었다. (3) 정낭의 경우 부고환과 유사한 LH 함량을 보였으며 정낭액에서도 검출되었다 (3.3±0.6 ng/ml). (4) 백서 부고환에서 획득한 정자를 IN HCl로 산성화한 후 중화시킨 정자 추출물에서도 LH 활성이 검출되었다.

**결 론**: 부고환에서 추출한 정자에서 LH-like molecule이 검출되었다는 것은 고환의 정세관 내의 정자세포 단계에서 합성된 LH-like molecule이 이후 정자까지 지속됨을 의미한다. 또한 백서 정액에 함유된 LH-like molecule이 이미 알려진 전립선 외에도 정낭과 부고환에서 유래될 수 있음을 알 수 있었다. 정자와 정액에 존재하는 LH의 기능은 현재까지 알려진 바가 전혀 없으나 LH 수용체가 존재하는 정낭, 전립선 그리고 자궁에서의 분비능이나 평활근 활성 조절 등에 관여할 것으로 사료된다.

## P-7 The Study on Mechanism and Effects of Xenoestrogens on Steroidogenesis in Male Mice

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**Objective:** This was designed to evaluate the effects of OP, BPA and PCB, on steroidogenesis in male mice. Especially, we tried to identify the expression of CYPscc, CYP17α, CYP19 and estrogen (ER) and testosterone receptors (TR).

**Materials and Methods:** CYP enzymes, ER, TR, Inhibin α, β and activin were detected in testis tissue of neonate (3-week) and adults (8-week) (adult group: **AG**) in mice treated with OP, BPA and PCB. Prepubertal mice were injected with OP (2, 20, 200 mg/kg) and PCB (0.02, 0.2, 2 μl/ml) for 5 days, daily in neonate (15-days) and **AG** and BPA (0.5, 5, 50 mg/kg) for 3, 6 days in mice.

**Results:** There was no effect on the histology of the testis in all of **AG** except of neonates at 20, 200 mg/kg OP, histological structures which were reduced Leydig and Sertoli cells in testis. The expression of CYPscc and CYP17α in testis decreased in 20, 200 mg/kg OP in neonate as compared with control(**C**). In 20, 200 mg/kg OP of neonate, OP induced increasing of inhibin β, but not affected in **AG** of OP and BPA. Also, T production decreased in the neonate group at 20, 200 mg/kg OP, but did not be different in AG of OP and BPA. Therefore, these suggest that OP-induced inhibition of T production is related to a decrease in the activity of CYPscc and CYP17α in testis of prepubertal male mice.

**Conclusions:** OP and BPA did not affect development of adults mice at low conc. and short exposure time, but, significantly affect in prepubatal mice. Our results clearly demonstrate that OP can severely reduced p450 enzymes, production of T and increased inhibin β in prepubertal male mice and inhibit the development and differentiation of Leydig and Sertoli cells and on steroidogenesis.

**Key Word:** Xenoestrogen, Steroidogenesis, OP, BPA

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