1 **Cover Page for Supporting Information**

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12 **Description of supporting information:** Demographic (Table S1) and descriptive statistics (Table
13 S2), child age seven geometric mean concentrations by collection year (Table S3), and
14 concentrations of CB-153 and *p,p'*-DDE in the CHAMACOS cohort compared with that of Texas
15 children[14] by age category (Figure S1) are provided as supporting information. This material is
16 available free of charge via the Internet at http://pubs.acs.org.

Table S1. Comparison of demographic statistics between CHAM1 (n=203) and CHAM2 (n=292)

Measure	CHAM1	CHAM2	p-value	Measure	CHAM1	CHAM2	p-value[a]
	n (%)	n (%)			n (%)	n (%)	
Maternal education			*0.23*	*Family income at age 10.5 years of index child*			*0.42*
≤ 6th grade	129 (42.7)	120 (41.0)		< poverty level	86 (28.5)	74 (25.3)	
7-12th grade	109 (36.1)	94 (32.1)		> poverty level	216 (71.5)	219 (74.7)	
≥ high school graduate	64 (21.2)	79 (27.0)					
				Parity prior to index child			*0.19*
Maternal age at delivery (years)			*0.89*	zero	91 (30.1)	104 (35.5)	
18-24	118 (39.1)	119 (40.6)		≥1	211 (69.9)	189 (64.5)	
25-29	105 (34.8)	84 (28.7)					
30-34	50 (16.6)	58 (19.8)		*Breastfeeding duration of index child*			*0.86*
35-45	29 (9.6)	32 (10.9)		≤ 2 months	74 (24.5)	71 (24.2)	
				2-12 months	127 (42.1)	118 (40.3)	
Maternal country of birth			*0.91*	≥ 12 months	101 (33.4)	104 (35.5)	
Mexico	264 (87.4)	258 (88.1)					
Other	38 (12.6)	35 (11.9)		*Sex of index child*			*0.2*
				Female	162 (53.6)	141 (48.1)	
Maternal years in US prior to birth			*0.54*	Male	140 (46.4)	152 (51.9)	
≤ 1	63 (20.9)	55 (18.8)					
2-5	83 (27.5)	84 (28.7)					
6-10	77 (25.5)	67 (22.9)					
≥ 11	48 (15.9)	61 (20.8)					
Entire life	31 (10.3)	26 (8.9)					

[a] p-value from t-test (maternal age) or chi-square test between CHAM1 and CHAM2 study populations

