

**Supplemental Material:**

**Assessment of the mitigative capacity of dietary zinc on PCB126 hepatotoxicity and the contribution of zinc to toxicity.**

Klaren WD<sup>†,‡</sup>, Gibson-Corley KN<sup>§</sup>, Wels B<sup>||</sup>, Simmons DL<sup>||</sup>, McCormick ML<sup>⊥</sup>, Spitz DR<sup>†,⊥</sup>, Robertson LW<sup>†,‡,\*</sup>

<sup>†</sup>Interdisciplinary Graduate Program in Human Toxicology, University of Iowa, Iowa City, Iowa

<sup>‡</sup>Department of Occupational and Environmental Health, College of Public Health, University of Iowa, Iowa City, Iowa

<sup>§</sup>Department of Pathology, University of Iowa, Iowa City, Iowa

<sup>||</sup>State Hygienic Laboratory, University of Iowa, Ankeny, Iowa

<sup>⊥</sup>Free Radical and Radiation Biology Program, University of Iowa Carver College of Medicine, Iowa City, Iowa

\*Corresponding Author

Larry W. Robertson, Ph.D., M.P.H., ATS, Professor  
Department of Occupational and Environmental Health  
The University of Iowa, College of Public Health  
100 Oakdale Campus #219 IREH  
Iowa City, Iowa 52242-5000  
Phone: 319-335-4346  
Fax: 319-335-4290  
Email: [larry-robertson@uiowa.edu](mailto:larry-robertson@uiowa.edu)

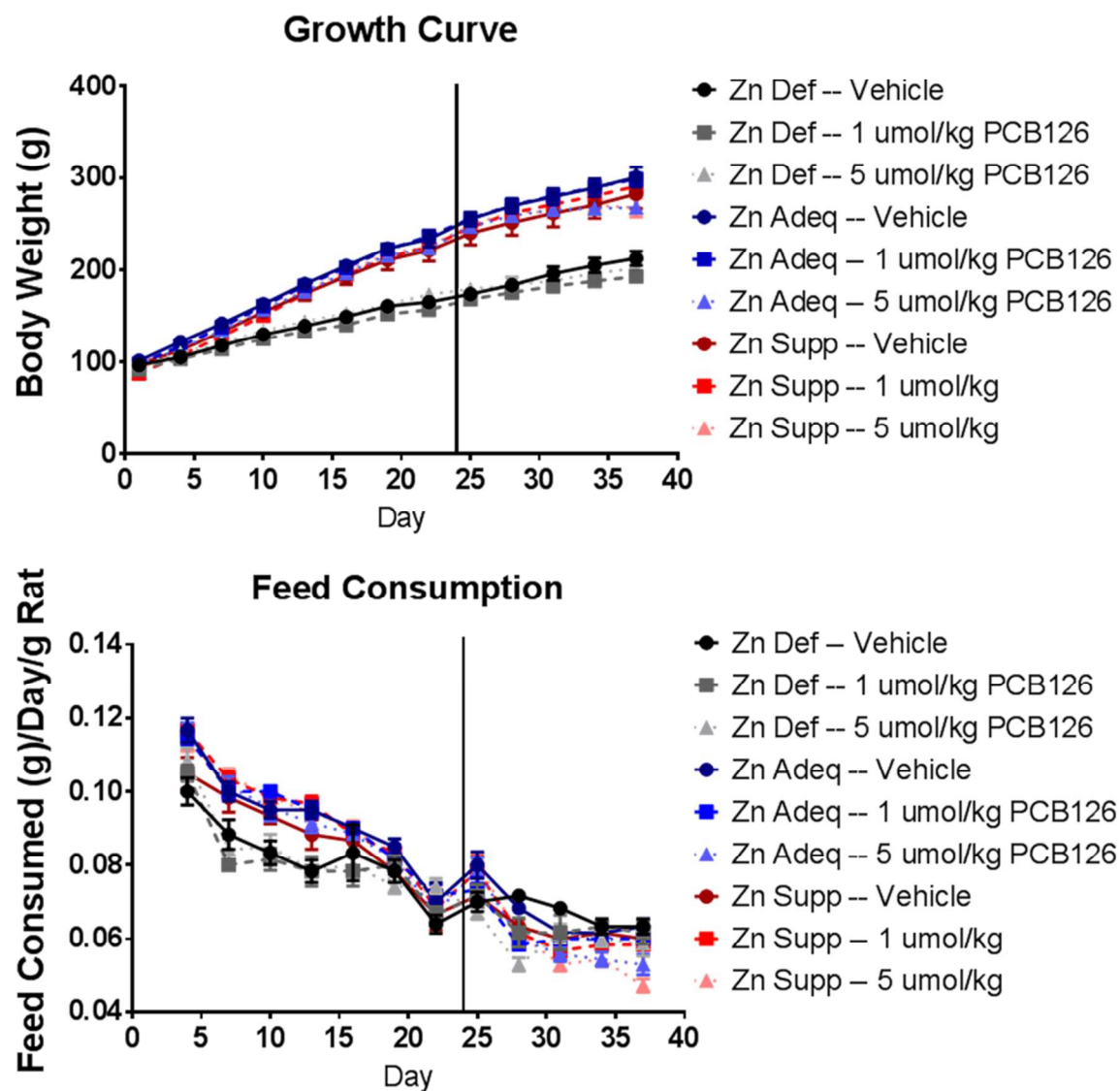
**Table S1:** Primer sequences used for the qPCR analysis of hepatic gene expression.

