

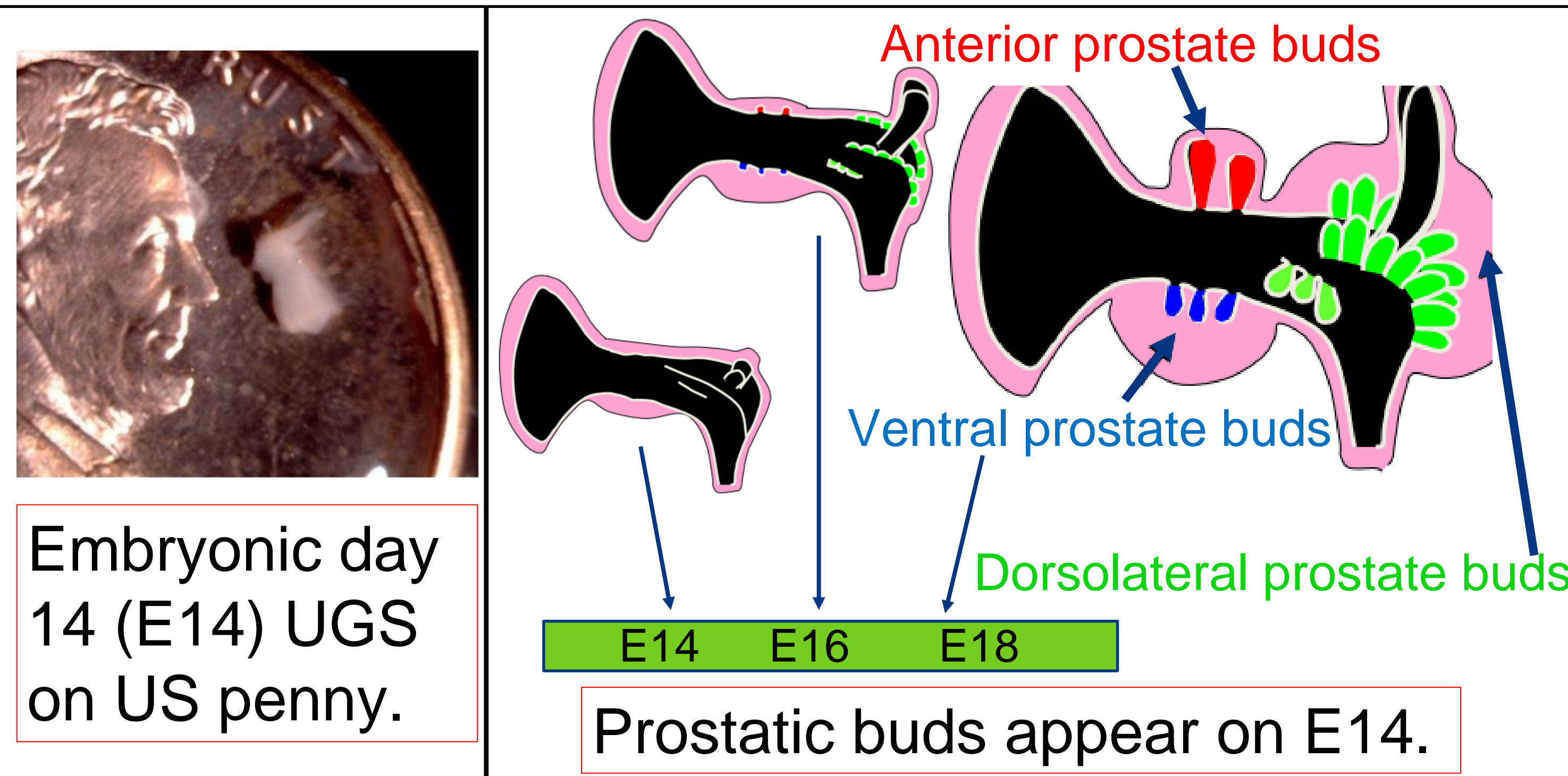


# Polychlorinated biphenyls do not affect mouse prostate bud development

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## BACKGROUND

- Polychlorinated biphenyls (PCBs) are persistent organic pollutants
- PCBs are known to cause changes in voiding physiology in adult mice
- PCBs may be the cause to changes in prostate structure, which is associated to urinary issues in adult humans