Table S2. Median and interquartile range (IQR) concentration (ng/g lipid) of selected polybrominated diphenyl ethers (PBDEs), polychlorinated biphenyls (PCBs) and 2,2-bis(4-chlorophenyl)-1,1-dichloroethylene (*p,p'*-DDE) in serum from children at age 7 and 9 and their mothers at 26 weeks of pregnancy and at child age 9. Levels of significance is given as Wilcoxon two-sided test.
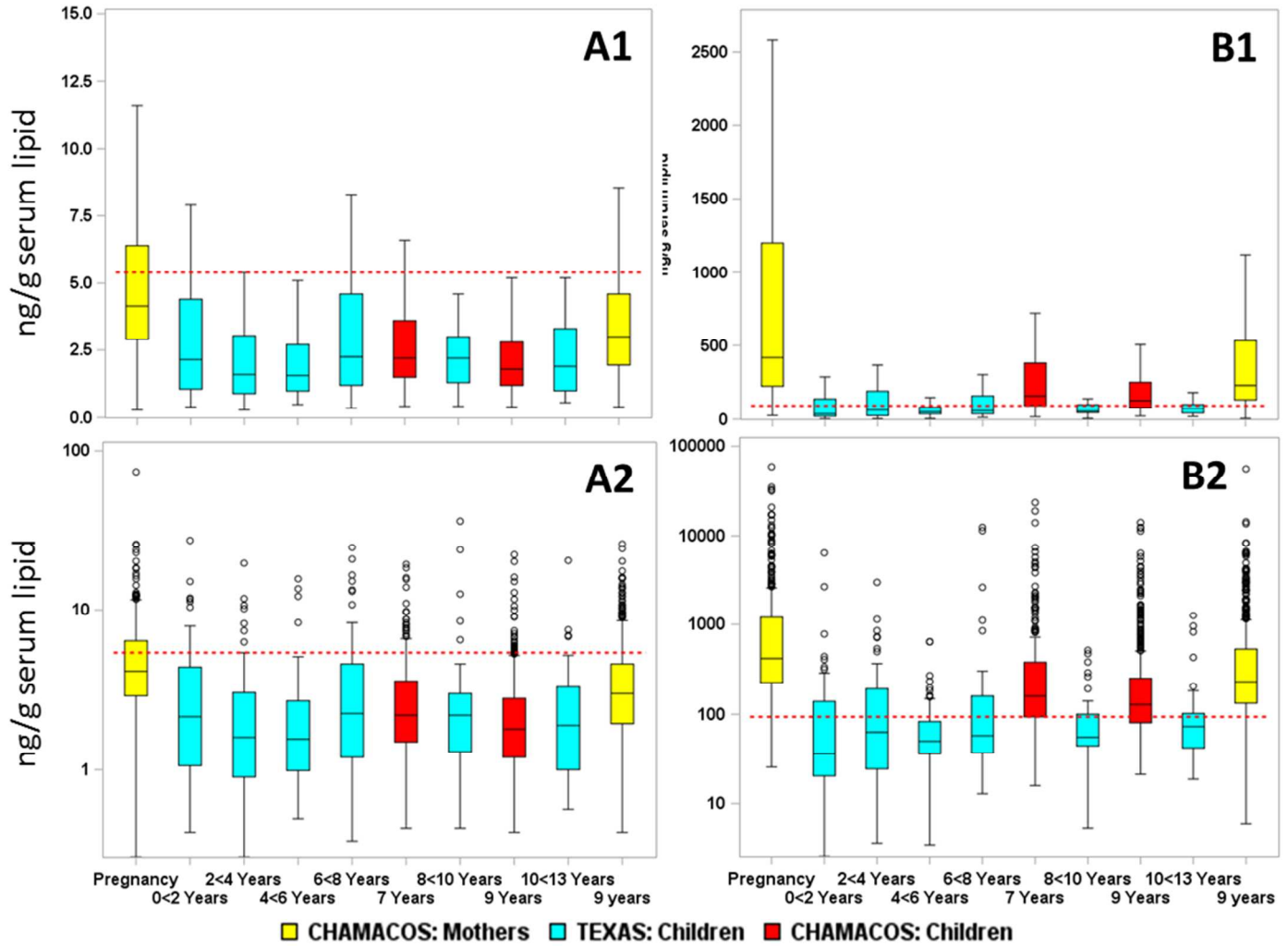
Compound	Maternal 26 weeks (N=313)			Mother at child 9 Years (N=473)				Child 7 Years (N=275)			Child 9 Yea
	Median	IQR	Detect (%)	Median	IQR	Detect (%)	p-Value[1]	Median	IQR	Detect (%)	Median
Polybrominated Diphenyl Ethers (PBDEs)											
BDE-28	0.400	0.283 - 1.35	46%	1.20	0.7 - 2	87%	<0.001	2.20	1.3 - 3.5	88%	1.50
BDE-47	14.6	7.75 - 25.3	100%	17.6	9.3 - 31.2	98%	<0.01	46.9	27.9 - 77.7	100%	35.9
BDE-85	0.350	0.283 - 0.6	40%	0.420	0.354 - 0.67	38%	<0.001	0.900	0.57 - 1.6	64%	0.700
BDE-99	3.80	2.3 - 6.55	99%	3.25	1.7 - 6.4	94%	<0.01	10.6	6.2 - 19.3	100%	7.90
BDE-100	2.40	1.5 - 4.25	97%	3.30	2 - 5.5	96%	<0.001	10.8	5.9 - 16.9	100%	7.60
BDE-153	2.00	1.25 - 3.7	97%	3.70	2.4 - 5.8	100%	<0.001	11.6	6.8 - 19.9	100%	9.40
BDE-154	0.350	0.283 - 0.6	37%	0.420	0.354 - 0.64	39%	<0.001	1.10	0.7 - 2	78%	0.800
Polychlorinated Biphenyls (PCBs)											
PCB-74	1.20	0.849 - 1.9	48%	0.800	0.5 - 1.1	78%	<0.001	0.900	0.6 - 1.2	72%	0.700
PCB-99	1.10	0.7 - 1.7	87%	0.900	0.6 - 1.3	88%	<0.001	0.900	0.64 - 1.4	73%	0.800
PCB-118	2.00	1.4 - 2.9	97%	1.40	0.9 - 2	98%	<0.001	1.20	0.9 - 1.7	90%	1.000
PCB-138/158	3.60	2.3 - 5.6	94%	2.20	1.4 - 3.3	98%	<0.001	1.70	1.1 - 2.7	87%	1.50
PCB-153	4.15	2.9 - 6.4	98%	3.00	1.95 - 4.6	99%	<0.001	2.20	1.5 - 3.6	96%	1.80
PCB-180	2.70	1.9 - 4.7	97%	2.20	1.4 - 3.5	99%	<0.001	1.29	0.78 - 2.2	77%	1.10
Persistent Pesticides											
p,p'-DDE	418	225 - 1200	100%	231	132.5 - 531	100%	<0.001	159	93.3 - 381	100%	128

