



**Figure S1** Gene set enrichment analysis (GSEA) associated with FGG expression. The gene sets of “B cell receptor signaling pathway” (A), “pantothenate and CoA biosynthesis” (B), “Fc epsilon RI signaling pathway” (C) and “toll-like receptor signaling pathway” (D) were enriched in COPD samples with FGG highly expressed. FGG, fibrinogen gamma chain; CoA, coenzyme A; COPD, chronic obstructive pulmonary disease.

**Table S1** Top ten up- and down-regulated genes in smokers compared with non-smokers

No.	Gene symbol	Gene function	Log <sub>2</sub> FC	P value	FDR
Up					
1	<i>RPS4Y1</i>	Ribosomal protein S4, Y-linked 1	4.082734	2.93×10 <sup>-6</sup>	0.007796
2	<i>DDX3Y</i>	DEAD-box helicase 3, Y-linked	3.110421	3.97×10 <sup>-7</sup>	0.003271
3	<i>EIF1AY</i>	Eukaryotic translation initiation factor 1A, Y-linked	2.297136	2.52×10 <sup>-7</sup>	0.003271
4	<i>RNU2-2P</i>	RNA, U2 small nuclear 2, pseudogene	1.62925	0.007246	0.109298
5	<i>KDM5D</i>	Lysine demethylase 5D	1.548177	1.18×10 <sup>-5</sup>	0.013452
6	<i>SNORA73A</i>	Small nucleolar RNA, H/ACA box 73A	1.520264	0.044346	0.297499
7	<i>TXLNGY</i>	Taxilin gamma pseudogene, Y-linked	1.494942	7.38×10 <sup>-7</sup>	0.003785
8	<i>RN7SKP203</i>	RNA, 7SK small nuclear pseudogene 203	1.480157	0.012755	0.149845
9	<i>PSMA6P1</i>	Proteasome subunit alpha 6 pseudogene 1	1.425072	1.63×10 <sup>-6</sup>	0.006117
10	<i>PRKY</i>	Protein kinase, Y-linked, pseudogene	1.40373	1.39×10 <sup>-5</sup>	0.013677
Down					
1	<i>XIST</i>	X inactive specific transcript (non-protein coding)	-2.47777	3.51×10 <sup>-6</sup>	0.007927
2	<i>MIR3687-2</i>	microRNA 3687-2	-2.33861	0.000831	0.042056
3	<i>MIR3687-1</i>	microRNA 3687-1	-2.1256	0.001734	0.055803
4	<i>MIR3648-1</i>	microRNA 3648-1	-1.93688	0.007883	0.114649
5	<i>MIR3648-2</i>	microRNA 3648-2	-1.78911	0.017309	0.177343
6	<i>AC018638.1</i>	Unknown	-1.39712	0.001046	0.046365
7	<i>PRKCD</i>	Protein kinase C delta	-1.22466	0.002458	0.064787
8	<i>ADAMTS7P3</i>	ADAMTS7 pseudogene 3	-1.13843	0.000429	0.03273
9	<i>EGFL7</i>	EGF like domain multiple 7	-1.09507	0.000117	0.021783
10	<i>TSPO</i>	Translocator protein 2	-1.03523	0.006953	0.10673

FC, fold change; FDR, false discovery rate.

