Supplementary Material

Life cycle exposure to 2-phenylbenzimidazole-5-sulfonic acid (PBSA) impairs reproductive endocrine functions and induces adverse transgenerational effects

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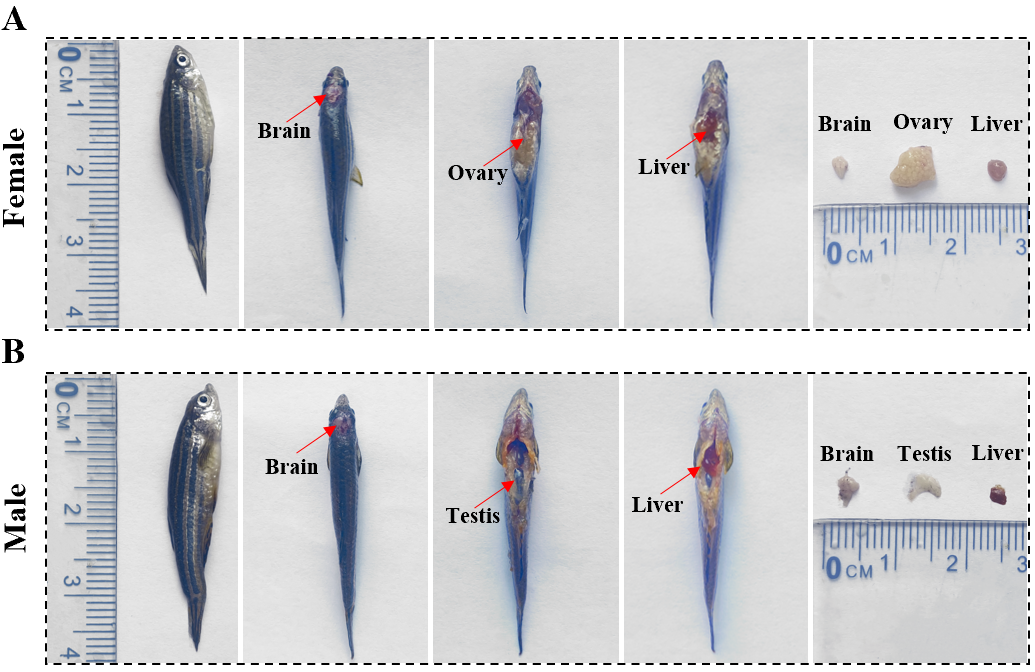


Fig. S1**.** Method to sample ovary, liver, and brain, and three tissues isolated from female (A) and male (B) adult zebrafish.

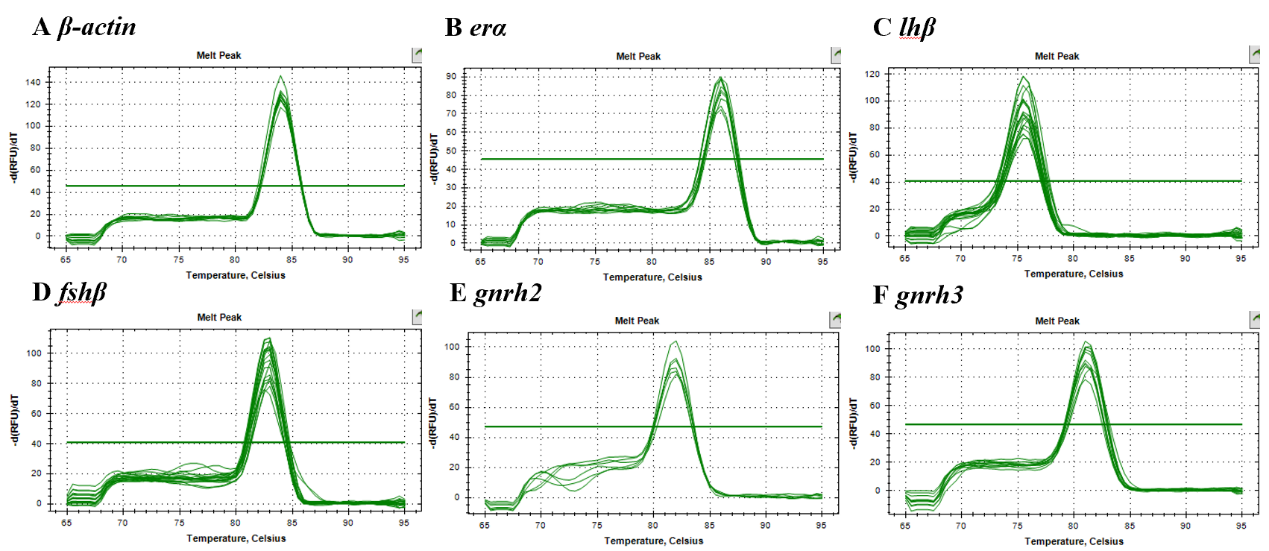
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Fig. S2 The melt curves of *β-actin* (A), *erα* (B), *lhβ* (C), *fshβ* (D), *gnrh2* (E) and *gnrh3* (F) in zebrafish brains

