978	10.56638	-0.11260	0.91066	3.72990	1.36942	2.72370	0.00828	1.78768	0.07383	2.64037	0.00828
177758	64	11	4.82	-9.97263	8.06702	-1.23622	0.22039	-16.64450	5.15971	-3.22586	0.01213	-2.64017	0.00829	-2.64017	0.00829
851733	59	16	70.75	10.34719	6.93609	1.49179	0.14012	3.78745	1.48194	2.55573	0.02393	2.64002	0.00829	2.64002	0.00829
357930	64	11	110.91	-8.61168	8.09150	-1.06429	0.29075	-2.59847	0.74745	-3.47643	0.00836	-2.61170	0.00901	-2.63704	0.00836
184525	65	10	1.70	-20.70228	8.15344	-2.53909	0.01328	-23.53975	17.28289	-1.36203	0.21539	-2.62702	0.00861	-2.62702	0.00861
174516	43	32	22.66	11.25842	5.81506	1.93608	0.05678	4.51292	2.40327	1.87783	0.07050	2.62597	0.00864	2.62597	0.00864
34789	63	12	3.83	-20.33586	7.53596	-2.69851	0.00867	-8.24459	8.98557	-0.91754	0.38279	-2.47310	0.01339	-2.62472	0.00867
193477	38	37	5.78	-13.59704	5.58404	-2.43498	0.01737	-4.25673	3.14968	-1.35148	0.18547	-2.61832	0.00884	-2.61832	0.00884
182797	69	6	2.83	-26.09489	10.39567	-2.51017	0.01432	-57.03296	35.94635	-1.58661	0.21079	-2.61675	0.00888	-2.61675	0.00888
197581	69	6	2.00	-2.60991	10.62638	-0.24561	0.80669	11.03465	1.82183	6.05692	0.00903	1.67318	0.09429	2.61094	0.00903
105287	64	11	3.09	-20.87598	7.93603	-2.63053	0.01042	-9.78927	8.15517	-1.20038	0.26433	-2.60060	0.00931	-2.60060	0.00931
349123	70	5	2.60	-29.52283	11.04806	-2.67222	0.00931	6.15478	20.66671	0.29781	0.79394	-1.65401	0.09813	-2.60033	0.00931
194654	58	17	3.06	-4.01863	6.94065	-0.57900	0.56440	-10.42257	3.46151	-3.01099	0.00935	-2.24539	0.02474	-2.59914	0.00935
315223	62	13	6.62	-6.95411	7.58096	-0.91731	0.36204	-15.52809	4.87290	-3.18662	0.00971	-2.47309	0.01339	-2.58600	0.00971
4479443	65	10	2.90	8.68126	8.42458	1.03047	0.30624	19.09898	5.43480	3.51420	0.00980	2.54970	0.01078	2.58267	0.00980
182289	34	41	10.37	-10.07184	5.67096	-1.77604	0.07995	-4.25545	2.19417	-1.93944	0.05990	-2.56857	0.01021	-2.56857	0.01021
179267	45	30	6.03	-14.79331	5.62719	-2.62890	0.01047	-2.12136	3.17941	-0.66722	0.51029	-2.27578	0.02286	-2.56006	0.01047
195436	37	38	4.76	-14.56108	5.54448	-2.62623	0.01054	3.81049	2.75232	1.38446	0.17498	-0.84938	0.39567	-2.57578	0.01054
2046330	67	8	5.88	23.42965	8.92596	2.62489	0.01058	0.76831	6.55277	0.11549	0.91255	1.88525	0.05940	2.55633	0.01058
519880	70	5	3.80	-29.37026	11.20750	-2.62059	0.01070	9.04333	50.96898	0.17743	0.87552	-1.69399	0.09027	-2.55233	0.01070
320786	67	8	3.38	-23.40178	8.93187	-2.62003	0.01072	4.41092	4.92304	0.89598	0.41132	-1.22346	0.22115	-2.55181	0.01072
158625	70	5	2.80	-29.03759	11.08341	-2.61991	0.01072	-14.53078	15.66249	-0.92774	0.45148	-2.33674	0.01945	-2.55170	0.01072
591118	71	4	3.25	-4.44682	12.88000	-0.34525	0.73091	-32.64721	0.56302	-57.98563	0.01098	-2.04164	0.04119	-2.54340	0.01098
4379646	67	8	1.75	-23.28756	8.93797	-2.60547	0.01114	57.52187	41.02166	1.40225	0.21977	-0.92709	0.35388	-2.53824	0.01114
197179	69	6	3.83	26.47442	10.18549	2.59923	0.01133	-5.49181	6.26266	-0.87691	0.44509	1.25073	0.21103		

Table S4e. OTUs associated with Total cholesterol (TC) at FDR < 0.05 level ^a (Cont.)

