**SUPPLEMENTAL DATA**

**FOR**

**Mammary Gland Evaluation in Juvenile Toxicity Studies: Temporal Developmental Patterns in the Male and Female Harlan Sprague Dawley Rat.**

Adam J.  Filgo1,2, Julie F. Foley3, Samantha Puvanesarajah4, Aditi R. Borde2, Bentley R. Midkiff5 Casey E. Reed2, Vesna A. Chappell2, Lydia B. Alexander2, Pretish R. Borde2, Melissa A. Troester4,6, Schantel A. Hayes Bouknight7 and Suzanne E. Fenton2

**\\groupdata02\public\Filgo\revised atlas figures\supplemental figure 1\filgo_supplemental_fig1_flt.tifSupplemental Figure 1.** **Quantitative histological data obtained with automated digital methods.** A. Image of H&E slide with no annotations. B. Image from Panel A, with annotation overlay of epithelial area in blue. C. Image from Panel A, with annotation overlay of epithelial nuclei in blue.

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| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Supplemental Table 1. Terminal end bud counts from whole mounts of male and female rat pups | | | | | | | |  | | | | | | | |  | PND 21 | | | PND 33 | | | | PND 46 | | | | | | *Female* | | |  | |  | | | |  | | | | Control | 5.00 ± 1.21 | | | 36.40 ± 6.10 | | | 23.80 ± 3.09 | | | | | | | | DES | 4.00 ± 0.86 | | | 58.00 ± 4.43 | | | 12.83 ± 4.52 | | | | | | | | TCDD | 1.00 ± 0.58 | | | 43.00 ± 13.53 | | | 22.00 ± 0 | | | | | | | | *Male* | |  | | | |  |  | | | |  | | | | Control | 1.75 ± 1.18 | | | 6.20 ± 1.39 | | | 5.00 ± 1.30 | | | | | | | | DES | 3.75 ± 1.49 | | | 17.83 ± 2.59 | | | 3.00 ± 1.53 | | | | | | | | TCDD | 1.00 ± 0 | | | 5.00 ± 3.00 | | | 6.67 ± 1.67 | | |  | | |   Note: PND= Postnatal day. DES= Diethylstilbestrol. TCDD= 2,3,7,8-tetrachlorodibenzo-p-dioxin.  Data presented are mean ± SE. n=1-6 pups per sex per litter evaluated.  Supplemental Table 2. Nuclear estrogen receptor-α staining in male and female rat mammary sections,  quantitated using Quickscore | | | | | | | | | | | | | | |  | |
|  | Control | | | | DES | | | | | TCDD | | | | | | | |
| *Female* | | | |  | |  | | |  | | | |
| PND1 | | | - | | | | | 0±0 | | | | 0±0 | | | | | | |
| PND4 | | | 0±0 | | | | | 0±0 | | | | 0±0 | | | | | | |
| PND8 | | | 0±0 | | | | | 0±0 | | | | 0±0 | | | | | | |
| PND12 | | | 0±0 | | | | | - | | | | 0±0 | | | | | | |
| PND15 | | | 0±0 | | | | | 1.3±0.8 | | | | 0±0 | | | | | | |
| PND21 | | | 2.0±0.6 | | | | | 4.0±1.0 | | | | 0.7±0.7 | | | | | | |
| PND33 | | | 2.5±0.5 | | | | | 2.2±0.6 | | | | 2.7±0.3 | | | | | | |
| PND46 | | | 2.0±0 | | | | | 2.7±2.7 | | | | 2.5±0 | | | | | | |
| PND70 | | | 1.3±0.2 | | | | | 1.5±0.8 | | | | 1.5±0.3 | | | | | | |
| *Male* | |  | | | | |  | | | |  | | |  | |
| PND1 | | | 0±0 | | | | | 0±0 | | | | 0±0 | | | | | | |
| PND4 | | | 0±0 | | | | | 0±0 | | | | - | | | | | | |
| PND8 | | | 0±0 | | | | | 0±0 | | | | 0±0 | |  | |
| PND12 | | | 0±0 | | | | | 0±0 | | | | 0±0 | |  | |
| PND15 | | | 0±0 | | | | | 0±0 | | | | 0±0 | |  | |
| PND21 | | | 0±0 | | | | | 0±0 | | | | 0±0 | |  | |
| PND33 | | | 1.3±0.7 | | | | | 2.0±0.9 | | | | 2.8±1.8 | |  | |
| PND46 | | | 0.7±0.7 | | | | | 0±0 | | | | 0±0 | |  | |
| PND70 | | | 0.8±0.8 | | | | | 0.2±0.2 | | | | 0±0 | |  | |

Note: PND= Postnatal day. DES= Diethylstilbestrol. TCDD= 2,3,7,8-tetrachlorodibenzo-p-dioxin.

