

**Supplementary Table 1.** Average levels of non-significant markers detected in NPAs of infants with RSV infection.

Marker	At home (n=8)	Hospitalized (n=10)	Ventilated (n=7)
Matrix metalloproteinase 2	124 ng/ml	463 ng/ml	459 ng/ml
Factor VII	19.9 ng/ml	56.9 ng/ml	42.8 ng/ml
Epidermal growth factor	2,274 pg/ml	4,663 pg/ml	5,684 pg/ml
Inter-cellular adhesion molecule 1	28,816 pg/ml	73,420 pg/ml	55,166 pg/ml
C-reactive protein	184 ng/ml	1,994 ng/ml	1,593 ng/ml
Interferon- $\gamma$	24.2 pg/ml	129.6 pg/ml	58.4 pg/ml
Interleukin-8	161,417 pg/ml	387,444 pg/ml	248,530 pg/ml
Interleukin-16	88,071 pg/ml	108,816 pg/ml	34,610 pg/ml
Tissue factor	52.8 ng/ml	80.4 ng/ml	30.5 ng/ml
CD40 ligand	127 pg/ml	278 pg/ml	202 pg/ml
Beta-2-microglobulin	6,008 ng/ml	12,064 ng/ml	9,001 ng/ml
Stem cell factor	1,166 pg/ml	2,344 pg/ml	1,297 pg/ml
Interleukin-1 $\alpha$	834 pg/ml	2,375 pg/ml	3,904 pg/ml
Glutathione S-transferase	2.1 ng/ml	5.0 ng/ml	3.3 ng/ml
Interleukin-3	289 pg/ml	652 pg/ml	239 pg/ml
Chemokine (C-C motif) ligand 3 (MIP-1 $\alpha$ )	3,251 pg/ml	15,364 pg/ml	7,373 pg/ml
Interleukin-1 receptor antagonist	224,124 pg/ml	275,288 pg/ml	834,452 pg/ml
Serum amyloid P	181 ng/ml	861 ng/ml	553 ng/ml
Adiponectin	0.6 $\mu$ g/ml	1.9 $\mu$ g/ml	1.7 $\mu$ g/ml
Ferritin	1,112 ng/ml	2,783 ng/ml	3,371 ng/ml
Chemokine (C-X-C motif) ligand 5 (ENA-78)	62.1 ng/ml	119.1 ng/ml	53.3 ng/ml
Tumor necrosis factor receptor superfamily member 1B	8,012 pg/ml	19,467 pg/ml	23,352 pg/ml
Chemokine (C-C motif) ligand 4 (MIP-1 $\beta$ )	28,534 pg/ml	13,3803 pg/ml	58,463 pg/ml
CD40	4,398 pg/ml	7,649 pg/ml	8,259 pg/ml
Chemokine (C-C motif) ligand 22 (MDC)	358 pg/ml	573 pg/ml	239 pg/ml
Chemokine (C-C motif) ligand 5 (RANTES)	613 pg/ml	1,056 pg/ml	655 pg/ml
Alpha-2-macroglobulin	166 $\mu$ g/ml	554 $\mu$ g/ml	276 $\mu$ g/ml
Chemokine (C-C motif) ligand 2 (MCP-1)	5,999 pg/ml	9,461 pg/ml	18,730 pg/ml
Tumor necrosis factor	1,573 pg/ml	4,118 pg/ml	2,906 pg/ml
Vascular endothelial growth factor A	13,103 pg/ml	17,202 pg/ml	11,064 pg/ml
Interleukin-6	13,435 pg/ml	16,840 pg/ml	16,363 pg/ml
Matrix metalloproteinase 9	28,371 ng/ml	52,947 ng/ml	19,230 ng/ml
Fatty acid binding protein	6.0 ng/ml	11.2 ng/ml	56.1 ng/ml
Lymphotoxin alpha (TNF- $\beta$ )	17.2 pg/ml	32.9 pg/ml	18.0 pg/ml
Vascular cell adhesion molecule 1	71.2 ng/ml	114.6 ng/ml	135.5 ng/ml
Sex hormone-binding globulin	1,611 pmol/l	5,849 pmol/l	3,742 pmol/l
Colony stimulating factor 3	41,595 pg/ml	55,155 pg/ml	33,367 pg/ml
Interleukin-1 $\beta$	5,770 pg/ml	11,700 pg/ml	14,113 pg/ml

Marker	At home (n=8)	Hospitalized (n=10)	Ventilated (n=7)
Fibroblast growth factor 2	530 pg/ml	752 pg/ml	1,026 pg/ml

Levels of markers were analyzed in nasopharyngeal aspirates (NPAs) of infants with respiratory syncytial virus (RSV) infection at home, infants hospitalized for RSV lower respiratory tract infection (LRTI) or mechanically ventilated infants at the Pediatric Intensive Care Unit (PICU) with RSV LRTI. Undiluted NPA sampling was performed within 48 hours after the start of initial respiratory symptoms in the infants at home, at the day of hospitalization in the hospitalized infants, or at the day of intubation in the mechanically ventilated infants. Marker levels among three groups were compared using logarithmic transformation and one-way ANOVA testing. False discovery rate (FDR) of 5 percent with correction according to Benjamini and Hochberg was used to correct for multiple comparisons.

## Figure legends

**Supplementary Figure 1.** TIMP-1, MMP-3, and growth hormone are associated with RSV disease severity.

Levels of TIMP metalloproteinase inhibitor 1 (TIMP)-1, matrix metalloproteinase (MMP)-3, and growth hormone were analyzed after log-transformation in nasopharyngeal aspirates (NPAs) of infants with respiratory syncytial virus (RSV) infection at home (n=8), infants hospitalized for RSV lower respiratory tract infection (LRTI) (n=10) or mechanically ventilated infants at the Pediatric Intensive Care Unit (PICU) with RSV LRTI (n=7). Horizontal lines indicate median for analyzed groups. False discovery rate (FDR) < 5% with correction according to Benjamini and Hochberg is shown for markers associated with RSV disease severity. \*Fisher post-hoc test < 0.05.