

1 Supporting Information for:

2 Urinary pyrethroid and chlorpyrifos metabolite concentrations in northern California families
3 and their relationship to indoor residential insecticide levels, part of SUPERB.

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8 Summary:

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14 *cis*-DBCA and 4F3PBA and range of concentrations both volume-based (ng/mL) and
15 creatinine-adjusted ($\mu\text{g/g}$) from a subset of SUPERB participants recruited in 2009.

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24 **Supporting Information**25 **Introduction**26 **Table S1.** A selection of pyrethroid parent compounds and their metabolites.

Metabolite	Parent Compound(s)
3PBA	cyhalothrin cypermethrin deltamethrin esfenvalerate permethrin sumithrin
4F3PBA	cyfluthrin
DCCA	cyfluthrin cypermethrin permethrin
DBCA	deltamethrin

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29 **Results**30 *Urinary concentrations of trans-DCCA, cis-DBCA and 4F3PBA*

31 *Trans*-DCCA was detected in 2 children and 8 adults, none of whom were from the same
 32 household. *Cis*-DBCA was detected in 2 children and 1 adult, with one household having both a
 33 child and an adult with detectable concentrations. 4F3PBA was detected in 3 children and 8
 34 adults, with only 1 household having detectable concentrations in both the adult and child. A
 35 summary of *trans*-DCCA, *cis*-DBCA and 4F3PBA detection frequency and concentration ranges
 36 are presented in Table S2.

37 We looked at the co-occurrence of specific urinary pyrethroid metabolites within individual
 38 participants. All adult and child urine samples with detectable concentrations of *trans*-DCCA,
 39 *cis*-DBCA or 4F3PBA also had detectable concentrations of 3PBA, with the exception of one
 40 child's urine sample having a detectable concentration of 4F3PBA and no detectable

41 concentration of any other pyrethroid metabolite. Of the 8 adults with detectable *trans*-DCCA
 42 urinary concentrations, 3 also had detectable 4F3PBA concentrations. Those 3 adult participants
 43 had 3 of the 4 highest urinary concentrations of 3PBA. Most notable was one adult who had the
 44 highest urinary concentrations of both *trans*-DCCA (121.4 ng/mL) and 4F3PBA (22.5 ng/mL) of
 45 the entire sample (adults and children), and who also had the highest urinary concentration of
 46 3PBA (44.8 ng/mL) of the adults.

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48 **Table S2.** Number of samples with detectable* urinary concentrations of *trans*-DCCA, *cis*-
 49 DBCA and 4F3PBA and range of concentrations both volume-based (ng/mL) and creatinine-
 50 adjusted ($\mu\text{g/g}$) from a subset of SUPERB participants recruited in 2009.

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Category (n)	#D		Min	Max
Children (83)				
<i>trans</i> -DCCA	2	Volume-based	10.0	111
		Creatinine-adjusted	26.2	77.2
<i>cis</i> -DBCA	2	Volume-based	1.09	1.48
		Creatinine-adjusted	0.87	0.60
4F3PBA	3	Volume-volume based	0.49	0.77
		Creatinine-adjusted	0.99	0.77
Adults (90)				
<i>trans</i> -DCCA	8	Volume-based	4.99	121
		Creatinine-adjusted	2.79	119
<i>cis</i> -DBCA	1	Volume-based		1.32
		Creatinine-adjusted		1.03
4F3PBA	8	Volume-based	0.43	22.4
		Creatinine-adjusted	0.13	22.1

52 * The limits of detection (LODs) were 1.11–2.54 ng/mL (*trans*-DCCA), 0.16–0.74 ng/mL (*cis*-
 53 DBCA), and 0.32 ng/mL (4F3PBA)

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