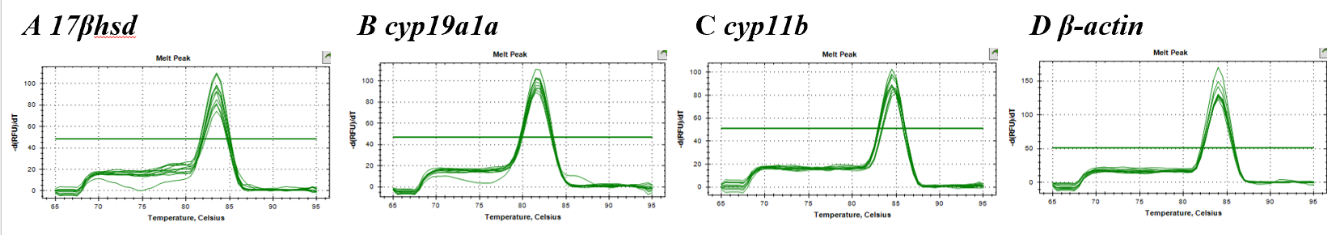


Fig S3. The melt curves of *17βhsd* (A), *cyp19a1a* (B), *cyp11b* (C) and *β-actin* (D) in zebrafish gonads

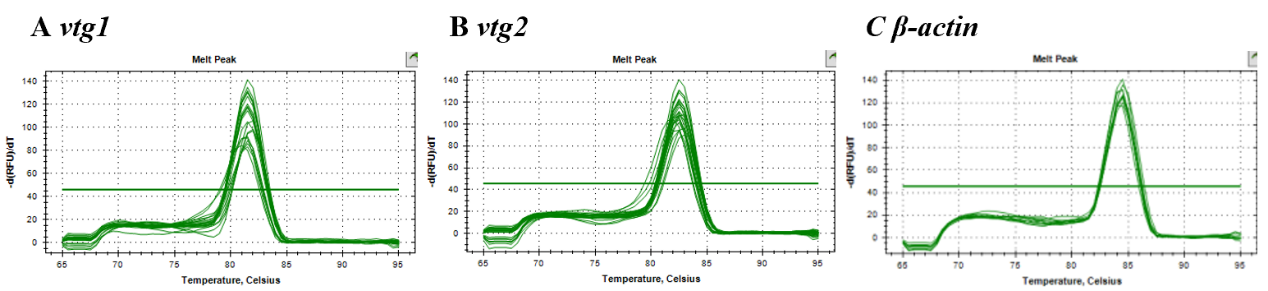


Fig. S4 The melt curves of *vtg1* (A), *vtg2* (B), and *β-actin* (C) in zebrafish livers