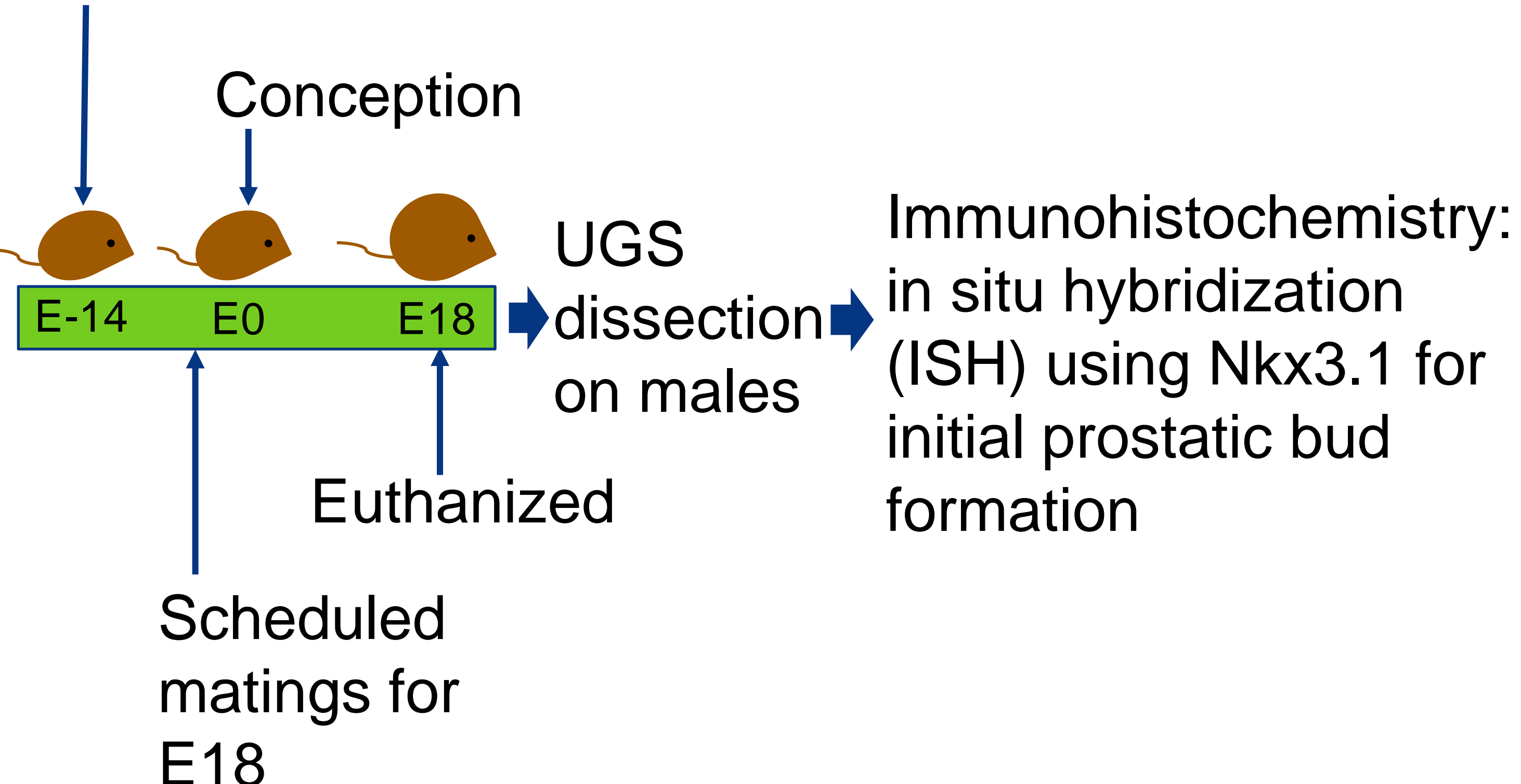


**Objective: What is the effect of PCB exposure on the developing prostate?