

**Supplementary table S1.** Gene expression datasets used in this study.

<b>Number</b>	<b>GEO accession</b>	<b>Platform</b>	<b>Tissue types</b>
1	GSE147881	GPL6104	Bronchial biopsies
2	GSE43696	GPL6480	Bronchial brushing
3	GSE132006	GPL19965	PBMCs
4	GSE137268	GPL6104	Sputum

**Supplementary Table S2.** Demographics of subjects in study GSE147881

	<b>Healthy control (n=13)</b>	<b>Mild-moderate asthma (n=18)</b>	<b>Severe asthma (n=42)</b>	<b>p-value*</b>
Age, mean (SD), years	45 (12)	61 (15)	57 (12)	0.004
Male	7/13 (54%)	3/18 (17%)	18/42 (43%)	NS
Former smoker	2/13 (15%)	2/18 (11%)	10/42 (24%)	NS
Oral use of corticosteroids	0	0	7/42 (17%)	0.057

\*NS: non-significant, p-values of less than 0.05 were considered as statistically significant.

**Supplementary table S3.** Demographics of subjects in study GSE43696

	<b>Healthy control (n=20)</b>	<b>Mild-moderate* asthma (n=50)</b>	<b>Severe asthma* (n=38)</b>	<b>p-value**</b>
Age, mean (SD), years	33 (13)	33 (11)	44 (10)	0.001
Male gender (%)	9/20 (45)	15/50 (30)	10/38 (26.3)	NS

\*There was no difference in the use of inhaled corticosteroids [1, 2].

\*\*NS: non-significant, p-values of less than 0.05 were considered as statistically significant.

**Supplementary table S4.** Demographics of subjects in study GSE132006

	<b>Healthy (n=5)</b>	<b>Allergic asthmatic (n=5)</b>	<b>p-value*</b>
Age, median (range), years	22 (21-31)	25 (22-46)	NS
Male gender (%)	3/5 (60)	1/5 (25)	NS

\*NS: non-significant, p-values of less than 0.05 were considered as statistically significant.

**Supplementary table S5.** Demographics of subjects in study GSE137268

	<b>Controlled asthma (n=33)</b>	<b>Uncontrolled asthma (n=58)</b>	<b>p-value*</b>
Age, mean (SD), years	56 (3)	56 (3)	NS
Male gender (%)	8/21 (38)	12/21 (57)	NS
Asthma inflammatory subtypes			
Eosinophilic	4/21 (19)	9/21 (43)	NS
Neutrophilic	4/21 (19)	4/21 (19)	
Paucigranulocytic	10/21 (48)	5/21 (24)	
Mixed granulocytic	3/21 (14)	3/21 (14)	

\*NS: non-significant, p-values of less than 0.05 were considered as statistically significant.

**Supplementary table S6.** Demographics of study participants

	<b>Healthy control (n=6)</b>	<b>Mild-moderate asthma (n=12)</b>	<b>Severe asthma (n=18)</b>	<b>p-value*</b>
Age, median (range), years	39 (37-41)	56 (52-62)	51 (37-61)	NS
Male	3/6 (50%)	5/12 (41%)	7/18 (39%)	NS
Atopic status	1/6 (17%)	5/12 (42%)	12/18 (68%)	NS
Oral use of corticosteroids	0	0	15/18 (83%)	-

\*NS: non-significant, p-values of less than 0.05 were considered as statistically significant.