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
178478	34	41	4.98	-9.75791	5.74026	-1.69991	0.09346	-4.65850	2.61399	-1.78214	0.08272	-2.41302	0.01582	-2.41302	0.01582
192676	69	6	3.83	-1.19380	10.74543	-0.11110	0.91185	-18.54316	3.75226	-4.94186	0.01589	-1.78337	0.07453	-2.41135	0.01589
337161	62	13	9.46	-1.49092	7.61805	-0.19571	0.84539	10.84224	3.74320	2.89652	0.01593	1.56663	0.11720	2.41055	0.01593
179201	52	23	5.70	-14.85216	6.02522	-2.46500	0.01609	-3.88865	4.59863	-0.84561	0.40777	-2.28731	0.02218	-2.40693	0.01609
2949328	63	12	3.42	0.17037	7.87047	0.02165	0.98279	16.75681	5.68582	2.94712	0.01630	1.71386	0.08655	2.40220	0.01630
808794	71	4	3.25	-8.64693	12.80201	-0.67544	0.50156	-30.73374	0.78940	-38.93293	0.01635	-2.17300	0.02978	-2.40105	0.01635
315982	71	4	2.25	30.30829	12.36861	2.45042	0.01670	5.55113	16.90290	0.32841	0.79799	1.87326	0.06103	2.39325	0.01670
181452	66	9	3.00	-20.92043	8.56771	-2.44178	0.01707	5.20614	14.34388	0.36295	0.72908	-1.44164	0.14940	-2.38513	0.01707
191928	65	10	1.80	-19.92159	8.17091	-2.43811	0.01723	1.37879	9.79716	0.14073	0.89204	-1.58814	0.11225	-2.38169	0.01723
925131	69	6	76.17	-24.89420	10.21799	-2.43631	0.01731	6.67263	6.50091	1.02641	0.38022	-1.06244	0.28804	-2.38000	0.01731
188262	71	4	1.00	31.16998	12.80096	2.43497	0.01737	0.00000	0.00000	0.00000	1.00000	1.68203	0.09256	2.37874	0.01737
191874	48	27	3.07	-4.74986	6.03417	-0.78716	0.43377	-12.60701	4.95984	-2.54182	0.01790	-2.22767	0.02590	-2.36765	0.01790
341730	67	8	2.50	-19.24887	9.07267	-2.12163	0.03731	-16.89469	11.63935	-1.45151	0.20635	-2.36599	0.01798	-2.36599	0.01798
175761	58	17	2.41	-0.98717	6.90710	-0.14292	0.88675	-20.60406	7.71999	-2.66892	0.01834	-1.76856	0.07697	-2.35871	0.01834
310633	71	4	10.00	-16.15987	12.75873	-1.26657	0.20939	-14.71017	0.87027	-16.90301	0.03762	-2.35765	0.01839	-2.35765	0.01839
4094866	57	18	5.89	2.88451	6.74686	0.42753	0.67027	-10.35846	3.92012	-2.64238	0.01847	-1.36491	0.17228	-2.35605	0.01847
158423	60	15	79.60	-7.56135	7.16915	-1.05471	0.29509	5.86865	2.15747	2.72015	0.01860	0.92375	0.35562	2.35340	0.01860
190913	30	45	9.82	-0.54321	6.14181	-0.08844	0.92977	5.70763	2.33971	2.43946	0.01901	1.59603	0.11048	2.34526	0.01901
329798	65	10	5.80	19.58336	8.16403	2.39874	0.01904	4.03780	5.81663	0.69418	0.50994	2.12387	0.03368	2.34468	0.01904
730906	53	22	2.91	-14.87998	6.23168	-2.38780	0.01958	-3.79768	4.93909	-0.76890	0.45140	-2.18316	0.02902	-2.33438	0.01958
176108	64	11	2.18	-18.89827	7.92605	-2.38432	0.01975	15.00937	12.48698	1.20200	0.26373	-0.85807	0.39085	-2.33111	0.01975
