**Manuscript Title:** POLYBROMINATED DIPHENYL ETHERS, POLYCHLORINATED BIPHENYLS AND 2,2-BIS(4-CHLOROPHENYL)-1,1-DICHLOROETHENE (p,p'-DDE) IN 7 AND 9 YEAR OLD CHILDREN AND THEIR MOTHERS IN THE CHAMACOS COHORT

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**Description of supporting information:** Demographic (Table S1) and descriptive statistics (Table S2), child age seven geometric mean concentrations by collection year (Table S3), and concentrations of CB-153 and p,p’-DDE in the CHAMACOS cohort compared with that of Texas children¹⁴ by age category (Figure S1) are provided as supporting information. This material is 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)

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

*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.

<table>
<thead>
<tr>
<th>Compound</th>
<th>Maternal 26 weeks (N=313)</th>
<th>Mother at child 9 Years (N=473)</th>
<th>Child 7 Years (N=275)</th>
<th>Child 9 Years (N=554)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>IQR</td>
<td>Detect (%)</td>
<td>Median</td>
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<tr>
<td>Polybrominated Diphenyl Ethers (PBDEs)</td>
<td></td>
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</tr>
<tr>
<td>BDE-28</td>
<td>0.400</td>
<td>0.283 - 1.35</td>
<td>46%</td>
<td>1.20</td>
</tr>
<tr>
<td>BDE-47</td>
<td>14.6</td>
<td>7.75 - 25.3</td>
<td>100%</td>
<td>17.6</td>
</tr>
<tr>
<td>BDE-85</td>
<td>0.350</td>
<td>0.283 - 0.6</td>
<td>40%</td>
<td>0.420</td>
</tr>
<tr>
<td>BDE-99</td>
<td>3.80</td>
<td>2.3 - 6.55</td>
<td>99%</td>
<td>3.25</td>
</tr>
<tr>
<td>BDE-100</td>
<td>2.40</td>
<td>1.5 - 4.25</td>
<td>97%</td>
<td>3.30</td>
</tr>
<tr>
<td>BDE-153</td>
<td>2.00</td>
<td>1.25 - 3.7</td>
<td>97%</td>
<td>3.70</td>
</tr>
<tr>
<td>BDE-154</td>
<td>0.350</td>
<td>0.283 - 0.6</td>
<td>37%</td>
<td>0.420</td>
</tr>
<tr>
<td>Polychlorinated Biphenyls (PCBs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCB-74</td>
<td>1.20</td>
<td>0.849 - 1.9</td>
<td>48%</td>
<td>0.800</td>
</tr>
<tr>
<td>PCB-99</td>
<td>1.10</td>
<td>0.7 - 1.7</td>
<td>87%</td>
<td>0.900</td>
</tr>
<tr>
<td>PCB-118</td>
<td>2.00</td>
<td>1.4 - 2.9</td>
<td>97%</td>
<td>1.40</td>
</tr>
<tr>
<td>PCB-138/158</td>
<td>3.60</td>
<td>2.3 - 5.6</td>
<td>94%</td>
<td>2.20</td>
</tr>
<tr>
<td>PCB-153</td>
<td>4.15</td>
<td>2.9 - 6.4</td>
<td>98%</td>
<td>3.00</td>
</tr>
<tr>
<td>PCB-180</td>
<td>2.70</td>
<td>1.9 - 4.7</td>
<td>97%</td>
<td>2.20</td>
</tr>
<tr>
<td>Persistent Pesticides</td>
<td></td>
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<tr>
<td>p,p’-DDE</td>
<td>418</td>
<td>225 - 1200</td>
<td>100%</td>
<td>231</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Compound</th>
<th>Child Age 7 by serum collection year</th>
<th></th>
<th>Year 2007</th>
<th>Year 2008</th>
<th>ANOVA Level of significance</th>
<th>Total N by year</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>GM</td>
<td>95% CI</td>
<td>GM</td>
<td>95% CI</td>
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<tr>
<td><strong>Polybrominated Diphenyl Ethers (PBDEs)</strong></td>
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<tr>
<td>BDE-28</td>
<td></td>
<td></td>
<td>2.03</td>
<td>1.78 - 2.32</td>
<td>2.07</td>
<td>1.82 - 2.36</td>
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<tr>
<td>BDE-47</td>
<td></td>
<td></td>
<td>46.1</td>
<td>40.4 - 52.5</td>
<td>47.4</td>
<td>41.6 - 54</td>
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<td>BDE-85</td>
<td></td>
<td></td>
<td>0.91</td>
<td>0.8 - 1.04</td>
<td>0.98</td>
<td>0.86 - 1.11</td>
</tr>
<tr>
<td>BDE-99</td>
<td></td>
<td></td>
<td>11.1</td>
<td>9.58 - 12.8</td>
<td>11</td>
<td>9.53 - 12.7</td>
</tr>
<tr>
<td>BDE-100</td>
<td></td>
<td></td>
<td>10.6</td>
<td>9.31 - 12.1</td>
<td>11</td>
<td>9.65 - 12.4</td>
</tr>
<tr>
<td>BDE-153</td>
<td></td>
<td></td>
<td>11.6</td>
<td>10.31 - 13.1</td>
<td>12.6</td>
<td>11.1 - 14.1</td>
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<tr>
<td>BDE-154</td>
<td></td>
<td></td>
<td>1.2</td>
<td>1.05 - 1.36</td>
<td>1.21</td>
<td>1.07 - 1.38</td>
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<td><strong>Polychlorinated Biphenyls (PCBs)</strong></td>
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<td>CB-74</td>
<td></td>
<td></td>
<td>0.94</td>
<td>0.87 - 1.02</td>
<td>0.86</td>
<td>0.79 - 0.93</td>
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<td>CB-99</td>
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<td></td>
<td>0.81</td>
<td>0.74 - 0.88</td>
<td>1.08</td>
<td>0.99 - 1.17</td>
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<td>CB-118</td>
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<td>1.22</td>
<td>1.13 - 1.32</td>
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<td>1.13 - 1.33</td>
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<td>CB-138/158</td>
<td></td>
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<td>1.65</td>
<td>1.47 - 1.85</td>
<td>1.76</td>
<td>1.57 - 1.98</td>
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<td>CB-153</td>
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<td>2.2</td>
<td>1.98 - 2.45</td>
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<td>2.05 - 2.54</td>
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<td>1.3</td>
<td>1.14 - 1.48</td>
<td>1.31</td>
<td>1.15 - 1.5</td>
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<td><strong>Persistent Pesticides</strong></td>
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<tr>
<td>(p,p')-DDE</td>
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<td>184</td>
<td>155 - 217</td>
<td>177</td>
<td>149 - 209</td>
</tr>
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</table>
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 children1 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:

