

**Supplemental Fig. 1.** PND1 pup body weight negatively correlates to litter size. ( $R^2 \leq 0.05$ )

**Supplemental Fig. 2.** Variation of shape occurs in 3D reconstructed urogenital sinuses and colliculi. Representative 3D reconstruction of UGS and colliculi from vehicle controls, BPA treated, and ethinylestradiol exposed pups (upper panels), including urethra (red), colliculus (blue), cranial urethral lumen (orange), seminal vesicles (purple) and the anterior prostate (green). Note the variability of the cranial urethral lumen. The lower panels represent colliculi from different treatment groups. Note the variability of size and shape between treatments as well as within treatments (data not shown).

**Supplemental Fig. 3.** Pups from PND1 treated groups were immunostained for Estrogen Receptor  $\alpha$ , ER $\alpha$  (Protein Tech, 212441-1-AP, 1:400). Each column represents a different treatment group. Each row represents variability of immunostaining within treatment groups.

**Supplemental Fig. 4.** Pups from PND1 treated groups were immunostained for Androgen Receptor, AR (Santa Cruz, SC-816, 1:100). Each column represents a different treatment group. Each row represents variability of immunostaining within treatment groups.

**Supplemental Fig. 5.** Pups from PND1 treated groups were immunostained for Bone Morphogenetic Protein 4, BMP4 (Protein Tech, 12492-1-AP, 1:100). Each column represents a different treatment group. Each row represents variability of immunostaining within treatment groups.

**Supplemental Fig. 6.** Pups from PND1 treated groups were immunostained for Cytochrome P450, CYP11A1 (Protein Tech, 13363-1-AP, 1:100). Each column represents a different treatment group. Each row represents variability of immunostaining within treatment groups.

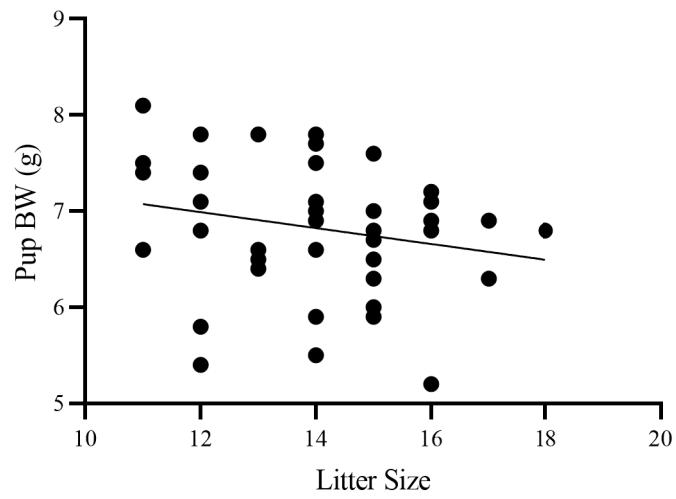
**Supplemental Fig. 7.** Pups from PND1 treated groups were immunostained for Aromatase, CYP19A1, (Abcam, ab18995, 1:125). Each column represents a different treatment group. Each row represents variability of immunostaining within treatment groups.

**Supplemental Fig. 8.** Pups from PND1 treated groups were immunostained for Dickkopf, DKK2 (Protein Tech, 21051-AP-1, 1:50). Each column represents a different treatment group. Each row represents variability of immunostaining within treatment groups.

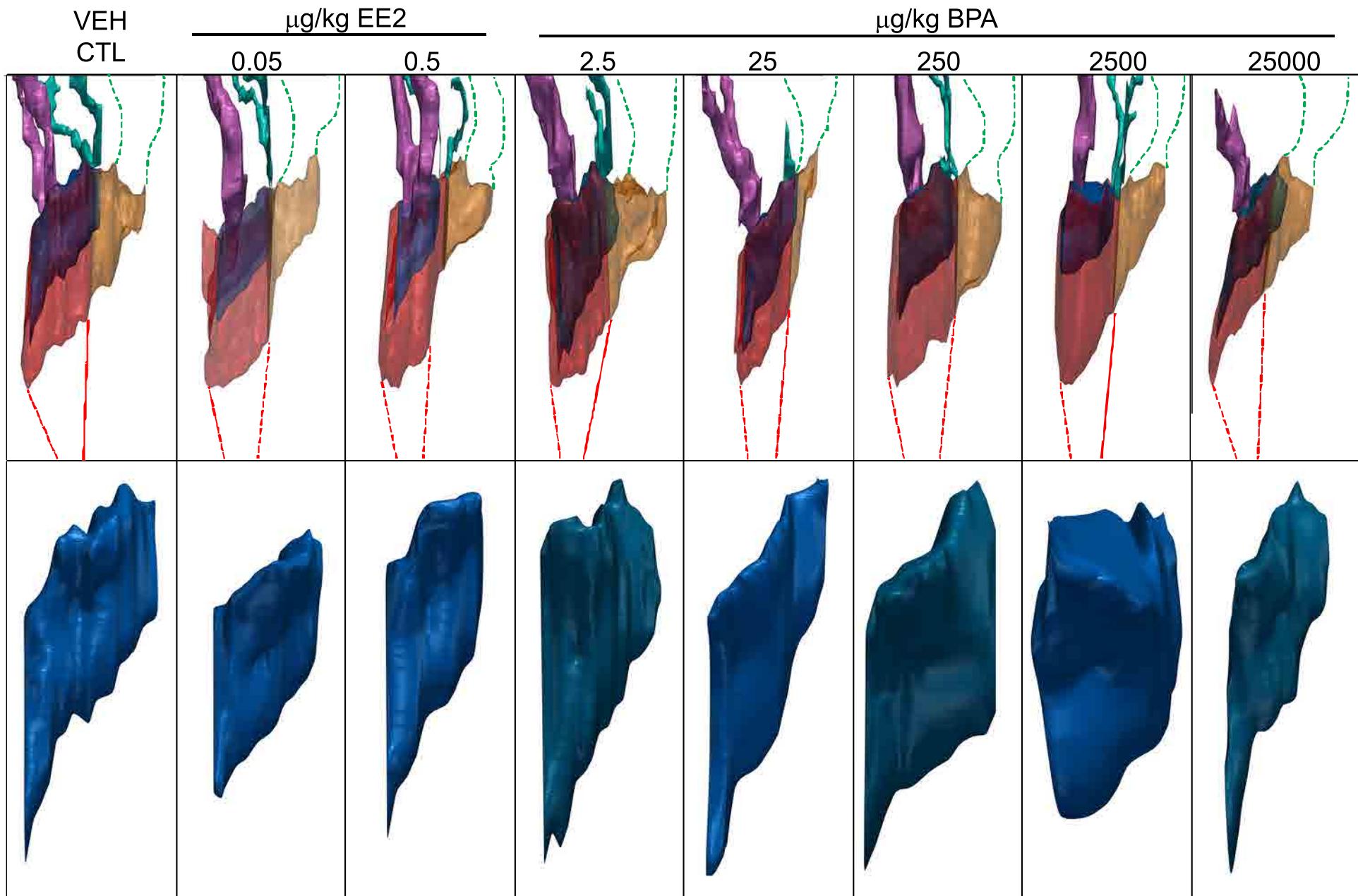
**Supplemental Fig. 9.** Pups from PND1 treated groups were immunostained for Insulin-like Growth Factor-1, IGF-1 (Santa Cruz, SC-9013, 1:400). Each column represents a different treatment group. Each row represents variability of immunostaining within treatment groups.

**Supplemental Fig. 10.** Pups from PND1 treated groups were immunostained for Secreted Frizzled-Related Protein 4, SFRP4 (Protein Tech, 15328-1-AP, 1:800). Each column represents a different treatment group. Each row represents variability of immunostaining within treatment groups.

**Supplemental Fig. 11.** Pups from PND1 treated groups were immunostained for Thombospondin 2, Thbs2 (Bioss, bs-7524R, 1:100). Each column represents a different treatment group. Each row represents variability of immunostaining within treatment groups.