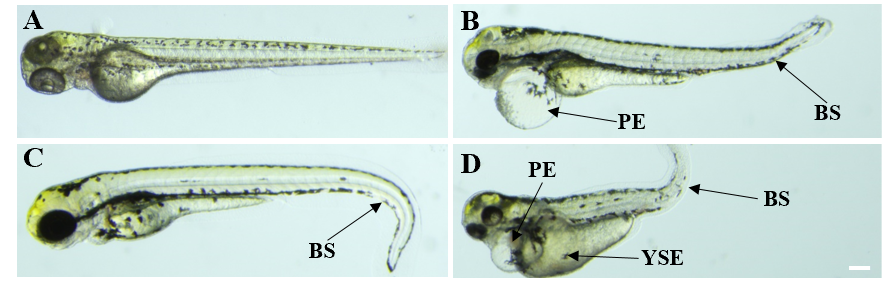


Fig. S5 Representative images showing normal (A) and deformed (B, C and D) larvae. BS, bent spine; PE, pericardial edema; YSE, yolk-sac edema. Scale bars, 100 µm

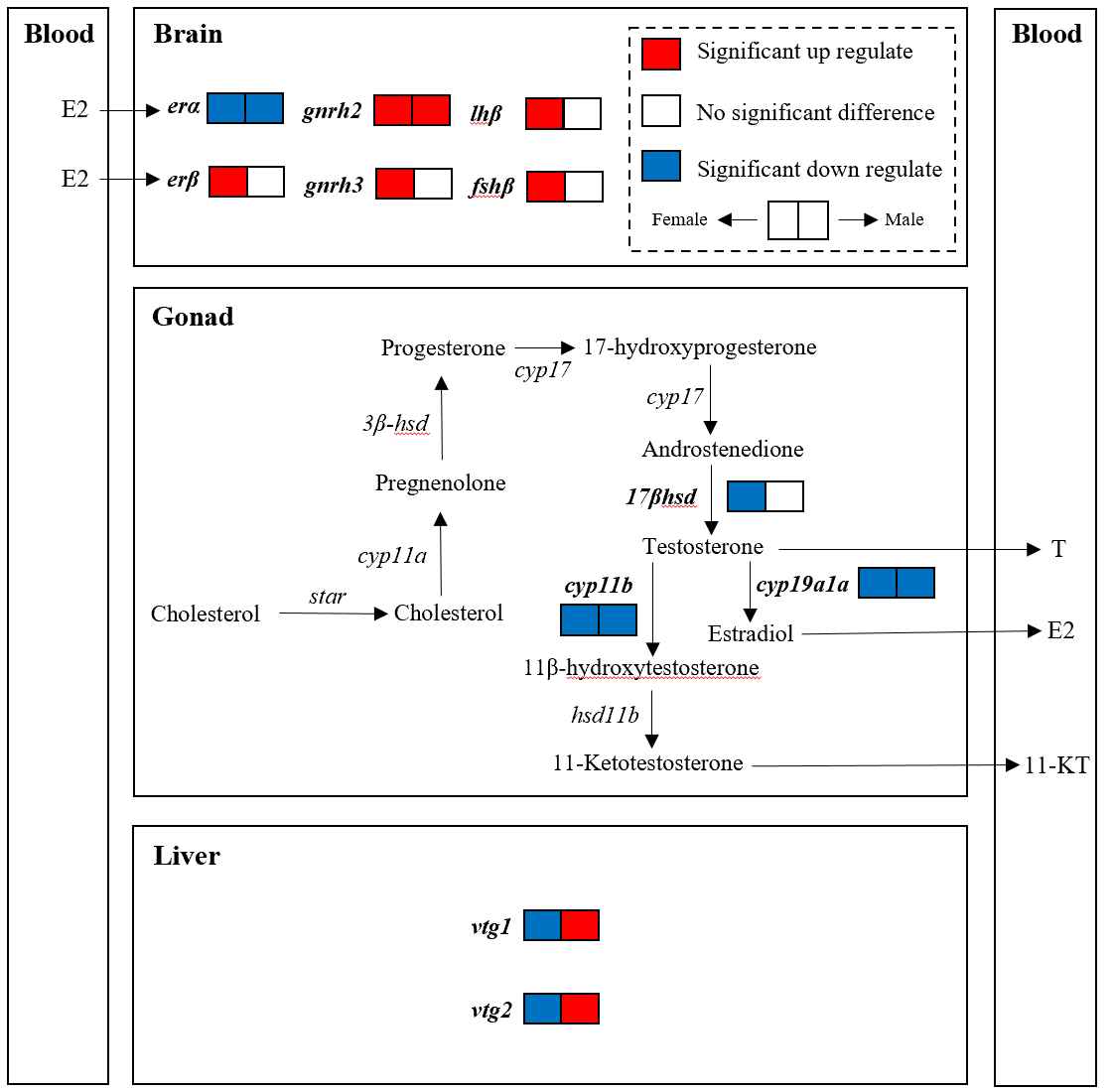
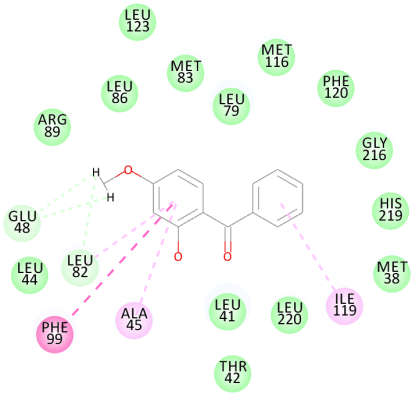
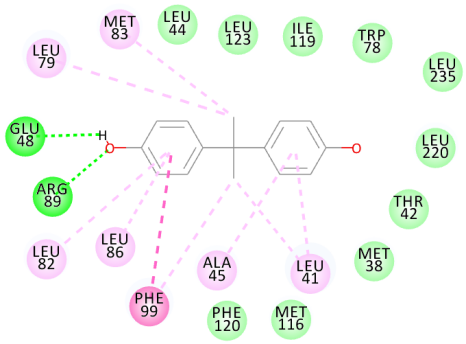
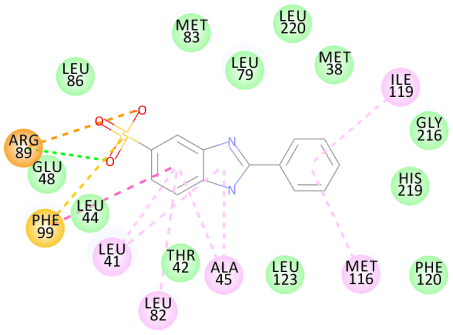


