

Readme

Table	Title	Notes
S1	Detailed information of 69 inpatients with COVID-19	(1)binomial variables: 1 means "yes", 0 means "no"; (2)... means the lost
S2	Relative abundance of bacterial microbiome among each samples at different levels	The table showed relative abundance of bacterial microbiome among each samples at phylum, class, order, family and genus levels
S3	Comparison the relative abundance of the top 10 bacterial microbiome between mild and severe groups	The top 10 relative abundance at the phylum, class, order, family and genus levels respectively were selected and assessed differences by Mann-Whitney
S4	Rank correlation coefficients between clinical characteristics and top 10 genera	(1)binomial variables: 1 means "yes", 0 means "no", and were assigned as dummy variables and then explored the relationships directly through the

Supplementary Table S1: Detailed information of 69 inpatients with COVID-19

Sample_id	Group	Sample_type	COVID-19_symptoms	Age (years)	BMI (kg/m ²)	Inpatient_days	Sex	Cough	Diarrhea	Dyspnea	Coexisting_disorders (any)	Hypertension	Cardiopathy	ICU_admission	Death_during_hospitalization	SARS-CoV-2_IgG	SARS-CoV-2_IgM	White blood cell count (×10 ⁹ /L)	Neutrophil count (×10 ⁹ /L)	Lymphocyte count (×10 ⁹ /L)	Hemoglobin (g/L)	C-reactive protein (mg/L)	Procalcitonin (ng/ml)
SN01	Mild_group	nasopharyngeal swabs	moderate	31	25.47	6	Male	1	0	0	0	0	0	0	0	190	32.1	6.7	3.85	2.15	140	2.3	0.04
SN02	Severe_group	sputum	critical	57	24.77	10	Male	1	0	0	1	1	1	0	0	1.06	0.58	8.8	5.66	1.82	145	4.14	...
SN03	Mild_group	sputum	moderate	63	27.12	12	Female	1	0	0	1	1	0	0	0	193	10.4	6	3.66	1.64	133	5.85	...
SN04	Mild_group	nasopharyngeal swabs	moderate	73	24.14	12	Female	1	0	0	1	1	1	0	0	187	4.99	5.5	3.38	1.61	88	0.57	...
SN05	Severe_group	nasopharyngeal swabs	severe	62	26.86	40	Male	1	0	1	1	1	1	1	1	39.3	2.25	10.6	9.31	0.85	133	117	0.38
SN06	Severe_group	nasopharyngeal swabs	severe	82	27.54	36	Male	1	1	0	1	1	0	1	0	186	63.9	10.6	9.11	0.67	154	61.7	0.15
SN07	Severe_group	nasopharyngeal swabs	severe	63	26.44	61	Female	1	1	1	1	1	0	1	0	166	39.5	12.9	11.9	0.7	112	49.4	2.42
SN08	Mild_group	nasopharyngeal swabs	moderate	54	24.65	12	Female	1	0	0	1	1	0	0	0	173	62.2	4.8	3.38	1.01	109	8.65	0.02
SN09	Mild_group	nasopharyngeal swabs	moderate	72	25.81	9	Female	1	0	0	1	1	0	0	0	203	7.6	5.2	2.94	1.58	117	1.44	0.02
SN10	Mild_group	nasopharyngeal swabs	moderate	57	38.05	6	Female	1	0	0	1	1	1	0	0	2.05	2.02	6	4.14	1.43	132	2.54	0.2
SN11	Mild_group	nasopharyngeal swabs	moderate	63	25.98	21	Male	0	1	0	1	0	0	0	0	105	153	6.3	4.09	1.53	126	1.99	...
SN12	Severe_group	nasopharyngeal swabs	severe	25	21.88	28	Male	1	0	0	0	0	0	0	0	63.5	30.1	6.3	4.47	1.08	134	39.7	0.03
SN13	Mild_group	nasopharyngeal swabs	moderate	38	19.60	7	Female	1	0	0	0	0	0	0	0	158	119	9.5	7.56	1.31	123	0.19	0.01
SN14	Severe_group	nasopharyngeal swabs	severe	85	16.86	14	Female	1	0	0	1	1	1	0	0	179	54.8	3.1	1.94	0.73	86	15.2	0.15
SN15	Severe_group	nasopharyngeal swabs	severe	50	26.67	17	Female	0	0	0	1	1	0	0	0	1.58	13.1	13.8	12.4	0.74	87	42.4	0.24
SN16	Mild_group	nasopharyngeal swabs	moderate	42	26.44	20	Female	1	1	1	1	0	0	0	0	121	12.8	8.3	5.59	2.15	110	5.29	0.04
SN17	Severe_group	nasopharyngeal swabs	severe	91	16.86	22	Female	1	0	0	1	1	1	0	0	193	16.6	5.6	4.1	1.04	107	42	0.04
SN18	Severe_group	nasopharyngeal swabs	severe	69	24.86	32	Female	1	1	0	1	1	0	0	0	2.11	1.11	16.7	13.2	2.54	93	58.9	0.73
SN19	Severe_group	nasopharyngeal swabs	severe	82	16.86	10	Female	1	0	0	1	1	1	0	0	198	5.72	7.2	5.08	1.51	103	42.5	0.12
SN20	Mild_group	nasopharyngeal swabs	moderate	81	15.82	12	Female	1	0	0	1	0	0	0	0	5.65	2.41	4.7	2.41	1.79	101	4.04	0.04
SN21	Severe_group	nasopharyngeal swabs	severe	65	21.63	20	Female	1	0	0	1	1	0	0	0	205	19.3	6.1	3.13	2.02	139	4.4	0.07
SN22	Mild_group	nasopharyngeal swabs	moderate	49	27.55	23	Male	1	1	1	1	0	0	0	0	138	84.7	4.4	2.46	1.5	128	4.41	0.03
SN23	Mild_group	nasopharyngeal swabs	moderate	51	15.63	7	Female	1	0	0	1	0	0	0	0	233	5.44	25.1	22.4	1.65	124	138	0.45
SN24	Mild_group	nasopharyngeal swabs	moderate	62	25.64	5	Female	1	0	0	0	0	0	0	0	248	27.4	5.6	3.23	1.98	122	1.01	0.04
SN25	Mild_group	nasopharyngeal swabs	moderate	54	26.08	17	Male	0	0	0	1	1	0	0	0	172	20.8	5.9	3.23	1.95	139	1.17	...
SN26	Severe_group	nasopharyngeal swabs	severe	49	22.85	16	Female	1	0	0	1	0	0	0	0	159	9.15	9.5	5.32	2.91	93	4.56	0.04

SN27	Mild_group	nasopharyn geal swabs	moderate	25	24.54	17	Male	1	0	0	0	0	0	0	0	0	0	25.2	2.29	7.8	4.26	2.91	158	4.28	0.03
SN28	Mild_group	sputum	moderate	52	25.28	23	Male	1	1	0	0	0	0	0	0	0	0	162	191	4.5	2.43	1.41	113	3.49	0.05
SN29	Mild_group	sputum	moderate	65	24.68	45	Female	1	1	0	1	1	0	0	0	0	0	196	9.51	5	3.42	0.9	121	2.95	0.03
SN30	Severe_grou	nasopharyn geal swabs	severe	84	16.86	40	Female	1	0	1	1	1	0	1	1	0	0	226	54.9	8.9	8.15	0.48	105	78.4	0.61
SN31	Severe_grou	nasopharyn geal swabs	critical	69	23.63	16	Female	1	0	1	1	0	0	1	0	0	0	45	47.4	6.2	5.59	0.37	102	15.6	0.21
SN32	Mild_group	nasopharyn geal swabs	moderate	66	21.11	17	Female	1	0	0	1	1	0	0	0	0	0	62.6	99.3	4.3	2.5	1.22	116	34.9	11.7
SN33	Mild_group	nasopharyn geal swabs	moderate	67	20.96	5	Female	0	0	0	1	0	0	0	0	0	0	207	26	6.3	4.15	1.56	123	8.75	0.01
SN34	Mild_group	nasopharyn geal swabs	moderate	44	16.18	9	Female	0	0	0	1	0	0	0	0	0	0	4.69	1.77	5.2	4.31	0.41	77	197	0.36
SN35	Mild_group	nasopharyn geal swabs	moderate	49	27.18	8	Male	1	0	0	0	0	0	0	0	0	0	1.71	2.21	10.1	6.79	1.88	147	81	0.08
SN36	Mild_group	nasopharyn geal swabs	moderate	95	16.86	7	Female	1	0	0	1	1	1	0	0	0	0	2.35	2.96	6.4	4.3	1.32	72	9.94	0.73
SN37	Mild_group	nasopharyn geal swabs	moderate	52	25.47	6	Male	0	0	0	0	0	0	0	0	0	0	0.73	2.76	5.4	3.9	1.11	100	10.9	0.29
SN38	Mild_group	nasopharyn geal swabs	moderate	72	19.73	4	Female	1	0	0	1	1	0	0	0	0	0	56.8	22.4	5.8	4.38	0.94	87	6.28	...
SN39	Mild_group	sputum	moderate	47	23.73	12	Female	1	0	0	0	0	0	0	0	0	0	174	122	6.6	3.83	1.98	60	0.27	0.03
SN40	Severe_grou	nasopharyn geal swabs	severe	66	27.54	10	Male	1	0	1	1	1	0	1	0	0	0	60.9	4.93	6.8	5.72	0.51	133	30.1	0.23
SN41	Mild_group	nasopharyn geal swabs	moderate	80	35.43	5	Male	1	0	0	1	1	1	0	0	0	0	59.8	34.8	6.5	3	2.57	117	1.69	0.04
SN42	Severe_grou	nasopharyn geal swabs	severe	85	27.54	12	Male	0	0	0	1	0	0	0	0	0	0	189	28.7	4.3	2.42	1.24	70	28.8	0.13
SN43	Severe_grou	nasopharyn geal swabs	severe	77	27.54	5	Male	1	0	0	1	0	0	0	0	0	0	160	10.9	7.5	6.3	0.89	88	53.5	1.23
SN44	Mild_group	nasopharyn geal swabs	moderate	50	27.55	7	Male	1	0	0	1	1	0	0	0	0	0	188	85.2	9.1	4.58	3.77	143	3.47	0.14
SN45	Mild_group	nasopharyn geal swabs	moderate	70	27.73	14	Female	1	1	0	1	1	0	0	0	0	0	51	9.81	5.6	3.29	1.52	133	4.59	0.06
SN46	Mild_group	nasopharyn geal swabs	moderate	65	20.81	10	Female	1	0	0	1	0	0	0	0	0	0	71.4	16.3	6.6	3.86	2.04	135	3.72	0.03
SN47	Severe_grou	nasopharyn geal swabs	severe	36	17.92	9	Male	1	0	0	1	0	0	0	0	0	0	53.8	0.57	6.1	5	0.39	114	61.6	0.09
SN48	Mild_group	nasopharyn geal swabs	moderate	57	25.90	4	Female	1	0	0	1	1	0	1	1	0	0	88.2	4.39	9	8.09	0.67	42	8.36	0.16
SN49	Severe_grou	nasopharyn geal swabs	severe	83	20.28	30	Male	1	0	0	1	0	0	1	0	0	0	199	37.5	7.6	6.43	0.52	83	77.2	0.46
SN50	Severe_grou	nasopharyn geal swabs	critical	87	13.21	28	Male	1	0	1	1	0	0	1	1	0	0	201	30.2	8.4	7.4	0.56	122	52	0.69
SN51	Mild_group	nasopharyn geal swabs	moderate	86	16.86	6	Female	0	0	0	1	0	1	0	0	0	0	98.7	2.71	8.1	5.97	1.23	88	1.48	...
SN52	Mild_group	nasopharyn geal swabs	moderate	40	16.94	17	Female	0	1	0	0	0	0	0	0	0	0	171	18.8	5.4	2.98	1.89	111	0.28	0.04
SN53	Mild_group	nasopharyn geal swabs	moderate	66	25.78	53	Male	1	0	0	0	0	0	0	0	0	0	177	32.2	5.1	2.29	2.22	114	2.09	0.06
SN54	Mild_group	nasopharyn geal swabs	moderate	36	18.03	12	Female	1	0	0	0	0	0	0	0	0	0	69.4	3.09	3.7	1.51	1.66	108	0.27	0.01
SN55	Mild_group	nasopharyn geal swabs	moderate	85	25.39	9	Female	0	0	0	1	1	1	0	0	0	0	2.21	0.8	8.3	6.53	1.18	162	95.1	...
SN56	Severe_grou	nasopharyn geal swabs	severe	80	21.09	15	Male	1	0	1	1	0	1	0	0	0	0	84.9	43.6	16	11.1	3.45	149	11	0.06
SN57	Severe_grou	nasopharyn geal swabs	severe	56	24.45	5	Female	1	0	0	0	0	0	0	0	0	0	92	19.7	4	1.89	1.65	111	0.86	0.02