[1] p-Value for the two-sided Wilcoxon test for child 7 vs. 9 years. [2] p-Value for the two-sided Wilcoxon test for mother 24 week of pregnancy vs. at 9 years of age of the child.

Table S3. Child age seven geometric mean serum concentration (ng/g lipid) with 95% confidence interval (95% CI), by collection year. The ANOVA p-value comparing collection year as well as the total number of available samples by year are given.

Compound	Child Age 7 by serum collection year						Total N by year	
	Year 2007		Year 2008		ANOVA Level of significance			
	GM	95% CI	GM	95% CI	F	2007 vs. 08	2007	2008
Polybrominated Diphenyl Ethers (PBDEs)								
BDE-28	2.03	1.78 - 2.32	2.07	1.82 - 2.36	>0.5	>0.5	134	138
BDE-47	46.1	40.4 - 52.5	47.4	41.6 - 54	>0.5	>0.5	134	137
BDE-85	0.91	0.8 - 1.04	0.98	0.86 - 1.11	0.42	0.42	133	137
BDE-99	11.1	9.58 - 12.8	11	9.53 - 12.7	>0.5	>0.5	134	138
BDE-100	10.6	9.31 - 12.1	11	9.65 - 12.4	>0.5	>0.5	113	138
BDE-153	11.6	10.31 - 13.1	12.6	11.1 - 14.1	0.38	0.38	134	138
BDE-154	1.2	1.05 - 1.36	1.21	1.07 - 1.38	>0.5	>0.5	134	138
Polychlorinated Biphenyls (PCBs)								
CB-74	0.94	0.87 - 1.02	0.86	0.79 - 0.93	0.12	0.12	125	123
CB-99	0.81	0.74 - 0.88	1.08	0.99 - 1.17	>0.5	>0.5	134	133
CB-118	1.22	1.13 - 1.32	1.23	1.13 - 1.33	>0.5	>0.5	134	131
CB-138/158	1.65	1.47 - 1.85	1.76	1.57 - 1.98	0.42	0.42	133	133
CB-153	2.2	1.98 - 2.45	2.28	2.05 - 2.54	>0.5	>0.5	133	132
CB-180	1.3	1.14 - 1.48	1.31	1.15 - 1.5	>0.5	>0.5	134	135
Persistent Pesticides								
p,p'-DDE	184	155 - 217	177	149 - 209	>0.5	>0.5	132	132

Figure S1. Concentration (ng/g serum lipid) of (A) CB-153 and (B) *p,p'*-DDE on a (1) linear and (2) log10 scale by age of the child (7 and 9 years) are given in red and their mothers at week 26 of pregnancy and at age 9 of their children in yellow. Median and interquartile range (IRQ) concentration (box) and outlier range (bars) [Outlier range is the 25th percentile - 1.5 IRQ and 75th percentile +1.5 IRQ]. A cohort of Texas children[1] stratified by 2 year age groups between <2 years and >10 years are included as a comparison in blue. The red horizontal dashed line represents the National Health and Nutrition Examination Study (NHANES) estimate for the age category 12- 19 years of age for the survey years 2003/04.[2,3]

References:

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