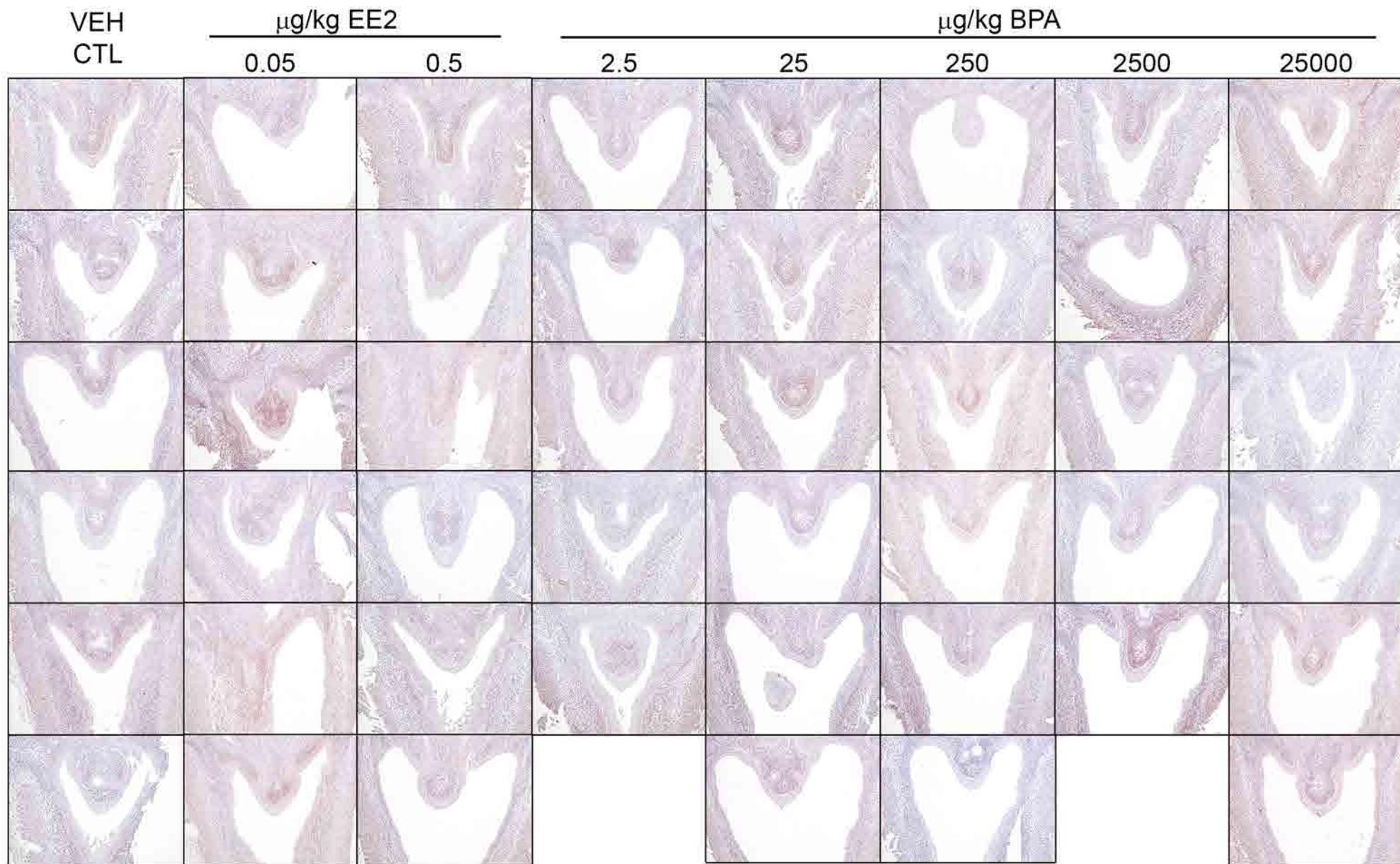


Supplemental Fig 1



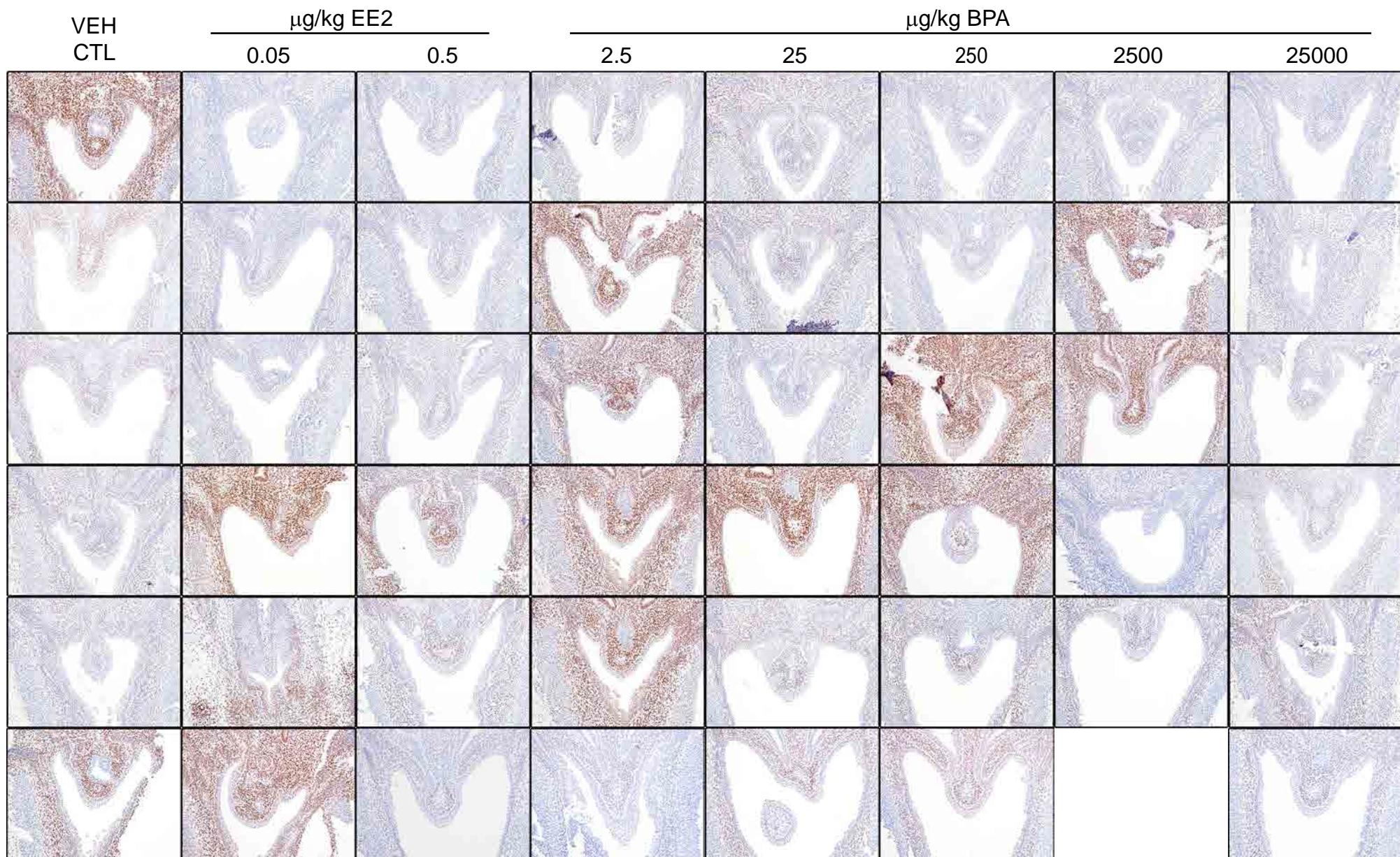
Supplemental Figure 2

# ER $\alpha$



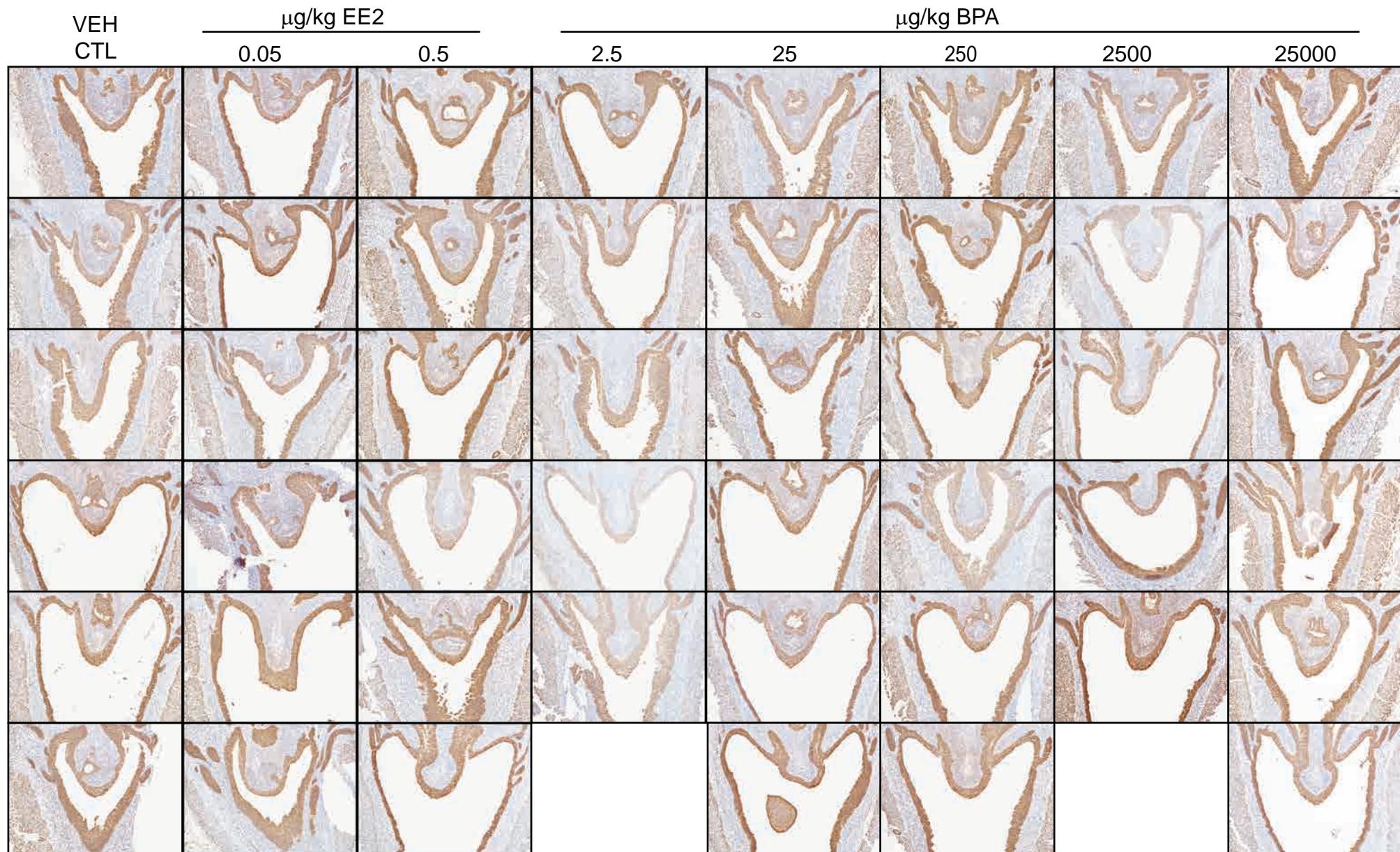
Supplemental Figure 3

AR

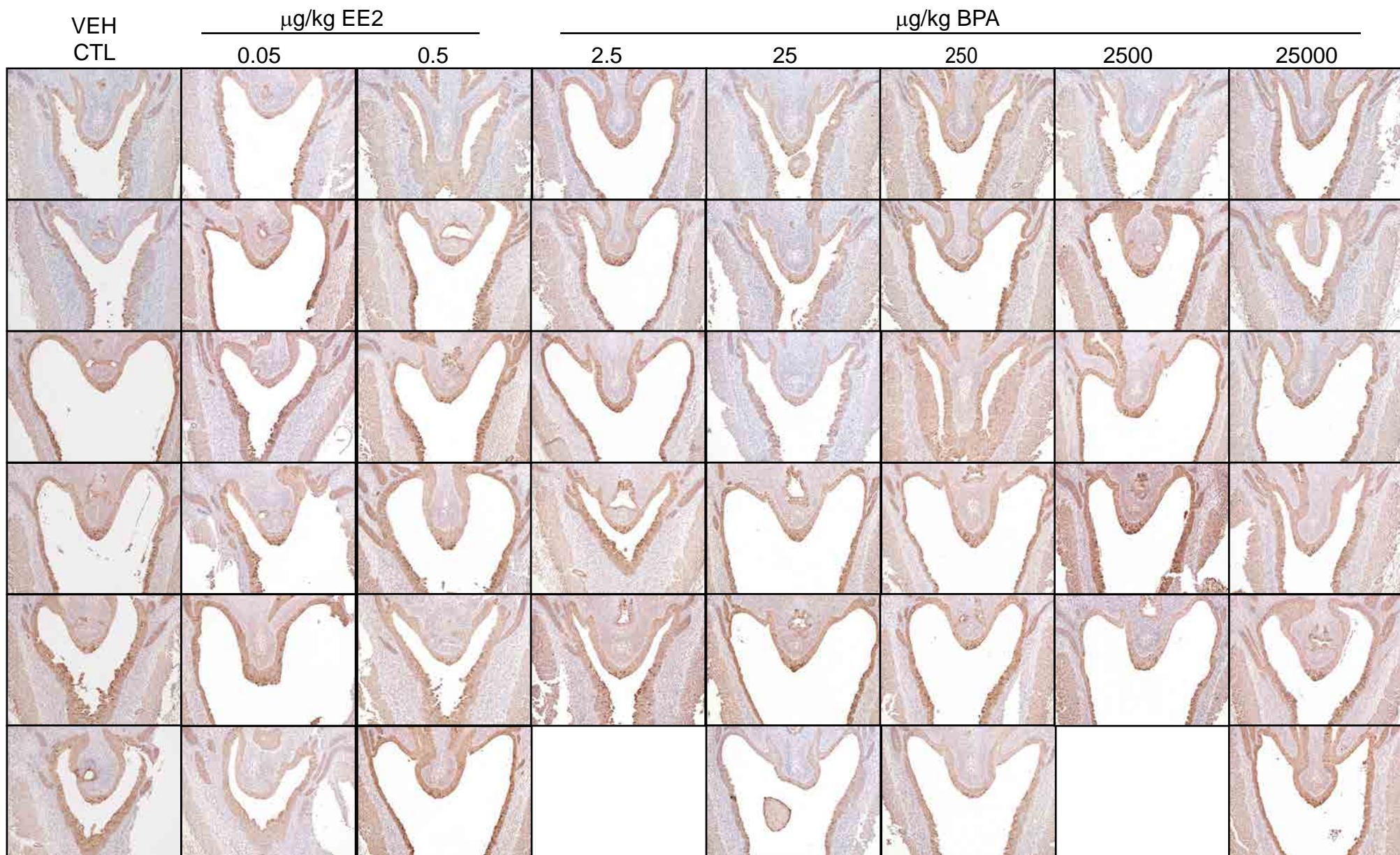


Supplemental Figure 4

# BMP4

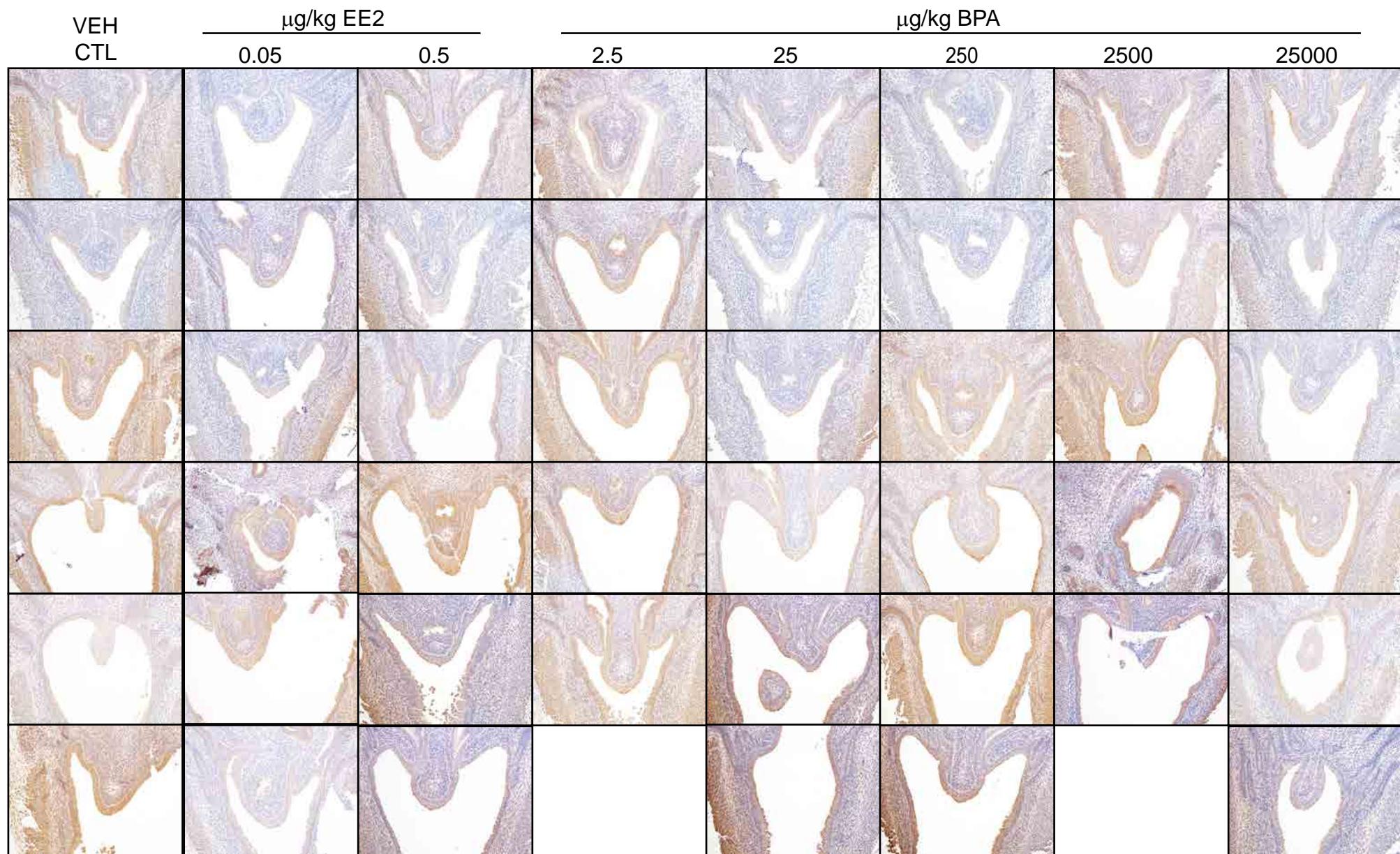


# CYP11A1



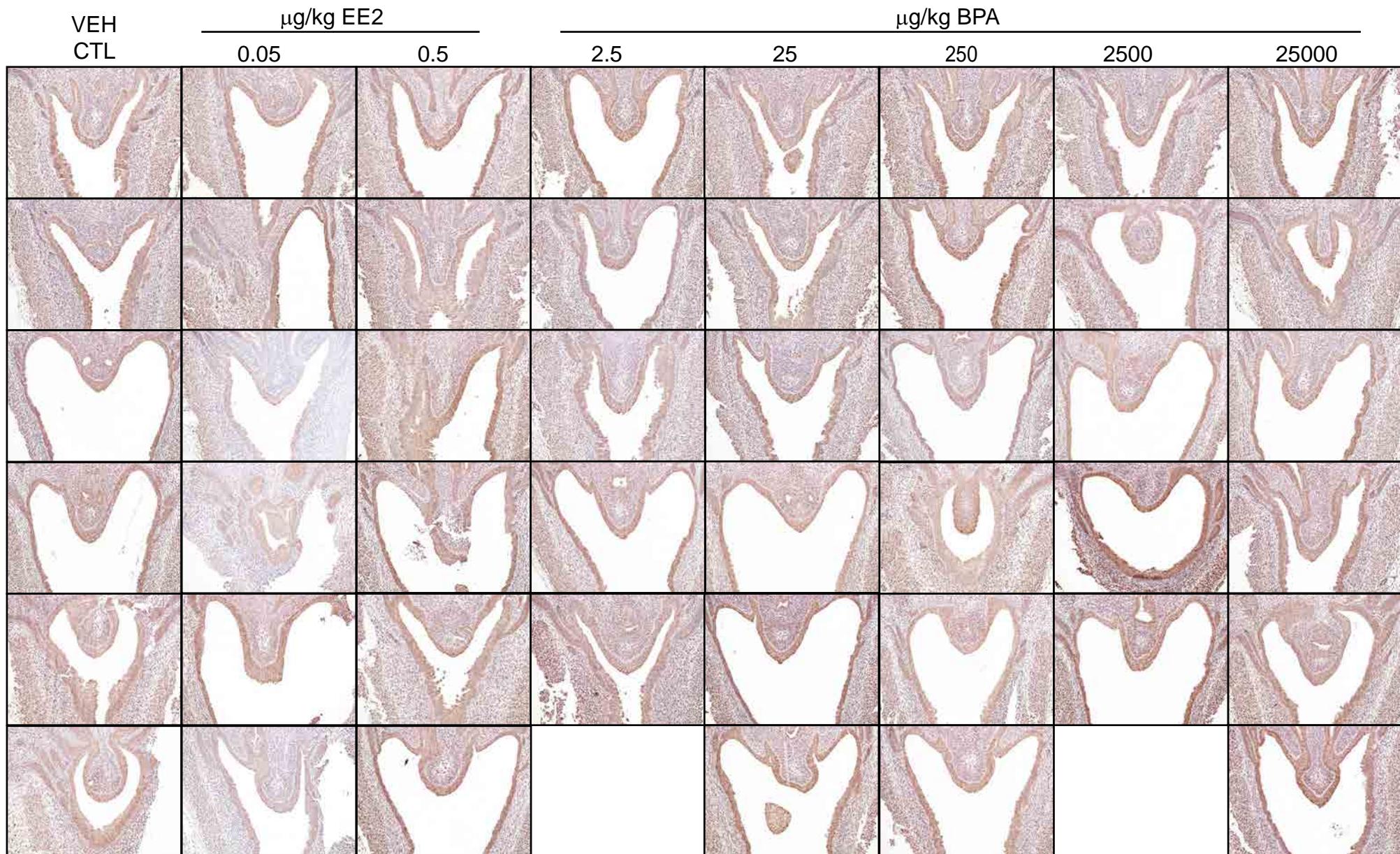
Supplemental Figure 6

# CYP19A1



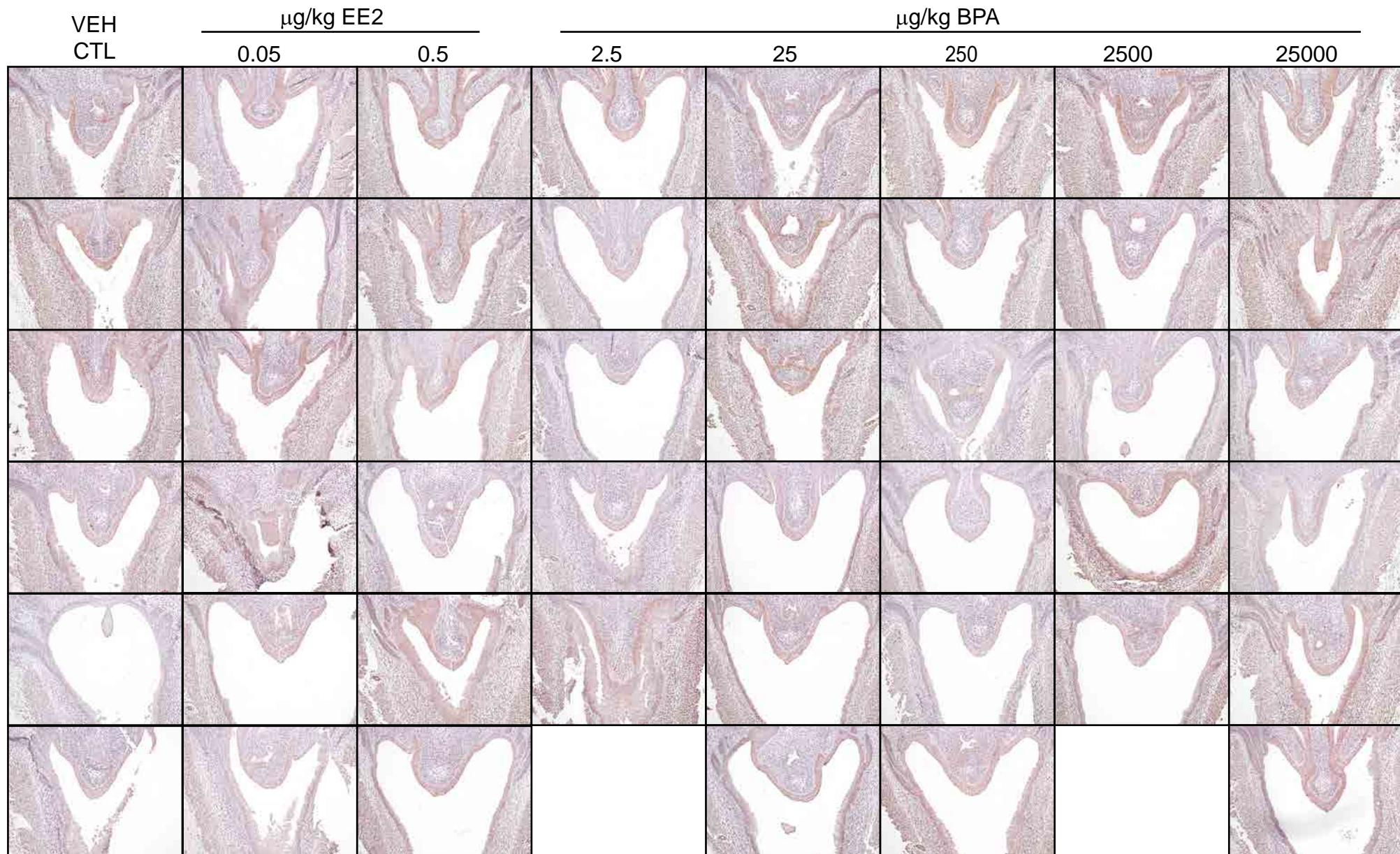