	<b>Forward</b>	<b>Reverse</b>
MTI	5'-caccgttgctccagattcac-3'	5'-gcagcagcactgttcgtcac-3'
MTII	5'-atctccaactgccgcctcc-3'	5'-tgcacttgccgaagcctct-3'
CYP1A1	5'-ccatgaccaggaactatggg-3'	5'-tctggtgagcatccaggaca-3'
B-actin	5'-tagagccaccaatccacacag-3'	5'-cagccttccttctctgggtatg-3'

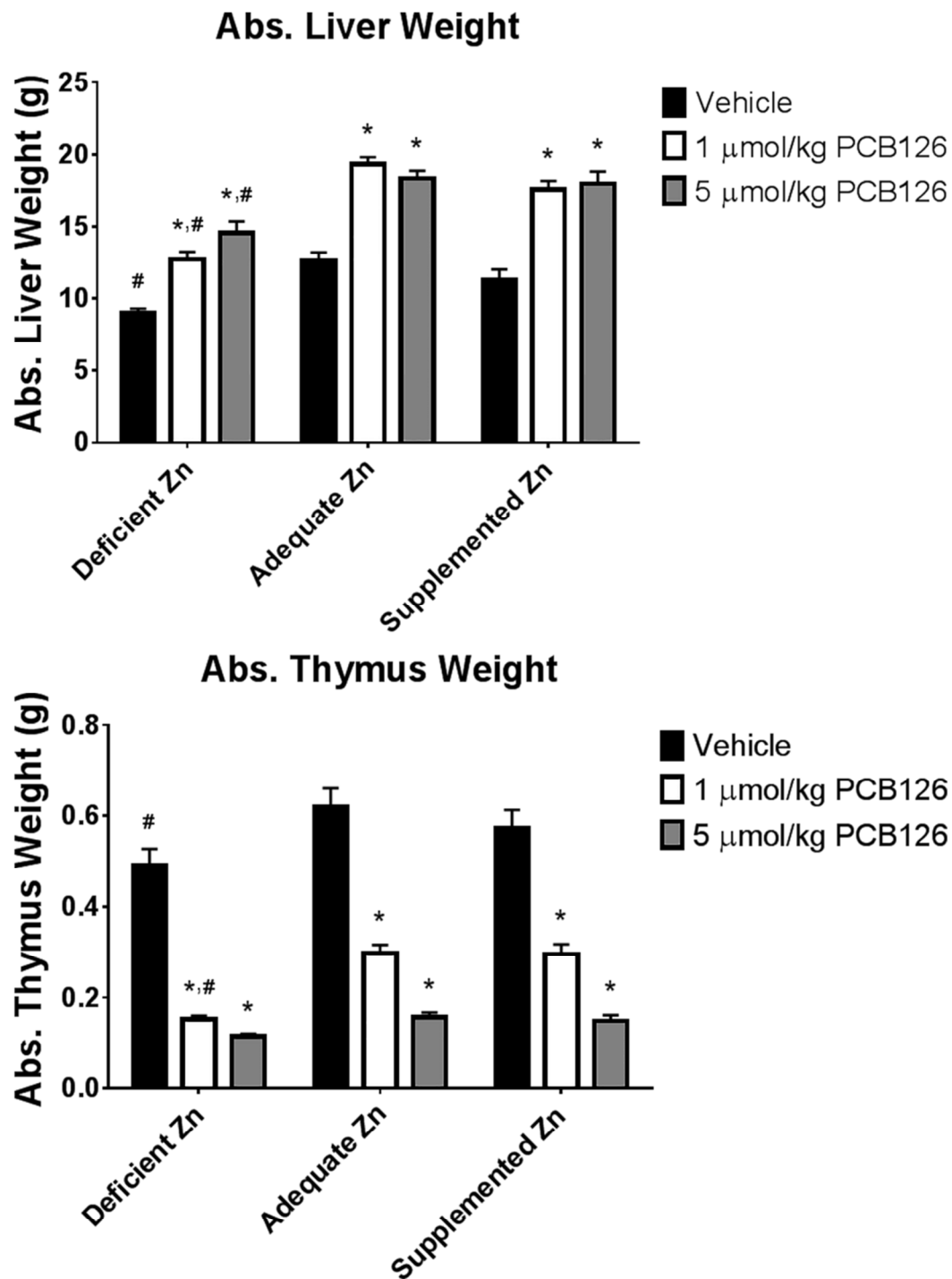
**Table S2:** P-Values from Two-Way ANOVA analysis. (Red indicates significance; p<0.05; n=6)