SN58	Severe_group	nasopharyngeal swabs	severe	73	24.91	6	Male	1	0	0	1	0	0	0	0	52.7	3.35	6.9	2.75	2.77	114	13.7	0.06
SN59	Mild_group	nasopharyngeal swabs	moderate	57	24.97	6	Female	1	0	0	1	1	0	0	0	60.2	14.5	6	3.65	1.61	108	14.5	0.01
SN60	Mild_group	nasopharyngeal swabs	moderate	71	24.61	45	Male	1	0	0	1	0	1	0	0	113	21.6	8.5	6.02	1.36	136	9.32	0.04
SN61	Severe_group	nasopharyngeal swabs	severe	86	27.54	6	Male	0	0	0	1	1	1	0	0	76.7	6.92	12.9	8.81	3.2	87	39	0.22
SN62	Mild_group	nasopharyngeal swabs	moderate	51	26.20	21	Male	0	0	0	1	1	0	0	0	115	23.1	5.2	3.15	1.46	157	0.99	0.04
SN63	Severe_group	nasopharyngeal swabs	severe	63	21.23	47	Female	1	0	1	1	1	0	0	0	114	25.2	6.1	4.88	0.86	111	79.6	0.06
SN64	Severe_group	nasopharyngeal swabs	severe	75	27.54	39	Male	1	0	1	1	1	1	0	0	78	5.98	8.6	7.63	0.28	136	87.6	0.22
SN65	Mild_group	nasopharyngeal swabs	moderate	100	13.52	12	Male	0	0	1	1	1	0	0	0	193	5.37	6.7	4.79	1.19	83	10	0.2
SN66	Mild_group	nasopharyngeal swabs	moderate	58	25.90	49	Female	1	0	1	1	1	0	1	1	171	22	9.8	8.37	1.03	94	182	0.32
SN67	Mild_group	nasopharyngeal swabs	moderate	54	21.78	12	Female	1	0	0	1	1	0	0	0	199	146	4.9	2.76	1.73	126	1.03	0.05
SN68	Severe_group	nasopharyngeal swabs	severe	73	27.34	61	Male	1	1	1	1	1	0	0	0	82.4	13	6.4	5.36	0.5	117	86.5	0.12
SN69	Severe_group	nasopharyngeal swabs	severe	67	22.49	52	Male	1	0	1	1	1	0	1	0	150	98.2	10.6	8.51	1.1	167	118	0.1

Supplementary Table S2: Relative abundance of bacterial microbiome among each samples at different levels

S2.1 At the phylum level											
	<i>Actinobacteria</i>	<i>Bacteroidetes</i>	<i>Candidatus Saccharibacteria</i>	<i>Cyanobacteria</i>	<i>Firmicutes</i>	<i>Fusobacteria</i>	Others	<i>Proteobacteria</i>	<i>Spirochaetes</i>	<i>Synergistetes</i>	<i>Tenericutes</i>
SN01	4.29E-02	2.60E-01	7.62E-03	0.00E+00	0.430395646	7.78E-02	5.44E-04	0.152522504	2.69E-02	1.05E-03	0.00E+00
SN02	1.04E-01	2.14E-01	0.00E+00	0.00E+00	0.658697928	0.00E+00	0.00E+00	0.023738748	0.00E+00	0.00E+00	0.00E+00
SN03	7.03E-02	1.01E-01	2.09E-05	0.00E+00	0.379129161	2.91E-03	0.00E+00	0.441657944	5.19E-03	1.67E-04	0.00E+00
SN04	3.90E-01	5.79E-02	4.19E-05	6.28E-05	0.481494662	2.72E-02	0.00E+00	0.042913963	3.14E-04	4.40E-04	0.00E+00
SN05	0.00E+00	1.53E-03	0.00E+00	0.00E+00	0.002846975	0.00E+00	0.00E+00	0.995624869	0.00E+00	0.00E+00	0.00E+00
SN06	2.09E-02	1.76E-02	8.16E-04	0.00E+00	0.041323006	2.76E-03	0.00E+00	0.915846766	3.14E-04	1.26E-04	2.30E-04
SN07	1.95E-01	1.12E-01	0.00E+00	0.00E+00	0.48275068	2.93E-04	0.00E+00	0.209692276	0.00E+00	0.00E+00	0.00E+00
SN08	4.11E-01	9.70E-02	3.18E-03	8.37E-05	0.423278208	2.92E-02	5.65E-04	0.03047938	4.81E-03	0.00E+00	0.00E+00
SN09	2.31E-01	1.00E-01	9.84E-04	0.00E+00	0.585576722	4.23E-03	0.00E+00	0.077203266	6.28E-04	0.00E+00	4.19E-05
SN10	1.28E-01	4.16E-02	4.19E-04	1.67E-04	0.598283442	8.56E-02	3.56E-04	0.139292443	1.76E-03	1.67E-04	4.14E-03
SN11	9.88E-01	1.34E-03	4.19E-04	0.00E+00	0.006175424	2.93E-04	7.33E-04	0.002784174	0.00E+00	0.00E+00	0.00E+00
SN12	1.44E-02	4.88E-03	4.19E-05	2.07E-03	0.952459703	2.32E-03	1.47E-04	0.023675947	0.00E+00	0.00E+00	2.09E-05
SN13	7.73E-02	1.42E-01	2.99E-03	0.00E+00	0.433096085	6.04E-02	1.05E-04	0.281243458	2.18E-03	2.09E-04	4.19E-05
SN14	6.77E-02	1.88E-04	6.28E-05	2.93E-04	0.865040821	2.09E-05	4.19E-05	0.066631777	0.00E+00	0.00E+00	0.00E+00
SN15	5.16E-02	5.98E-02	1.87E-02	5.23E-04	0.139627381	4.81E-04	0.00E+00	0.729286163	0.00E+00	0.00E+00	0.00E+00
SN16	2.01E-01	4.55E-01	3.52E-03	0.00E+00	0.274544693	2.87E-02	3.98E-04	0.022985137	6.11E-03	7.54E-03	1.88E-04
SN17	8.34E-01	3.98E-02	1.90E-03	0.00E+00	0.116935315	4.84E-03	6.28E-05	0.00247017	0.00E+00	8.37E-05	0.00E+00
SN18	9.78E-01	1.76E-03	4.61E-04	3.77E-04	0.00247017	2.30E-04	7.33E-03	0.008666527	0.00E+00	3.56E-04	0.00E+00
SN19	4.24E-02	4.16E-02	0.00E+00	0.00E+00	0.813313795	5.37E-02	0.00E+00	0.044839858	0.00E+00	0.00E+00	4.19E-03
SN20	1.09E-01	1.31E-01	0.00E+00	8.37E-05	0.719426418	0.00E+00	0.00E+00	0.039920452	0.00E+00	0.00E+00	0.00E+00
SN21	2.05E-01	3.73E-01	4.23E-03	0.00E+00	0.402784174	4.96E-03	1.88E-04	0.00931547	3.14E-04	4.19E-05	4.19E-05
SN22	3.06E-01	5.99E-02	1.53E-02	0.00E+00	0.559388738	2.01E-02	2.09E-05	0.034854511	3.37E-03	1.13E-03	0.00E+00
SN23	7.97E-01	1.15E-01	1.74E-03	0.00E+00	0.083567092	1.38E-03	4.19E-05	0.001235085	2.09E-05	3.56E-04	0.00E+00
SN24	7.66E-03	4.27E-03	2.09E-04	2.30E-04	0.979485032	1.88E-04	6.28E-05	0.007808248	8.37E-05	0.00E+00	0.00E+00
SN25	3.40E-01	3.03E-01	5.11E-03	0.00E+00	0.324848231	1.94E-02	4.19E-05	0.006447561	1.26E-03	6.28E-05	2.09E-05
SN26	5.84E-01	1.26E-04	0.00E+00	9.63E-04	0.391542809	4.19E-04	0.00E+00	0.022922336	0.00E+00	0.00E+00	0.00E+00
SN27	2.35E-01	7.81E-02	2.91E-03	0.00E+00	0.664329077	6.49E-03	8.37E-05	0.008226921	3.04E-03	1.80E-03	8.37E-05
SN28	4.03E-01	1.49E-01	2.45E-03	2.97E-03	0.226669458	2.03E-02	3.77E-04	0.188046891	6.87E-03	1.88E-04	0.00E+00
SN29	3.67E-01	3.12E-01	1.99E-03	8.37E-04	0.27452376	2.90E-02	2.09E-04	0.011241365	3.22E-03	9.00E-04	0.00E+00
SN30	1.49E-01	9.38E-03	4.19E-05	0.00E+00	0.010676157	0.00E+00	0.00E+00	0.828092945	0.00E+00	1.05E-04	2.53E-03
SN31	3.10E-02	7.13E-01	0.00E+00	0.00E+00	0.004563534	2.09E-04	0.00E+00	0.251015282	0.00E+00	0.00E+00	8.37E-05
SN32	5.75E-01	6.82E-02	2.32E-03	2.09E-05	0.143290768	7.66E-02	5.44E-04	0.133786896	4.40E-04	2.09E-05	0.00E+00
SN33	1.88E-01	8.34E-02	4.19E-05	0.00E+00	0.324387691	1.27E-01	4.19E-05	0.267238853	9.27E-03	2.09E-05	0.00E+00
SN34	1.02E-01	1.62E-01	0.00E+00	0.00E+00	0.69476659	4.19E-05	0.00E+00	0.041511409	0.00E+00	0.00E+00	0.00E+00
SN35	2.64E-01	2.18E-01	4.88E-03	0.00E+00	0.464161608	4.00E-02	2.09E-05	0.005296211	2.62E-03	6.49E-04	2.09E-05
SN36	1.16E-01	2.68E-02	5.02E-04	0.00E+00	0.8522713	3.71E-03	0.00E+00	0.000942014	4.19E-05	1.05E-04	0.00E+00
SN37	1.12E-01	3.88E-01	2.33E-02	0.00E+00	0.351727025	1.11E-01	6.91E-04	0.013460331	9.21E-04	6.28E-05	0.00E+00
SN38	2.77E-02	4.61E-04	1.67E-04	1.63E-03	0.956499895	2.09E-05	1.05E-04	0.013250994	0.00E+00	8.37E-05	4.19E-05
SN39	1.27E-01	1.87E-01	1.38E-03	4.19E-05	0.43225874	7.32E-02	0.00E+00	0.164622148	2.01E-03	1.24E-02	1.05E-04
SN40	3.33E-03	1.42E-03	0.00E+00	0.00E+00	0.044400251	1.17E-03	0.00E+00	0.949675529	0.00E+00	0.00E+00	0.00E+00
SN41	1.16E-01	9.63E-02	4.65E-03	0.00E+00	0.684592841	2.43E-02	1.88E-04	0.061544903	6.91E-03	4.90E-03	5.86E-04
SN42	4.33E-01	2.68E-03	0.00E+00	0.00E+00	0.557211639	0.00E+00	0.00E+00	0.0068453	4.19E-05	0.00E+00	0.00E+00
SN43	8.24E-01	2.19E-02	1.67E-04	0.00E+00	0.122147792	2.51E-04	0.00E+00	0.03110739	6.28E-05	0.00E+00	0.00E+00
SN44	6.09E-01	8.80E-02	1.17E-02	2.09E-05	0.256562696	1.14E-02	2.09E-05	0.023068872	1.47E-04	6.28E-05	0.00E+00
SN45	1.89E-01	1.76E-01	0.00E+00	0.00E+00	0.545635336	2.47E-02	4.19E-05	0.062235713	7.12E-04	1.21E-03	1.88E-04
SN46	1.99E-01	4.66E-02	6.49E-04	6.28E-05	0.686267532	4.04E-02	0.00E+00	0.024303957	2.49E-03	0.00E+00	0.00E+00
SN47	8.28E-02	2.47E-01	0.00E+00	0.00E+00	0.628155746	2.57E-02	0.00E+00	0.015993301	0.00E+00	0.00E+00	0.00E+00
SN48	6.09E-03	1.01E-01	0.00E+00	4.19E-05	0.891584677	0.00E+00	5.23E-04	0.000544275	0.00E+00	0.00E+00	0.00E+00
SN49	7.51E-01	1.26E-04	1.05E-04	0.00E+00	0.247896169	2.09E-05	0.00E+00	0.000167469	0.00E+00	1.47E-04	9.21E-04

