

# 3<sup>rd</sup> International Conference on Translational Medicine

November 03-05, 2014 Las Vegas, USA

## Hyperoside suppresses the production of Thymicstromallymphopoietin through the blockade of RIP2 and Caspase-1 signal cascade in activated mast cells

Hyung-Min Kim

Kyung Hee University, Republic of Korea

*Crataeguspinnatifida Bunge* regulates allergic inflammatory diseases. The compound hyperoside (HYP) is the principle active component of *Crataeguspinnatifida Bunge*. Thymic stromal lymphopoietin (TSLP) plays a vital role in the pathogenesis of allergic inflammation. Here, we investigated how HYP regulates the levels of TSLP in a human mast cell line, HMC-1 cells. We analyzed the levels of TSLP by treatment with HYP in phorbol myristate acetate plus calcium ionophore A23187-activated HMC-1 cells with ELISA and a polymerase chain reaction analysis. We also analyzed the pathway that HYP regulates TSLP by measuring the level of fluorescent intracellular calcium and using a Western blot analysis. It also significantly diminished the production and mRNA expression of TSLP in activated HMC-1 cells. HYP diminished the level of intracellular calcium in activated HMC-1 cells. It significantly diminished the levels of receptor-interacting protein 2 and active caspase-1 in activated HMC-1 cells. HYP significantly diminished the translocation of NF- $\kappa$ B into the nucleus and degradation of I $\kappa$ B $\alpha$  in the cytoplasm in activated HMC-1 cells. Furthermore, it significantly diminished the production and mRNA expression of interleukin-1 $\beta$  and interleukin-6 in activated HMC-1 cells. Taken together, our findings establish HYP as a potential agent for the treatment of allergic inflammation.

### Biography

Hyung-Min Kim has completed as a Pharmacist from Wonkwang University and Postdoctoral studies with a major in Pathology from Osaka University. He has published more than 400 papers in reputed journals and serving as an Editor-in-Chief of international journal, TANG (*Humanitas Medicine*).

[hmkim@khu.ac.kr](mailto:hmkim@khu.ac.kr)