

15th International Conference on

OBESITY MEDICINE

October 30-31, 2017 Bangkok, Thailand

***Diospyros kaki* fruit and *Citrus unshiu* peel mixture (PCM) enhances fecal lipid excretion through the inhibition of fat absorption**Seong-Soo Roh¹ and Hae Jin Park²¹Onbiotec Inc., South Korea²Daegu Haany University, South Korea

This study aimed to investigate the action of *Diospyros kaki* fruit (young persimmon) and *Citrus unshiu* peel mixture extract (PCM) on the excretion of dietary triglyceride in high fat diet induced obese mice. The inhibitory activity on pancreatic lipase of PCM was evaluated *in vitro* and its anti-obesity effects were studied based on the serum, liver and fecal triglyceride level analysis from high-fat diet (HFD)-fed mice *in vivo*. Moreover, we measured the protein expressions of AMP-activated protein kinase alpha (AMPK α), the fatty acid oxidation and thermogenesis-related genes (e.g., *PPAR α* , *CPT-1* and *UCP-2*) and lipogenesis-related genes (e.g., *SREBP-1*, *SREBP-2*, *ACC*, *SCD-1* and *HMGCR*) with western blot in the liver. Hepatic functional parameters were analyzed in the serum. PCM exhibited the inhibitory effect on lipase activity with an IC₅₀ value of 428.9 μ g/ml. Moreover, the dietary TG by the PCM200 treatment was significantly excreted through the feces. Furthermore, PCM200 treated mice increased significantly the level of phosphorylated AMPK α in obese mice. Lipogenesis-related protein expressions in PCM200 were marked reduced compared to these of HFD control mice, whereas the PCM administration did not show any effect on fatty acid oxidation and thermogenesis related protein expressions. Thus, the PCM treatment produced no obvious adverse effects on the liver function. Taken together, PCM promoted fecal lipid excretion by inhibiting intestinal absorption of dietary fat and improving lipid metabolism *via* activation of AMPK. Accordingly, these data clearly show that PCM possess an anti-obesity function in mice fed with HFD. Accordingly, PCM may be a promising herbal formula in the prevention or treatment of obesity.

Biography

Seong-Soo Roh has lectured and studied Pharmacology and Toxicity in Korean Medicine at Daegu Haany University, South Korea. In addition to natural drug research, he also has focus on research of functional food ingredients and natural cosmetic materials. Presently he is the Editor-In-Chief of The Korea Association of Herbiology and serves as an Academic Member and Editor of internationally renowned journals.

ddede@dhu.ac.kr

Notes: