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***In utero* and lactational exposure of DEHP increases the susceptibility of prostate carcinogenesis in male offspring through *PSCA* hypomethylation**

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Highlights

- The *in utero* and lactational DEHP exposure rat model was constructed by treating the pregnant rats with corn oil or DEHP at 0.01, 0.1 and 1 mg/kg BW/day from GD7 to PND21.
- *In utero* and lactational exposure to DEHP significantly increased the mRNA expression of *GSTP1*, *PSCA* and *PTGS2* in a dose-dependent manner on PND21.
- Early life mRNA expression of *GSTP1*, *PSCA* and *PTGS2* induced by DEHP might be tightly linked with prostate carcinogenesis in adulthood
- *In utero* and lactational exposures to DEHP induced hypomethylation of *PSCA* gene in early life, and it may be a predisposing factor for prostate carcinogenesis as rat aged.

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