187196	71	4	2.25	-29.40984	12.35899	-2.37963	0.01998	0.83969	16.15505	0.05198	0.96694	-1.61592	0.10611	-2.32670	0.01998
178151	71	4	3.25	-18.91848	12.64449	-1.49618	0.13898	-8.37890	0.93065	-9.00329	0.07042	-2.32554	0.02004	-2.32554	0.02004
851323	47	28	57.61	-10.69397	5.84376	-1.82998	0.07139	-3.58044	2.33293	-1.53474	0.13741	-2.32531	0.02006	-2.32531	0.02006
197988	42	33	14.00	-13.28355	5.59736	-2.37318	0.02031	0.26346	2.46296	0.10697	0.91552	-1.56592	0.11737	-2.32062	0.02031
182033	56	19	3.68	-10.33662	6.77714	-1.52522	0.13159	-10.26423	5.41752	-1.89464	0.07636	-2.31937	0.02037	-2.31937	0.02037
288651	26	49	32.88	-3.49789	6.05907	-0.57730	0.56554	-3.63627	1.51606	-2.39849	0.02057	-2.04377	0.04098	-2.31570	0.02057
176077	66	9	2.67	20.21362	8.55052	2.36402	0.02078	0.02050	8.06401	0.00254	0.99805	1.63655	0.10172	2.31199	0.02078
3141342	60	15	4.33	4.69473	7.28299	0.64462	0.52122	-17.84493	6.70793	-2.66027	0.02078	-1.18121	0.23752	-2.31194	0.02078
553080	28	47	17.00	-13.61482	5.77471	-2.35766	0.02111	2.65357	2.38546	1.11240	0.27201	-0.85387	0.39318	-2.30600	0.02111
4311621	67	8	2.50	21.26075	9.04133	2.35151	0.02144	-7.55005	5.96474	-1.26578	0.26137	0.83228	0.40525	2.30019	0.02144
4438999	61	14	3.93	0.51318	7.40209	0.06933	0.94492	-14.33736	5.35490	-2.67743	0.02151	-1.57676	0.11485	-2.29897	0.02151
180107	61	14	3.93	0.51318	7.40209	0.06933	0.94492	-14.33736	5.35490	-2.67743	0.02151	-1.57676	0.11485	-2.29897	0.02151
180312	51	24	4.92	-14.01917	5.97179	-2.34757	0.02165	-0.93061	4.63320	-0.20086	0.84274	-1.76413	0.07771	-2.29648	0.02165
3709990	63	12	3.08	-10.95802	7.93429	-1.38110	0.17152	-14.01236	6.54866	-2.13973	0.06105	-2.29137	0.02194	-2.29137	0.02194
302333	63	12	2.50	-8.23645	7.82857	-1.05210	0.29627	-24.60621	9.48717	-2.59363	0.02904	-2.28212	0.02248	-2.28212	0.02248
303320	70	5	2.40	26.46978	11.35304	2.33151	0.02253	-1.87917	6.32334	-0.29718	0.79435	1.42883	0.15305	2.28133	0.02253
2996838	46	29	9.14	-5.81087	5.96127	-0.97477	0.33294	-5.04090	2.10231	-2.39779	0.02397	-2.28103	0.02255	-2.28103	0.02255
182577	43	32	3.63	-10.88096	5.68850	-1.91280	0.05975	-5.11298	3.72207	-1.37369	0.18006	-2.27914	0.02266	-2.27914	0.02266
4462107	69	6	2.67	5.11967	10.61726	0.48220	0.63112	-38.83900	9.02298	-4.30445	0.02308	-1.26715	0.20510	-2.27216	0.02308
197970	27	48	8.15	-13.52053	5.84982	-2.31127	0.02368	-0.51752	2.45194	-0.21107	0.83379	-1.74802	0.08046	-2.26222	0.02368
189478	66	9	1.44	-9.63102	8.81755	-1.09226	0.27836	-25.35312	9.30843	-2.72367	0.03447	-2.26167	0.02372	-2.26167	0.02372