Supplemental Figure 7

# DKK2



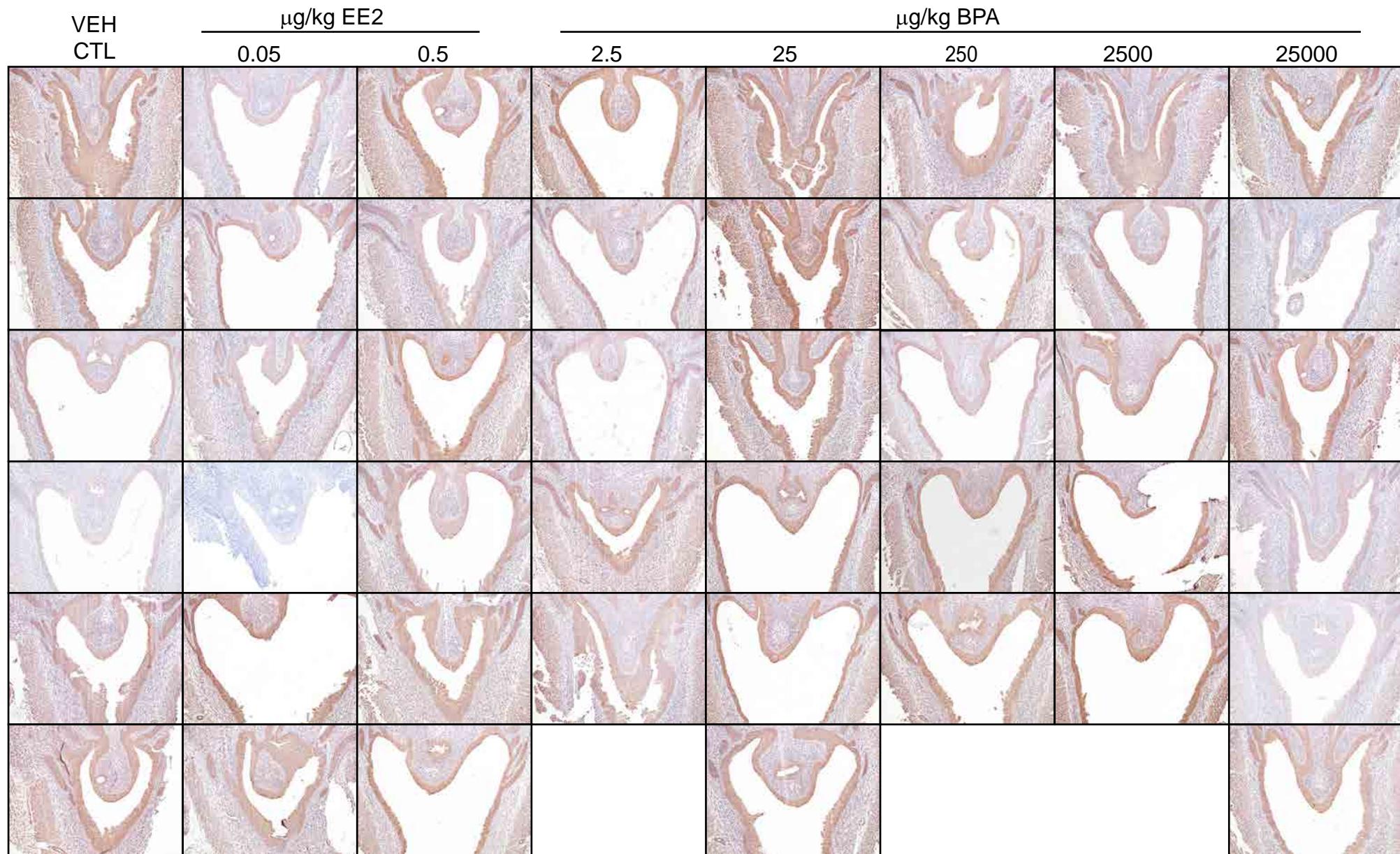
Supplemental Figure 8

# IGF-1



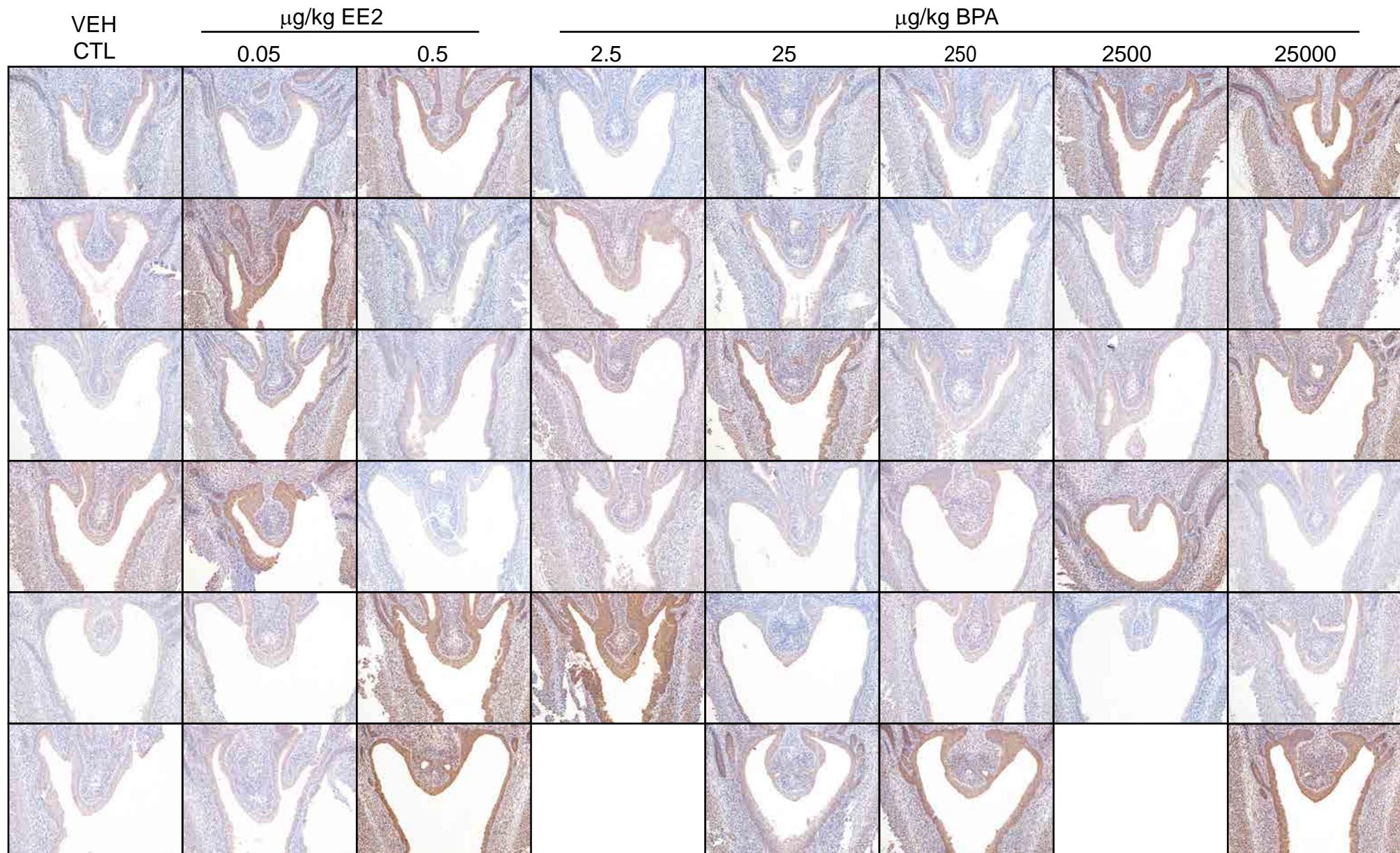
Supplemental Figure 9

# SFRP4



Supplemental Figure 10

# THBS2



Supplemental Figure 11

**Supplemental Table 1: Antibodies used for immunehistochemical analysis in UGS from PND1 rats**

Antibody	Alt. Name	Company	Cat #	Dilution	Retrieval	Peroxide Block	Background Block	Chromogen
