

# Supplementary Materials: Identification of Short-Chain Fatty Acids for Predicting Preterm Birth in Cervicovaginal Fluid Using Mass Spectrometry

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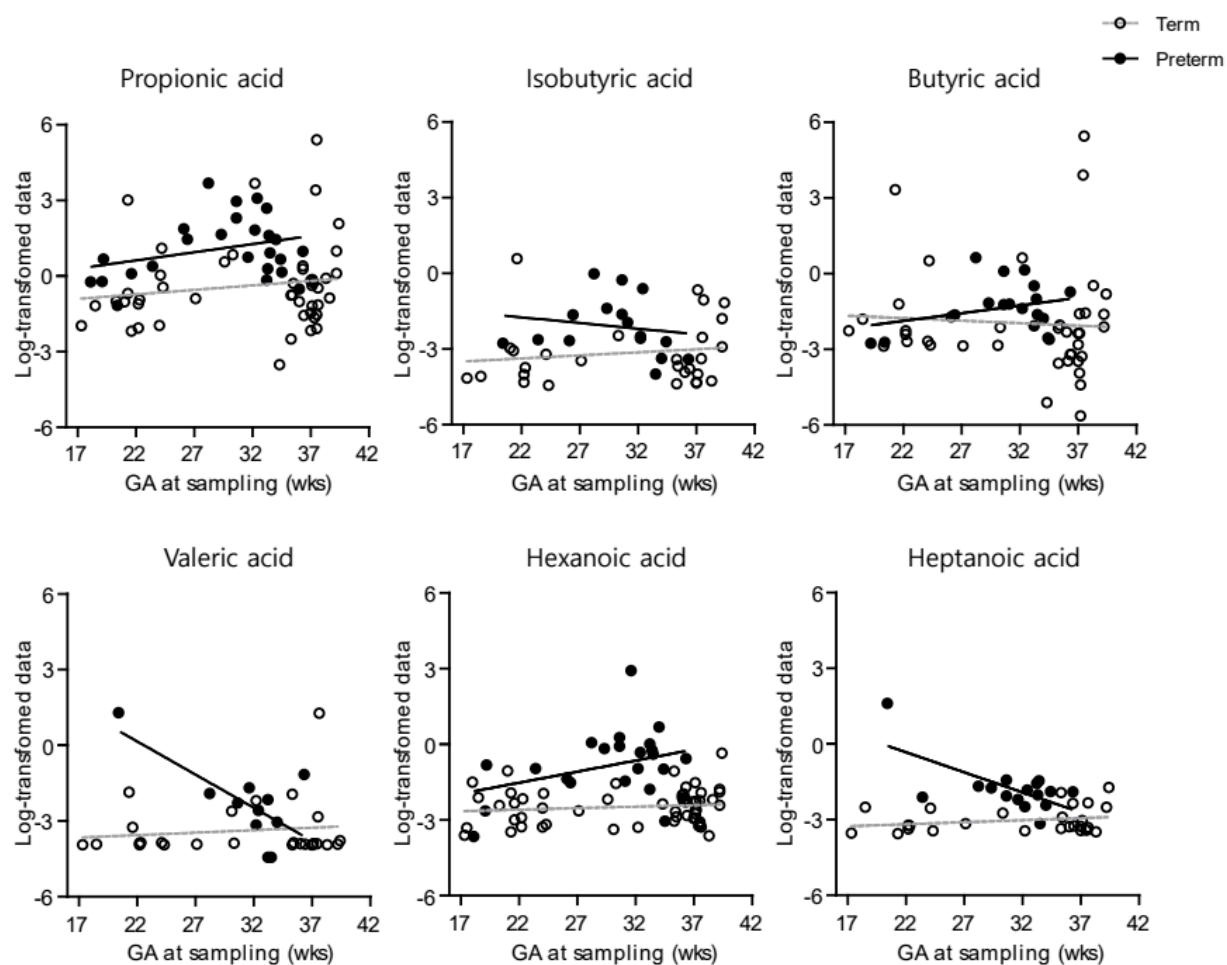
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**Table S1. Clinical characteristics of the subgroup of PTB**