SN50	2.05E-03	0.00E+00	0.00E+00	0.00E+00	0.645509734	0.00E+00	0.00E+00	0.352438769	0.00E+00	0.00E+00	0.00E+00
SN51	3.94E-02	9.86E-02	0.00E+00	2.09E-05	0.857944317	2.09E-05	0.00E+00	0.003788989	2.30E-04	0.00E+00	0.00E+00
SN52	1.98E-01	3.96E-01	1.65E-02	3.35E-04	0.300167469	6.98E-02	6.28E-04	0.015176889	3.31E-03	5.86E-04	6.28E-05
SN53	3.40E-01	3.62E-01	1.09E-02	4.19E-05	0.243123299	2.79E-02	2.09E-05	0.015742098	6.28E-05	0.00E+00	0.00E+00
SN54	4.13E-01	2.21E-01	6.13E-03	4.19E-05	0.308080385	4.18E-02	0.00E+00	0.009629475	1.88E-04	2.09E-05	0.00E+00
SN55	4.19E-05	1.26E-04	0.00E+00	4.19E-05	0.99907892	0.00E+00	0.00E+00	0.000711744	0.00E+00	0.00E+00	0.00E+00
SN56	7.58E-03	1.47E-04	0.00E+00	8.37E-05	0.991207871	0.00E+00	0.00E+00	0.000711744	0.00E+00	0.00E+00	2.72E-04
SN57	4.35E-01	2.81E-01	1.86E-02	4.19E-05	0.240694997	8.23E-03	0.00E+00	0.016767846	0.00E+00	0.00E+00	0.00E+00
SN58	4.44E-01	8.79E-04	0.00E+00	4.19E-05	0.288758635	6.28E-05	2.09E-05	0.266485242	0.00E+00	0.00E+00	0.00E+00
SN59	2.69E-01	3.47E-01	4.40E-04	2.09E-05	0.322336194	1.56E-02	0.00E+00	0.044442119	5.02E-04	1.05E-04	2.09E-05
SN60	6.56E-01	6.28E-05	0.00E+00	1.49E-03	0.002951643	0.00E+00	0.00E+00	0.339020306	0.00E+00	0.00E+00	0.00E+00
SN61	7.18E-01	1.67E-04	0.00E+00	0.00E+00	0.279401298	4.19E-05	0.00E+00	0.002135231	2.09E-05	1.88E-04	0.00E+00
SN62	1.19E-01	1.52E-01	1.91E-02	2.47E-03	0.490140255	4.10E-03	0.00E+00	0.2067825	6.57E-03	0.00E+00	6.28E-05
SN63	7.81E-01	1.17E-02	1.15E-03	1.04E-02	0.037157212	3.77E-04	6.28E-05	0.158509525	0.00E+00	0.00E+00	0.00E+00
SN64	9.31E-01	4.17E-03	8.37E-05	2.24E-03	0.044211848	2.09E-05	0.00E+00	0.018589073	0.00E+00	0.00E+00	0.00E+00
SN65	9.64E-01	2.18E-03	0.00E+00	1.26E-04	0.014297676	4.19E-05	8.37E-05	0.019258949	0.00E+00	0.00E+00	0.00E+00
SN66	1.97E-03	0.00E+00	0.00E+00	0.00E+00	0.000502407	0.00E+00	0.00E+00	0.99752983	0.00E+00	0.00E+00	0.00E+00
SN67	8.57E-01	2.30E-03	1.05E-04	4.19E-05	0.09338497	0.00E+00	2.09E-05	0.045760938	1.05E-04	1.00E-03	0.00E+00
SN68	2.20E-02	1.19E-01	9.44E-03	1.05E-04	0.344630521	1.28E-03	1.88E-03	0.50207243	0.00E+00	0.00E+00	0.00E+00
SN69	4.04E-01	1.01E-02	2.72E-04	2.09E-05	0.286581537	3.35E-04	6.28E-05	0.299037053	0.00E+00	0.00E+00	4.19E-05

