

Supplementary materials

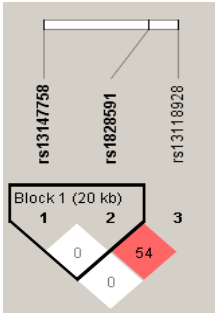
	Haplotypes	COPD-BS	BBES	p	OR	CI 95%
	AA	243	669	0.07	1.25	0.98 – 1.60
	GG	99	305	0.78	0.96	0.73 – 1.25
	GA	19	80	0.18	0.69	0.41 – 1.16
	AG	11	60	0.06	0.53	0.27 – 1.02

Figure S1. Haplotypes of the rs13147758 and rs1828591 in the *HHIP* gene. COPD-BS: COPD related to biomass-burning exposure; BBES: Biomass-burning smoke-exposed subjects; $p < 0.05$ statistical significance; OR: Odds ratio; CI 95%: 95% confidence interval; showing r^2 values among SNPs.

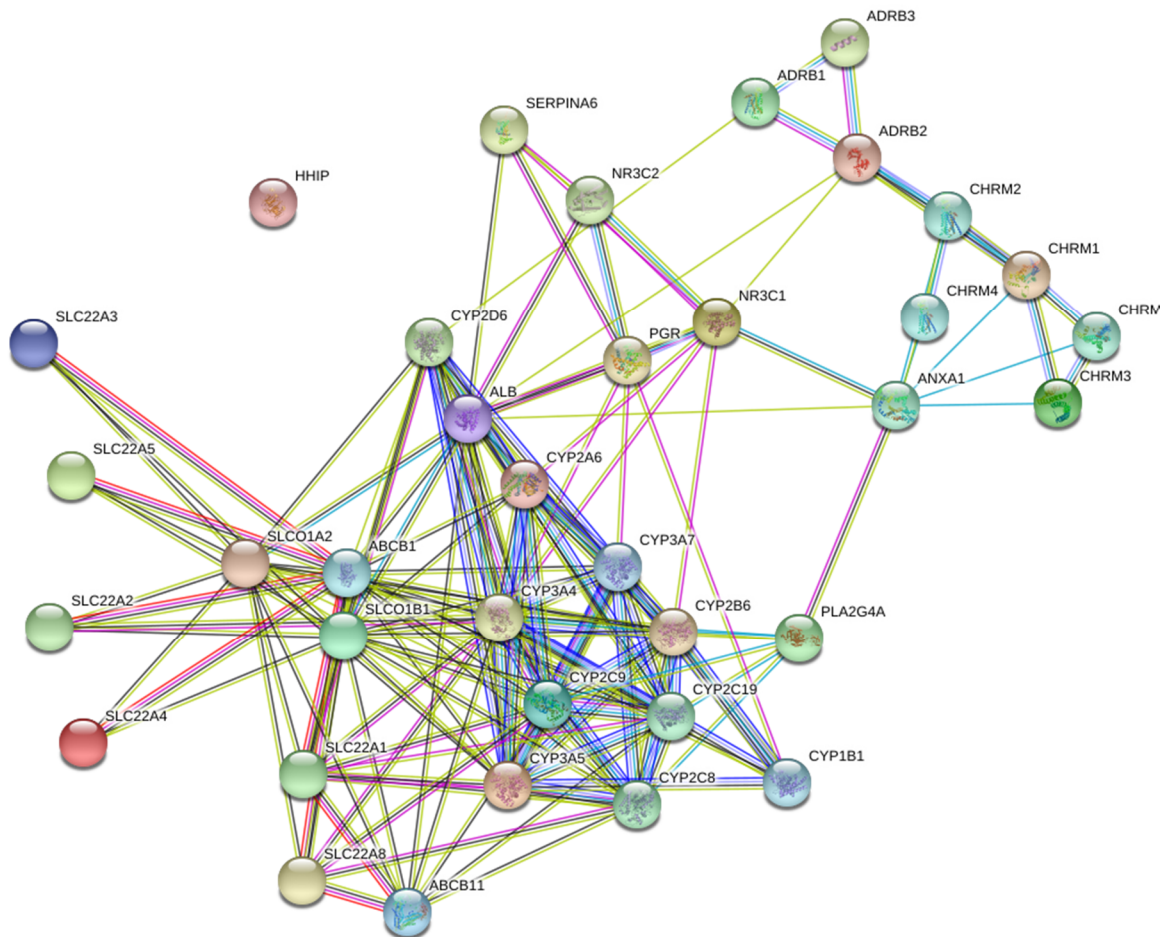


Figure S2. In silico analysis from the metabolism of drugs in the treatment of COPD, and the interaction of HHIP with pharmacological treatment.