176947	69	6	3.83	-22.05129	10.38990	-2.12238	0.03725	-8.58882	6.27766	-1.36816	0.26473	-2.26157	0.02372	-2.26157	0.02372
2774254	69	6	13.50	-19.75752	10.37282	-1.90474	0.06081	-11.84969	6.94798	-1.70549	0.18665	-2.25952	0.02385	-2.25952	0.02385
4060501	46	29	13.69	-0.25794	5.95116	-0.04334	0.96555	-7.63167	3.19898	-2.38566	0.02462	-1.61961	0.10532	-2.24728	0.02462
186687	60	15	2.60	-16.02744	6.98471	-2.29465	0.02467	-4.00832	5.98827	-0.66936	0.51594	-2.04788	0.04057	-2.24651	0.02467
180352	70	5	4.00	-25.62911	11.17757	-2.29291	0.02478	-7.47438	13.30091	-0.56194	0.63073	-1.92727	0.05395	-2.24487	0.02478
4306262	33	42	261.55	-8.97558	5.71544	-1.57041	0.12070	-2.40477	1.45076	-1.65759	0.10542	-2.24219	0.02495	-2.24219	0.02495
294791	69	6	2.67	-4.76407	10.63079	-0.44814	0.65540	-26.37107	6.31319	-4.17714	0.02499	-1.90058	0.05736	-2.24155	0.02499
4398588	63	12	4.00	17.40154	7.61729	2.28448	0.02529	-3.42502	6.29547	-0.54405	0.59963	1.21054	0.22607	2.23690	0.02529
322835	38	37	7.84	-12.75940	5.58732	-2.28363	0.02535	4.54343	3.07070	1.47961	0.14819	-0.55870	0.57636	-2.23610	0.02535
125270	61	14	3.50	4.83975	7.42466	0.65185	0.15165	-7.48035	2.89493	-2.58395	0.02541	-1.12180	0.26195	-2.23510	0.02541
1679707	62	13	3.23	-16.80224	7.37182	-2.27925	0.02562	6.08068	5.86905	1.03606	0.32458	-0.88166	0.37796	-2.23195	0.02562
3609545	45	30	6.00	-13.10806	5.76529	-2.27362	0.02597	-0.73576	3.90986	-0.18818	0.85214	-1.70626	0.08796	-2.22662	0.02597
305318	37	38	6.50	-12.69619	5.58487	-2.27332	0.02599	3.92794	2.67778	1.46686	0.15134	-0.55970	0.57569	-2.22634	0.02599
4483570	71	4	5.25	-26.81850	12.48823	-2.14750	0.03512	-16.22480	8.19172	-1.98064	0.29765	-2.22629	0.02599	-2.22629	0.02599
3138798	31	44	219.93	-9.75340	5.74307	-1.69829	0.09377	-1.70766	1.13815	-1.50039	0.14118	-2.22545	0.02605	-2.22545	0.02605
337538	67	8	1.63	-10.21361	9.29994	-1.09824	0.27576	-15.46566	5.63557	-2.74430	0.04058	-2.21866	0.02651	-2.21866	0.02651
189450	66	9	2.44	-19.58847	8.65648	-2.26287	0.02666	-4.69062	7.99431	-0.58674	0.57877	-1.95984	0.05001	-2.21645	0.02666
193534	68	7	2.43	5.45579	9.89320	0.55147	0.58302	31.33216	9.18755	3.41029	0.02702	1.95176	0.05097	2.21122	0.02702
346253	69	6	2.67	-13.78278	10.62288	-1.29746	0.19861	-28.64492	10.13936	-2.82512	0.06646	-2.20677	0.02733	-2.20677	0.02733
189007	67	8	2.00	-12.47547	9.24722	-1.34910	0.18153	-18.99121	8.47508	-2.24083	0.07514	-2.20312	0.02759	-2.20312	0.02759
174818	20	55	10.71	4.87704	6.50307	0.74996									

Table S4e. OTUs associated with Total cholesterol (TC) at FDR < 0.05 level ^a (Cont.)

