

1 **Supplementary data**

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3 **The LINA study: Higher sensitivity of infant compared to maternal eosinophil/basophil**
4 **progenitors to indoor chemical exposures**

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36 **Supplementary Materials and Methods**

37 *Questionnaire data*

38 Ever wheezing was recorded as a parental report of symptoms ('Did your child suffer from
39 whistling / wheezy respiration during the last twelve months?') with/without the necessity of
40 medical treatment ('If your child suffered from a whistling/wheezy respiration or cough, was
41 it treated with drugs or by inhalation?'). Recurrent wheezing was recorded as parental report
42 of whistling/wheezy respiration in more than two periods within the second year of life.
43 Bronchitis as well as obstructive bronchitis were recorded as physician diagnoses ('Has a
44 doctor diagnosed your child with bronchitis/obstructive bronchitis in the last 12 months?').
45 Exposure to ETS was assessed as smoking frequency at home ('Did you or anybody else
46 smoke inside your dwelling?'). Answering this question as '(almost) daily', 'once a week or
47 more' or 'occasionally' was defined as exposure to ETS in the subsequent analyses and
48 'never' as no exposure to ETS in the dwelling, respectively. Furthermore, the numbers of
49 smoked cigarettes per day in the dwelling ('How many cigarettes per day were smoked by the
50 mother/father/anybody else in your dwelling?') was considered. In the subsequent analyses
51 the sum of smoked cigarettes per day of all persons living in the dwelling was used for
52 correlations.

53 Exposure to disinfectants was assessed by the frequency of their usage in the dwelling ('How
54 often did you use disinfectants in the household?'). Answering this question as 'once a week
55 or more', 'once a month or more' or 'occasionally' was defined as exposure to disinfectants in
56 the subsequent analyses and 'never' as no exposure to disinfectants in the dwelling,
57 respectively.

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59 *Analyses of urinary cotinine concentration*

60 Cotinine was analyzed in the urine of the mothers at the child's first birthday. After
61 dichloromethane extraction and chromatographic separation with a Chromolith Speed ROD

62 column (Merck, Darmstadt, Germany) cotinine was determined using turbo ionspray
63 ionization on the LC/MS/MS device API 4000 (Applied Biosystems, Darmstadt, Germany).

64 Analysis of creatinine as a measure for individual urinary dilution was used for
65 standardization of the metabolite.

66

67 **Supplementary Tables**

68 **Table A.1** Number of relevant cases for analyses of indoor chemical exposures and IL-3, IL-5
 69 or GM-CSF stimulated Eo/B CFUs of mothers and infants. Data resulting from sub-groups
 70 N<5 (cases in brackets) are not shown in our main document.

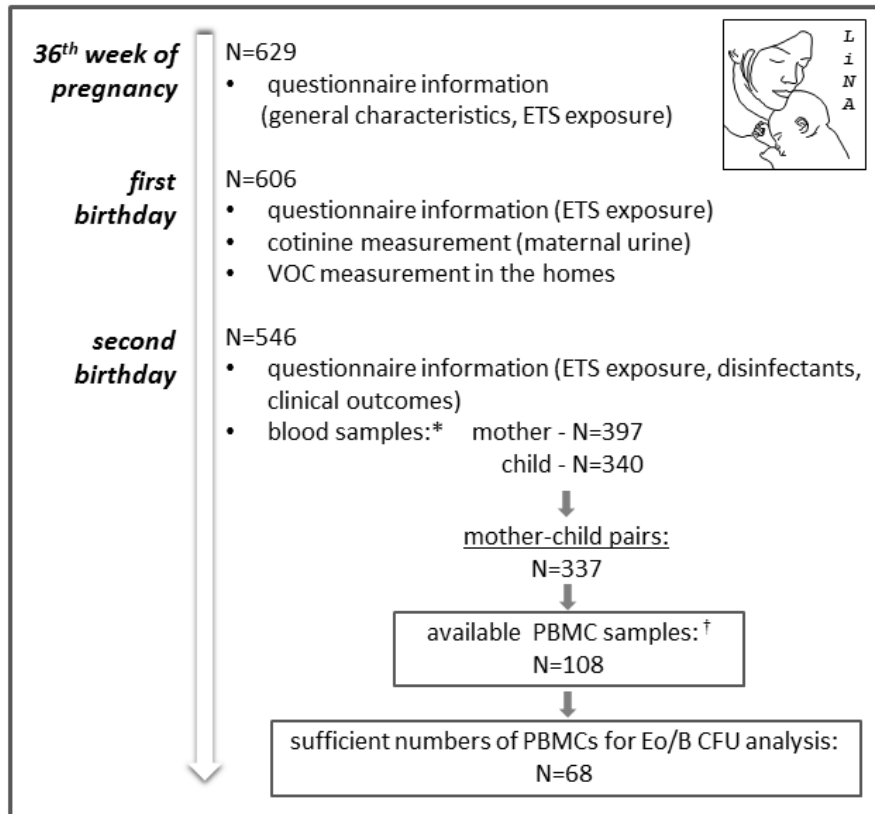
	Eo/B CFUs mother N=66			Eo/B CFUs child N=68		
	IL-3 N=63	IL-5 N=36	GM-CSF N=11	IL-3 N=67	IL-5 N=66	GM-CSF N=56
Exposure to ETS in dwelling*						
yes	6	(2)	(2)	7	7	7
no	56	(34)	(9)	59	58	48
Number of smoked cigarettes/day in dwelling						
>0	6	(2)	(2)	7	7	7
0	56	(34)	(9)	59	58	48
Usage of disinfectant						
yes	37	20	5	40	40	36
no	24	15	6	25	23	18
VOCs†	63	36	11	67	66	56

71 *yes = (almost) daily, once a week or more or occasionally; no= never

72 †N may differ due to missing data

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74 **Supplementary Figures**



* out of N=546 subjects 139 did not participate in the 2 year examination; 10 mothers denied blood collection from themselves and 67 from their children

† due to limitations of blood volume PBMCs could not be isolated from all samples

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76 **Figure A.1 Relevant N-numbers for Eo/B CFU analysis within the LINA study.**

77 Overview about relevant N-numbers and selected information/data from the LINA study

78 which are used in the current paper. Questionnaire information always refers to the previous

79 12 months.