Androgen Receptor	AR	Santa Cruz	SC-816	1:100	microwave	0.3% H <sub>2</sub> O <sub>2</sub>	2.5% horse serum	DAB
Aromatase	CYP19A1	abcam	ab18995	1:125	microwave	0.3% H <sub>2</sub> O <sub>2</sub>	2.5% horse serum	DAB
Cytochrome P450	CYP11A1	Protein Tech	13363-1-AP	1:100	Decloaker	Bloxall	Background Punisher	DAB
Bone Morphogenetic Protein 4	BMP4	Protein Tech	12492-1-AP	1:100	Decloaker	Bloxall	2.5% horse serum	DAB
Dickkopf	DKK2	Protein Tech	21051-AP-1	1:50	Decloaker	Bloxall	Background Punisher	DAB
Estrogen Receptor 1	ER $\alpha$	Protein Tech	21244-1-AP	1:400	Decloaker	Bloxall	Background Punisher	DAB
Insulin-like Growth Factor-1	IGF-1	Santa Cruz	SC-9013	1:400	Decloaker	Bloxall	2.5% horse serum	DAB
Thombospondin 2	Thbs2	Bioss	bs-7524R	1:100	microwave	0.3% H <sub>2</sub> O <sub>2</sub>	2.5% horse serum	DAB
Secreted Frizzled-Related Protein 4	SFRP4	Protein Tech	15328-1-AP	1:800	Decloaker	Bloxall	Background Punisher	DAB