OTU	Summary of OTUs reads			Binary model				Quantitative model				Meta analysis		Final association	
	No. Absent	No. Present	mean counts in presents	Estimate	s.e.	t value	P value	Estimate	s.e.	t value	P value	Meta z value	Meta P value	z	P value
181756	70	5	4.20	-11.92971	11.48241	-1.03896	0.30230	-13.00165	2.90890	-4.46961	0.04659	-2.13656	0.03263	-2.13656	0.03263
4411875	67	8	2.75	-0.24781	9.36333	-0.02647	0.97896	14.19238	4.84527	2.92912	0.03267	1.49185	0.13574	2.13616	0.03267
842193	51	24	70.96	-13.17286	6.06049	-2.17356	0.03303	1.00164	2.28998	0.43740	0.66628	-1.20243	0.22920	-2.13175	0.03303
180468	12	63	15.57	-4.74880	7.84952	-0.60498	0.54709	4.65638	2.13631	2.17964	0.03322	1.07996	0.28016	2.12942	0.03322
4414420	71	4	1.75	5.86402	12.85548	0.45615	0.64966	15.23606	0.81136	18.77853	0.03387	1.82141	0.06854	2.12162	0.03387
4020046	64	11	7.64	-6.76508	8.16074	-0.82898	0.40986	14.05703	5.50812	2.55206	0.03407	0.91581	0.35977	2.11930	0.03407
272886	71	4	2.25	-14.01511	12.74402	-1.09974	0.27511	45.97852	2.48434	18.50736	0.03436	0.72435	0.46885	2.11577	0.03436
196139	69	6	2.33	1.18886	10.73568	0.11074	0.91213	67.78870	18.35715	3.69277	0.03445	1.57339	0.11563	2.11476	0.03445
258099	64	11	4.64	-17.08436	7.93939	-2.15185	0.03476	1.02887	6.38459	0.16115	0.87597	-1.38241	0.16685	-2.11110	0.03476
4381555	62	13	3.92	-11.30755	7.70170	-1.46819	0.14641	-7.00063	4.20287	-1.66568	0.12675	-2.10675	0.03514	-2.10675	0.03514
4393532	60	15	5.53	-15.04464	7.00762	-2.14690	0.03517	-0.64027	4.78001	-0.13395	0.89567	-1.58217	0.11361	-2.10639	0.03517
194320	44	31	3.90	12.18770	5.67925	2.14600	0.03524	-3.09034	4.04773	-0.76348	0.45157	0.95653	0.33881	2.10554	0.03524
187569	64	11	2.36	-16.91932	7.90854	-2.13937	0.03580	5.96508	6.78705	0.87889	0.40508	-0.89566	0.37043	-2.09923	0.03580
4466707	63	12	14.75	-13.78011	7.77887	-1.77148	0.08071	-5.95251	4.55424	-1.30703	0.22361	-2.09555	0.03612	-2.09555	0.03612
2438203	43	32	7.66	-8.15308	5.75984	-1.41550	0.16123	-4.55476	2.83458	-1.60685	0.11892	-2.09322	0.03633	-2.09322	0.03633
558839	70	5	1.80	2.79406	11.55793	0.24174	0.80967	16.82027	3.29738	5.10110	0.03635	1.65030	0.09888	2.09301	0.03635
189292	64	11	6.00	-16.88374	7.93858	-2.12680	0.03686	5.68279	5.68822	0.45496	0.66123	-1.16605	0.24359	-2.08726	0.03686
178713	63	12	34.50	0.15867	7.87168	0.02016	0.98397	-7.21391	2.95424	-2.44188	0.03725	-1.45871	0.14464	-2.08302	0.03725
183576	66	9	3.56	-14.18300	8.73528	-1.62365	0.10882	-10.67633	7.06943	-1.51021	0.18173	-2.07815	0.03770	-2.07815	0.03770