**

## MATERIALS AND METHODS

*E18: in vivo*

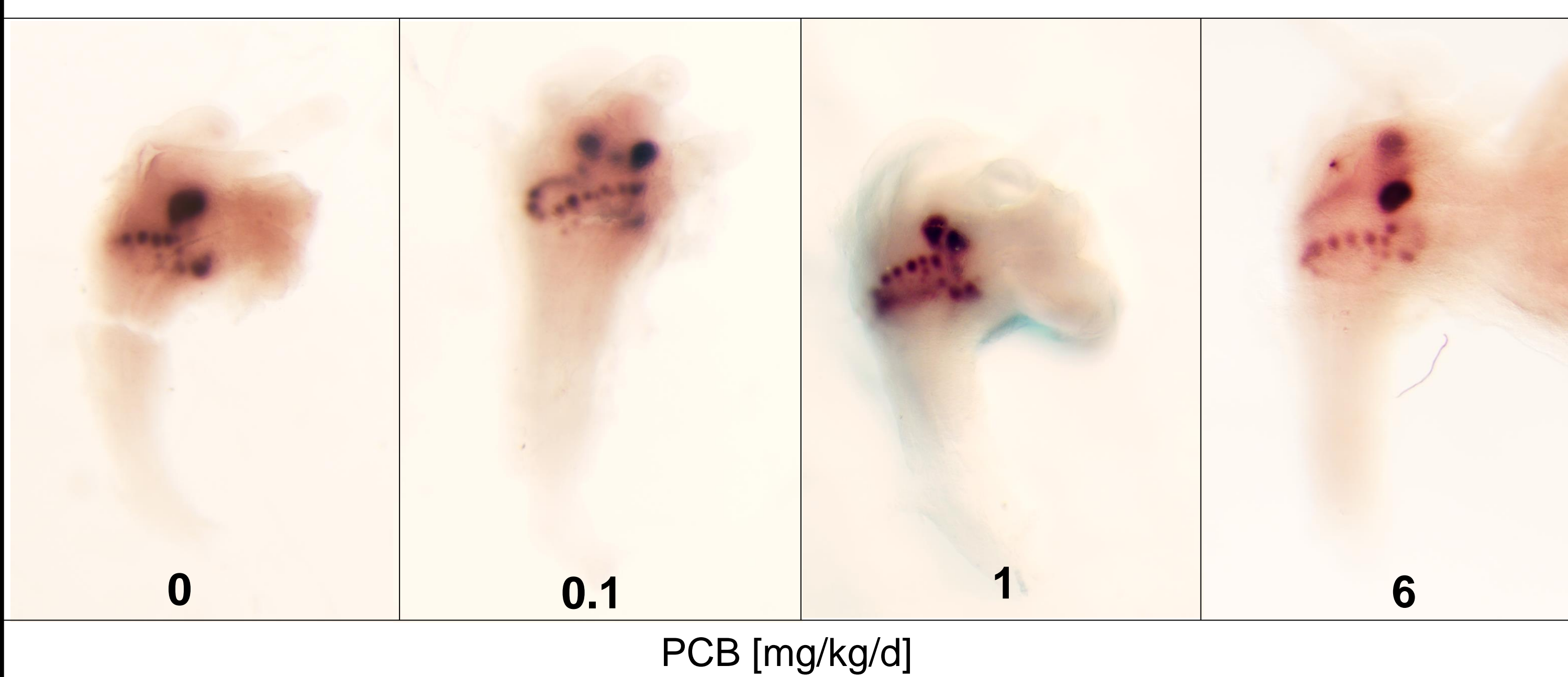