Data presented are mean ± SE. n=1-3 pups per sex per litter evaluated.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Supplemental Table 3. Nuclear androgen receptor staining in male and female rat mammary sections,  quantitated using Quickscore. | | | | | | | | | | | |  | | |
|  | Control | | | | DES TCDD | | | | | |  | | | |
| Female | | | |  | |  | | |  | | | | | | | |
| PND1 | | | - | | | | | 0.5±0.5 | | 1.0±1.0 | | | | | | | |
| PND4 | | | 0±0 | | | | | 0±0 | | 0±0 | | | | | | | |
| PND8 | | | 0±0 | | | | | 0±0 | | 0±0 | | | | | | | |
| PND12 | | | 0±0 | | | | | - | | 0±0 | | | | | | | |
| PND15 | | | 1.0±1.0 | | | | | 1±0 | | 0±0 | | | | | | | |
| PND21 | | | 1.5±0.5 | | | | | 0.5±0.5 | | 2.0±1.2 | | | | | | | |
| PND33 | | | 1.0±1.0 | | | | | 0.3±0.3 | | 0±0 | | | | | | | |
| PND46 | | | 0.1±0.3 | | | | | 0±0 | | - | | | | | | | |
| PND70 | | | 1.5±1.5 | | | | | 0±0 | | 0.7±0.7 | | | | | | | |
| Male | |  | | | | |  | | | | | |  |  | |
| PND1 | | | 0±0 | | | | | 0±0 | | 1.7±0.7 | | | | | | | |
| PND4 | | | 2.0±0.6 | | | | | 0±0 | | - | | | | | | | |
| PND8 | | | 0±0 | | | | | 0±0 | | 0±0 | | | |  | |
| PND12 | | | 2.7±1.8 | | | | | 0±0 | | 2.0±0 | | | |  | |
| PND15 | | | - | | | | | 4.0±0 | | 4.0±0 | | | |  | |
| PND21 | | | 3.7±2.3 | | | | | 2.5±0.5 | | 1.0±0 | | | |  | |
| PND33 | | | 7.7±2.6 | | | | | 5.7±3.2 | | 2.5±0.5 | | | |  | |
| PND46 | | | 18.0±0 | | | | | 6.3±3.0 | | 17.0±1.0 | | | |  | |
| PND46 | | | 3.3±3.3 | | | | | 3.7±0.3 | | 4.5±1.5 | | | |  | |

Note: PND= Postnatal day. DES= Diethylstilbestrol. TCDD= 2,3,7,8-tetrachlorodibenzo-p-dioxin.

Data presented are mean ± SE. n=1-3 pups per sex per litter evaluated.

Supplemental Table 4. Nuclear progesterone receptor staining in male and female rat mammary sections,

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| quantitated using Quickscore. | | | | | | | | | |  | | |
|  | Control | | | | DES | | | | | TCDD | | | | | | |
| Female | | | |  | |  | | |  | | | | |
| PND1 | | | - | | | | | 0±0 | | | | 0±0 | | | | | |
| PND4 | | | 0±0 | | | | | 0±0 | | | | 0±0 | | | | | |
| PND8 | | | 0±0 | | | | | 0±0 | | | | - | | | | | |
| PND12 | | | 0±0 | | | | | - | | | | 0±0 | | | | | |
| PND15 | | | 0±0 | | | | | 0±0 | | | | 0±0 | | | | | |
| PND21 | | | 0±0 | | | | | 0±0 | | | | 0±0 | | | | | |
| PND33 | | | 4.0±1.3 | | | | | 6.7±3.6 | | | | 0±0 | | | | | |
| PND46 | | | 11.0±1.3 | | | | | 3.3±1.3 | | | | 4.5±1.5 | | | | | |
| PND70 | | | 4.7±0.7 | | | | | 6.2±2.2 | | | | 4.3±2.6 | | | | | |
| Male | |  | | | | |  | | | |  | | | |  |
| PND1 | | | - | | | | | 0±0 | | | | 0±0 | | | | | |
| PND4 | | | 0±0 | | | | | 0±0 | | | | 0±0 | | | | | |
| PND8 | | | 0±0 | | | | | 0±0 | | | | 0±0 | | |  |
| PND12 | | | 0±0 | | | | | 0±0 | | | | 0±0 | | |  |
| PND15 | | | 0±0 | | | | | 0±0 | | | | 0±0 | | |  |
| PND21 | | | 0±0 | | | | | 0±0 | | | | 0±0 | | |  |
| PND33 | | | 0±0 | | | | | 0±0 | | | | 0±0 | | |  |
| PND46 | | | 0±0 | | | | | 0±0 | | | | 0±0 | | |  |
| PND70 | | | 0±0 | | | | | 0±0 | | | | 0±0 | | |  |

Note: PND= Postnatal day. DES= Diethylstilbestrol. TCDD= 2,3,7,8-tetrachlorodibenzo-p-dioxin.

Data presented are mean ± SE. n=1-3 pups per sex per litter evaluated.