183604	65	10	3.50	-17.47602	8.25768	-2.11634	0.03777	2.44284	4.76861	0.51227	0.62422	-1.12248	0.26166	-2.07730	0.03777
192912	68	7	4.00	-16.15085	9.73008	-1.65989	0.10129	-9.38830	6.06632	-1.54761	0.19663	-2.07173	0.03829	-2.07173	0.03829
157162	70	5	3.00	1.88571	11.55943	0.16313	0.87087	-13.34827	2.69467	-4.95358	0.03842	-1.34901	0.17733	-2.07035	0.03842
556126	63	12	4.17	6.00632	7.83474	0.76663	0.44581	13.77797	5.70122	2.41667	0.03882	2.00004	0.04550	2.06607	0.03882
182911	39	36	7.17	-7.27268	5.71367	-1.27286	0.20716	-4.67100	2.76136	-1.69156	0.10015	-2.05451	0.03993	-2.05451	0.03993
2497335	29	46	20.37	4.54098	5.89824	0.76989	0.44389	3.92621	1.85492	2.11664	0.04012	1.99277	0.04629	2.05255	0.04012
535955	64	11	2.36	1.39975	8.16458	0.17144	0.86436	15.94772	6.52342	2.44469	0.04027	1.57106	0.11617	2.05098	0.04027
4381430	38	37	3.92	-11.74236	5.62697	-2.08680	0.04045	-0.21595	2.98657	-0.07231	0.94278	-1.49972	0.13369	-2.04915	0.04045
178331	70	5	3.80	-24.02767	11.53625	-2.08280	0.04082	29.46669	27.34630	1.07754	0.39394	-0.84346	0.39897	-2.04533	0.04082
184342	68	7	1.86	-20.17123	9.68574	-2.08257	0.04084	26.44693	12.40327	2.13225	0.09995	-0.28287	0.77728	-2.04511	0.04084
208739	32	43	3.77	-1.25038	5.86674	-0.21313	0.83183	-5.20414	2.46283	-2.11308	0.04088	-1.59600	0.11049	-2.04472	0.04088
179384	68	7	1.86	20.03844	9.63435	2.07990	0.04110	-2.33202	9.92321	-0.23501	0.82574	1.28863	0.19753	2.04256	0.04110
185607	60	15	2.07	-14.56056	7.00931	-2.07732	0.04134	10.93694	9.99470	1.09427	0.29531	-0.70256	0.48233	-2.04010	0.04134
173965	60	15	2.40	14.53509	7.00583	2.07471	0.04159	6.87750	7.48061	0.91938	0.37601	-0.81483	0.41517	-2.03762	0.04159
187883	64	11	2.45	-12.67475	8.09080	-1.56656	0.12160	-10.71882	7.34360	-1.45962	0.18252	-2.03726	0.04162	-2.03726	0.04162
189384	71	4	1.00	26.45629	12.78350	2.06956	0.04208	0.00000	0.00000	0.00000	1.00000	1.43734	0.15062	2.03270	0.04208
4425512	71	4	3.50	-1.33977	12.86587	-0.10413	0.91735	-20.25496	1.34915	-15.01311	0.04234	-1.50891	0.13132	-2.03015	0.04234
4388068	69	6	18.83	14.29651	10.51443	1.35970	0.17817	4.30248	2.05826	2.09035	0.12773	2.02906	0.04245	2.02906	0.04245
4326573	70	5	11.00	21.09246	11.31825	1.86358	0.06646	11.41105	8.27877	1.37835	0.30203	2.02756	0.04261	2.02756	0.04261
573061	69	6	3.50	4.13811	10.63443	0.38912	0.69833	50.63745	14.95752	3.38542	0.04292	1.70559	0.08808	2.02449	0.04292
110192	60	15	20.60	-5.24261	7.20199	-0.72794	0.46901	-7.44671	3.29346	-2.26106	0.04313	-1.94211	0.05212	-2.02247	0.04313
178799	69	6	4.00	-2.04063	10.64219	-0.19175	0.84848	-7.03765	2.09034	-3.36675	0.04352	-1.56256	0.11816	-2.01873	0.04352