	Dietary Effect	Treatment Effect	Interaction
<i>Rel. Liver Wt.</i>	0.0974	<0.0001	0.8121
<i>Rel. Thymus Wt.</i>	0.9669	<0.0001	0.1374
<i>Hepatic CYP1A1 Exp.</i>	<0.0001	<0.0001	0.0015
<i>Hepatic Lipids</i>	0.0144	<0.0001	0.0396
<i>Hepatic ROS</i>	<0.0001	<0.0001	0.0002
<i>Hepatic CuZnSOD Act.</i>	0.0067	<0.0001	0.0763
<i>Hepatic MnSOD Act.</i>	0.3714	0.0017	0.3145
<i>Hepatic Total SOD Act.</i>	0.0805	<0.0001	0.2444
<i>Hepatic MTI Exp.</i>	<0.0001	<0.0001	<0.0001
<i>Hepatic MTII Exp.</i>	<0.0001	0.0003	<0.0001
<i>Hepatic Cu</i>	0.6812	<0.0001	0.6770
<i>Hepatic Zn</i>	<0.0001	<0.0001	0.2254
<i>Hepatic Se</i>	0.3558	<0.0001	0.0152
<i>Hepatic Mn</i>	<0.0001	<0.0001	0.4704
<i>Renal Cu</i>	<0.0001	0.0002	<0.0001
<i>Renal Zn</i>	<0.0001	<0.0001	0.0396
<i>Renal Se</i>	<0.0001	<0.0001	0.2834
<i>Renal Mn</i>	<0.0001	<0.0001	0.5161