S2.2 At the class level											
	<i>Actinobac</i>	<i>Bacilli</i>	<i>Bacteroidia</i>	<i>Betaproteob</i>	<i>Clostridia</i>	<i>Epsilonpro</i>	<i>Flavobacter</i>	<i>Fusobacteria</i>	<i>Gammapro</i>	<i>Negativicute</i>	Others
SN01	4.29E-02	0.30157	2.57E-01	1.17E-01	7.69E-02	4.06E-03	3.04E-03	7.78E-02	2.97E-02	4.99E-02	0.04067406
SN02	1.04E-01	0.352878	2.14E-01	1.43E-02	0.00E+00	6.91E-04	0.00E+00	0.00E+00	8.77E-03	3.06E-01	0
SN03	7.03E-02	0.103496	1.00E-01	1.26E-04	3.70E-02	4.81E-04	2.09E-04	2.91E-03	4.41E-01	2.31E-01	0.01268579
SN04	3.90E-01	0.42175	4.01E-02	4.03E-02	1.68E-02	2.24E-03	1.78E-02	2.72E-02	3.35E-04	3.84E-02	0.00550555
SN05	0.00E+00	0.002805	1.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.96E-01	4.19E-05	0
SN06	2.09E-02	0.012728	1.76E-02	4.40E-04	7.31E-03	8.21E-03	0.00E+00	2.76E-03	9.07E-01	2.08E-02	0.00194683
SN07	1.95E-01	0.332615	1.11E-01	2.03E-01	5.40E-03	4.73E-03	1.21E-03	2.93E-04	2.26E-03	1.43E-01	0.00127695
SN08	4.11E-01	0.239983	9.14E-02	9.80E-03	5.05E-02	1.19E-02	4.38E-03	2.92E-02	4.98E-03	1.33E-01	0.01377434
SN09	2.31E-01	0.414549	9.13E-02	3.05E-02	4.68E-02	1.55E-03	9.15E-03	4.23E-03	4.51E-02	1.24E-01	0.00236655
SN10	1.28E-01	0.542935	2.66E-03	2.78E-02	3.76E-02	1.01E-01	3.84E-02	8.56E-02	7.72E-03	1.66E-02	0.01128323
SN11	9.88E-01	0.004291	8.37E-04	1.00E-03	1.65E-03	2.09E-05	0.00E+00	2.93E-04	2.09E-04	2.30E-04	0.00320285
SN12	1.44E-02	0.947101	2.68E-03	1.22E-02	2.70E-03	1.47E-04	1.44E-03	2.32E-03	3.91E-03	2.66E-03	0.01040402
SN13	7.73E-02	0.302512	1.29E-01	2.03E-01	2.62E-02	7.79E-03	1.31E-02	6.04E-02	7.00E-02	1.03E-01	0.00755704
SN14	6.77E-02	0.864873	6.28E-05	7.95E-04	8.37E-05	0.00E+00	2.09E-05	2.09E-05	6.46E-02	8.37E-05	0.00171656
SN15	5.16E-02	0.035231	5.34E-02	2.14E-02	1.11E-02	1.35E-02	4.00E-03	4.81E-04	6.93E-01	9.15E-02	0.02459703
SN16	2.01E-01	0.15717	4.49E-01	9.92E-03	4.16E-02	2.30E-03	3.50E-03	2.87E-02	1.06E-02	7.34E-02	0.02237806
SN17	8.34E-01	0.007515	3.92E-02	6.28E-05	5.20E-02	2.30E-03	5.23E-04	4.84E-03	8.37E-05	5.50E-02	0.00450073
SN18	9.78E-01	0.001612	5.02E-04	3.71E-03	7.95E-04	8.37E-05	1.05E-04	2.30E-04	1.47E-03	6.28E-05	0.01308353
SN19	4.24E-02	0.735336	3.63E-02	1.90E-02	1.92E-02	2.57E-02	5.30E-03	5.37E-02	8.37E-05	5.88E-02	0.00418673
SN20	1.09E-01	0.010927	1.31E-01	2.45E-02	1.05E-04	1.54E-02	0.00E+00	0.00E+00	2.09E-05	7.08E-01	0.00010467
SN21	2.05E-01	0.198639	3.73E-01	1.40E-03	2.45E-02	4.81E-03	8.37E-05	4.96E-03	3.10E-03	1.76E-01	0.0087712
SN22	3.06E-01	0.398242	5.56E-02	2.08E-02	5.45E-02	5.65E-03	4.33E-03	2.01E-02	8.37E-03	1.02E-01	0.02499477
SN23	7.97E-01	0.01233	1.14E-01	2.30E-04	2.20E-02	9.42E-04	2.51E-04	1.38E-03	6.28E-05	4.53E-02	0.00609169
SN24	7.66E-03	0.9583	3.58E-03	3.04E-03	1.97E-02	0.00E+00	1.67E-04	1.88E-04	3.47E-03	1.49E-03	0.00244924
SN25	3.40E-01	0.154511	3.02E-01	2.89E-03	2.40E-02	1.51E-03	8.37E-04	1.94E-02	1.95E-03	1.43E-01	0.01032028
SN26	5.84E-01	0.309211	1.05E-04	2.01E-02	4.19E-05	0.00E+00	2.09E-05	4.19E-04	2.78E-03	8.23E-02	0.00102575
SN27	2.35E-01	0.602386	7.77E-02	4.50E-03	2.31E-02	1.36E-03	4.40E-04	6.49E-03	2.30E-03	3.67E-02	0.01009001
SN28	4.03E-01	0.179736	1.45E-01	1.71E-01	2.30E-02	4.46E-03	3.33E-03	2.03E-02	9.76E-03	2.24E-02	0.01821227
SN29	3.67E-01	0.054134	3.09E-01	2.49E-03	1.10E-01	6.34E-03	2.01E-03	2.90E-02	1.78E-03	1.06E-01	0.01235085
SN30	1.49E-01	0.000691	3.29E-03	3.35E-04	3.77E-04	2.51E-04	6.09E-03	0.00E+00	8.28E-01	9.61E-03	0.00267951

SN31	3.10E-02	0.000167	2.72E-04	8.37E-03	1.05E-04	5.46E-03	7.13E-01	2.09E-04	2.37E-01	4.29E-03	0.00016747
SN32	5.75E-01	0.067637	4.44E-02	1.26E-01	3.25E-02	4.17E-03	2.36E-02	7.66E-02	3.62E-03	4.27E-02	0.00408206
SN33	1.88E-01	0.25359	7.81E-02	2.15E-01	2.84E-02	4.52E-03	5.36E-03	1.27E-01	4.75E-02	4.16E-02	0.01021562
SN34	1.02E-01	0.255286	1.57E-01	3.96E-02	8.58E-04	1.11E-03	5.07E-03	4.19E-05	7.95E-04	4.38E-01	0.00020934
SN35	2.64E-01	0.214947	2.18E-01	6.07E-04	7.90E-02	2.85E-03	7.12E-04	4.00E-02	1.19E-03	1.68E-01	0.01094829
SN36	1.16E-01	0.8009	2.66E-02	1.88E-04	8.37E-03	4.19E-04	1.26E-04	3.71E-03	2.93E-04	4.27E-02	0.00098388
SN37	1.12E-01	0.068244	3.87E-01	5.23E-03	1.89E-02	1.65E-03	1.09E-03	1.11E-01	6.57E-03	2.63E-01	0.02614612
SN38	2.77E-02	0.93609	1.47E-04	2.18E-03	1.75E-02	0.00E+00	1.26E-04	2.09E-05	9.78E-03	2.43E-03	0.00399833
SN39	1.27E-01	0.192234	1.86E-01	1.43E-01	4.75E-02	2.01E-03	1.44E-03	7.32E-02	1.81E-02	1.88E-01	0.02248273
SN40	3.33E-03	0.034394	9.21E-04	4.81E-04	2.09E-05	0.00E+00	5.02E-04	1.17E-03	9.49E-01	9.99E-03	0
SN41	1.16E-01	0.525539	9.37E-02	5.65E-02	1.97E-02	2.53E-03	2.51E-03	2.43E-02	2.45E-03	1.39E-01	0.01756332
SN42	4.33E-01	0.512435	1.93E-03	5.36E-03	7.95E-04	9.63E-04	7.54E-04	0.00E+00	2.09E-05	4.40E-02	0.00054427
SN43	8.24E-01	0.00427	2.18E-02	1.47E-04	1.15E-01	3.98E-04	2.09E-05	2.51E-04	3.06E-02	2.64E-03	0.00023027
SN44	6.09E-01	0.171112	8.69E-02	1.52E-02	4.94E-02	4.38E-03	1.03E-03	1.14E-02	3.47E-03	3.43E-02	0.01379527
SN45	1.89E-01	0.424304	1.70E-01	5.12E-02	3.35E-02	7.33E-03	5.78E-03	2.47E-02	3.64E-03	8.78E-02	0.0022399
SN46	1.99E-01	0.599267	4.42E-02	1.55E-02	3.73E-02	1.44E-03	2.39E-03	4.04E-02	7.22E-03	4.92E-02	0.00385179
SN47	8.28E-02	0.291061	2.47E-01	4.19E-05	2.97E-01	1.30E-03	0.00E+00	2.57E-02	5.57E-03	3.83E-02	0.01063429
SN48	6.09E-03	0.888047	1.01E-01	4.81E-04	2.81E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-04	0.00125602
SN49	7.51E-01	0.244463	1.26E-04	4.19E-05	1.05E-04	2.09E-05	0.00E+00	2.09E-05	2.09E-05	2.93E-04	0.0042914
SN50	2.05E-03	0.64551	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-01	0.00E+00	0
SN51	3.94E-02	0.799498	9.85E-02	5.02E-04	1.16E-02	3.18E-03	4.19E-05	2.09E-05	6.28E-05	4.68E-02	0.00029307
SN52	1.98E-01	0.123885	3.88E-01	1.78E-03	2.53E-02	4.84E-03	7.77E-03	6.98E-02	8.54E-03	1.47E-01	0.02543437
SN53	3.40E-01	0.136634	3.57E-01	7.64E-03	3.51E-02	4.69E-03	4.79E-03	2.79E-02	3.41E-03	6.71E-02	0.01534436
SN54	4.13E-01	0.114193	2.20E-01	7.41E-03	1.44E-02	2.22E-03	9.63E-04	4.18E-02	0.00E+00	1.77E-01	0.00864559
SN55	4.19E-05	0.978522	1.05E-04	1.67E-04	2.30E-04	1.05E-04	2.09E-05	0.00E+00	3.56E-04	2.03E-02	0.0001256
SN56	7.58E-03	0.991208	8.37E-05	1.26E-04	0.00E+00	1.26E-04	0.00E+00	0.00E+00	3.77E-04	0.00E+00	0.00050241
SN57	4.35E-01	0.028826	2.81E-01	2.51E-04	5.28E-02	1.57E-02	6.28E-05	8.23E-03	6.70E-04	1.57E-01	0.02116391
SN58	4.44E-01	0.2879	8.79E-04	2.43E-01	7.33E-04	2.09E-04	0.00E+00	6.28E-05	2.31E-02	1.05E-04	0.00016747
SN59	2.69E-01	0.104626	3.44E-01	4.35E-03	1.70E-01	3.94E-02	9.84E-04	1.56E-02	5.86E-04	4.12E-02	0.01015282
SN60	6.56E-01	0.002428	4.19E-05	0.00E+00	5.02E-04	0.00E+00	2.09E-05	0.00E+00	3.39E-01	2.09E-05	0.00175843
SN61	7.18E-01	0.279213	1.47E-04	8.37E-05	8.37E-05	3.56E-04	2.09E-05	4.19E-05	1.70E-03	1.05E-04	0.00020934
SN62	1.19E-01	0.324011	1.31E-01	7.79E-02	3.83E-02	3.39E-03	4.56E-03	4.10E-03	8.51E-02	1.28E-01	0.08476031
SN63	7.81E-01	0.024053	3.22E-03	3.40E-02	1.23E-02	0.00E+00	4.75E-03	3.77E-04	1.03E-01	4.61E-04	0.03690601
SN64	9.31E-01	0.042579	3.98E-04	5.46E-03	5.65E-04	2.09E-05	7.12E-04	2.09E-05	9.48E-03	1.07E-03	0.00900147
SN65	9.64E-01	0.014046	1.88E-04	4.98E-03	2.09E-05	0.00E+00	1.67E-04	4.19E-05	8.54E-03	2.30E-04	0.00776638
SN66	1.97E-03	0.000461	0.00E+00	0.00E+00	4.19E-05	0.00E+00	0.00E+00	0.00E+00	9.98E-01	0.00E+00	0
SN67	8.57E-01	0.085933	2.24E-03	3.98E-04	3.41E-03	6.28E-05	0.00E+00	0.00E+00	4.44E-02	3.85E-03	0.0024283
SN68	2.20E-02	0.310153	1.11E-02	1.52E-01	1.49E-02	5.65E-04	7.42E-02	1.28E-03	1.73E-01	1.95E-02	0.2206615
SN69	4.04E-01	0.28162	6.66E-03	7.22E-03	1.21E-03	8.37E-05	2.22E-03	3.35E-04	2.78E-01	3.75E-03	0.01538623