Supplemental Table 2. Criteria for body and urogenital sinus measurements

Measurement Taken	Method Description
Body weight <b>BW</b> (g)	Mass of pup using balance
Colliculus angle <b>C<sub>A</sub></b>	Average of 3 repeated measures taken of the angle which the 3D reconstructed colliculus (blue) makes with the cranial urethral lumen (orange)
Colliculus volume <b>C<sub>V</sub></b> ( $\mu\text{M}^3 \times 10^4$ )	3D reconstructed colliculus (blue) volume calculated by BioVis3D
Colliculus surface area <b>C<sub>S</sub></b> ( $\mu\text{M}^2 \times 10^4$ )	3D reconstructed colliculus (blue) surface area calculated by BioVis3D
Cranial urethral distance <b>C<sub>D</sub></b> ( $\mu\text{M}$ )	Distance measured from the most cranial point of the cranial urethral lumen across to where the AP (teal) branch from the cranial urethral lumen (orange)
Cranial urethral length, cranial to caudal <b>C<sub>L</sub></b> ( $\mu\text{M}$ )	Distance measured from the most cranial point of the cranial urethral lumen to the most caudal point of the cranial urethral lumen (orange)
Cranial urethral lower angle <b>C<sub>LA</sub></b>	Average of 3 repeated measures taken of the angle made from where the AP (teal) branch, down caudally and back up to the most cranial point of the cranial urethral lumen (orange)
Cranial urethral surface area <b>C<sub>S</sub></b> ( $\mu\text{M}^2 \times 10^4$ )	3D reconstructed cranial urethral lumen surface area (ventral to where the AP branch) calculated by BioVis3D
Cranial urethral upper angle <b>C<sub>UA</sub></b>	Average of 3 repeated measures taken of the angle made from the most cranial point of the cranial urethral lumen (orange), over to where the AP (teal) last branch and down caudally
Cranial urethral volume <b>C<sub>V</sub></b> ( $\mu\text{M}^3 \times 10^4$ )	3D reconstructed cranial urethral lumen volume (ventral to where the AP branch) calculated by BioVis3D
Cranial urethral width, dorsal to ventral <b>C<sub>W</sub></b> ( $\mu\text{M}$ )	Distance measured from the most dorsal point of the cranial urethral lumen to the most ventral point of the cranial urethral lumen (orange)
<b>MIDWAY SECTION NUMBER</b>	
Midway colliculus distance <b>Midway C<sub>D</sub></b> ( $\mu\text{M}$ )	Distance measured between the lowest caudal point of the colliculus (blue) to the lowest caudal point drawn of the urethral lumen on the midway section
Midway colliculus size <b>Midway C<sub>S</sub></b> ( $\mu\text{M}$ )	Calculated as the reciprocal of C <sub>D</sub> x 1000
Midway luminal area <b>Midway L<sub>A</sub></b> ( $\mu\text{M}^2 \times 10^2$ )	Area measured inside the urothelium on the midway section (black outline)
Midway luminal perimeter <b>Midway L<sub>P</sub></b> ( $\mu\text{M} \times 10^2$ )	Perimeter measured inside the urothelium on the midway section (black outline)
Midway urethral area <b>Midway U<sub>A</sub></b> ( $\mu\text{M}^2 \times 10^2$ )	Area measured around the p63 positive urothelium on the midway section (red outline)
Midway urothelium area <b>Midway UE<sub>A</sub></b> ( $\mu\text{M}^2 \times 10^2$ )	Calculated by subtracting the luminal area (black outline) from the urethral area (red outline) on the midway section
Midway urothelium thickness <b>Midway UE<sub>T</sub></b> ( $\mu\text{M}$ )	Average of 2 urothelium (p63 positive) thicknesses of the left and right lateral sides at the widest point of the urethra on the midway section
Midway urethral perimeter <b>Midway U<sub>P</sub></b> ( $\mu\text{M} \times 10^2$ )	Perimeter measured around the p63 positive urothelium (red outline) on the midway section
Midway urethral lateral width <b>Midway U<sub>LW</sub></b> ( $\mu\text{M}$ )	Measure at the widest lateral point of the p63 positive urothelium (green line) on the midway section
Prostatic urethral surface area <b>PU<sub>S</sub></b> ( $\mu\text{M}^2 \times 10^4$ )	3D reconstructed prostatic urethral lumen surface area (dorsal to where the AP branch) calculated by BioVis3D (red)
Prostatic urethral volume <b>PU<sub>V</sub></b> ( $\mu\text{M}^3 \times 10^4$ )	3D reconstructed prostatic urethral lumen volume (dorsal to where the AP branch) calculated by BioVis3D (red)
Urethral length, cranial to caudal <b>U<sub>L</sub></b> ( $\mu\text{M}$ )	Distance measured from the most cranial point of the cranial urethral lumen (orange) to the most caudal point of the prostatic urethral lumen (red)
Urethral surface area <b>U<sub>S</sub></b> ( $\mu\text{M}^2 \times 10^4$ )	Entire 3D reconstructed urethral lumen surface area calculated by BioVis3D (red + orange)
Urethral volume <b>U<sub>V</sub></b> ( $\mu\text{M}^3 \times 10^4$ )	Entire 3D reconstructed urethral lumen volume calculated by BioVis3D (red + orange)
Urethral width, dorsal to ventral <b>U<sub>W</sub></b> ( $\mu\text{M}$ )	Distance measured from the most dorsal point of the prostatic urethral lumen (red) to the most ventral point of the cranial urethral lumen (orange)
<b>WIDEST SECTION NUMBER</b>	
Widest colliculus distance <b>Widest C<sub>D</sub></b> ( $\mu\text{M}$ )	Distance measured between the lowest caudal point of the colliculus (blue) to the lowest caudal point drawn of the urethral lumen on the widest section
Widest colliculus size <b>Widest C<sub>S</sub></b> ( $\mu\text{M}$ )	Calculated as the reciprocal of C <sub>D</sub> x 1000
Widest luminal area <b>Widest L<sub>A</sub></b> ( $\mu\text{M}^2 \times 10^2$ )	Area measured inside the urothelium on the widest section (black outline)
Widest luminal perimeter <b>Widest L<sub>P</sub></b> ( $\mu\text{M} \times 10^2$ )	Perimeter measured inside the urothelium on the widest section (black outline)
Widest urethral area <b>Widest U<sub>A</sub></b> ( $\mu\text{M}^2 \times 10^2$ )	Area measured around the p63 positive urothelium on the widest section (red outline)
Widest urothelium area <b>Widest UE<sub>A</sub></b> ( $\mu\text{M}^2 \times 10^2$ )	Calculated by subtracting the luminal area (black outline) from the urethral area (red outline) on the widest section
Widest urothelium thickness <b>Widest UE<sub>T</sub></b> ( $\mu\text{M}$ )	Average of 2 urothelium (p63 positive) thicknesses of the left and right lateral sides at the widest point of the urethra on the widest section
Widest urethral perimeter <b>Widest U<sub>P</sub></b> ( $\mu\text{M} \times 10^2$ )	Perimeter measured around the p63 positive urothelium (red outline) on the widest section
Widest urethral lateral width <b>Widest U<sub>LW</sub></b> ( $\mu\text{M}$ )	Measure at the widest lateral point of the p63 positive urothelium (green line) on the widest section

