**Mechanisms and Targeted Prevention of Hepatic Osteodystrophy Caused by a Low Concentration of Di-(2-ethylhexyl)-phthalate**

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**Table. S1. The *in vivo* concentrations of the four metabolites of DEHP from 2009 to 2018.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | 2009-2010 | 2011-2012 | 2013-2014 | 2015-2016 | 2017-2018 |
|  |  | Mean ± SD | *p* value | Mean ± SD | *p* value | Mean ± SD | *p* value | Mean ± SD | *p* value | Mean ± SD | *p* value |
|  | ALL | 3.441 ± 5.622 |  | 2.823 ± 3.637 |  | 1.9 59 ± 2.082 |  | 1.898 ± 2.003 |  | 1.130 ± 0.917 |  |
| MEHP | ♂ | 3.789 ± 5.636 | 0.017 | 2.908 ± 3.794 | 0.417 | 2.119 ± 2.210 | 0.121 | 2.006 ± 2.102 | 0.067 | 1.188 ± 0.966 | 0.390 |
|  | ♀ | 3.070 ± 5.588 | 2.728 ± 3.455 | 1.818 ± 1.957 | 1.788 ± 1.893 | 1.067 ± 0.863 |
| MECPP | ALL | 34.650 ± 41.600 |  | 20.452 ± 20.258 |  | 13.406 ± 11.561 |  | 12.104 ± 10.241 |  | 9.143 ± 8.651 |  |
| ♂ | 36.871 ± 45.172 | 0.040 | 20.998 ± 21.689 | 0.348 | 14.363 ± 12.086 | 0.096 | 12.355 ± 10.319 | 0.403 | 9.737 ± 8.116 | 0.347 |
| ♀ | 32.282 ± 37.309 | 19.843 ± 18.536 | 12.569 ± 11.039 | 11.846 ± 10.164 | 8.492 ± 9.209 |
| MEHHP | ALL | 23.393 ± 31.600 |  | 13.253 ± 13.653 |  | 9.259 ± 8.472 |  | 8.013 ± 6.976 |  | 5.685 ± 5.575 |  |
| ♂ | 25.976 ± 34.970 | 0.002 | 13.817 ± 14.794 | 0.150 | 10.031 ± 8.750 | 0.067 | 8.307 ± 6.891 | 0.150 | 6.412 ± 5.830 | 0.073 |
| ♀ | 20.642 ± 27.316 | 12.625 ± 12.241 | 8.584 ± 8.180 | 7.711 ± 7.056 | 4.886 ± 5.200 |
| MEOHP | ALL | 14.017 ± 17.341 |  | 8.377 ± 8.411 |  | 5.706 ± 5.004 |  | 4.999 ± 4.308 |  | 3.728 ± 3.680 |  |
| ♂ | 14.952 ± 18.380 | 0.038 | 8.438 ± 8.826 | 0.799 | 6.116 ± 5.092 | 0.099 | 5.003 ± 4.241 | 0.976 | 4.153 ±3.833 | 0.112 |
| ♀ | 13.021 ± 16.113 | 8.308 ± 7.932 | 5.346 ± 4.909 | 4.995 ± 4.380 | 3.261 ± 3.468 |

**Table. S2. Primers used in this study.**

|  |  |
| --- | --- |
| Genes | Primers |
| *14-3-3η* | F: 5’-CCTGCCTCTTAGCCAAAC-3’R: 5’-CTCCTGCTTCTTCATCCTG-3’ |
| *IL-6* | F: 5’-CAGCCACTCACCTCTTCA-3’R: 5’-CACTGTCTTTGAGCCTGTC-3’ |
| *CXCL1* | F: 5’-CGCTCAGTCAGTGAGTCTCTT-3’R: 5’-GGGGGACTTCACGTTCACA-3’ |
| *Actin* | F: 5’-GACCTGACCTGCCGTCTA-3’R: 5’-GGAGTGGGTGTC GCTGT-3’ |

**Table. S3. Antibodies used in this study.**

|  |  |  |  |
| --- | --- | --- | --- |
| Antibodies | Source | No. | Dilution |
| 14-3-3η | Thermo Fisher | PA5-75298 | 1: 100 (IHC)1:1000 (WB) |
| IL-6 | Santa Cruz | sc-130326 | 1: 100 (IHC)1:1000 (WB) |
| CXCL1 | Santa Cruz | sc-80516 | 1: 100 (IHC)1:1000 (WB) |
| NF-κB/p65 | Santa Cruz | sc-515045 | 1: 50 (WB) |
| p-NF-κB | Cell Signaling Technology | 3033 | 1: 1000 (WB) |
| Actin | Cell Signaling Technology | 4970 | 1: 1000 (WB) |

**SUPPLEMENTARY FIGURES**



**Supplementary Figure. 1.** Western Blot related to the 14-3-3η/NF-κB pathway and IL-6/CXCL1.

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**Supplementary Figure. 2.** Levels of serum BUN and CREA in NC and imICA group. Data was shown as mean ± SD, n = 5, and a two-tailed Student's t-test was used for between two group comparisons. ns, not significant