S2.3 At the order level											
	<i>Actinomyceta</i>	<i>Bacillales</i>	<i>Bacteroidales</i>	<i>Clostridiales</i>	<i>Enterobacteriales</i>	<i>Fusobacteriales</i>	<i>Lactobacillales</i>	<i>Neisseriales</i>	Others	<i>Pseudomonadales</i>	<i>Selenomonadales</i>
SN01	4.21E-02	3.30E-02	2.57E-01	7.69E-02	0.00E+00	7.78E-02	0.268536739	3.15E-02	0.160456353	2.85E-03	4.99E-02
SN02	1.03E-01	1.05E-02	2.14E-01	0.00E+00	8.77E-03	0.00E+00	0.342348754	0.00E+00	0.015260624	0.00E+00	3.06E-01
SN03	6.26E-02	0.00E+00	1.00E-01	3.70E-02	2.09E-05	2.91E-03	0.103495918	0.00E+00	0.058970065	4.03E-01	2.31E-01
SN04	3.87E-01	2.93E-04	4.01E-02	1.68E-02	0.00E+00	2.72E-02	0.421456981	1.06E-02	0.058551392	0.00E+00	3.84E-02
SN05	0.00E+00	0.00E+00	1.53E-03	0.00E+00	8.49E-01	0.00E+00	0.002805108	0.00E+00	0	1.47E-01	4.19E-05
SN06	9.55E-03	4.19E-05	1.76E-02	7.31E-03	1.58E-01	2.76E-03	0.012685786	4.40E-04	0.021582583	7.49E-01	2.08E-02
SN07	1.91E-01	1.47E-04	1.11E-01	5.40E-03	2.72E-04	2.93E-04	0.332468076	1.89E-01	0.025497174	1.90E-03	1.43E-01
SN08	3.96E-01	2.55E-03	9.14E-02	5.05E-02	1.47E-04	2.92E-02	0.237429349	2.55E-03	0.052669039	4.40E-03	1.33E-01
SN09	2.26E-01	1.06E-02	9.13E-02	4.68E-02	8.37E-05	4.23E-03	0.403935524	2.92E-02	0.064015072	0.00E+00	1.24E-01
SN10	1.26E-01	4.31E-01	2.66E-03	3.76E-02	6.18E-03	8.56E-02	0.111534436	1.44E-02	0.166338706	1.28E-03	1.66E-02
SN11	9.88E-01	4.10E-03	8.37E-04	1.65E-03	0.00E+00	2.93E-04	0.000188403	4.19E-05	0.004186728	2.09E-04	2.30E-04

SN12	1.42E-02	9.33E-01	2.68E-03	2.70E-03	6.70E-04	2.32E-03	0.014109274	7.75E-04	0.023948085	2.93E-03	2.66E-03
SN13	7.39E-02	1.39E-02	1.29E-01	2.62E-02	1.09E-03	6.04E-02	0.288570232	1.99E-01	0.10270044	2.39E-03	1.03E-01
SN14	6.77E-02	5.93E-01	6.28E-05	8.37E-05	6.39E-02	2.09E-05	0.271886121	8.37E-05	0.002491103	7.12E-04	8.37E-05
SN15	4.71E-02	1.47E-04	5.34E-02	1.11E-02	8.16E-04	4.81E-04	0.035084781	3.35E-03	0.754092527	2.99E-03	9.15E-02
SN16	1.96E-01	2.82E-02	4.49E-01	4.16E-02	6.07E-04	2.87E-02	0.128993092	8.65E-03	0.044714256	6.28E-05	7.34E-02
SN17	8.17E-01	4.19E-04	3.92E-02	5.20E-02	4.19E-05	4.84E-03	0.007096504	6.28E-05	0.024052753	0.00E+00	5.50E-02
SN18	9.74E-01	7.54E-04	5.02E-04	7.95E-04	3.14E-04	2.30E-04	0.000858279	0.00E+00	0.021415114	8.37E-04	6.28E-05
SN19	4.08E-02	3.12E-02	3.63E-02	1.92E-02	6.28E-05	5.37E-02	0.704144861	1.90E-02	0.036822273	0.00E+00	5.88E-02
SN20	1.09E-01	2.70E-03	1.31E-01	1.05E-04	2.09E-05	0.00E+00	0.008226921	2.45E-02	0.015532761	0.00E+00	7.08E-01
SN21	1.71E-01	4.81E-04	3.73E-01	2.45E-02	0.00E+00	4.96E-03	0.19815784	1.19E-03	0.050868746	2.09E-05	1.76E-01
SN22	3.02E-01	1.35E-02	5.56E-02	5.45E-02	0.00E+00	2.01E-02	0.384697509	1.32E-02	0.05434373	1.26E-04	1.02E-01
SN23	7.76E-01	4.19E-05	1.14E-01	2.20E-02	4.19E-05	1.38E-03	0.012288047	1.26E-04	0.028658154	0.00E+00	4.53E-02
SN24	7.60E-03	9.57E-01	3.58E-03	1.97E-02	9.21E-04	1.88E-04	0.001779359	1.05E-04	0.005673017	2.49E-03	1.49E-03
SN25	3.30E-01	2.01E-03	3.02E-01	2.40E-02	3.77E-04	1.94E-02	0.15250157	2.60E-03	0.024429558	0.00E+00	1.43E-01
SN26	5.81E-01	1.67E-04	1.05E-04	4.19E-05	4.19E-05	4.19E-04	0.309043333	2.09E-05	0.026439188	4.19E-05	8.23E-02
SN27	2.31E-01	2.07E-03	7.77E-02	2.31E-02	1.47E-04	6.49E-03	0.600314005	3.37E-03	0.018651874	0.00E+00	3.67E-02
SN28	3.98E-01	5.85E-02	1.45E-01	2.30E-02	1.05E-04	2.03E-02	0.121205778	4.51E-02	0.164831484	1.95E-03	2.24E-02
SN29	3.43E-01	1.10E-02	3.09E-01	1.10E-01	0.00E+00	2.90E-02	0.043123299	2.20E-03	0.045991208	1.47E-04	1.06E-01
SN30	1.49E-01	5.65E-04	3.29E-03	3.77E-04	6.63E-01	0.00E+00	0.000125602	3.14E-04	0.012727653	1.61E-01	9.61E-03
SN31	3.10E-02	0.00E+00	2.72E-04	1.05E-04	1.72E-01	2.09E-04	0.000167469	8.35E-03	0.718547205	6.55E-02	4.29E-03
SN32	5.74E-01	4.63E-03	4.44E-02	3.25E-02	0.00E+00	7.66E-02	0.063010258	1.25E-01	0.0363408	0.00E+00	4.27E-02
SN33	1.88E-01	2.25E-02	7.81E-02	2.84E-02	0.00E+00	1.27E-01	0.231128323	2.15E-01	0.067720327	1.47E-04	4.16E-02
SN34	8.20E-02	1.34E-03	1.57E-01	8.58E-04	2.09E-05	4.19E-05	0.253945991	1.28E-03	0.064622148	7.33E-04	4.38E-01
SN35	2.37E-01	2.27E-02	2.18E-01	7.90E-02	0.00E+00	4.00E-02	0.19229642	5.44E-04	0.042390622	0.00E+00	1.68E-01
SN36	1.13E-01	5.33E-01	2.66E-02	8.37E-03	6.28E-05	3.71E-03	0.267929663	1.47E-04	0.004249529	6.28E-05	4.27E-02
SN37	1.10E-01	1.37E-02	3.87E-01	1.89E-02	0.00E+00	1.11E-01	0.054553067	4.94E-03	0.037764287	2.09E-05	2.63E-01
SN38	2.72E-02	9.34E-01	1.47E-04	1.75E-02	8.42E-03	2.09E-05	0.002198032	1.67E-04	0.007138371	8.58E-04	2.43E-03
SN39	1.20E-01	2.05E-02	1.86E-01	4.75E-02	4.19E-05	7.32E-02	0.171718652	1.39E-01	0.054615868	1.05E-04	1.88E-01
SN40	3.31E-03	2.03E-02	9.21E-04	2.09E-05	0.00E+00	1.17E-03	0.014046473	4.81E-04	0.000523341	9.49E-01	9.99E-03
SN41	1.12E-01	2.11E-02	9.37E-02	1.97E-02	0.00E+00	2.43E-02	0.504437932	5.35E-02	0.032216873	2.09E-05	1.39E-01
SN42	4.26E-01	2.97E-03	1.93E-03	7.95E-04	0.00E+00	0.00E+00	0.509462005	5.28E-03	0.009880678	2.09E-05	4.40E-02
SN43	8.11E-01	1.05E-04	2.18E-02	1.15E-01	2.48E-02	2.51E-04	0.004165794	1.26E-04	0.014172075	5.67E-03	2.64E-03
SN44	6.04E-01	1.42E-03	8.69E-02	4.94E-02	6.28E-05	1.14E-02	0.169688089	1.34E-02	0.029055893	0.00E+00	3.43E-02
SN45	1.80E-01	4.36E-02	1.70E-01	3.35E-02	4.19E-05	2.47E-02	0.380699184	4.06E-02	0.039166841	2.09E-05	8.78E-02
SN46	1.97E-01	6.41E-03	4.42E-02	3.73E-02	1.72E-03	4.04E-02	0.592861629	1.55E-02	0.015553695	0.00E+00	4.92E-02
SN47	7.80E-02	2.51E-04	2.47E-01	2.97E-01	1.47E-04	2.57E-02	0.290810132	4.19E-05	0.022147792	0.00E+00	3.83E-02
SN48	2.72E-03	2.09E-05	1.01E-01	2.81E-03	0.00E+00	0.00E+00	0.888025958	0.00E+00	0.005107808	0.00E+00	1.05E-04
SN49	7.51E-01	1.28E-03	1.26E-04	1.05E-04	2.09E-05	2.09E-05	0.2431861	0.00E+00	0.004354197	0.00E+00	2.93E-04
SN50	2.05E-03	4.19E-05	0.00E+00	0.00E+00	3.52E-01	0.00E+00	0.645467867	0.00E+00	0	6.07E-04	0.00E+00
SN51	1.26E-03	2.92E-01	9.85E-02	1.16E-02	2.09E-05	2.09E-05	0.507640779	5.02E-04	0.041678878	4.19E-05	4.68E-02
SN52	1.95E-01	3.53E-02	3.88E-01	2.53E-02	2.72E-04	6.98E-02	0.088633033	1.74E-03	0.049068453	0.00E+00	1.47E-01
SN53	3.31E-01	4.67E-03	3.57E-01	3.51E-02	4.19E-05	2.79E-02	0.131965669	7.10E-03	0.038099226	0.00E+00	6.71E-02
SN54	4.11E-01	1.56E-02	2.20E-01	1.44E-02	0.00E+00	4.18E-02	0.098639313	3.58E-03	0.017898263	0.00E+00	1.77E-01
SN55	2.09E-05	0.00E+00	1.05E-04	2.30E-04	3.35E-04	0.00E+00	0.978522085	0.00E+00	0.00046054	0.00E+00	2.03E-02
SN56	3.77E-04	1.39E-02	8.37E-05	0.00E+00	3.56E-04	0.00E+00	0.977307934	0.00E+00	0.007954783	2.09E-05	0.00E+00
SN57	3.84E-01	9.06E-03	2.81E-01	5.28E-02	0.00E+00	8.23E-03	0.019761357	2.09E-04	0.088591166	0.00E+00	1.57E-01
SN58	4.44E-01	3.87E-03	8.79E-04	7.33E-04	1.05E-04	6.28E-05	0.284027632	2.19E-01	0.047310027	8.37E-05	1.05E-04
SN59	2.65E-01	2.22E-03	3.44E-01	1.70E-01	5.86E-04	1.56E-02	0.102407369	3.08E-03	0.055955621	0.00E+00	4.12E-02
SN60	6.56E-01	6.49E-04	4.19E-05	5.02E-04	3.39E-01	0.00E+00	0.001779359	0.00E+00	0.001904961	0.00E+00	2.09E-05
SN61	7.18E-01	2.56E-02	1.47E-04	8.37E-05	1.70E-03	4.19E-05	0.253569186	0.00E+00	0.000816412	0.00E+00	1.05E-04
SN62	1.13E-01	1.01E-01	1.31E-01	3.83E-02	5.13E-03	4.10E-03	0.22340381	6.51E-03	0.170776638	7.88E-02	1.28E-01
SN63	7.81E-01	1.66E-02	3.22E-03	1.23E-02	3.14E-04	3.77E-04	0.007494243	6.43E-03	0.07360268	9.85E-02	4.61E-04
SN64	9.31E-01	4.23E-02	3.98E-04	5.65E-04	3.47E-03	2.09E-05	0.000293071	0.00E+00	0.015490894	5.71E-03	1.07E-03
SN65	9.64E-01	8.90E-03	1.88E-04	2.09E-05	1.15E-03	4.19E-05	0.005149676	0.00E+00	0.012978857	7.33E-03	2.30E-04