	TB (n=60)	PTB < 2 days (n=19)	PTB ≥ 2 days (n=10)	
	Mean ± SD or N (%)	Mean ± SD or N (%)	Mean ± SD or N (%)	<i>P</i>
Maternal age (years)	33.1 ± 3.9	31.3 ± 4.0	32.6 ± 4.4	0.23
Pre-pregnancy BMI (kg/m <sup>2</sup> )	21.4 ± 2.5	22.5 ± 3.2	21.8 ± 2.8	0.18
Nulliparity	39 (65.0)	11 (57.9)	3 (37.5)	0.31
History of prior PTB	2 (3.3)	2 (10.5)	1 (10.0)	0.40
Cervical length (mm)	29.1 ± 7.2	22.5 ± 9.0	26.6 ± 8.4	0.09
Fetal fibronectin				
Positive	1 (16.7)	11 (91.7)	1 (33.3)	0.01
Negative	5 (83.3)	1 (8.3)	2 (66.7)	
White blood cell (cell/mL)	8.8 ± 2.1	10.8 ± 2.9	10.2 ± 3.3	0.03
C-reactive protein (mg/L)	0.2 ± 0.2	0.9 ± 1.3	0.8 ± 0.9	0.003
Gestational age at birth (weeks)	38.7 ± 0.9	32.3 ± 3.8	34.0 ± 3.5	<0.001

Kruskal–Wallis test was used for the statistical analysis. Continuous data are presented as means ± standard deviations, and categorical data are presented as N (%).

TB, term birth; PTB, preterm birth; BMI, body mass index.



**Figure S1.** Concentration of SCFAs in CVP samples from second to third trimester of pregnancy  
GA, gestational age; SCFAs, short chain fatty acids; CVP, cervicovaginal fluid

**Table S2. Quantitative results of SCFAs in clinical sample**

Patient No.	(Unit: µg/mL)						
	Acetic acid	Propionic acid	Isobutyric acid	Butyric acid	Valeric acid	Hexanoic acid	Heptanoic acid
1	N.D.	0.883	N.D.	0.143	BLOQ	0.132	N.D.
2	N.D.	0.895	N.D.	N.D.	N.D.	0.149	N.D.
3	N.D.	0.836	N.D.	0.047	N.D.	0.164	N.D.
4	3.003	0.767	N.D.	0.065	N.D.	0.162	N.D.
5	N.D.	0.819	N.D.	BLOQ	BLOQ	0.136	N.D.
6	20.037	0.223	0.049	0.193	0.065	0.206	0.104
7	1.64	N.D.	N.D.	0.091	N.D.	0.255	N.D.
8	N.D.	1.316	N.D.	0.108	N.D.	0.219	N.D.
9	40.196	10.585	0.096	14.971	0.067	0.106	0.095
10	42.765	0.452	0.481	0.34	2.405	0.103	0.101
11	N.D.	N.D.	N.D.	N.D.	N.D.	0.187	N.D.
12	18.737	0.256	0.056	0.208	0.065	0.082	0.086
13	0.538	0.489	0.128	N.D.	N.D.	0.481	N.D.
14	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
15	33.235	0.239	0.05	0.188	0.065	0.133	0.097
16	4.997	0.5	N.D.	0.136	N.D.	0.185	N.D.
17	0.404	0.177	0.048	0.085	0.065	0.121	0.098
18	42.006	0.442	0.059	0.286	0.066	0.231	0.175
19	95.002	42.284	0.172	43.828	0.141	0.112	0.094
20	13.229	0.316	N.D.	0.103	N.D.	N.D.	N.D.
21	18.016	2.15	N.D.	1.42	N.D.	N.D.	N.D.
22	19.84	0.94	0.052	0.716	0.065	0.081	0.089
23	N.D.	0.236	N.D.	N.D.	N.D.	0.211	N.D.
24	47.404	0.463	0.062	0.207	0.068	0.104	0.107
25	N.D.	N.D.	N.D.	N.D.	N.D.	0.208	N.D.
26	4.898	N.D.	N.D.	N.D.	N.D.	0.353	N.D.
27	17.361	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
28	44.25	0.591	0.094	0.223	0.26	0.475	0.263
29	11.815	0.906	0.632	0.33	N.D.	0.349	N.D.
30	27.207	1.107	N.D.	0.164	N.D.	0.121	N.D.
31	21.537	0.897	N.D.	0.238	0.046	0.289	N.D.
32	N.D.	1.595	N.D.	0.148	BLOQ	0.566	N.D.
33	1.871	0.86	N.D.	BLOQ	BLOQ	0.16	N.D.
34	N.D.	1.668	BLOQ	BLOQ	0.311	7.551	0.217
35	0.653	0.852	N.D.	BLOQ	N.D.	0.079	N.D.
36	23.914	6.387	BLOQ	0.712	0.225	1.007	0.34