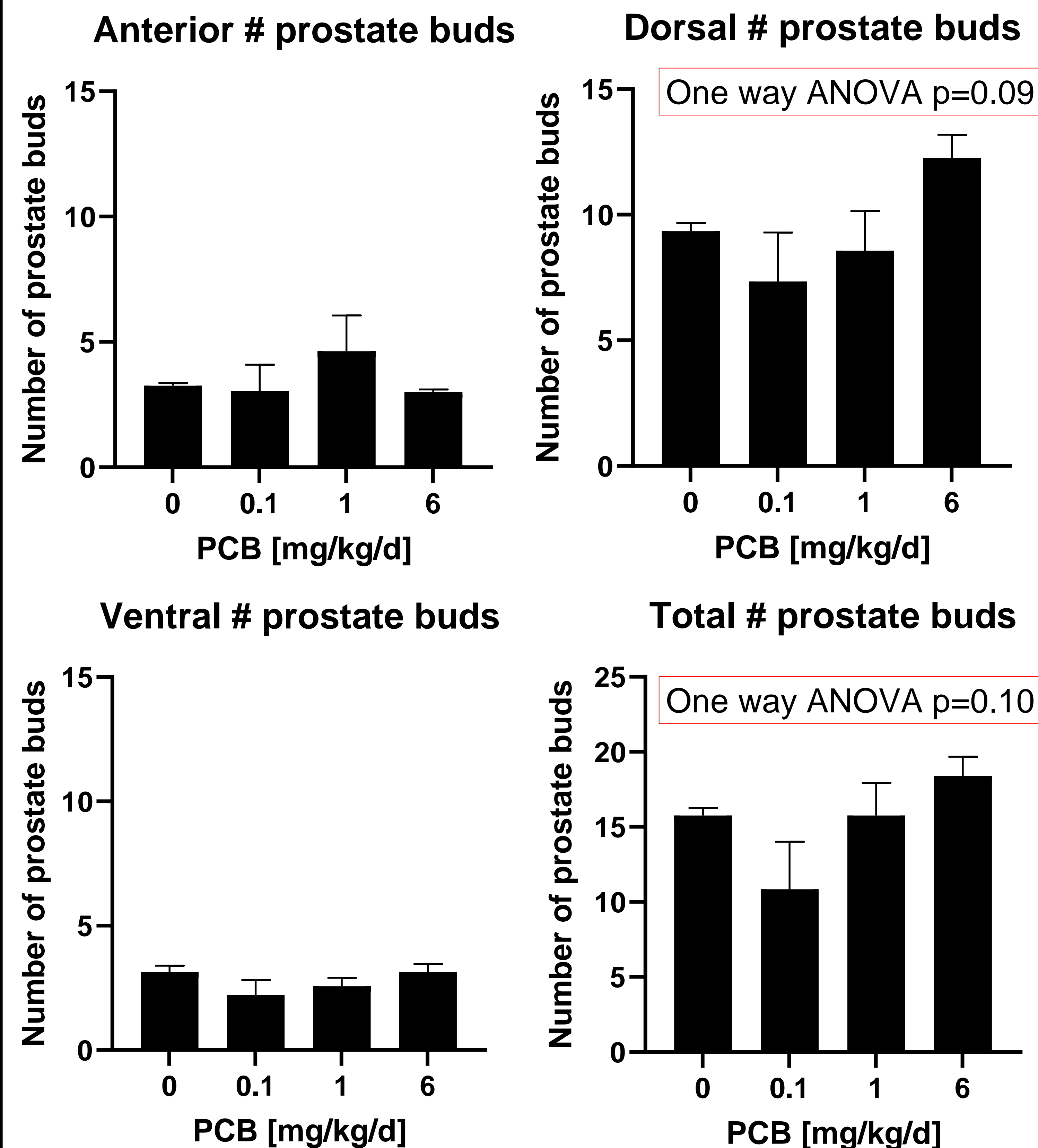
PCB dosing begins, 3-4 dams (C57Bl/6J) per dosage group (0, 0.1, 1, 6 mg/kg/day)



