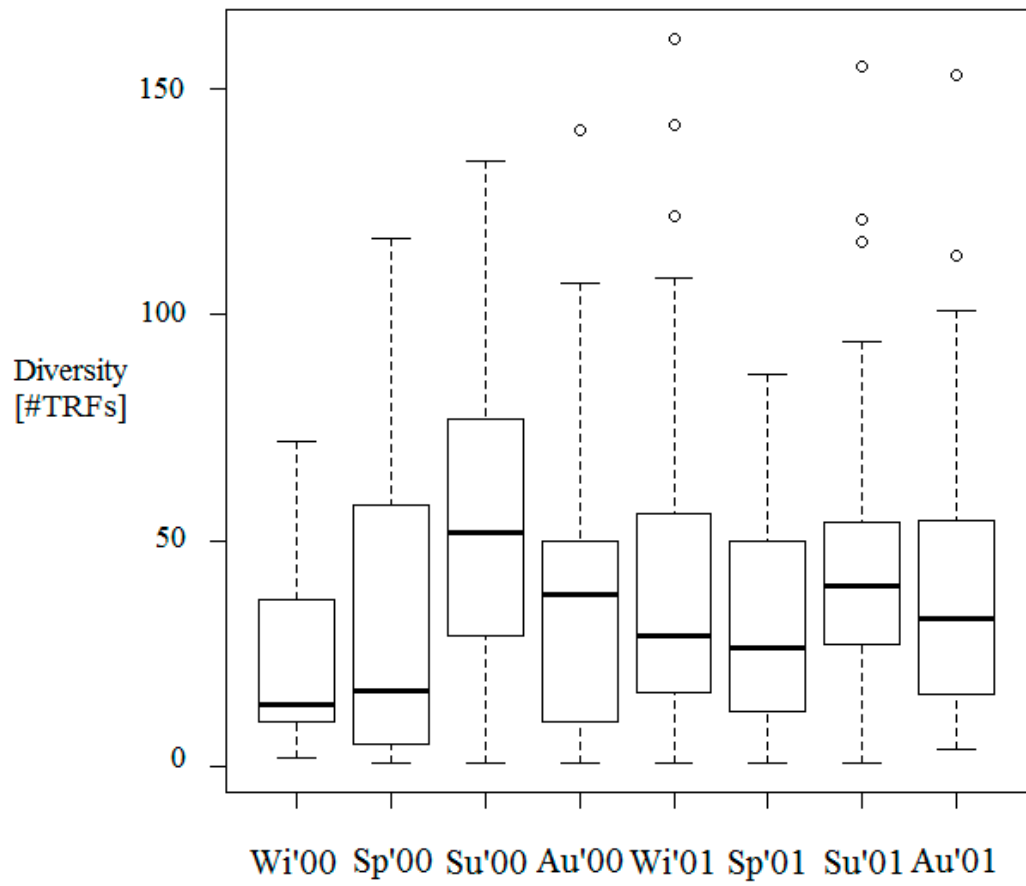


Supporting Information

Fig S1: Bacterial TRF richness variance across different sampling seasons.



Wi: winter; Sp: spring; Su: summer; Au: autumn; '00: year 2000; '01: year 2001

Table S1: Baseline characteristics of study cohort.

	Study cohort	Remaining	P-value
N	328	83	
Heredity			
Maternal asthma ¹ , n (%)	328 (100)	83 (100)	-
Maternal rhinitis, n (%)	246 (75.0)	64 (77.1)	0.83
Maternal dermatitis, n (%)	163 (49.7)	35 (42.2)	0.27
Paternal asthma, n (%)	51 (15.5)	17 (20.5)	0.37
Paternal rhinitis, n (%)	107 (32.6)	24 (28.9)	0.56
Paternal dermatitis, n (%)	43 (13.1)	9 (10.8)	0.68
Social status			
Family income ² , n (%)	155 (47.3)	31 (37.3)	0.15
Mother's highest education ³ , n (%)	40 (12.2)	12 (14.5)	0.70
Pregnancy			
Previous deliveries, n (%)	122 (37.2)	29 (34.9)	0.87
Antibiotic use in 3 rd trimester, n (%)	44 (13.4)	15 (18.1)	0.37
Paracetamol use in 3 rd trimester, n (%)	39 (11.8)	20 (24.1)	0.008
Smoking in 3 rd trimester, n (%)	48 (14.6)	15 (18.1)	0.54
Alcohol in 3 rd trimester, n (%)	51 (15.5)	22 (26.5)	0.030
Birth			
Gender, male, n (%)	169 (51.5)	49 (59.0)	0.11
Mother's age at birth, years, means (SD)	29.9 (4.4)	30.5 (5.0)	0.30
Gestational age, weeks, means (SD)	39.9 (1.6)	39.8 (1.6)	0.65
Head circumference, mm, mean (SD)	352.6 (16.2)	350.5 (16.3)	0.31
Birth length, cm, mean (SD)	53.5 (2.4)	53.7 (2.3)	0.46
Birth weight, kg, mean (SD)	4.1 (0.7)	4.2 (0.7)	0.67
Mode of delivery, Caesarean section, n (%)	69 (21.0)	16 (19.3)	0.95
APGAR score ≥9 at 5min, n (%)	324 (98.8)	81 (97.6)	1.00
Season of birth, n (%)			0.97
- Winter	77 (23.5)	18 (21.7)	
- Spring	69 (21.0)	17 (20.5)	
- Summer	87 (26.5)	24 (28.9)	
- Autumn	95 (29.0)	24 (28.9)	
Postnatal exposures			
Cat at birth, n (%)	38 (11.6)	13 (15.7)	0.26
Dog at birth, n (%)	34 (10.4)	15 (18.1)	0.039
Older siblings at birth, n (%)	124 (37.8)	28 (33.7)	0.69
Solely breastfed > 30days, n (%)	195 (59.5)	60 (72.3)	0.036

¹All mothers enrolled in the study had a doctor diagnosed history of asthma

²Above 67,000 EUR

³Mother's highest education at least university graduate

Table S2: Bacterial richness of nasopharynx and presence of discriminatory TRFs
divided into year of childbirth.

	Study cohort	Children born in year 2000	Children born in year 2001
N	328	127	182
Diversity			
Autumn (median/n)	31/95	38/41	33/39
Spring (median/n)	26/69	17/25	27/44
Summer (median/n)	46/87	52/41	40/46
Winter (median/n)	25/77	14/20	29/53
Discriminatory TRFs			
TRF 62 bp	+	+	+
TRF 339 bp	+	+	+
TRF 342 bp	+	+	+
TRF 396 bp	+	-	+