SN66	1.97E-03	0.00E+00	0.00E+00	4.19E-05	9.96E-01	0.00E+00	0.00046054	0.00E+00	0	1.63E-03	0.00E+00
SN67	8.57E-01	7.95E-04	2.24E-03	3.41E-03	2.96E-02	0.00E+00	0.085137115	0.00E+00	0.003035378	1.48E-02	3.85E-03
SN68	2.20E-02	2.90E-01	1.11E-02	1.49E-02	2.37E-03	1.28E-03	0.020326565	4.19E-05	0.455097341	1.63E-01	1.95E-02
SN69	4.03E-01	2.80E-01	6.66E-03	1.21E-03	8.79E-04	3.35E-04	0.001925895	1.00E-03	0.024408625	2.77E-01	3.75E-03

S2.4 At the family level											
	<i>Actinomycetae</i>	<i>Corynebacteria</i>	<i>Enterobacteria</i>	<i>Enterococceae</i>	<i>Micrococceae</i>	<i>Moraxellaceae</i>	Others	<i>Prevotellaceae</i>	<i>Staphylococci</i>	<i>Streptococceae</i>	<i>Veillonellaceae</i>
SN01	1.80E-02	1.26E-04	0.00E+00	0.00E+00	2.35E-02	2.57E-03	4.48E-01	2.31E-01	0.00E+00	2.26E-01	4.99E-02
SN02	8.12E-03	0.00E+00	8.77E-03	5.23E-04	9.51E-02	0.00E+00	4.32E-02	2.14E-01	0.00E+00	3.24E-01	3.06E-01
SN03	4.89E-02	0.00E+00	2.09E-05	0.00E+00	1.25E-02	4.29E-02	4.70E-01	1.00E-01	0.00E+00	9.36E-02	2.31E-01
SN04	2.87E-01	3.83E-03	0.00E+00	0.00E+00	9.56E-02	0.00E+00	1.31E-01	3.64E-02	2.09E-05	4.07E-01	3.84E-02
SN05	0.00E+00	0.00E+00	8.49E-01	0.00E+00	0.00E+00	1.47E-01	2.81E-03	1.53E-03	0.00E+00	0.00E+00	4.19E-05
SN06	4.54E-03	4.96E-03	1.58E-01	1.03E-03	0.00E+00	7.49E-01	3.26E-02	1.73E-02	0.00E+00	1.16E-02	2.08E-02
SN07	1.44E-01	6.28E-05	2.72E-04	0.00E+00	4.70E-02	1.82E-03	3.70E-01	1.11E-01	0.00E+00	1.83E-01	1.43E-01
SN08	3.13E-01	1.53E-03	1.47E-04	4.19E-05	8.15E-02	3.50E-03	1.64E-01	9.01E-02	8.37E-05	2.13E-01	1.33E-01
SN09	1.49E-01	1.88E-04	8.37E-05	0.00E+00	7.67E-02	0.00E+00	2.11E-01	6.15E-02	0.00E+00	3.77E-01	1.24E-01
SN10	1.18E-01	6.80E-03	6.18E-03	0.00E+00	7.95E-04	9.21E-04	3.36E-01	1.99E-03	4.31E-01	8.13E-02	1.66E-02
SN11	1.70E-03	9.84E-01	0.00E+00	2.09E-05	2.72E-04	8.37E-05	8.48E-03	8.37E-04	4.04E-03	1.26E-04	2.30E-04
SN12	5.48E-03	4.79E-03	6.70E-04	0.00E+00	9.63E-04	2.55E-03	4.19E-02	2.66E-03	9.33E-01	5.32E-03	2.66E-03
SN13	1.70E-02	2.24E-03	1.09E-03	0.00E+00	5.46E-02	2.28E-03	4.51E-01	9.54E-02	5.15E-03	2.68E-01	1.03E-01
SN14	1.47E-04	6.75E-02	6.39E-02	2.72E-01	2.09E-05	5.65E-04	3.66E-03	6.28E-05	5.92E-01	2.09E-04	8.37E-05
SN15	4.12E-02	1.44E-03	8.16E-04	6.28E-05	4.23E-03	2.60E-03	8.12E-01	3.20E-02	0.00E+00	1.47E-02	9.15E-02
SN16	1.31E-01	2.78E-02	6.07E-04	0.00E+00	3.75E-02	4.19E-05	2.03E-01	3.99E-01	3.68E-03	1.24E-01	7.34E-02
SN17	7.20E-01	1.52E-02	4.19E-05	0.00E+00	8.15E-02	0.00E+00	8.47E-02	3.67E-02	0.00E+00	6.49E-03	5.50E-02
SN18	8.37E-04	9.64E-01	3.14E-04	5.44E-04	2.26E-03	6.49E-04	3.05E-02	4.81E-04	1.88E-04	2.30E-04	6.28E-05
SN19	4.05E-02	1.47E-04	6.28E-05	1.47E-04	1.47E-04	0.00E+00	1.32E-01	3.63E-02	3.12E-02	7.01E-01	5.88E-02
SN20	1.09E-01	0.00E+00	2.09E-05	7.75E-03	6.28E-05	0.00E+00	4.01E-02	1.31E-01	2.68E-03	4.81E-04	7.08E-01
SN21	1.57E-01	7.54E-04	0.00E+00	0.00E+00	1.36E-02	2.09E-05	9.28E-02	3.72E-01	0.00E+00	1.88E-01	1.76E-01
SN22	2.42E-01	5.28E-03	0.00E+00	0.00E+00	5.47E-02	1.05E-04	1.71E-01	5.04E-02	2.09E-05	3.75E-01	1.02E-01
SN23	7.66E-01	2.09E-05	4.19E-05	0.00E+00	9.40E-03	0.00E+00	5.33E-02	1.14E-01	0.00E+00	1.14E-02	4.53E-02
SN24	3.16E-03	2.83E-03	9.21E-04	0.00E+00	7.95E-04	1.61E-03	2.76E-02	3.56E-03	9.56E-01	1.72E-03	1.49E-03
SN25	3.08E-01	9.63E-04	3.77E-04	0.00E+00	2.09E-02	0.00E+00	7.71E-02	3.01E-01	3.77E-04	1.49E-01	1.43E-01
SN26	4.49E-01	6.28E-03	4.19E-05	0.00E+00	1.26E-01	0.00E+00	4.19E-02	1.05E-04	1.67E-04	2.94E-01	8.23E-02
SN27	1.73E-01	1.36E-03	1.47E-04	2.09E-05	5.67E-02	0.00E+00	6.40E-02	7.13E-02	0.00E+00	5.96E-01	3.67E-02
SN28	7.82E-02	4.65E-03	1.05E-04	0.00E+00	3.14E-01	1.51E-03	3.16E-01	1.45E-01	8.37E-05	1.18E-01	2.24E-02
SN29	1.66E-01	2.55E-02	0.00E+00	0.00E+00	1.51E-01	1.05E-04	2.14E-01	3.04E-01	1.26E-04	3.22E-02	1.06E-01
SN30	1.05E-03	1.47E-01	6.63E-01	2.09E-05	0.00E+00	1.61E-01	1.39E-02	3.29E-03	5.65E-04	8.37E-05	9.61E-03
SN31	3.05E-02	4.81E-04	1.72E-01	0.00E+00	0.00E+00	6.49E-04	7.92E-01	2.51E-04	0.00E+00	2.09E-05	4.29E-03
SN32	2.53E-01	3.06E-01	0.00E+00	0.00E+00	1.58E-02	0.00E+00	2.92E-01	3.63E-02	1.88E-03	5.23E-02	4.27E-02
SN33	4.35E-02	0.00E+00	0.00E+00	0.00E+00	1.45E-01	1.47E-04	5.43E-01	5.06E-02	2.07E-03	1.74E-01	4.16E-02
SN34	7.21E-02	2.30E-04	2.09E-05	0.00E+00	9.67E-03	7.33E-04	9.60E-02	1.57E-01	1.34E-03	2.25E-01	4.38E-01
SN35	1.84E-01	1.19E-03	0.00E+00	0.00E+00	5.25E-02	0.00E+00	2.00E-01	2.10E-01	0.00E+00	1.85E-01	1.68E-01
SN36	7.24E-03	8.38E-02	6.28E-05	5.42E-03	2.21E-02	6.28E-05	2.09E-02	2.57E-02	5.31E-01	2.61E-01	4.27E-02
SN37	1.07E-01	2.30E-04	0.00E+00	0.00E+00	1.97E-03	0.00E+00	2.04E-01	3.77E-01	5.65E-04	4.54E-02	2.63E-01
SN38	4.19E-04	2.63E-02	8.42E-03	4.81E-04	1.26E-04	5.02E-04	2.67E-02	1.47E-04	9.34E-01	1.44E-03	1.80E-03
SN39	1.82E-02	2.70E-03	4.19E-05	0.00E+00	9.91E-02	8.37E-05	3.71E-01	1.65E-01	5.44E-04	1.56E-01	1.88E-01
SN40	1.57E-03	8.37E-05	0.00E+00	8.58E-04	1.65E-03	9.49E-01	1.48E-02	9.21E-04	2.03E-02	6.28E-04	9.99E-03
SN41	4.71E-02	8.19E-03	0.00E+00	0.00E+00	5.65E-02	0.00E+00	1.90E-01	7.08E-02	2.09E-05	4.88E-01	1.39E-01
SN42	3.77E-04	4.20E-01	0.00E+00	0.00E+00	5.42E-03	2.09E-05	1.82E-02	6.28E-05	2.97E-03	5.09E-01	4.40E-02
SN43	6.89E-03	7.89E-01	2.48E-02	0.00E+00	7.54E-04	0.00E+00	1.50E-01	2.18E-02	2.09E-05	4.04E-03	2.64E-03
SN44	5.55E-01	1.21E-03	6.28E-05	0.00E+00	4.80E-02	0.00E+00	1.13E-01	8.33E-02	0.00E+00	1.65E-01	3.43E-02
SN45	2.74E-02	2.57E-03	4.19E-05	0.00E+00	1.50E-01	0.00E+00	3.52E-01	5.74E-02	2.09E-05	3.23E-01	8.78E-02
SN46	1.24E-01	4.75E-03	1.72E-03	0.00E+00	6.83E-02	0.00E+00	1.33E-01	3.54E-02	8.37E-05	5.84E-01	4.92E-02
SN47	3.62E-02	4.18E-02	1.47E-04	1.30E-03	0.00E+00	0.00E+00	3.80E-01	2.15E-01	2.09E-04	2.89E-01	3.62E-02

