

1 **Appendix A**

2 **Supplementary**

3 **Table S1.** Nasal cytokine levels of healthy non-respiratory disease controls, RV-C infected patients with asthma and without asthma.

Participants	IL-5	IL-9	IL-15	IL-18	IL-21	IL-22	IL-23	IL-27	IL-31	TNF-α	CXCL-12	CXCL-1	MIP-1β	RANTES	GM-CSF	Eotaxin
Ctrls (n=5)	17	0	0	66	89	48	32	0	59	8	390	426	19	8	5	10
IQR	13-16	0-36	0-2	62-78	88-97	45-53	13-34	0-91	56-67	6-9	358-458	344-676	17-26	7-9	5-7	9-17
Asth (n=18)	12	51	10	38	114	157	38	103	77	8	331	193	45	9	7	8
IQR	7-23	20-95	6-19	12-76	32-191	45-389	16-99	25-241	31-147	5-15	124-453	93-315	17-67	3-21	2-15	5-14
Non-Asth (n=15)	14	36	7	22	50	91	16	47	38	5	142	103	25	4	5	6
IQR	10-16	18-87	4-10	13-26	29-81	35-174	15-35	11-107	23-55	5-11	79-228	62-240	10-87	3-5	2-8	5-9
<i>p values</i>																
Asth vs Ctrls	n.s	0.009	<0.001	n.s	n.s	0.048	n.s	0.005	n.s	n.s	n.s	0.002	n.s	n.s	n.s	n.s
Non-asth vs Ctrls	n.s	0.024	<0.001	0.004	0.025	n.s	n.s	0.047	0.025	n.s	0.005	0.001	n.s	0.007	n.s	0.004
Asth vs Non-asth	n.s	n.s	0.049	n.s	n.s	n.s	0.01	0.031	n.s	n.s	n.s	n.s	n.s	n.s	n.s	n.s

4 Abbreviations: IL-interleukin, TNF- α - Tumour necrosis factor alpha, CXCL- chemokine ligand, MIP- Macrophage Inflammatory protein, RANTES- Regulated on
 5 Activation, Normal T Cell Expressed and Secreted, GM-CSF-Granulocyte-macrophage colony-stimulating factor. Asth-asthmatics, Non.Asth-Non-asthmatics,
 6 Ctrls-controls, IQR- interquartile range.

Table S2. The relationship between RV-C load and inflammatory mediator production in the nasal secretions of children with asthma.

	IFN- α	IL-1 β	IL-4	IL-6	IL-10	IL-17	IL-9	IL-15	CXCL-1	IL-8	IP-10	IL-2	IL-27
Correlation (R ²)	0.05	-0.03	-0.10	-0.07	0.11	-0.06	-0.02	-0.08	-0.05	0.00	0.02	-0.18	-0.19
p-value	0.85	0.92	0.71	0.79	0.69	0.83	0.93	0.77	0.85	1.00	0.95	0.52	0.47

Table S3. The relationship between RV-C load and inflammatory mediator production in the nasal secretions of children without asthma.

	IFN- α	IL-4	IL-6	IL-8	IL-9	IL-15	IP-10	IL-18	IL-21	IL-27	IL-31	Eotaxin	CXCL-1	CXCL-12	RANTES
Correlation (R ²)	-0.16	0.14	-0.27	-0.01	-0.03	-0.29	-0.18	-0.31	-0.20	0.02	-0.19	-0.15	-0.06	-0.10	-0.42
p-value	0.59	0.64	0.35	0.97	0.92	0.32	0.53	0.28	0.50	0.95	0.51	0.62	0.83	0.74	0.13

Table S4. Association between cytokine production and hospitalisation of children hospitalised following RV-C infection using the Mann-Whitney U test.

Cytokine	p-value (Asthmatics)	p-value (Non-Asthmatics)
IFN- γ	0.26	0.947
IL-4	0.259	0.601
IL-6	0.212	1.00
IL-8	0.26	0.361
IL-9	0.109	0.744
IP-10	0.594	0.896
IL-15	0.191	0.512
IL-27	0.138	0.554
CXCL-1	0.515	0.794
IL-13	0.313	-
IL-1B	0.441	-
IL-17	0.233	-
IL-22	0.26	-
IL-18	-	0.794
IL-21	-	1.00
Eotaxin	-	0.946
CXCL-12	-	0.896
RANTES	-	0.647
IL-31	-	0.793

- denotes that analysis was not performed in that group.