37	2.617	2.717	0.097	0.292	0.121	1.601	0.185
38	4.143	3.533	0.177	0.384	0.112	0.512	0.178
39	N.D.	1.885	0.063	0.324	0.046	0.758	0.112
40	31.742	8.438	0.655	1.1	0.167	0.794	0.281
41	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
42	53.543	12.777	0.989	1.548	0.266	1.042	0.313
43	12.472	N.D.	0.259	0.431	N.D.	0.363	N.D.
44	N.D.	0.444	0.147	0.152	2.449	54.362	3.055
45	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
46	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
47	7.061	1.968	0.095	0.601	0.448	0.673	0.268
48	6.129	1.326	N.D.	0.084	0.125	0.426	0.191
49	21.753	4.934	0.322	0.427	0.204	0.946	0.239
50	9.961	1.581	0.153	0.171	N.D.	0.502	0.269
51	16.629	2.731	0.318	0.321	N.D.	0.348	N.D.
52	3.172	0.698	N.D.	N.D.	N.D.	0.23	N.D.
53	4.515	1.21	N.D.	N.D.	N.D.	N.D.	0.246
54	21.768	3.062	BLOQ	0.495	N.D.	0.849	0.363
55	6.5	1.312	0.161	N.D.	N.D.	0.512	0.231
56	25.606	3.135	0.382	0.445	N.D.	0.891	0.298
57	59.134	7.808	0.835	1.067	N.D.	1.198	0.371
58	3.637	1.063	N.D.	N.D.	N.D.	N.D.	N.D.
59	16.32	3.666	0.157	0.303	N.D.	0.387	N.D.
60	5.158	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
61	1.886	N.D.	N.D.	0.02	N.D.	0.207	N.D.
62	22.74	0.437	0.063	0.194	0.067	0.131	0.122
63	2.864	0.087	N.D.	0.029	N.D.	0.194	N.D.
64	44.354	0.594	0.078	0.243	0.069	0.157	0.133
65	47.477	0.492	0.066	0.2	0.067	0.249	0.103
66	3.002	1.205	N.D.	N.D.	N.D.	0.308	0.195
67	15.514	0.257	N.D.	N.D.	N.D.	0.173	N.D.
68	N.D.	0.618	N.D.	N.D.	N.D.	0.263	N.D.
69	40.031	0.516	0.075	0.155	0.069	0.224	0.105
70	3.926	N.D.	N.D.	N.D.	N.D.	0.205	N.D.
71	7.608	1.476	N.D.	N.D.	N.D.	0.221	N.D.
72	15.911	8.056	0.119	10.01	0.276	0.09	0.085
73	3.656	N.D.	N.D.	N.D.	N.D.	0.125	N.D.
74	2.992	0.717	N.D.	N.D.	N.D.	0.265	0.197
75	1.388	N.D.	N.D.	0.14	0.164	0.097	N.D.
76	3.783	1.021	0.108	0.156	0.069	0.259	0.171

77	N.D.	N.D.	N.D.	N.D.	N.D.	0.101	N.D.
78	16.835	1.986	0.288	0.325	N.D.	0.269	N.D.
79	N.D.	0.346	N.D.	N.D.	N.D.	0.118	N.D.
80	N.D.	BLOQ	N.D.	N.D.	N.D.	0.103	N.D.
81	3.37	0.731	0.046	0.141	0.065	0.11	0.092
82	3.844	1.075	0.132	0.232	0.066	0.289	0.176
83	1.989	0.538	0.091	0.137	0.066	0.16	0.112
84	14.877	4.211	0.444	0.571	0.073	0.781	0.302
85	51.123	12.697	0.167	1.535	0.219	0.102	0.092
86	N.D.	0.547	N.D.	N.D.	N.D.	0.219	N.D.
87	7.338	1.787	0.181	0.229	0.068	0.342	0.15
88	0.982	0.364	0.05	0.09	0.065	0.129	0.093
89	1.178	0.34	0.073	0.109	0.066	0.142	0.105