SN48	0.00E+00	2.72E-03	0.00E+00	8.80E-01	0.00E+00	0.00E+00	1.12E-01	0.00E+00	2.09E-05	4.90E-03	1.05E-04
SN49	0.00E+00	7.51E-01	2.09E-05	2.43E-01	0.00E+00	0.00E+00	4.92E-03	6.28E-05	1.11E-03	0.00E+00	2.93E-04
SN50	2.09E-05	2.03E-03	3.52E-01	6.45E-01	0.00E+00	6.07E-04	3.77E-04	0.00E+00	4.19E-05	0.00E+00	0.00E+00
SN51	1.00E-03	0.00E+00	2.09E-05	1.53E-03	2.09E-04	4.19E-05	2.12E-01	9.73E-02	2.43E-01	3.98E-01	4.68E-02
SN52	1.70E-01	8.37E-05	2.72E-04	1.47E-04	2.52E-02	0.00E+00	2.24E-01	3.56E-01	0.00E+00	7.78E-02	1.47E-01
SN53	2.81E-01	2.83E-03	4.19E-05	2.09E-05	4.72E-02	0.00E+00	1.20E-01	3.54E-01	0.00E+00	1.28E-01	6.71E-02
SN54	1.18E-01	3.56E-04	0.00E+00	0.00E+00	2.92E-01	0.00E+00	1.63E-01	1.98E-01	6.07E-04	5.11E-02	1.77E-01
SN55	0.00E+00	0.00E+00	3.35E-04	6.28E-05	2.09E-05	0.00E+00	5.71E-02	4.19E-05	0.00E+00	9.22E-01	2.03E-02
SN56	3.56E-04	2.09E-05	3.56E-04	0.00E+00	0.00E+00	2.09E-05	9.71E-01	2.09E-05	1.39E-02	1.40E-02	0.00E+00
SN57	3.68E-01	1.32E-02	0.00E+00	0.00E+00	2.37E-03	0.00E+00	1.50E-01	2.81E-01	9.06E-03	1.92E-02	1.57E-01
SN58	2.64E-01	1.88E-04	1.05E-04	0.00E+00	1.79E-01	6.28E-05	3.13E-01	8.79E-04	6.70E-04	2.42E-01	1.05E-04
SN59	1.99E-01	5.65E-04	5.86E-04	0.00E+00	6.55E-02	0.00E+00	2.54E-01	3.43E-01	0.00E+00	9.66E-02	4.12E-02
SN60	0.00E+00	6.56E-01	3.39E-01	0.00E+00	0.00E+00	0.00E+00	4.25E-03	4.19E-05	6.49E-04	2.09E-05	2.09E-05
SN61	1.67E-04	7.18E-01	1.70E-03	6.49E-04	0.00E+00	0.00E+00	9.84E-04	1.47E-04	2.56E-02	2.53E-01	1.05E-04
SN62	4.25E-02	5.61E-02	5.13E-03	0.00E+00	2.32E-03	7.02E-02	2.54E-01	1.29E-01	9.56E-02	2.17E-01	1.28E-01
SN63	4.63E-03	7.62E-01	3.14E-04	5.02E-04	1.18E-02	8.98E-02	1.11E-01	3.20E-03	1.15E-02	4.96E-03	4.61E-04
SN64	4.10E-03	9.25E-01	3.47E-03	0.00E+00	1.67E-04	5.30E-03	1.79E-02	3.56E-04	4.20E-02	2.93E-04	1.07E-03
SN65	1.26E-04	9.64E-01	1.15E-03	5.11E-03	0.00E+00	5.80E-03	1.52E-02	1.88E-04	8.69E-03	0.00E+00	2.30E-04
SN66	0.00E+00	1.97E-03	9.96E-01	2.09E-04	0.00E+00	1.61E-03	8.37E-05	0.00E+00	0.00E+00	2.30E-04	0.00E+00
SN67	1.21E-03	8.55E-01	2.96E-02	8.48E-02	7.33E-04	1.47E-02	7.85E-03	1.67E-03	6.49E-04	4.19E-05	3.85E-03
SN68	7.56E-03	3.24E-03	2.37E-03	0.00E+00	2.72E-03	1.42E-01	5.03E-01	1.06E-02	2.89E-01	2.03E-02	1.95E-02
SN69	9.84E-04	4.01E-01	8.79E-04	0.00E+00	6.07E-04	2.75E-01	3.40E-02	2.60E-03	2.80E-01	1.40E-03	3.75E-03

S2.5 At the genus level											
samp	<i>Acinetoba</i>	<i>Actinomyd</i>	<i>Corynebact</i>	<i>Enterococci</i>	<i>Klebsiella</i>	Others	<i>Prevotella</i>	<i>Rothia</i>	<i>Staphylococ</i>	<i>Streptococci</i>	<i>Veillonella</i>
SN01	0.00257	0.0146	0.000126	0	0	0.468139	0.222	0.0235	0	0.226	0.0433
SN02	0	0.00812	0	0.000523	0.00421	0.048252	0.214	0.0951	0	0.324	0.306
SN03	0.0429	0.0481	0	0	0	0.521729	0.0805	0.0125	0	0.0936	0.201
SN04	0	0.287	0.00383	0	0	0.134855	0.0357	0.0956	2.09E-05	0.407	0.0355
SN05	0.147	0	0	0	0.659	0.193008	0.00151	0	0	0	0.0000419
SN06	0.749	0.00454	0.00496	0.00103	0.109	0.097216	0.0128	0	0	0.0116	0.00925
SN07	0.00182	0.144	6.28E-05	0	0.000167	0.416203	0.0773	0.047	0	0.183	0.131
SN08	0.00245	0.309	0.00153	0.0000419	0	0.182667	0.0879	0.0813	8.37E-05	0.213	0.122
SN09	0	0.149	0.000188	0	0.0000209	0.26659	0.0578	0.0767	0	0.377	0.0728
SN10	0.000816	0.115	0.0068	0	0	0.346535	0.00176	0.000586	0.431	0.0813	0.0158
SN11	0	0.000712	0.984	0.0000209	0	0.009588	0.000837	0.00023	0.00404	0.000126	0.00023
SN12	0.00255	0.00548	0.00479	0	0.000356	0.04304	0.00214	0.000816	0.933	0.00532	0.00251
SN13	0.00228	0.017	0.00224	0	0.000942	0.484132	0.0682	0.0546	0.00515	0.268	0.0976
SN14	0.000565	0.000147	0.0675	0.272	0.000293	0.067239	6.28E-05	0.0000209	0.592	0.000209	0.0000837
SN15	0.00255	0.0409	0.00144	0.0000628	0.000712	0.87019	0.027	0.00398	0	0.0147	0.0385
SN16	0	0.13	0.0278	0	0.00044	0.222273	0.396	0.0375	0.00368	0.124	0.0584
SN17	0	0.72	0.0152	0	0.0000419	0.136592	0.0365	0.0815	0	0.00649	0.00383
SN18	0.000649	0.000837	0.964	0.000544	0.000209	0.033075	0.000481	0.0000209	0	0.00023	0.0000628
SN19	0	0.0404	0.000147	0.000147	0	0.132238	0.0363	0.000147	0.0312	0.701	0.0586
SN20	0	0.109	0	0.00775	0	0.04013	0.131	0.0000628	0.00268	0.000481	0.708
SN21	2.09E-05	0.157	0.000754	0	0	0.125204	0.365	0.0136	0	0.188	0.15
SN22	0.000105	0.241	0.00528	0	0	0.20023	0.0408	0.0547	2.09E-05	0.375	0.0826
SN23	0	0.76	2.09E-05	0	0.0000209	0.07377	0.112	0.0094	0	0.0114	0.033
SN24	0.00117	0.00314	0.00283	0	0.000502	0.028951	0.00335	0.000565	0.956	0.00172	0.00144
SN25	0	0.307	0.000963	0	0.000272	0.106071	0.284	0.0209	0.000377	0.149	0.132
SN26	0	0.449	0.00628	0	0.0000419	0.041972	0.000105	0.126	0.000167	0.294	0.0823
SN27	0	0.173	0.00136	0.0000209	0.000126	0.070086	0.0703	0.0567	0	0.596	0.0321
SN28	0.00151	0.0634	0.00465	0	0	0.396546	0.0934	0.314	8.37E-05	0.118	0.00865