**Table S2** Top ten up- and down-regulated genes in COPD patients compared with smokers

No.	Gene symbol	Gene function	Log <sub>2</sub> FC	P value	FDR
Up					
1	<i>MIR3648-2</i>	microRNA 3648-2	1.327612	8.59×10 <sup>-5</sup>	0.173248
2	<i>FGG</i>	Fibrinogen gamma chain	1.155104	0.028642	0.689009
3	<i>IGHV3-23</i>	Immunoglobulin heavy variable 3-23	0.935122	0.045358	0.746359
4	<i>MIR3648-1</i>	microRNA 3648-1	0.870674	0.000674	0.383676
5	<i>AC026369.3</i>	Unknown	0.781978	0.002713	0.560834
6	<i>FGA</i>	Fibrinogen alpha chain	0.744763	0.024844	0.681361
7	<i>ZNF672</i>	Zinc finger protein 672	0.725588	0.020114	0.665167
8	<i>AC008738.7</i>	Unknown	0.711877	0.001453	0.484761
9	<i>IGKV1D-13</i>	Immunoglobulin kappa variable 1D-13	0.69582	0.022259	0.671114
10	<i>PTX3</i>	Pentraxin 3	0.688336	0.040471	0.733427
Down					
1	<i>RNU2-2P</i>	RNA, U2 small nuclear 2, pseudogene	-1.73202	3.44×10 <sup>-5</sup>	0.121012
2	<i>SCARNA5</i>	Small Cajal body-specific RNA 5	-1.27381	9.44×10 <sup>-5</sup>	0.177608
3	<i>AC247036.6</i>	Immunoglobulin heavy variable 5-10-1	-1.19032	0.038312	0.730368
4	<i>RNU4-2</i>	RNA, U4 small nuclear 2	-1.17173	3.58×10 <sup>-5</sup>	0.121012
5	<i>SLC39A1</i>	Solute carrier family 39 member 1	-1.1014	0.012167	0.637104
6	<i>SNORD17</i>	Small nucleolar RNA, C/D box 17	-1.08461	4.01×10 <sup>-5</sup>	0.121012
7	<i>RNVU1-7</i>	RNA, variant U1 small nuclear 7	-1.02956	8.05×10 <sup>-6</sup>	0.121012
8	<i>SNORD97</i>	Small nucleolar RNA, C/D box 97	-0.94319	0.010285	0.621664
9	<i>RNU4-1</i>	RNA, U4 small nuclear 1	-0.94101	4.72×10 <sup>-5</sup>	0.126794
10	<i>RNVU1-18</i>	RNA, variant U1 small nuclear 18	-0.92276	1.90×10 <sup>-5</sup>	0.121012

COPD, chronic obstructive pulmonary disease; FC, fold change; FDR, false discovery rate.

**Table S3** Top ten up- and down-regulated genes in COPD patients compared with non-smokers

No.	Gene symbol	Gene function	Log <sub>2</sub> FC	P value	FDR
Up					
1	<i>RPS4Y1</i>	Ribosomal protein S4, Y-linked 1	4.194222	1.78×10 <sup>-6</sup>	0.002284
2	<i>DDX3Y</i>	DEAD-box helicase 3, Y-linked	3.143001	4.28×10 <sup>-7</sup>	0.002284
3	<i>EIF1AY</i>	Eukaryotic translation initiation factor 1A, Y-linked	2.247875	3.16×10 <sup>-7</sup>	0.002284
4	<i>FGG</i>	Fibrinogen gamma chain	2.015582	0.000285	0.012016
5	<i>CXCL8</i>	C-X-C motif chemokine ligand 8	1.911682	0.008309	0.080009
6	<i>SNORA73A</i>	Small nucleolar RNA, H/ACA box 73A	1.784756	0.008717	0.082324
7	<i>CXCL1</i>	C-X-C motif chemokine ligand 1	1.689804	0.012565	0.102645
8	<i>CYP1B1</i>	Cytochrome P450 family 1 subfamily B member 1	1.561504	2.92×10 <sup>-7</sup>	0.002284
9	<i>IGHG4</i>	Immunoglobulin heavy constant gamma 4 (G4m marker)	1.541758	0.017562	0.126753
10	<i>CCL2</i>	C-C motif chemokine ligand 2	1.540555	0.04216	0.217972
Down					
1	<i>XIST</i>	X inactive specific transcript (non-protein coding)	-2.48934	3.26×10 <sup>-6</sup>	0.002284
2	<i>MIR3687-2</i>	microRNA 3687-2	-2.18868	0.001302	0.026981
3	<i>MIR3687-1</i>	microRNA 3687-1	-1.94183	0.003179	0.044999
4	<i>AC018638.1</i>	Unknown	-1.57748	0.000181	0.009589
5	<i>AC073850.1</i>	Unknown	-1.38813	1.96×10 <sup>-5</sup>	0.003997
6	<i>SCARNA5</i>	Small Cajal body-specific RNA 5	-1.3045	0.000138	0.008421
7	<i>SOSTDC1</i>	Sclerostin domain containing 1	-1.17014	0.013221	0.105953
8	<i>ADAMTS7P3</i>	ADAMTS7 pseudogene 3	-1.16421	2.49×10 <sup>-5</sup>	0.004371
9	<i>SNX18P12</i>	Sorting nexin 18 pseudogene 12	-1.14717	0.00166	0.031134
10	<i>RPL23AP32</i>	Ribosomal protein L23a pseudogene 32	-1.11901	5.82×10 <sup>-5</sup>	0.005802

COPD, chronic obstructive pulmonary disease; FC, fold change; FDR, false discovery rate.