Table S1. Genotype frequencies comparison among COPD patients, according to G2 vs. G1 groups.

SNP	G2		G1		p	OR	CI 95%
Genotype	n= 37	%	n= 149	%			
rs13147758							

AA	17	45.95	70	46.98	1	0.95	0.46 – 1.97-
AG	16	43.24	64	42.95	1	1.01	0.48 – 2.09
GG	4	10.81	15	10.07	1	1.08	0.33 – 3.47
rs13118928							
AA	17	45.95	71	47.65	1	0.93	0.45 – 1.92
AG	18	48.64	68	45.64	0.85	1.12	0.54 – 2.32
GG	2	5.41	10	6.71	1	0.79	0.16 – 3.79
rs1828591							
AA	21	56.76	69	46.31	0.27	1.52	0.73 – 3.14
AG	15	40.54	62	41.61	1	0.95	0.45 – 1.99
GG	1	2.70	18	12.08	0.12	0.20	0.02 – 1.56

SNP: Single Nucleotide Polymorphism; G1 (GOLD I + II); G2 (GOLD III + IV); p statistically significant (<0.05); OR odds ratio; 95% CI confidence interval of 95%.

Table S2. Characteristics of selected women for serum protein levels analysis.

	COPD-BS (n= 40)	BBES (n= 40)	p
Age (Years)	71.50 (56 - 86)	64 (51 - 87)	0.003
BMI	25.43 (19.3 - 39.4)	27.30 (20.7 - 37.8)	0.043
BBEI	312 (140 - 828)	290 (108 - 1050)	0.17
FEV ₁ (%)	46.50 (18 - 79)	104 (69 - 135)	<0.001
FVC (%)	69.50 (43 - 146)	95.50 (65 - 134)	<0.001
FEV ₁ /FVC (%)	50 (24 - 69)	82.80 (72 - 138)	<0.001

COPD-BS: exposed biomass with COPD; BBES: exposed to biomass-burning smoke: p<0.05 statistical significance; BMI: body mass index; BBEI: Biomass-burning smoke exposure index, FEV₁: forced expiratory volume in the first second; FVC: forced vital capacity. The median and min. - max values are shown.

Table S3. Demographical, clinical, exposition and lung function of exposed to biomass-burning smoke of the subgroup for protein levels in supernatant sputum.

	COPD-BS (n= 20)	BBES (n= 20)	p
Age (years)	72 (55 - 88)	61.50 (50 - 82)	0.003
BMI	25.7 (17.7 - 41.4)	28.7 (19.8 - 39.2)	0.041
BBEI	470 (270 - 1050)	360 (120 - 720)	0.076
FEV ₁ (%)	68.50 (16 - 96)	104 (74 - 159)	<0.001
FVC (%)	81 (38 - 122)	110 (81 - 168)	<0.001
FEV ₁ /FVC (%)	60 (32 - 75.20)	86 (74.90 - 121)	<0.001

COPD-BS: exposed biomass with COPD; BBES: exposed to biomass-burning smoke: p<0.05 statistical significance; BMI: body mass index; BBEI: Biomass-burning smoke exposure index, FEV₁: forced expiratory volume in the first second; FVC: forced vital capacity. The median, minimum, and maximum values are shown.

Table S4. General characteristics of SNPs included in the analysis.

SNP	Position/ (Strand)	Ancestral allele	Change	MAF	MXL	Gene location
rs13118928	144565237 (FWD)	A	A/G	G=0.30	G=0.28	Intron
rs1828591	144559628 (FWD)	A	A/G	G=0.41	G=0.30	Intron
rs13147758	144539078 (FWD)	A	A/G	G=0.29	G=0.32	Intron

SNP: single nucleotide polymorphism; FWD: forward chain; MAF: minor frequency allele; MXL: Mexican Ancestry in Los Angeles, California; HWE: Hardy-Weinberg Equilibrium.