## RESULTS

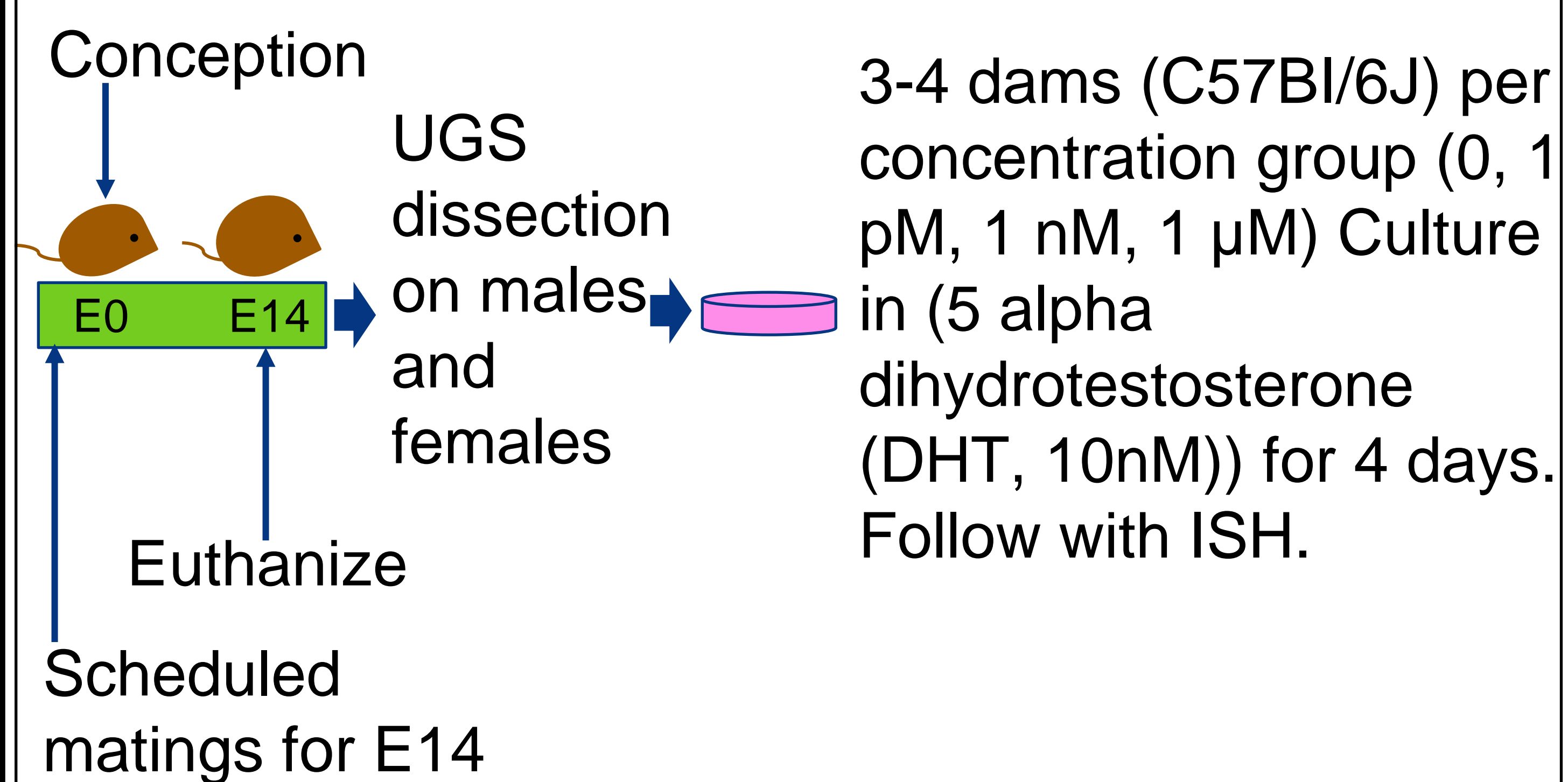
- The number of prostatic buds between each PCB dosing group was not significantly different from each other

E18 graphs: Number of prostate buds in each lobe



## CONCLUSION

- Changes in prostatic lobe mass seen in young adult male mice are not due to PCBs inhibiting prostate bud formation during the embryonic development
- Prostate changes could occur during later stages of differentiation and maturation
- In progress: *E14 cultures: in vitro*



**Future direction: What affect does developmental PCB exposure have on the adult prostate?**

## RELEVANCE

Understanding the influence of developmental PCB exposure on adult prostate morphology and function can improve the quality of life for patients with prostate disease.



Collaborating for the Advancement of Interdisciplinary Research in Benign Urology