

Table S4 List of the top 30 significant variables from *N*-way ANOVA test.

Order of most significant	Conditions			time			strains		
	variable	<i>p</i> -value	FDR	variable	<i>p</i> -value	FDR	variable	<i>p</i> -value	FDR
1	25	8.78E-16	8.96E-15	13	9.08E-05	2.59E-03	14	2.15E-25	2.15E-25
2	29	7.10E-10	3.62E-09	99	4.81E-05	2.74E-03	99	6.98E-24	6.98E-24
3	101	6.09E-08	1.24E-07	91	3.16E-04	5.99E-03	36	1.92E-19	1.92E-19
4	109	3.94E-08	1.34E-07	58	10.85E-04	1.55E-02	20	1.85E-17	1.85E-17
5	45	5.58E-08	1.42E-07				64	1.38E-12	1.38E-12
6	91	2.39E-07	4.06E-07				62	1.27E-11	1.27E-11
7	36	6.34E-07	9.24E-07				25	1.91E-11	1.91E-11
8	43	1.67E-06	1.70E-06				13	2.24E-10	2.24E-10
9	99	1.59E-06	1.80E-06				111	1.94E-09	1.94E-09
10	108	1.48E-06	1.89E-06				15	2.17E-09	2.17E-09
11	62	2.86E-06	2.65E-06				4	1.16E-08	1.16E-08
12	14	3.17E-06	2.70E-06				16	1.38E-08	1.38E-08
13	7	5.95E-06	4.67E-06				45	1.53E-08	1.53E-08
14	30	8.96E-06	6.53E-06				91	3.96E-08	3.96E-08
15	54	1.24E-05	8.43E-06				43	1.21E-07	1.21E-07
16	111	1.43E-05	9.09E-06				72	2.14E-07	2.14E-07
17	34	2.25E-05	1.35E-05				97	5.28E-07	5.28E-07
18	114	1.85E-04	9.95E-05				21	1.09E-06	1.09E-06
19	112	1.77E-04	1.01E-04				81	1.83E-06	1.83E-06
20	52	2.43E-04	1.12E-04				73	5.31E-06	5.31E-06
21	28	2.42E-04	1.17E-04				108	5.83E-06	5.83E-06
22	87	2.66E-04	1.18E-04				65	6.84E-06	6.84E-06
23	44	2.33E-04	1.19E-04				87	1.25E-05	1.25E-05
24	58	3.13E-04	1.33E-04				47	1.38E-05	1.38E-05
25	41	3.37E-04	1.38E-04				110	1.45E-05	1.45E-05
26	9	3.75E-04	1.47E-04				48	1.45E-05	1.45E-05

Order of most significant	Conditions			time			strains		
	variable	<i>p</i> -value	FDR	variable	<i>p</i> -value	FDR	variable	<i>p</i> -value	FDR
27	64	5.68E-04	2.07E-04				92	1.81E-05	1.81E-05
28	72	5.5E-04	2.08E-04				88	3.26E-05	3.26E-05
29	12	10.13E-04	3.56E-04				80	3.43E-05	3.43E-05
30	96	11.04E-04	3.75E-04				113	3.54E-05	3.54E-05