Fig. S6 Effects of PBSA exposure on the expression levels of HPGL axis-related genes. Trends are expressed in different colors, with red for up-regulation and blue for down-regulation

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Fig. S7 An analysis of the protein structure through Ramachandran revealed that the protein structure was successfully constructed.

BP3-ERα BPA-ERα PBSA-ERα



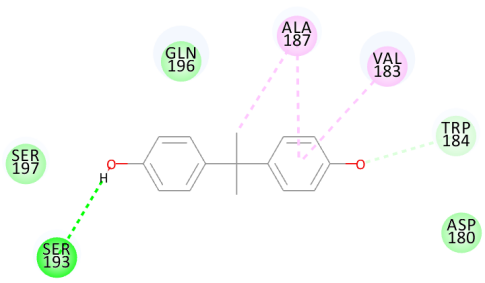
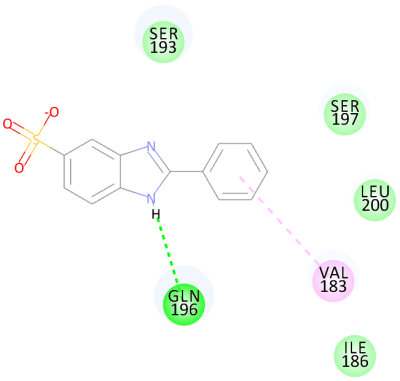
BP3-ERβ BPA-ERβ PBSA-ERβ



Fig. S8 Molecular interactions between BP3, BPA, PBSA and ERα, ERβ