

## Genotoxicity and Antigenotoxicity of Two An-Tai Decoctions in Pregnant Mice and Fetuses

Chien-liang Fang<sup>1</sup>, Jun-ming Chen<sup>2</sup>, Chien-lin Chen<sup>3</sup>, Su-yin Chiang<sup>4</sup>

<sup>1</sup>Department of Traditional Chinese Medicine, Ditmanson Medical Foundation Chiayi Christian Hospital, Taiwan, <sup>2</sup> Department of Traditional Chinese Medicine, Chen Jun-Ming TCM Clinics, Taiwan, <sup>3</sup> Department of Traditional Chinese Medicine, Buddhist Taipei Tzuchi General Hospital, , Taiwan, <sup>4</sup>School of Chinese Medicine, China Medical University, Taiwan

### Background & Aim :

"Shih-San-Wei An-Tai-Yin" (ATY) and "Bow-Tai-Tang" (BTT) are commonly used Chinese Medicine during pregnancy to stabilize the fetus. We examined their genotoxic and chemopreventive effects in pregnant ICR mice and fetuses.

### Materials & Methods :

Mice were administered ATY or BTT via gavage from Gestation day (GD) 12 to 17. Two hours after the last treatment, some mice were administered N-ethyl-N-nitrosourea (ENU, 90 mg/kg, i.p). Blood samples were collected on GD 19 to examine the frequencies of micronuclei, a marker of chromosome damage, in maternal and fetal reticulocytes (RET).

### Results :

There were no significant differences in maternal body weight gain or RET/normochromatic erythrocytes (NCE) ratio among groups. Treatment of ATY at the dose up to 17.6 g/kg and BTT at the dose up to 9.8 g/kg did not induce a significant increase in frequencies of micronuclei in maternal or fetal reticulocytes. Moreover, pretreatment with BTT but not with ATY resulted in a significant decrease in the frequencies of ENU-induced micronucleated reticulocytes, with an inhibition ratio of about 30% in the maternal blood and 20% in the fetal blood.

### Conclusion :

These data suggest that BTT but not ATY exerts the chemopreventive effects with no evidence of genotoxicity in pregnant mice or fetuses.

### Keywords:

Shih-San-Wei An-Tai-Yin ; Bow-Tai-Tang ; micronuclei, pregnancy ; fetuses