Supplemental Table 3: Effects of BPA on the urogenital sinus

	VEH CTL	$\mu\text{g/kg BPA}$					$\mu\text{g/kg EE2}$	
		2.5	25	250	2500	25000	0.05	0.5
Body weight <b>BW</b> (g)	6.1 (0.3)	<b>7.0 (0.4)</b>	<b>7.0 (0.2)</b>	<b>7.2 (0.2)</b>	6.4 (0.2)	6.7 (0.4)	<b>6.9 (0.1)</b>	<b>7.0 (0.3)</b>
Colliculus angle <b>C<sub>A</sub></b>	25.1 (1.3)	<b>21.2 (1.1)</b>	<b>21.3 (0.7)</b>	<b>20.7 (1)</b>	23 (0.9)	22 (1.8)	<b>19.7 (0.7)</b>	22 (1.3)
Colliculus volume <b>C<sub>V</sub></b> ( $\mu\text{M}^3 \times 10^4$ )	283.4 (30.7)	270.3 (24.2)	231.6 (22.6)	258.6 (16.7)	217.2 (33.6)	256.7 (27)	225 (44.5)	257.6 (41.6)
Colliculus surface area <b>C<sub>S</sub></b> ( $\mu\text{M}^2 \times 10^4$ )	8.5 (0.7)	7.7 (0.5)	6.9 (0.5)	7.2 (0.4)	6.8 (0.7)	7.2 (0.8)	6.6 (0.9)	7.7 (1)
Cranial urethral distance <b>CU<sub>D</sub></b> ( $\mu\text{M}$ )	39.5 (5.4)	32.9 (2.7)	36 (3.8)	33 (5.9)	32.9 (1.9)	33.2 (3.6)	32.8 (4.7)	26.5 (3.4)
Cranial urethral length, cranial to caudal <b>CU<sub>L</sub></b> ( $\mu\text{M}$ )	103.3 (6.1)	<b>77.1 (10.8)</b>	97.5 (5.2)	<b>86.1 (5.6)</b>	99.1 (6)	97.5 (4.2)	85.3 (10.9)	87.4 (8)
Cranial urethral lower angle <b>CU<sub>LA</sub></b>	3.1 (0.4)	3.6 (0.9)	2.1 (0.4)	2.9 (0.7)	2.7 (0.3)	2.6 (0.5)	3.2 (1)	2.7 (0.6)
Cranial urethral surface area <b>CU<sub>S</sub></b> ( $\mu\text{M}^2 \times 10^4$ )	8.8 (1.4)	8.7 (1.6)	7.6 (1.4)	7.8 (1.3)	10.7 (2.1)	8 (0.8)	7.9 (1.1)	8.1 (1.5)
Cranial urethral upper angle <b>CU<sub>UA</sub></b>	14.9 (2.2)	12.7 (1.1)	15 (3.2)	13.1 (2)	16.5 (1.9)	12.8 (2.3)	13.5 (2.2)	12.8 (1.9)
Cranial urethral volume <b>CU<sub>V</sub></b> ( $\mu\text{M}^3 \times 10^4$ )	247.4 (69.5)	231.6 (52.8)	169.1 (51.5)	218.6 (74.1)	314.3 (94.1)	173.7 (40.7)	164.9 (29.3)	200.4 (61.7)
Cranial urethral width, dorsal to ventral <b>CU<sub>W</sub></b> ( $\mu\text{M}$ )	29.3 (4.3)	33.1 (3.9)	<b>19.7 (1.8)</b>	28.4 (3.5)	31.1 (2.1)	26.8 (3.8)	29.2 (4.5)	24.2 (2.6)
<b>Midway section number</b>		4 (0.1)	4 (0.3)	3.2 (0.4)	3.6 (0.2)	3.4 (0.4)	3.5 (0.4)	3.3 (0.5)
Midway colliculus distance <b>Midway C<sub>D</sub></b> ( $\mu\text{M}$ )	61.8 (12.1)	62.9 (12.4)	45.7 (7.3)	46.5 (5)	68.8 (9.9)	55.8 (8.8)	50.8 (9.7)	44.7 (7.4)
Midway colliculus size <b>Midway C<sub>S</sub></b> ( $\mu\text{M}$ )	19.2 (3.2)	19.6 (4.8)	24.6 (3.6)	22.5 (1.9)	15.7 (2.1)	20.2 (3)	25.2 (6.4)	24.8 (3.1)
Midway luminal area <b>Midway L<sub>A</sub></b> ( $\mu\text{M}^2 \times 10^2$ )	182.6 (67.5)	167.2 (71.2)	144.1 (50.8)	161 (40.2)	289 (96.3)	151.8 (48.7)	130.1 (49.5)	154.9 (45.7)
Midway luminal perimeter <b>Midway L<sub>P</sub></b> ( $\mu\text{M} \times 10^2$ )	2.6 (0.3)	1.9 (0.4)	2.4 (0.3)	2.3 (0.3)	2.6 (0.4)	2.3 (0.4)	2.1 (0.3)	2.5 (0.5)
Midway urethral area <b>Midway U<sub>A</sub></b> ( $\mu\text{M}^2 \times 10^2$ )	293.2 (64.7)	240.4 (73.7)	259.8 (51.2)	265.8 (33.7)	386.1 (90.3)	256.6 (54.6)	234.5 (51.2)	260.1 (58.6)
Midway urothelium area <b>Midway UE<sub>A</sub></b> ( $\mu\text{M}^2 \times 10^2$ )	110.6 (8.8)	73.2 (7.9)	115.7 (9)	104.8 (19)	97.1 (14.4)	104.9 (14.6)	104.4 (22.1)	105.2 (17.9)
Midway urothelium thickness <b>Midway UE<sub>T</sub></b> ( $\mu\text{M}$ )	6.6 (0.5)	5.6 (0.3)	5.8 (0.5)	5 (0.7)	6.1 (0.6)	6.2 (0.7)	5.8 (0.6)	5.9 (0.3)
Midway urethral perimeter <b>Midway U<sub>P</sub></b> ( $\mu\text{M} \times 10^2$ )	2.7 (0.3)	2.3 (0.3)	2.4 (0.2)	2.7 (0.3)	3 (0.3)	2.8 (0.4)	2.3 (0.2)	2.8 (0.4)
Midway urethral lateral width <b>Midway U<sub>W</sub></b> ( $\mu\text{M}$ )	66.6 (9.6)	56.2 (11.7)	60.4 (7.8)	60.7 (4.9)	79.8 (14.5)	57.3 (9.7)	55.2 (7.7)	62.1 (10.7)
Prostatic urethral surface area <b>PU<sub>S</sub></b> ( $\mu\text{M}^2 \times 10^4$ )	18.9 (2)	17.3 (1.5)	16.3 (1.6)	16.8 (0.5)	18.7 (3)	16.3 (2)	15.8 (2)	16.9 (2.3)
Prostatic urethral volume <b>PU<sub>V</sub></b> ( $\mu\text{M}^3 \times 10^4$ )	869.9 (156.7)	784.4 (147.4)	653.1 (135.1)	736.3 (91.5)	850.5 (219.2)	632.9 (85.5)	683.5 (145.2)	682.1 (115.2)
Urethral length, cranial to caudal <b>U<sub>L</sub></b> ( $\mu\text{M}$ )	156.5 (8.7)	<b>125.4 (9.5)</b>	139.2 (4.6)	133.2 (6.6)	140.9 (17.9)	137.7 (15.6)	<b>125.3 (8.3)</b>	131.1 (12.5)
Urethral surface area <b>U<sub>S</sub></b> ( $\mu\text{M}^2 \times 10^4$ )	21.7 (2.3)	20.1 (1.6)	18.2 (1.7)	19.2 (0.9)	21.8 (3.5)	18.5 (1.9)	18 (2)	19.2 (2.5)
Urethral volume <b>U<sub>V</sub></b> ( $\mu\text{M}^3 \times 10^4$ )	1116.7 (222.1)	1016.7 (191.3)	822 (165.4)	955.1 (130.1)	1165.3 (309.5)	806.7 (106.3)	848.2 (170.1)	880.8 (173.5)
Urethral width, dorsal to ventral <b>U<sub>W</sub></b> ( $\mu\text{M}$ )	74.4 (5.6)	70.8 (9)	<b>50.8 (4.8)</b>	64.4 (6.7)	64.5 (5.4)	60.8 (7.6)	<b>58.6 (3.3)</b>	60.9 (5.4)
<b>Widest section number</b>		2.5 (0.1)	2.6 (0.1)	2.2 (0.3)	2.3 (0.2)	2.2 (0.5)	2.3 (0.3)	2.3 (0.5)
Widest colliculus distance <b>Widest C<sub>D</sub></b> ( $\mu\text{M}$ )	42.3 (2.3)	37.2 (5.4)	35.9 (1.6)	<b>31.6 (4.9)</b>	40.3 (4.8)	37.4 (2.6)	37.9 (2.8)	<b>31.3 (5.1)</b>
Widest colliculus size <b>Widest C<sub>S</sub></b> ( $\mu\text{M}$ )	24.0 (1.3)	29.3 (4.2)	28.1 (1.2)	<b>38.8 (9.9)</b>	26.5 (3.5)	27.5 (2.2)	27.2 (2.2)	<b>37.6 (7.3)</b>
Widest luminal area <b>Widest L<sub>A</sub></b> ( $\mu\text{M}^2 \times 10^2$ )	277.2 (62.1)	230.2 (56.2)	254.3 (57.4)	215.6 (41.1)	346.2 (72.7)	223.5 (40.3)	238 (41)	248.2 (53.3)
Widest luminal perimeter <b>Widest L<sub>P</sub></b> ( $\mu\text{M} \times 10^2$ )	4 (0.3)	3.5 (0.2)	3.6 (0.2)	<b>3.4 (0.1)</b>	4.1 (0.2)	3.6 (0.3)	3.5 (0.1)	3.8 (0.3)
Widest urethral area <b>Widest U<sub>A</sub></b> ( $\mu\text{M}^2 \times 10^2$ )	411.4 (62.4)	346.1 (44.8)	370.9 (54.3)	345.7 (21.8)	465.9 (77.2)	339.5 (45.1)	342 (38.1)	373.9 (51.4)
Widest urothelium area <b>Widest UE<sub>A</sub></b> ( $\mu\text{M}^2 \times 10^2$ )	134.2 (6.5)	115.9 (12.8)	116.5 (4.3)	130.1 (25.1)	119.7 (6.9)	116 (9.2)	<b>104 (5.3)</b>	125.7 (13.4)
Widest urothelium thickness <b>Widest UE<sub>T</sub></b> ( $\mu\text{M}$ )	5.2 (0.4)	4.5 (0.5)	<b>4.2 (0.4)</b>	<b>4 (0.3)</b>	<b>4.2 (0.1)</b>	4.6 (0.3)	4.4 (0.3)	4.9 (0.3)
Widest urethral perimeter <b>Widest U<sub>P</sub></b> ( $\mu\text{M} \times 10^2$ )	4.3 (0.3)	3.8 (0.2)	3.9 (0.1)	3.8 (0.1)	4.3 (0.2)	3.9 (0.3)	3.8 (0.1)	4 (0.3)
Widest urethral lateral width <b>Widest U<sub>W</sub></b> ( $\mu\text{M}$ )	104.7 (8.7)	94.6 (5.8)	96.8 (6.1)	91.5 (2)	109.8 (11.5)	90.8 (8.4)	88.4 (4.4)	99.4 (8.4)