SN29	0.000105	0.149	0.0255	0	0	0.281243	0.299	0.151	0.000126	0.0322	0.0622
SN30	0.161	0.00105	0.147	0.0000209	0.518	0.160331	0.00329	0	0.000565	0.0000837	0.00862
SN31	0.000649	0.0305	0.000481	0	0.101	0.862822	0.00023	0	0	0.0000209	0.00429
SN32	0	0.253	0.306	0	0	0.309839	0.0334	0.0158	0.00188	0.0523	0.0283
SN33	2.09E-05	0.0358	0	0	0	0.560687	0.0472	0.145	0.00207	0.174	0.0353
SN34	0.000733	0.0721	0.00023	0	0.0000209	0.113858	0.153	0.00967	0.00134	0.225	0.424
SN35	0	0.184	0.00119	0	0	0.206887	0.206	0.0525	0	0.185	0.165
SN36	6.28E-05	0.00714	0.0838	0.00542	0.0000628	0.022587	0.0251	0.0221	0.531	0.261	0.0417
SN37	0	0.107	0.00023	0	0	0.275089	0.338	0.00197	0.000565	0.0454	0.231
SN38	0.000502	0.000419	0.0263	0.000481	0.00469	0.030898	0.000126	0.0000837	0.934	0.00144	0.00142
SN39	6.28E-05	0.0173	0.0027	0	0.0000419	0.409525	0.162	0.0991	0.000544	0.156	0.153
SN40	0.949	0.00157	8.37E-05	0.000858	0	0.014779	0.000921	0.00165	0.0203	0.000628	0.00996
SN41	0	0.046	0.00819	0	0	0.202428	0.0688	0.0565	2.09E-05	0.488	0.13
SN42	2.09E-05	0.000377	0.42	0	0	0.018191	6.28E-05	0.00542	0.00297	0.509	0.044
SN43	0	0.00674	0.789	0	0.0105	0.166925	0.0216	0.000754	2.09E-05	0.00404	0.000167
SN44	0	0.542	0.00121	0	0.0000419	0.144023	0.081	0.048	0	0.165	0.0185
SN45	0	0.0268	0.00257	0	0	0.370672	0.0513	0.15	2.09E-05	0.323	0.0759
SN46	0	0.118	0.00475	0	0.00172	0.146891	0.035	0.0683	8.37E-05	0.584	0.041
SN47	0	0.0362	0.0418	0.0013	0	0.413607	0.215	0	0.000209	0.289	0.00251
SN48	0	0	0.00272	0.88	0	0.112142	0	0	2.09E-05	0.0049	0.0000628
SN49	0	0	0.751	0.243	0	0.004961	6.28E-05	0	0.00111	0	0.000272
SN50	0.000607	2.09E-05	0.00203	0.645	0.282	0.069709	0	0	4.19E-05	0	0
SN51	4.19E-05	0.001	0	0.00153	0.0000209	0.213251	0.0972	0.000209	0.243	0.398	0.0452
SN52	0	0.169	8.37E-05	0.000147	0.000188	0.254072	0.329	0.0252	0	0.0778	0.144
SN53	0	0.28	0.00283	0.0000209	0	0.152774	0.333	0.0472	0	0.128	0.0562
SN54	0	0.117	0.000356	0	0	0.179736	0.188	0.292	0.000607	0.0511	0.17
SN55	0	0	0	0.0000628	0.000272	0.057149	4.19E-05	0.0000209	0	0.922	0.0203
SN56	2.09E-05	0.000356	2.09E-05	0	0	0.971656	2.09E-05	0	0.0139	0.014	0
SN57	0	0.368	0.0132	0	0	0.233912	0.263	0.00234	0.00906	0.0192	0.0914
SN58	4.19E-05	0.264	0.000188	0	0	0.312686	0.000879	0.179	0.00067	0.242	0.0000628
SN59	0	0.198	0.000565	0	0.00044	0.273435	0.331	0.0655	0	0.0966	0.0345
SN60	0	0	0.656	0	0.0000209	0.342935	4.19E-05	0	0.000649	0.0000209	0.0000209
SN61	0	0.000167	0.718	0.000649	0.00117	0.001528	0.000147	0	0.0256	0.253	0.0000837
SN62	0.0252	0.0425	0.0561	0	0	0.34283	0.119	0.00188	0.0956	0.217	0.1
SN63	0.0116	0.00264	0.762	0.000502	0	0.201905	0.00297	0.00214	0.0115	0.00481	0.000419
SN64	0.005	0.0041	0.925	0	0.00291	0.018987	0.000293	0.000167	0.042	0.000272	0.001
SN65	0.0053	0.000126	0.964	0.00511	0.000837	0.016035	0.000126	0	0.00869	0	0.00023
SN66	0.00161	0	0.00197	0.000209	0.771	0.224702	0	0	0	0.00023	0
SN67	0.0147	0.00121	0.855	0.0848	0.0221	0.019405	0.00153	0.00067	0.000649	0.0000419	0
SN68	0.0466	0.00728	0.00324	0	0	0.603684	0.0104	0.000167	0.289	0.0201	0.0195
SN69	0.00379	0.000984	0.401	0	0.00044	0.307201	0.00234	0.000565	0.279	0.0014	0.00264

Supplementary Table S3: Comparison the relative abundance of the top 10 bacterial microbiome between mild and severe groups

Levels	Microbiome	p_value
phylum	<i>Actinobacteria</i>	0.826
	<i>Bacteroidetes</i>	0.006
	<i>Candidatus_Saccharibacteria</i>	0.011
	<i>Cyanobacteria</i>	0.658
	<i>Firmicutes</i>	0.104
	<i>Fusobacteria</i>	0.001
	<i>Proteobacteria</i>	0.219
	<i>Spirochaetes</i>	<0.001
	<i>Synergistetes</i>	0.001
	<i>Tenericutes</i>	0.901
class	<i>Actinobacteria</i>	0.826
	<i>Bacilli</i>	0.406
	<i>Bacteroidia</i>	0.001
	<i>Betaproteobacteria</i>	0.092
	<i>Clostridia</i>	<0.001
	<i>Epsilonproteobacteria</i>	0.058
	<i>Flavobacteriia</i>	0.037
	<i>Fusobacteriia</i>	0.001
	<i>Gammaproteobacteria</i>	0.139
	<i>Negativicutes</i>	0.008
order	<i>Actinomycetales</i>	0.816
	<i>Bacillales</i>	0.163
	<i>Bacteroidales</i>	0.001
	<i>Clostridiales</i>	<0.001
	<i>Enterobacteriales</i>	0.021
	<i>Fusobacteriales</i>	0.001
	<i>Lactobacillales</i>	0.328
	<i>Neisseriales</i>	0.011
	<i>Pseudomonadales</i>	0.035
	<i>Selenomonadales</i>	0.008
family	<i>Actinomycetaceae</i>	0.029
	<i>Corynebacteriaceae</i>	0.185
	<i>Enterobacteriaceae</i>	0.021
	<i>Enterococcaceae</i>	0.232
	<i>Micrococcaceae</i>	0.005
	<i>Moraxellaceae</i>	0.068
	<i>Prevotellaceae</i>	0.003
	<i>Staphylococcaceae</i>	0.360
	<i>Streptococcaceae</i>	0.036
	<i>Veillonellaceae</i>	0.007
genus	<i>Acinetobacter</i>	0.047
	<i>Actinomyces</i>	0.036
	<i>Corynebacterium</i>	0.185
	<i>Enterococcus</i>	0.232
	<i>Klebsiella</i>	0.093

genus	<i>Prevotella</i>	0.003
	<i>Rothia</i>	0.003
	<i>Staphylococcus</i>	0.464
	<i>Streptococcus</i>	0.035
	<i>Veillonella</i>	0.005

Supplementary Table S4.1: Rank correlation coefficients between clinical characteristics and top 10 genera

	Mild group					Severe group				
	Age	Inpatient days	Dyspnea	Coexisting disorders	ICU admission	Age	Inpatient days	Dyspnea	Coexisting disorder	ICU admission
Acinetobacter	-0.0987	-0.0090	0.2040	-0.0025	0.0364	-0.0962	0.6599	0.6449	0.0786	0.4914
Actinomyces	-0.3235	0.1831	-0.1077	-0.0652	-0.3542	-0.4188	-0.2309	-0.3169	-0.2060	-0.3645
Corynebacterium	0.1654	0.3194	0.2642	0.2026	0.0000	0.2892	0.0846	-0.1992	0.0000	-0.2083
Enterococcus	0.3429	-0.0135	0.1233	0.1541	0.3737	0.2497	-0.1066	-0.1722	0.2425	0.1903
Klebsiella	-0.0086	-0.0890	0.2737	0.0520	0.0968	0.1257	0.2385	0.2101	0.1063	0.4249
Prevotella	-0.4805	0.1183	-0.1459	-0.4188	-0.3733	-0.4379	-0.0384	-0.2219	-0.2061	-0.1658
Rothia	-0.2788	0.1238	-0.1946	-0.2793	-0.3542	-0.3514	-0.1562	-0.2901	-0.1397	-0.4189
Staphylococcus	0.2325	-0.1545	0.0317	0.1533	-0.1989	0.1317	-0.0465	0.1427	-0.2968	-0.2262
Streptococcus	-0.0395	-0.1410	-0.1667	-0.0372	-0.2679	-0.2230	-0.4267	-0.4755	-0.0344	-0.5825
Veillonella	-0.2722	0.0224	-0.1737	-0.2513	-0.3493	-0.3580	-0.0291	-0.1857	-0.1460	-0.0663

Supplementary Table S4.2: Rank correlation coefficients between clinical indexes and top 10 genera

	Mild group					Severe group			
	WBC	GRA	LYMPH	CRP		WBC	GRA	LYMPH	CRP
Acinetobacter	-0.1268	0.0156	-0.3227	-0.0815	Acinetobacter	0.2114	0.3651	-0.4882	0.5200
Actinomyces	-0.2984	-0.3624	0.3855	-0.0549	Actinomyces	-0.2513	-0.3736	0.1505	-0.3999
Corynebacterium	-0.1107	-0.0777	-0.1217	-0.0963	Corynebacterium	-0.1187	-0.0531	-0.0999	0.3857
Enterococcus	0.0632	0.1539	-0.2612	0.1208	Enterococcus	0.0560	0.1439	-0.2445	0.1219
Klebsiella	0.3852	0.3683	0.0598	0.0305	Klebsiella	0.4257	0.5012	-0.2688	0.2939
Prevotella	-0.2149	-0.2946	0.3704	-0.1852	Prevotella	-0.1697	-0.1457	-0.0268	-0.0120
Rothia	-0.3134	-0.4250	0.3137	-0.3012	Rothia	-0.2361	-0.4184	0.3967	-0.4507
Staphylococcus	-0.1716	0.0261	-0.3231	-0.1661	Staphylococcus	-0.2605	-0.3033	-0.0089	0.1057
Streptococcus	0.0860	-0.0308	0.2131	-0.1446	Streptococcus	-0.0918	-0.3176	0.5104	-0.4611
Veillonella	-0.3069	-0.3336	0.1700	-0.1868	Veillonella	-0.1981	-0.2489	0.0008	-0.3234