177024	70	5	9.40	-3.92276	11.62042	-0.33757	0.73667	-23.33428	5.03988	-4.62993	0.04362	-1.66452	0.09601	-2.01772	0.04362
4337970	57	18	10.00	0.08319	6.75276	0.01232	0.99020	-9.14735	4.15568	-2.20117	0.04380	-1.41686	0.15652	-2.01602	0.04380
4473509	24	51	20.41	-2.59374	6.17925	-0.41975	0.67592	4.22386	2.04320	2.06728	0.04412	1.12775	0.25942	2.01292	0.04412
16054	56	19	19.47	-6.28479	6.59098	-0.95354	0.34350	-4.17527	2.04062	-2.04608	0.05755	-2.01270	0.04415	-2.01270	0.04415
134671	68	7	4.43	-7.67474	9.87713	-0.77702	0.43969	-12.37322	4.27745	-2.89267	0.04444	-1.96759	0.04912	-2.00988	0.04444
663500	55	20	69.10	7.53020	6.46113	1.16546	0.24768	4.05092	2.27884	1.77762	0.09336	2.00390	0.04508	2.00390	0.04508
4364405	41	34	10.06	3.01978	5.90734	0.51119	0.61078	-7.13128	3.41718	-2.08689	0.04521	-1.05621	0.29087	-2.00266	0.04521
4354103	66	9	34.22	17.57991	8.63193	2.03661	0.04537	-0.37822	2.63523	-0.14352	0.89057	1.31781	0.18757	2.00123	0.04537
340960	69	6	20.83	11.35225	10.57778	1.07322	0.28676	8.46282	3.20694	2.63891	0.07773	2.00060	0.04544	2.00060	0.04544
110060	70	5	2.00	-23.16109	11.38075	-2.03511	0.04552	30.28886	31.91999	0.94890	0.44283	-0.87142	0.38353	-1.99980	0.04552
4370025	59	16	7.63	-7.86759	7.16301	-1.09836	0.27571	-6.38082	3.98997	-1.87728	0.08310	-1.99616	0.04592	-1.99616	0.04592
4294457	64	11	4.64	4.62176	8.30712	0.55636	0.57969	11.05265	4.68512	2.35910	0.04602	1.80243	0.07148	1.99518	0.04602
33112	70	5	3.60	-4.08595	11.90918	-0.34309	0.73253	18.01051	4.00461	4.49745	0.04605	1.16896	0.24242	1.99493	0.04605
367946	69	6	7.50	3.32992	10.94231	0.30432	0.76176	-24.09126	7.32276	-3.28992	0.04608	-1.19606	0.23167	-1.99465	0.04608
193968	17	58	13.78	3.02549	6.87911	0.43981	0.66139	-3.93056	1.92907	-2.03755	0.04642	-1.09855	0.27196	-1.99158	0.04642
4458227	66	9	16.11	-5.55195	8.85201	-0.62720	0.53251	-11.58563	4.63551	-2.49932	0.04657	-1.84863	0.06451	-1.99018	0.04657
4358921	59	16	1.69	-13.86867	6.85693	-2.02258	0.04683	1.15544	9.29572	0.12430	0.90298	-1.31940	0.18703	-1.98782	0.04683
4318177	67	8	268.38	-18.39584	9.10755	-2.01984	0.04712	0.85841	0.90988	0.94343	0.38878	-0.79434	0.42700	-1.98520	0.04712
365717	62	13	3.69	-15.05745	7.46295	-2.01763	0.04736	5.30989	5.49118	0.96699	0.35636	-0.75006	0.45322	-1.98308	0.04736
367814	54	21	2.24	-12.67384	6.28268	-2.01727	0.04740	13.76642	6.70365	2.05357	0.05484	-0.04426	0.96470	-1.98274	0.04740
146554	20	55	91.85	4.17387	6.51845	0.64032	0.52400	-3.50296	1.72831	-2.02681	0.04782	-0.94876	0.34274	-1.97894	0.04782
175520	69	6	2.33	-21.19602	10.53273	-2.01240	0.04792	6.09738	11.16824	0					