Means (SEM) with  $p \leq 0.1$  (*italics*),  $p \leq 0.05$  (**bold**),  $p \leq 0.01$  (*italics and bold*)

Supplemental Table 4: Litter Size Means

	Animal #	VEH CTL	$\mu\text{g/kg}$ BPA					$\mu\text{g/kg}$ EE2	
			2.5	25	250	2500	25000	0.05	0.5
Litter Size	1	13	14	14	13	15	15	15	15
	2	14	11	16	14	14	16	14	15
	3	16	17	14	14	16	15	11	12
	4	13	15	15	16	N/A	12	12	13
	5	14	14	16	11	15	15	15	12
	6	12	N/A	11	18	N/A	12	14	17
		14±1	14±2	14±2	14±2	15±1	14±2	14±2	14±2
Sex Ratio (M/F)	1	6/7	N/A	7/7	7/6	N/A	7/8	7/8	8/7
	2	8/6	6/5	N/A	8/6	7/7	N/A	7/7	N/A
	3	8/8	8/9	7/7	7/7	7/9	7/8	6/5	6/6
	4	7/6	8/7	7/8	7/9	N/A	7/5	6/6	7/6
	5	8/6	8/6	8/8	6/5	8/7	7/8	7/8	9/3
	6	7/5	N/A	6/5	8/10	N/A	6/6	7/7	8/9
		7.6±0.8/6.3±1.0	7.5±1/6.8±1.7	7±0.7/7±1.2	7.2±0.8/7.2±1.9	7.3±0.6/7.7±1.2	6.8±0.4/7±1.4	6.7±0.5/6.8±1.3	7.6±1.1/7.4±2.2
Dam GD21 BW	1	442.9	500.3	466.2	442.9	434.3	437.0	387.3	445.0
	2	403.4	372.5	391.6	409.7	445.3	432.6	407.8	468.9
	3	344.5	405.3	442.9	434.9	453.1	387.6	409.8	368.5
	4	442.6	465.5	481.4	446.3	374.0	381.4	417.1	481.7
	5	352.3	406.9	421.8	474.2	443.6	367.1	446.1	384.3
	6	331.5	N/A	454.4	388.5	N/A	386.9	411.7	429.3
		386.2±50.1	430.1±51.6	*443.1±32.4	*432.8±30.0	430.1±32.0	398.8±28.9	413.3±19.0	429.6±45.4
Mean Litter BW	1	8.4	7.8	7.4	7.3	5.9	8.9	5.3	7.4
	2	5.8	6.5	5.9	6.6	9.4	6.7	6.2	7.0
	3	3.7	5.2	7.3	7.5	7.2	7.0	9.0	6.0
	4	7.6	7.5	8.6	7.6	N/A	6.6	8.5	10.0
	5	4.2	6.0	6.6	10.0	7.1	4.9	5.3	7.1
	6	5.7	N/A	9.8	5.0	N/A	7.4	6.6	5.7
		5.9±1.9	6.6±1.1	7.5±1.5	7.3±1.6	7.4±1.4	6.9±1.3	6.8±1.6	7.2±1.5

Mean±SEM \* $p\leq 0.05$ , N/A: Not Available or Data Not Provided

Supplemental Table 5: Cumulative Litter Information

Animal #	Treatment	Load #	Litter of Origin	Dam GD21 BW (g)	Dam PND0 BW (g)	GD21-PND0 (g)	Litter Size	Mean Pup BW (g)	Pup BW (g)	Sex Ratio (#male/#females)
1	Veh-Cont	2	246	442.9	333.5	109.4	13	8.42	6.4	6/7
2	Veh-Cont	2	252	403.4	321.8	81.6	14	5.83	5.9	8/6
3	Veh-Cont	3	254	344.5	285.6	58.9	16	3.68	7.1	8/8
4	Veh-Cont	4	483	442.6	343.5	99.1	13	7.62	6.5	7/6
5	Veh-Cont	2	495	352.3	293.1	59.2	14	4.23	5.5	8/6
6	Veh-Cont	3	725	331.5	263.1	68.4	12	5.70	5.4	7/5
1	2.5ug/kg BPA	4	263	500.3	391.3	109	14	7.79	7.1	6/5 + 3 undetermined
2	2.5ug/kg BPA	2	267	372.5	301.2	71.3	11	6.48	8.1	6/5
3	2.5ug/kg BPA	4	499	405.3	316.2	89.1	17	5.24	6.3	8/9
4	2.5ug/kg BPA	3	743	465.5	352.9	112.6	15	7.51	6	8/7
5	2.5ug/kg BPA	2	746	406.9	323	83.9	14	5.99	7.5	8/6
1	25ug/kg BPA	2	275	466.2	362.8	103.4	14	7.39	7.7	7/7
2	25ug/kg BPA	3	278	391.6	303.9	87.7	16	5.48	6.8	8/7 + 1 undetermined
3	25ug/kg BPA	3	516	442.9	341	101.9	14	7.28	7.1	7/7
4	25ug/kg BPA	3	517	481.4	352.9	128.5	15	8.57	6.8	7/8
5	25ug/kg BPA	2	527	421.8	315.5	106.3	16	6.64	7.2	8/8
6	25ug/kg BPA	4	755	454.4	346.8	107.6	11	9.78	6.6	6/5
1	250ug/kg BPA	4	294	442.9	348	94.9	13	7.30	6.6	7/6
2	250ug/kg BPA	2	298	409.7	317.9	91.8	14	6.56	7.5	8/6
3	250ug/kg BPA	3	303	434.9	329.3	105.6	14	7.54	7.8	7/7
4	250ug/kg BPA	2	534	446.3	324	122.3	16	7.64	6.9	7/9
5	250ug/kg BPA	2	768	474.2	364.2	110	11	10.00	7.5	6/5
6	250ug/kg BPA	4	776	388.5	298.1	90.4	18	5.02	6.8	8/10
1	2500ug/kg BPA	2	315	434.3	345.3	89	15	5.93	5.9	7/7 + 1 undetermined
2	2500ug/kg BPA	2	317	445.3	314.3	131	14	9.36	6.9	7/7
3	2500ug/kg BPA	2	320	453.1	338.2	114.9	16	7.18	6.9	7/9
4	2500ug/kg BPA	2	321	374	299.3	74.7	N/A	N/A	5.8	N/A
5	2500ug/kg BPA	2	324	443.6	337.9	105.7	15	7.05	6.3	8/7
1	25000ug/kg BPA	2	330	437	303.8	133.2	15	8.88	7	7/8
2	25000ug/kg BPA	3	337	432.6	325.6	107	16	6.69	5.2	8/7 + 1 undetermined
3	25000ug/kg BPA	2	342	387.6	281.8	105.8	15	7.05	6	7/8
4	25000ug/kg BPA	3	567	381.4	302.6	78.8	12	6.57	7.4	7/5
5	25000ug/kg BPA	2	582	367.1	293.6	73.5	15	4.90	7	7/8
6	25000ug/kg BPA	4	808	386.9	298.3	88.6	12	7.38	7.8	6/6
1	0.05ug/kg EE2	4	344	387.3	307.4	79.9	15	5.33	6.7	7/8
2	0.05ug/kg EE2	2	345	407.8	321.7	86.1	14	6.15	7	7/7
3	0.05ug/kg EE2	2	350	409.8	310.8	99	11	9.00	7.4	6/5
4	0.05ug/kg EE2	5	814	417.1	315.1	102	12	8.50	6.8	6/6
5	0.05ug/kg EE2	2	816	446.1	366.7	79.4	15	5.29	7	7/8
6	0.05ug/kg EE2	4	938	411.7	318.8	92.9	14	6.64	6.6	7/7
1	0.5ug/kg EE2	2	353	445	334	111	15	7.40	7.6	8/7
2	0.5ug/kg EE2	4	834	468.9	363.6	105.3	15	7.02	6.5	6/7 + 2 undetermined
3	0.5ug/kg EE2	4	838	368.5	296.1	72.4	12	6.03	5.8	6/6
4	0.5ug/kg EE2	5	955	481.7	351.7	130	13	10.00	7.8	7/6
5	0.5ug/kg EE2	5	956	384.3	298.8	85.5	12	7.13	7.1	9/3
6	0.5ug/kg EE2	5	959	429.3	331.7	97.6	17	5.74	6.9	8/9