

**C15****Lithospermic acid modulate the Action potential duration by increasing Ica current in the rat ventricular myocyte**Seong-Hun An\*, Dae-Gill Kang, Ho-Sup Lee, Suk-Ho Lee<sup>1</sup>, Yung-E Earm<sup>1</sup>Professional Graduate School of Oriental Medicine, Wonkwang University  
College of Oriental Medicine Department of Physiology and National Reserch  
Laboratory for cellular signaling Seoul Natinal University College of Medicine

We observed the APD of rat ventricle myocyte and the effects of Lithospermic acid that was separated at *Salvia miltiorrhiza* having used in Oriental medicine by using classical whole cell patch clamp technique. We classified APD into APD30mV, APD0mV, APD-50mV, APD-60mV by cell membrane potential and the mean of cell resting membrane potential was  $-69.44 \pm 1.72$  mV. APD30mV of Control cell was  $2.14 \pm 0.80$  ms, APD0 mV was  $15.27 \pm 4.00$ ms, APD-50mV was  $42.15 \pm 12.83$ ms and APD-60mV is 48.36ms. But APD30mV of Lithospermic acid(40 ng/ml) cell was  $4.28 \pm 0.53$ ms, APD0mV was  $26.37 \pm 3.86$ ms, APD-50mV was  $58.64 \pm 13.16$ ms and APD-60mV was  $69.64 \pm 17.83$ ms. At this results, difference ms of control and Lithospermic acid treated cell was 2.14ms (APD30mv), 11.1ms (APD0mV), 16.49ms (APD-30mV) and 21.28ms (APD-60mV). There were little change of I<sub>k</sub> IV-curve in long step pulse(holding potential -80mV, step by 20mV) at 950ms. But I<sub>ca</sub> current was increased step pulse(holding potential -40mV, step pulse by 10mv) in Lithospermic acid treated cell. I<sub>ca</sub> current of control cell was  $19.97 \pm 14.94$  pA/PF and that of Lithospermic acid treated cell was  $31.89 \pm 4.95$  pA/pF. So we concluded that Lithospermic acid modulate the APD by increasing I<sub>ca</sub> current in the rat ventricular myocyte.