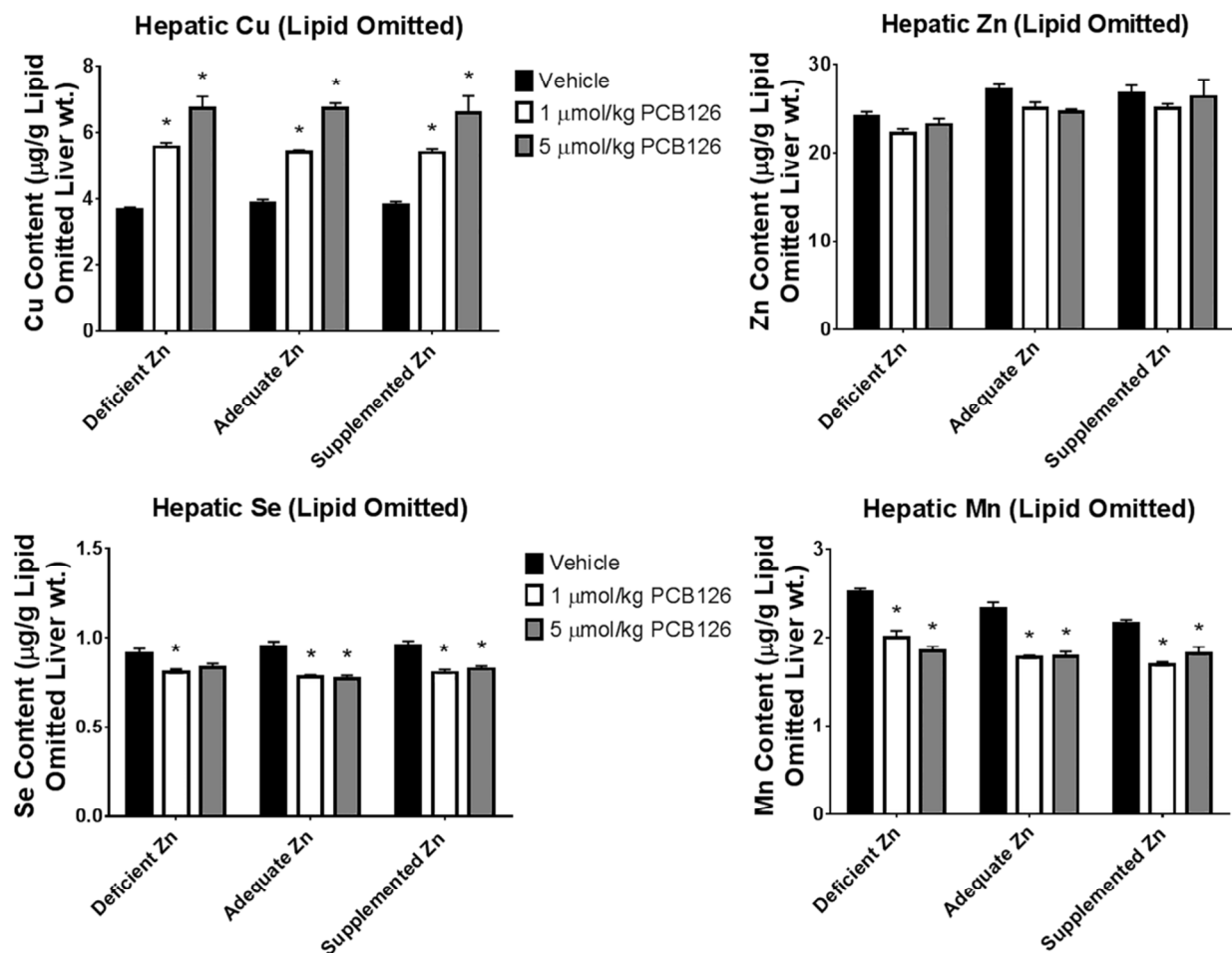
**Figure S1:** Growth curve and feed consumption during the animals study. Day of exposure marked by vertical line at 24 days.



**Figure S2:** Absolute organ weights for liver and thymus. (Bars are standard error; Two-Way ANOVA; n=6; \* represents p<0.05 compared to vehicle in same diet; # represents p<0.05 compared to same treatment in adequate zinc diet).



**Figure S3:** Metal level changes in the liver with the omission of hepatic lipids following PCB126 exposure and with varying zinc levels in the diet. (Bars are standard error; Two-Way ANOVA; n=6; \* represents p<0.05 compared to vehicle in same diet; # represents p<0.05 compared to same treatment in adequate zinc diet).



**Figure S4:** Metal level changes in the kidney following PCB126 exposure and with varying zinc levels in the diet. (Bars are standard error; Two-Way ANOVA; n=6; \* represents  $p < 0.05$  compared to vehicle in same diet; # represents  $p < 0.05$  compared to same treatment in adequate zinc diet).

